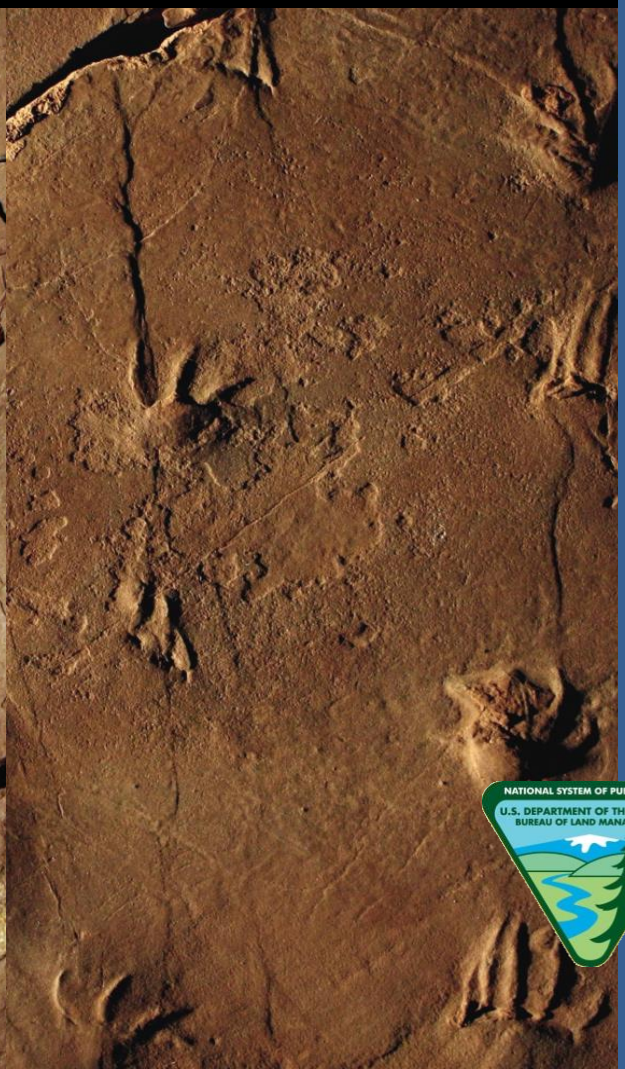
BLM

Prehistoric Trackways National Monument

RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN

November 2015



NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BLM MISSION. . .

To sustain the health, diversity, and productivity of the public land for the use and enjoyment of present and future generations.

OUR VISION. . .

The Prehistoric Trackways National Monument preserves a moment in time when the world was poised on the brink of cataclysmic change that would usher in the era of the dinosaurs. Our vision is to tell this story to the Nation through education and interpretation, and through scientific research. The BLM will maintain the rugged and scenic setting while providing opportunities for recreationists to enjoy these lands now, and for future generations, while ensuring the sustainability and protection of the paleontological resources. We will work collaboratively with partners to optimize Monument management which will enhance our ability to serve the public and meet the needs of the Monument resources, objects, and values.

NATIONAL CONSERVATION LANDS

The PTNM is a unit of the BLM National Landscape Conservation System (NLCS). The mission of the NLCS is to conserve, protect, and restore Nationally-significant landscapes that are recognized for their outstanding cultural, ecological, and scientific values. The PTNM was designated in order to conserve, protect, and enhance the unique and Nationally-important paleontological, scientific, educational, scenic, and recreational resources, and values of the public land.

BLM/NM/PL-16-01-1610

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Las Cruces District Office
1800 Marquess Street
Las Cruces, New Mexico 88005
www.blm.gov/nm

TAKE PRIDE IN AMERICA

In Reply Refer To:
1610-5.g.1.4 (L0000)

November 2015

Dear Reader:

Enclosed are the Record of Decision (ROD) and Approved Resource Management Plan (RMP) for the Prehistoric Trackways National Monument. This ROD and RMP provide overall direction for management of all resources on Bureau of Land Management (BLM)-administered public land within the National Monument. The National Monument is 5,255 acres and is located in the southern third of the Robledo Mountains, approximately 10 miles northwest of the City of Las Cruces in Doña Ana County.

The BLM prepared the plan in accordance with Presidential Proclamation 7318 establishing the Monument and under the authority of the Federal Land Policy and Management Act and other applicable laws. This document contains broad land use plan decisions that provide overall direction for management of resources and resource uses within the Prehistoric Trackways planning area.

Land use planning decisions are expressed as goals and objectives, allowable uses, and management actions anticipated to achieve desired outcomes. Although land use plan decisions identified in the Approved RMP are final and effective upon signing of this ROD, they may require additional implementation decision steps before on-the-ground activities can begin. Subsequent National Environmental Policy Act (NEPA) analysis will be required as necessary for implementation decisions requiring on-the-ground activities.

This plan is very similar to the one set forth in the Preferred Alternative for the *Prehistoric Trackways National Monument Proposed RMP/Final EIS* published in December 2014. Modifications to the proposed plan corrected errors that were noted during review of the Proposed RMP/Final EIS and provide further clarification for decisions in travel management planning and visitor services.

The BLM greatly appreciates all those who contributed to the completion of the Prehistoric Trackways National Monument RMP. The public's extensive interest and involvement in this planning effort has ensured that the RMP is of substantial quality and will provide for the continued use and enjoyment of public land and resources by present and future generations.

Hard copies and CDs of the plan are available by request at the Las Cruces District Office. The approved RMP is also available at: www.blm.gov/nm/st/en/fo/Las_Cruces_District_Office/trackways_rmp.html. If you have any questions about the plan, please contact Jennifer Montoya, Planning and Environmental Specialist at (575) 525-4316.

Sincerely,

Bill Childress
District Manager

1 Enclosure

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ACRONYMS/ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
AMP	Allotment Management Plan
BLM	Bureau of Land Management
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CTTM	Comprehensive Trails and Travel Management
EIS	Environmental Impact Statement
ERMA	Extensive Recreation Management Area
FLPMA	*Federal Land Policy and Management Act*
FMU	Fire Management Unit
GIS	Geographic Information System
GPS	Global Positioning System
LWC	Lands with Wilderness Characteristics
NEPA	*National Environmental Policy Act*
NHPA	*National Historic Preservation Act*
NLCS	National Landscape Conservation System
NMMNHS	New Mexico Museum of Natural History & Science
NOI	Notice of Intent
NRHP	National Register of Historic Places
OHV	Off-highway Vehicle
PTNM	Prehistoric Trackways National Monument
RMP	Resource Management Plan
RNA	Research Natural Area
ROD	Record of Decision
SRP	Special Recreation Permits
T&E	Threatened and Endangered
USC	United States Code
USDI	U. S. Department of the Interior
VRM	Visual Resources Management
WSA	Wilderness Study Area

PREHISTORIC TRACKWAYS NATIONAL MONUMENT

RECORD OF DECISION

Prepared by:

Bureau of Land Management
Las Cruces District Office
1800 Marquess Street
Las Cruces, NM 88005
November 2015

PREHISTORIC TRACKWAYS NATIONAL MONUMENT
RECORD OF DECISION

1 DECISION

This Record of Decision (ROD) approves the Prehistoric Trackways National Monument (PTNM) Resource Management Plan (RMP). This ROD and RMP provide overall direction for management of all resources on BLM-administered land within the National Monument. The PTNM is 5,255 acres and is located in Doña Ana County, New Mexico.

The decision is hereby made to approve the attached RMP for the PTNM. This plan was prepared in accordance with Presidential Proclamation 7318 (Appendix A) establishing the Monument and under the authority of the Federal Land Policy and Management Act (FLPMA) (43 United States Code [U.S.C.] §§ 1701, *et seq*.) and other applicable laws (43 Code of Federal Regulations [CFR] Part 1600) and includes broad land use plan decisions that provide overall direction for management of resources and resource uses within the Prehistoric Trackways Planning Area. Land use planning decisions are expressed as goals and objectives (desired outcomes), allowable uses, and management actions anticipated to achieve desired outcomes. Although land use plan decisions identified in the Approved RMP are final and effective upon signing of this ROD, they may require additional implementation decision steps before on-the-ground activities can begin. The Approved RMP does not include new implementation level decisions. Subsequent National Environmental Policy Act (NEPA) analysis will be required as necessary for implementation decisions requiring on-the-ground activities.

This plan is very similar to the one set forth in the Preferred Alternative for the *Prehistoric Trackways National Monument Proposed RMP/Final EIS* published in December 2014. Modifications to the proposed plan corrected errors that were noted during review of the Proposed RMP/Final EIS and provide further clarification for decisions in travel management planning and visitor services. Specific management decisions and objectives for public land under jurisdiction of the PTNM are presented in Chapter 2 of the *Proposed RMP/Final EIS*.

1.1 Implementation Decisions

BLM intends to implement, over time, a number of specific project-level decisions. These are called "implementation decisions" (as opposed to land use planning decisions described above).

Certain implementation decisions are specifically described and the effects of those decisions have been analyzed in the *Proposed RMP/Final EIS*, and will take effect with the signing of the ROD. An example of such an implementation decision is the Comprehensive Trails and Travel Management Plan. Although these decisions were included as part of the *Proposed RMP/Final EIS*, they are not land use planning decisions. All implementation decisions included in Chapter 2 of the *Proposed RMP/Final EIS* are denoted with an asterisk (*). These decisions are appealable to the Interior Board of Land Appeals.

Other implementation decisions in the Approved RMP will require the preparation of detailed, project-level NEPA analyses prior to approval. Public involvement, including opportunities for further protest or appeal, will be provided at that time. Implementation decisions tiered to the PTNM RMP to be analyzed in the future include:

- Visitor facilities site plan development (e.g., trailheads, restrooms, signage, etc.).
- Education and Interpretation (e.g., materials to be used, the location of kiosks, etc.).
- Livestock management (adjustments to allotment management plans).

1.1.1 Comprehensive Trails and Travel Management Plan and Cultural Resources

The PTNM RMP and the Comprehensive Trails and Travel Management (CTTM) Plan are undertakings that have the potential to cause adverse effects to historic properties (cultural resources that are eligible for or listed on the National Register of Historic Places) and therefore, are subject to review under Section 106 of the National Historic Preservation Act (NHPA), and its implementing regulations (36 CFR 800). In performing this review, the BLM has determined that both the RMP and the CTTM Plan will have "no adverse effects" to historic properties that may exist within the area of potential effects (APE) for either action. For the RMP, the APE is the Monument itself and for the CTTM Plan, the APE is the roads that are the subject of the CTTM Plan. The New Mexico State Historic Preservation Officer has concurred with these determinations.

RMP level decisions are broad-based and may result in project-specific land use authorizations that could result in adverse effects to historic properties. However, any necessary NEPA analysis and Section 106 review would occur prior to implementation of such authorizations, and would include intensive, pedestrian cultural resources inventory.

For the CTTM Plan, which is an implementation-level decision, BLM performed a records review-level inventory, reviewed the environmental information gathered during the NEPA analysis, and applied the Archaeological Sensitivity Modeling in Southern New Mexico to arrive at a "no adverse effect" determination. The records review inventory revealed that archaeological sites were not found during intensive field inventories performed within the PTNM or in lands directly adjacent. The one CTTM Plan decision that could cause adverse effects to any such site is the decision to allow road maintenance to address a resource concern or to allow administrative use. In these cases, an intensive field inventory for historic properties would take place prior to work being done.

2 ALTERNATIVES PRESENTED IN THE PROPOSED RMP/FINAL EIS

2.1 Alternative Themes

Alternative A or the "*No Action Alternative*" analyzed the continuation of existing management, which is defined by the *Mimbres RMP* (1993) and the legislation designating the Monument, the *Omnibus Public Land Management Act of 2009*. Two RMP amendments also affect management of the Planning Area*: New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management* (2001) (NM Standards and Guidelines) and the *Resource Management Plan Amendment for Fire and Fuels Management on Public Land in New Mexico and Texas* (2004).

Alternative B analyzed a more restrictive approach to use of the Monument that emphasized resource protection; BLM would invest less in the Monument and would limit changes and involvement as compared to Alternatives C and D:

- All paleontological resources would be conserved for future scientific research.
- The Monument would be closed to casual collection of common invertebrate fossils, livestock grazing, and all mechanized and motorized vehicles – with exceptions for emergencies or authorized use.
- There would be no prohibitions on recreational target shooting.
- Special Recreation Permits (SRPs) would not be issued.
- The education and interpretation program would be primarily off-site.

Alternative C (Preferred Alternative) analyzed protection of resources while allowing compatible public uses. The BLM has determined that this is the best combination of management approaches to protect the resources, objects and values in the Monument:

- Paleontological resources deemed suitable for scientific research would be conserved and used for scientific research only. Paleontological resources appropriate for interpretation, educational and recreational use would be developed for that use.
- The Monument would be closed to casual collecting of petrified wood, common invertebrate and plant paleontological resources.
- Allotment management plans would be adjusted to exclude grazing at specific locations such as campsites or fossil sites based on the Monument Monitoring Plan results.
- Motorized and mechanized travel within the Monument would be limited to designated routes and require a no-fee day-use permit.
- Approximately 5.4 miles of previously designated routes would be closed to motorized and mechanized travel.
- Recreational target shooting would be prohibited.
- New routes or trails may be developed by the BLM to enhance visitor experiences and research opportunities.
- Commercial, competitive, and organized group activities would be managed through the SRP process.
- Education and interpretation would be enhanced on-site and off-site, including an on-site visitor contact station.
- Organized tours and self-guided interpretive activities would be developed.

Alternative D analyzed a maximum use approach to management of the Monument and the widest range of public uses of the resources while still following the constraints of the Monument Legislation:

- Localities for research would be preserved and used for scientific research only.
- Localities for interpretation, educational and recreational use would be developed.
- PTNM would be closed to casual collecting of common invertebrate and plant fossils.
- Limited collecting of common invertebrates would be allowed when in conjunction with a BLM-authorized educational or interpretive activity.
- Current livestock management would continue in the Monument.
- Approximately 4.0 miles of designated routes would be closed to motorized and mechanized use.
- New motorized and non-motorized routes may be developed by the BLM to enhance visitor experiences and research opportunities.
- Competitive, commercial, or organized group activities would be managed by SRPs.
- Recreational target shooting would be prohibited.

- Education and interpretation would be developed for the Monument both on-site and off-site, including an on-site visitor center.
- Organized tours and self-guided interpretive activities would be developed along with an interpretive motorized tour route.

2.2 Alternatives Considered But Not Analyzed in Detail

Community Pit #1

During scoping, the BLM received a comment to consider including the adjacent Community Pit #1 into the Monument. Community Pit #1 is not within the Monument boundary and only the Secretary of the Interior or President may alter the Monument boundary. This action cannot be accomplished through the RMP process.

Target Shooting Allowed Within a Designated Area of Monument

In the *Proposed RMP/Final EIS*, Alternatives A and B analyzed no restrictions to target shooting, while Alternatives C and D would close the entire Monument to target shooting. A proposal to allow target shooting within a designated subset of the Monument was evaluated in a map-based exercise in GIS using a ½-mile safety buffer (described further in Appendix G of the *Proposed RMP/Final EIS*) overlain on documented paleontological localities in the Monument (areas where researchers and visitors are likely to congregate). Only 356 acres, or 7 percent, of the Monument lies outside the Safety Zone, and this area is near the southern boundary where there are no access roads and no distinct physical boundaries for the 356 acres. From a management perspective, this area would be inaccessible by vehicle and impractical as an area in which to target shoot. It would also be difficult to erect and maintain an adequate number of boundary signs designating the shooting area. As a result, the *Proposed RMP/Final EIS* did not carry this alternative forward for further analysis, determining that such an alternative would be technically infeasible. Approximately 10 miles southwest of the PTNM is the Butterfield Range, which is a City of Las Cruces facility that is free for public use and open 7 days a week. The shooting range accommodates a full range of target shooting, including pistol, rifle and shotgun, and has multiple shooting bays ranging from 25 yards to 1,000 yards.

2.3 PTNM Legislative Directives

The four alternatives were developed by considering the PTNM legislative directives. Each alternative incorporated the elements of the Legislation presented below:

- The Secretary shall manage the Monument in a manner that conserves, protects, and enhances the resources and values of the Monument.

- Provide for public interpretation of, and education and scientific research on, the paleontological resources of the Monument, with priority given to exhibiting and curating the resources in Doña Ana County, New Mexico.

- Enter into cooperative management agreements or other instruments with parties or agencies, as appropriate, to coordinate and collaborate management of the Monument.

- Continue to manage that portion of the Robledo Mountains Wilderness Study Area (WSA) within the Monument until such time that Congress designates it as a Wilderness Area or releases it from further consideration.

- Continue to manage that portion of the Robledo Mountains Area of Critical Environmental Concern (ACEC) within the Monument as an ACEC.

- Land use authorizations may be permitted to facilitate the management of the Monument and to meet the intent of the enabling Legislation. The Secretary shall only allow uses of the Monument that the Secretary determines would further the purposes for which the Monument has been established.

- Subject to valid existing rights, close the Monument to location, entry, and patent under the mining laws; and the operation of the mineral leasing laws, geothermal leasing laws, and minerals materials laws.

- Manage any land or interest in land that is acquired by the United States for inclusion in the Monument after the date of enactment of this Act in the same manner and degree as herein described for the rest of the Monument.

- Except as needed for administrative purposes or to respond to an emergency, the use of motorized vehicles in the Monument shall be allowed only on roads and trails designated in this plan for use by motorized vehicles.

2.4 Monument Resources, Objects, and Values

The broad categories of Monument resources, objects, and values found within the PTNM Legislation were interpreted by the BLM as part of the development of the PTNM RMP. These resources, objects, and values were developed based on BLM's knowledge of the Monument and input received during internal and external scoping on the RMP:

- *Paleontological*
  Fossil resources are predominantly Permian Age fossil material, but may be expanded to encompass subsequent discoveries.

- *Scientific*
  Science-based research conducted on paleontological and geologic resources, especially Permian Age fossils and their geologic context.

- *Educational*
  Educational and interpretive opportunities on the Permian fossils.

- *Recreation*
  Recreational uses related to the enjoyment, appreciation, and protection of the fossil resources and their geologic context.

- *Scenic*
  Distinct geologic exposures of the Robledo Mountains in the context of the Permian fossils.

2.5 Management Considerations

Public comment and input provided throughout this planning process was considered in preparing the RMP. The Preferred Alternative (Alternative C), as modified, was selected because this approach to managing the Monument most effectively accomplishes the overall objectives of protecting Monument

resources and facilitating appropriate research, and provides the most workable framework for future management of the Monument. Among the attributes that led to this determination are directed recreational activities with basic improvements to reduce impacts, the closure of the Monument to the casual collecting of fossil resources, and a Monument monitoring plan.

The CEQ has defined the environmentally preferred alternative as the alternative that will best promote the National environmental policy as expressed in Section 101 of NEPA. This section lists six broad policy goals for all Federal plans, programs and policies:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- Preserve important historic, cultural, and natural aspects of our National heritage, and maintain, whenever possible, an environment which supports diversity and variety of individual choice;
- Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

While Alternatives B, C, and D were developed with the Council on Environmental Quality (CEQ) goals in mind, Alternative C was selected because it best balances BLM's ability to implement the plan and achieve the goals.

3 MITIGATION MEASURES

The PTNM RMP mitigates negative impacts to Monument objects through the adoption of best management practices (Appendix B).

Best management practices (BMPs) are those land and resource management techniques designed to maximize beneficial results and minimize negative impacts of management actions. BMPs are defined as methods, measures, or practices selected on the basis of site-specific conditions to provide the most effective, environmentally sound, and economically feasible means of managing an activity and mitigating its impacts. Interdisciplinary site-specific analysis is necessary to determine which management practices would be necessary to meet specific goals.

BMPs are identified as part of the NEPA process, with interdisciplinary involvement. Because the control of nonpoint sources of pollution and prevention of damage to other resources is an ongoing process, continual refinement of BMP design is necessary. Data gathered through monitoring are evaluated and used to identify changes needed in BMP design, application, or in the monitoring program.

The PTNM RMP provides BMPs for the following activities:

1. Road Design and Maintenance
2. Surface-Disturbing Activities
3. Rights-of-Way
4. Fire Suppression
5. Prescribed Burning

6. Livestock Grazing Management
7. Invasive/Noxious Weed Management
8. Developed Recreation
9. Wildlife and Riparian Habitat
10. Visual Resources Management

4 PLAN MONITORING

During the life of the RMP, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the RMP, the BLM will integrate the data through a process called plan maintenance or updating. This process includes the use of an adaptive management strategy. As part of this process, the BLM will review management actions and the RMP periodically to determine whether the objectives set forth in this planning document are being met. Where they are not being met, the BLM will consider adjustments of appropriate scope. Where the BLM considers taking or approving actions which would alter or not conform to overall direction of the RMP, the BLM will prepare a plan amendment and environmental analysis of appropriate scope in making its determinations and in seeking public comment.

5 PUBLIC INVOLVEMENT

The BLM is committed to providing opportunities for meaningful participation in the resource management planning process. Throughout the preparation of this RMP, the BLM has maintained an extensive public participation process aimed at providing frequent opportunities for interaction with the public through a variety of avenues.

Scoping

The formal scoping process began with the publication of a Notice of Intent (NOI) in the *Federal Register* on January 5, 2010 (Volume 75, Number 2, Pages 431-432). This NOI announced the Las Cruces District Office's intent to prepare an RMP, an associated EIS, and to hold a public scoping meeting. Press releases, flyers, paid advertisements in newspapers, and the BLM New Mexico and Las Cruces District project web sites all announced the public scoping period and public scoping meeting also.

One formal scoping meeting was held on January 26, 2010 to share information about the Monument, preliminary issues, and the planning process. The BLM asked the public for comments and suggestions regarding the management of the natural, cultural, recreation, and scientific resources within the Monument. Approximately 100 people attended the public scoping meeting. The BLM received 17,388 total comment submittals, of which 17,287 were a variety of repeat form letters. The initial "*formal scoping*" period closed on February 10, 2010. Although the formal comment period ended, the BLM continued to accept and consider all comments received throughout the planning process.

The public was invited to participate in the review of preliminary management alternatives for the PTNM RMP/EIS through a workshop held on September 22, 2010. The workshop was conducted as an open forum, with BLM specialists on hand to discuss alternatives.

Draft RMP/Draft EIS

On July 20, 2012, concurrent with the distribution of the *Draft PTNM RMP/EIS*, the Environmental Protection Agency (EPA) notice of availability was published in the *Federal Register* announcing the availability of the draft document for a 90-day public review and comment period.

Public Meetings on the Draft RMP/DEIS

During the review period for the *Draft PTNM RMP/EIS*, the BLM held a public meeting on August 7, 2012, to assist the public in their review of the draft document and solicit comments.

Proposed RMP/Final EIS

A 30-day protest period, beginning December 29, 2014, was provided for the *Proposed RMP/Final EIS* in accordance with 43 CFR 1610.5-2. A total of 5 letters were received by the BLM Washington Office. These protests were resolved by the BLM Director. All of those who provided protest or comment letters to the Washington Office received a response from the BLM Washington Office. The approved protest report can be found at:
http://www.blm.gov/wo/st/en/prog/planning/planning_overview/protest_resolution/protestreports.html

Concurrent with the protest period, the Governor of New Mexico was provided a formal 60-day period to determine if the proposed plan was consistent with existing state and local plans, programs, and policies. No inconsistencies were identified.

6 MANAGER'S RECOMMENDATION

Having considered a full range of alternatives, associated effects, and public input, I recommend adoption and implementation of the Prehistoric Trackways National Monument Resource Management Plan, as described in this Record of Decision. This plan supersedes all other planning documents that previously covered the PTNM. The Resource Management Plan addresses all issues raised that are relevant for resolution by the Bureau of Land Management.

Bill Childress
Las Cruces District Manager/Monument Manager

10/28/15
Date

7 STATE DIRECTOR'S APPROVAL

I approve the Prehistoric Trackways National Monument Resource Management Plan. This document meets the requirement for a Record of Decision, as provided in 40 CFR Part 1505.2, and for a Resource Management Plan, as described in 43 CFR Part 1610 0-5(k).

Aden L. Seidlitz
Aden Seidlitz
Acting, New Mexico State Director

11/5/2015
Date

PREHISTORIC TRACKWAYS NATIONAL MONUMENT

APPROVED RESOURCE MANAGEMENT PLAN

Prepared by:

Bureau of Land Management
Las Cruces District Office
1800 Marquess Street
Las Cruces, NM 88005
November 2015

PREHISTORIC TRACKWAYS NATIONAL MONUMENT APPROVED RESOURCE MANAGEMENT PLAN

1 INTRODUCTION

In 1987, a major deposit of Paleozoic Era fossil footprints and trace fossils trackways were discovered in the Robledo Mountains in southern New Mexico. The deposit contains imprints of tracks, tail drags, burrows, and body impressions of numerous amphibians, reptiles, and insects (including previously unknown species), as well as impressions of plants and petrified wood that date to approximately 280 million years ago. Together, these types of fossils are known as ichnofossils. Ichnofossils are fossilized traces of actions and behaviors; they may include footprints, burrow casts, and body impressions. These paleontological resources collectively provide new opportunities to understand animal behaviors and environments from a time predating the dinosaurs. The area is located in the Bureau of Land Management (BLM) New Mexico Las Cruces District Office and covered by management outlined in the *Mimbres Resource Management Plan (RMP)* (BLM 1993). In 1990, Senator Jeff Bingaman and Congressman Joe Skeen introduced the Prehistoric Trackways Study Legislation (S. 2684 and H.R. 4945). In 1993, the legislation passed which led the BLM to contract with the Smithsonian Institution and the New Mexico Museum of Natural History & Science to conduct a study and prepare a report on the significance of the trackways discovery. The report states:

> *…evaluation indicates the Robledo Mountains tracksites are the most scientifically significant Early Permian tracksites known. The diversity, abundance and quality of the tracks in the Robledo Mountains is far greater than at any other known tracksites or aggregation of tracksites. Because of this, the Robledo tracks allow a wide range of scientific problems regarding late Paleozoic tracks to be solved that could not be solved before.* (The Paleozoic Trackways Scientific Study Report1994)

In 2008, Senator Bingaman introduced legislation to designate an area of public land in the southern Robledo Mountains as a National Monument . . . "*in order to conserve, protect, and enhance the unique and nationally important paleontological, scientific, educational, scenic, and recreational resources and values of the public land…."* The legislation was passed as part of the Omnibus Public Land Management Act of 2009 (the Act or Legislation) and designated 5,280 acres as the Prehistoric Trackways National Monument (PTNM or Monument) administered by the BLM. The Act as it pertains to PTNM is reprinted in Appendix A. This Legislation directs the BLM to develop a comprehensive management plan specifically for the Monument.

This land use plan provides direction for the Prehistoric Trackways National Monument consistent with the designating legislation and manages its resources using scientific principles and expertise. The BLM developed a Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) to analyze and consider measures to ensure that resources, objects and values are conserved, protected, and restored. The BLM then published a *Proposed RMP/Final EIS* that is now the basis for every on-the-ground action the BLM undertakes in the Monument.

Dromopus (dro-MOE-puss) – meaning "running foot". Illustration by Matt Celesky.

1.1 DESCRIPTION OF THE MONUMENT AND DECISION AREA

The Monument is located in the southern third of the Robledo Mountains and is approximately 10 miles northwest of the City of Las Cruces in Doña Ana County, New Mexico (see Map 1-1). The Robledo Mountains are a north-south trending fault-block and elevation varies from 5,876 feet on Robledo Mountain to about 4,100 feet at the southern end of the Monument. The area is characterized by an arid, continental climate with mild winters and warm-to-hot summers. Summer daytime temperatures often exceed 100°F. Average annual precipitation is slightly less than 9 inches; however wide variations in both temperature and precipitation are common.

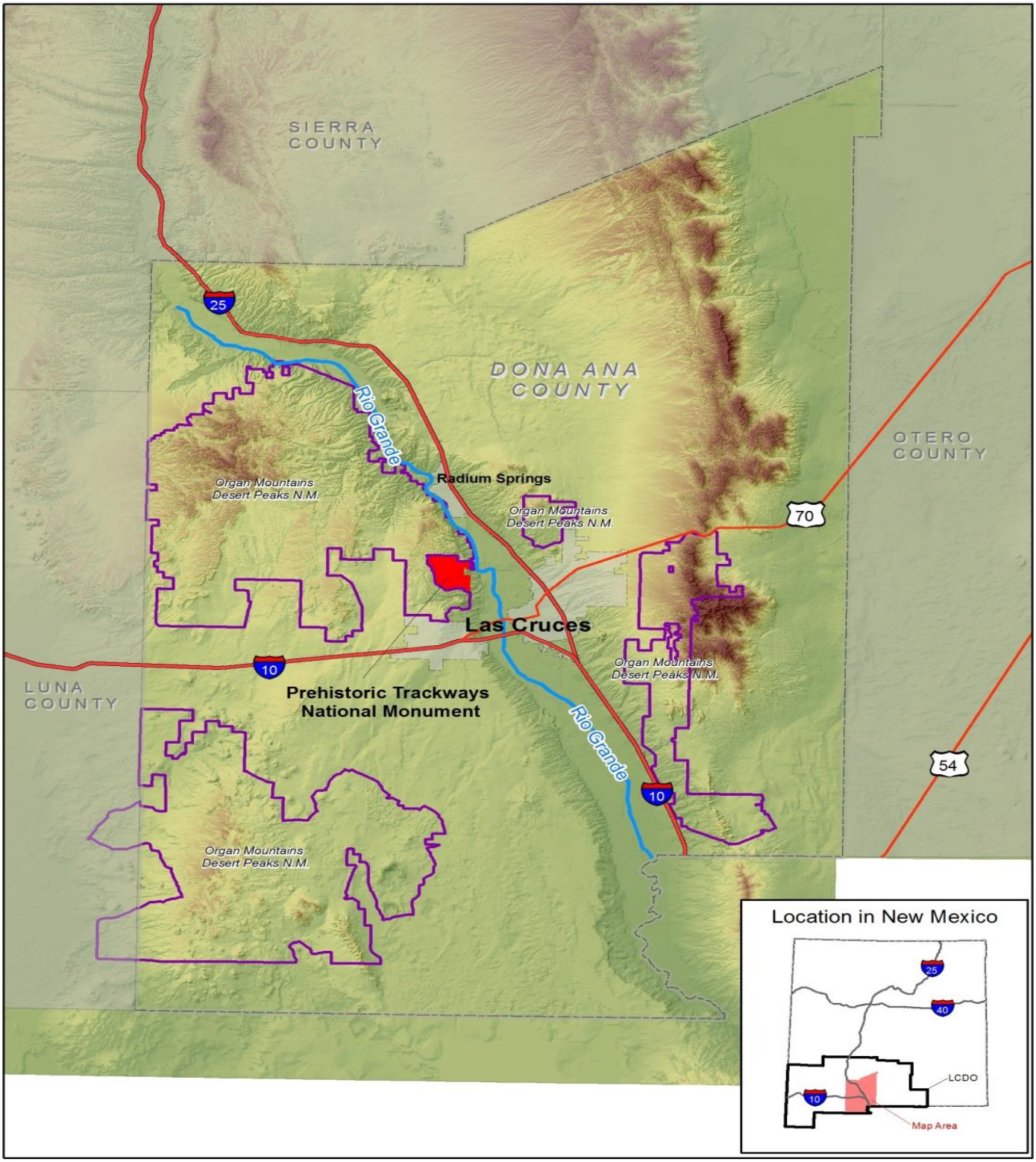
Vegetation in the Monument is sparse, dominated by Chihuahuan Desert shrub and grass species. Juniper trees are scattered along north slopes and arroyos. Shrubs include mesquite, yucca, whitethorn acacia, creosotebush, and mimosa, with agave and various cacti.

Wildlife of the Monument is typical of the Chihuahuan Desert, but also includes species that may be found along the Rio Grande and the nearby farming areas in the Mesilla Valley. Species found within the Monument include side-blotched lizards and marbled whiptail lizards, mule deer, black-tailed jackrabbits, and spotted ground squirrels. Common birds include mourning dove, Swainson's hawk, red-tailed hawk, Chihuahuan raven, greater roadrunner, black-throated sparrow, and Gambel's quail.

Prior to designation, a portion of the Monument was managed by the BLM as the Paleozoic Trackways Research Natural Area (RNA), as designated by the *Mimbres RMP* (BLM 1993). The management goals of the Paleozoic Trackways RNA were to protect, research, and interpret paleontological resources. The Robledo Mountains Area of Critical Environmental Concern (ACEC) was designated to protect paleontological and scenic resources in the *Mimbres RMP* as well. A portion of the ACEC (789 acres) is within the Monument. The ACEC boundary and the Robledo Mountains Wilderness Study Area (WSA) boundary overlap (Map 1-2). The Robledo Mountains WSA was designated in 1980 and since that time, the BLM has managed the area to preserve its wilderness character (BLM 1980).

The Robledo Mountains are used for many types of recreation, including hiking, mountain biking, fossil and rock collecting, hunting, horseback riding, camping, target shooting and off-highway vehicle (OHV) use. A system of designated OHV trails was authorized in 1997. The Robledo Mountains Off-Highway Vehicle Trails are used daily by casual OHV enthusiasts. The annual Chile Challenge OHV event has been permitted through the BLM Special Recreation Program since 2001. This is a Nationally-recognized "rock-crawling" activity that attracts both regional and international participants. In 2014, this event moved to lands outside the Monument.

Map 1-1 - Planning Area



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the BLM. Spatial information may not meet National Map Accuracy Standards. This information is subject to change without notification.

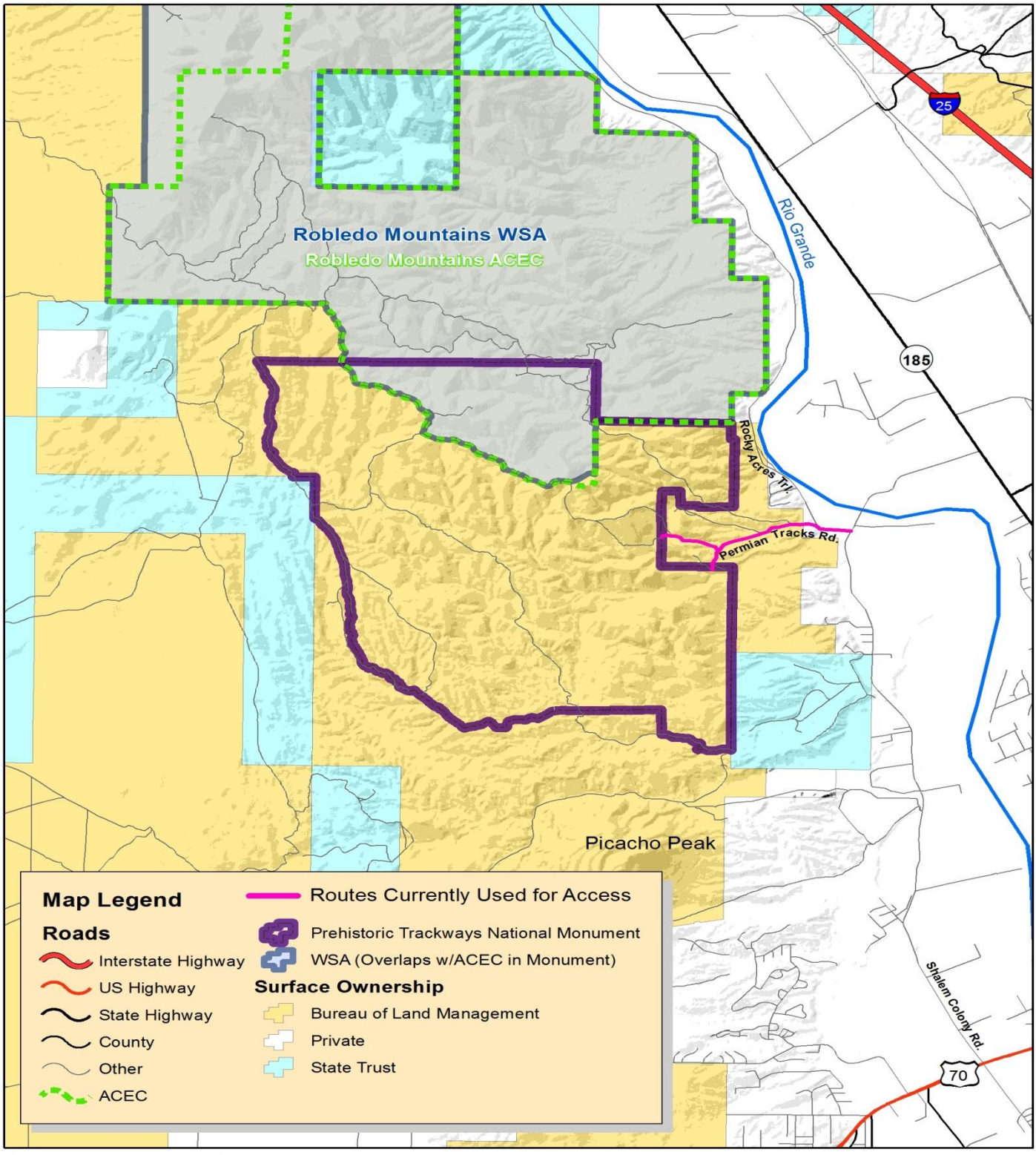
BLM GIS
Las Cruces District Office

N
W E
S

0 9 18 Miles

Projection: UTM, Zone 13
Datum: NAD 1983

Map 1-2 - Prehistoric Trackways National Monument



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the BLM. Spatial information may not meet National Map Accuracy Standards. This information is subject to change without notification.

BLM GIS
Las Cruces District Office

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Projection: UTM Zone 13
Datum: NAD 1983

In the 2009 Omnibus Lands Act, the acreage of the Monument is stated as 5,280. However, the acreage calculated using the BLM's Geographic Information System (GIS) layer for the Monument, shows a smaller acreage area of 5,255 acres. Because the acreage difference is relatively insignificant in comparison to the level of effort required to reconcile the data precisely, the BLM Planning Team has elected to use the GIS figures throughout the analysis. These differences are not large enough to change the outcome of the analysis.

The designating Legislation states: "*If additional paleontological resources are discovered on public land adjacent to the Monument after the date of enactment of this Act, the Secretary may make minor boundary adjustments to the Monument to include the resources in the Monument.*" If public land is added to the Monument, it will be administered following the same management decisions resulting from this document.

The **Decision Area** is the area for which decisions made in this RMP will apply. The Decision Area consists of 5,255 acres of Federal surface estate and 4,886 acres of Federal subsurface estate, designated as the PTNM (see Map 1-2).

The term **Planning Area** is used for some resources and resource use discussions outside the Decision Area. The Planning Area, Doña Ana County, includes public, private, and other government lands, and consists of 2,436,595 acres (see Map 1-1).

Kouphichnium (koof-ICK-nee-um) similar to Horseshoe Crabs.
Illustration by Mary Sundstrom

1.2 PURPOSE AND NEED FOR THE ACTION

The enabling Legislation established the need for the PTNM RMP, which requires that "*Not later than 3 years after the date of enactment of this Act, the Secretary shall develop a comprehensive management plan for the long-term protection and management of the Monument… The management plan shall describe the appropriate uses and management of the Monument, consistent with the provisions of the legislation.*" The purpose of the Monument RMP is to address resource management and public uses within the Monument as prescribed by the Legislation, including:

- Manage the Monument in a manner that conserves, protects, and enhances the paleontological, scientific, educational, scenic, and recreational resources and values of the Monument.

- The Secretary shall provide for public interpretation of, and education and scientific research on, the paleontological resources of the Monument, (with priority given to exhibiting and curating the resources in Doña Ana County, New Mexico).

- The use of motorized vehicles in the Monument shall be allowed only on roads and trails designated for use by motorized vehicles under the RMP.

- The Secretary may issue permits for special recreation events involving motorized vehicles within the boundaries of the Monument to the extent the events do not harm paleontological resources, and subject to any terms and conditions that the Secretary determines to be necessary.

Reptile tracks of Dromopus (dro-MOE-puss), meaning "running foot". Photo by Sebastian Voigt

1.3 SCOPING AND PLANNING ISSUES

BLM specialists and the public identified planning issues during internal and public scoping. The BLM then refined the preliminary planning issues and determined which issues would be carried forward and they are discussed below.

Paleontological Research and Protection

How will management actions address the legislative mandate of providing for resource protection and research of paleontological resources?

How will the management prescriptions address site protection and resource mitigation?

The paleontological resources of the Monument provide information and insight into the Permian Era. Research of the paleontological resources has increased the knowledge of the Permian Era environment and life forms that existed during this interval of geologic history. This research has also provided the BLM with information for public educational and interpretive materials.

The BLM has entered into a partnership with the New Mexico Museum of Natural History & Science (NMMNHS) to collect, record locality data, curate, research, publish, and provide educational materials relating to the paleontological resources discovered in what is now the PTNM. The NMMNHS continues to publish scientific information regarding the fossils of the Robledo Mountains through scientific journals. The NMMNHS is in the process of finalizing a report for the BLM that provides recommendations for the management of paleontological resources within the PTNM. The NMMNHS has also provided several trackways specimens through a long-term loan that are currently on exhibit at the Las Cruces Museum of Nature and Science.

Interpretation and Education

How will the management actions address the legislative mandate of providing for public interpretation of, and education and scientific research on, the paleontological resources of the Monument, with priority given to exhibiting and curating the resources in Doña Ana County?

What types of education and interpretation are best suited to protect fossils? Onsite? Off-site?

Since the designation of the Monument in 2009, the BLM has initiated education and interpretation activities. Park rangers regularly give programs for community groups and partnering agencies, host an annual K-5 paleontology day camp, visit classrooms, host field trips, and give guided hikes to the public. The PTNM is a BLM Hands on the Land Site – a National network of outdoor classrooms on public land. The Monument has a K-8 curriculum and school kit for in-classroom and field trip activities. There are two traveling trunk exhibits that are stationed in visitor centers around Las Cruces. In 2009, the BLM partnered with the NMMNHS, the Smithsonian's National Museum of Natural History and New Mexico State University's Creative Media Institute to make 10 podcasts in which scientists explain the scientific significance of the Trackways. As the on-site educational and interpretive programs expand, facilities such as trails with wayside interpretive exhibits may be needed.

The BLM has entered into a partnership with the City of Las Cruces Museums and assisted in developing the trackways exhibits for their new Museum of Nature and Science. The theme of the new museum is "*Trackways to Space*" and the centerpiece exhibit is a large sandstone trackway segment that includes

ichnofossils from a number of Permian species. There are several other exhibits that also interpret various aspects of the trackways and the Monument. This museum now serves as the primary gateway to educating the public on the resources of the Monument; future plans may include educational presentations and guided tours of the Monument.

Travel and Access

How can the BLM manage access to the Monument while protecting the resources?

Within the Monument are 37.6 miles of primitive roads. Most of these primitive roads were created in conjunction with the Robledo Off-Highway Vehicle (OHV) Trails, and they usually follow drainage bottoms. There are portions of some primitive roads that follow along prominent ridge lines. As primitive roads, these are not maintained and do not adhere to any BLM prescription for construction. Although these routes function as the primary vehicle access to the majority of the Monument, travel is limited to high clearance, 4-wheel drive vehicles. Technically, there are a variety of access points to the Monument. Many of these "*casual use*" access routes cross private or State trust lands.

Recreation

How will the BLM manage motorized use and protection of resources, objects, and values?

How will the BLM manage requests for special recreation permits?

How will the management actions address other various recreation opportunities such as camping, shooting, and fossil hunting while protecting Monument resources, objects, and values?

What opportunities will be available for visitor services and facilities?

The Monument is currently used for a wide variety of recreation. Mountain biking, hiking, OHV (including all-terrain vehicles, motorcycles, and full size 4-wheel drive vehicles), hunters, and visitors in search of a rugged, scenic experience, and naturalists hoping to glimpse evidence of a prehistoric environment all find a destination in the Monument. Some activities are no longer compatible with the legislative mandate for Monument management. Casual collection of fossilized material may disturb geologic formations that host significant Permian Age ichnofossil, and motorized activities may adversely affect fossils that are exposed within the vehicle footprint. These types of recreational opportunities may need to be monitored, restricted, or prohibited in order to adequately ensure the integrity of the fossil resources.

Wildlife, Livestock, and Vegetation

What management actions will protect wildlife and wildlife habitat?

How will livestock grazing be addressed within the Monument?

How will management of vegetative communities be addressed in the Monument?

Management must consider the potential impacts to wildlife and vegetation. Livestock grazing may continue, but the BLM must consider its potential impacts on the important paleontological resources.

Visual Resources

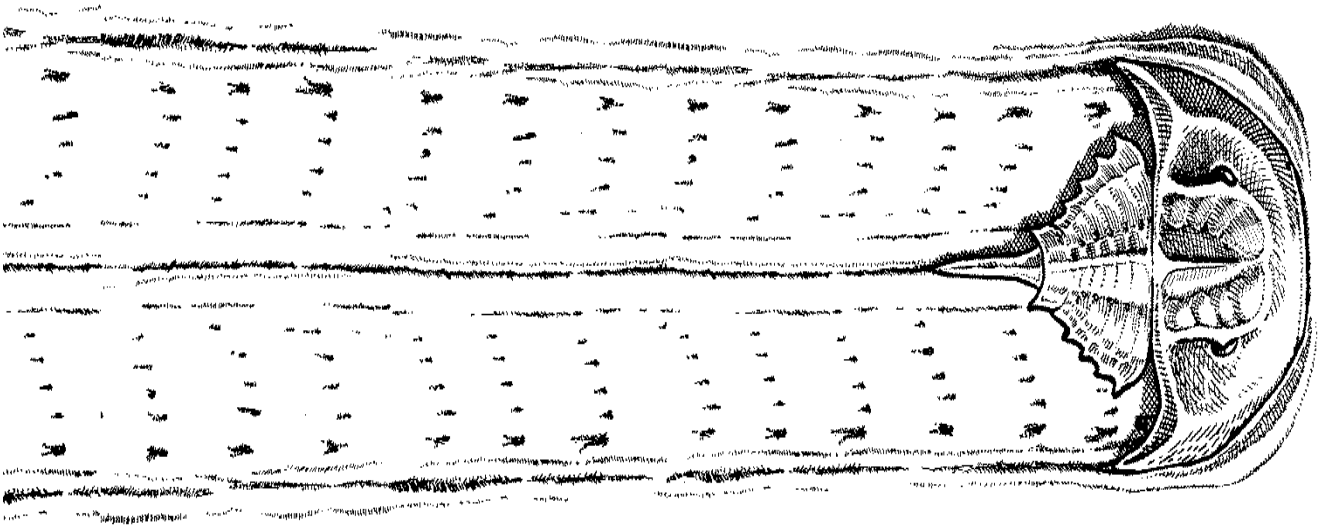
How will the BLM manage threats to scenic quality within the boundaries of the Monument?

The visual resources within the Monument must be considered while making management decisions.

Socio-economics

How will management actions impact economic and social opportunities in the community?

The Monument designation and management can impact economic and social opportunities for the local community through tourism, recreational opportunities, and livestock grazing. These impacts must be considered when analyzing the management alternatives.



Selenichnites (sel-EEN-ick-NIGHT-eez) meaning "moon-shaped trace". Illustration by Matt Celesky.

Issues Considered but Not Further Analyzed

During public scoping, the BLM received comments that referred to implementation decisions made through administrative or resource program guidance and do not require land use planning decisions in order to be resolved:

- Comments urging the BLM to organize or support a volunteer or advisory group for the Monument are documented in the Scoping Report, but will not be addressed in the RMP/EIS. Such actions can be resolved through administration or policy action. The BLM is committed to coordinating and collaborating with local groups, clubs, educational institutions, and agencies to protect and promote the resources of the Monument.

- A management concern for the BLM is the possibility of new legislation that would change the Monument boundary. The existing Legislation allows the Secretary of the Interior to make minor boundary adjustments to the Monument if additional paleontological resources are discovered on public land adjacent to the Monument. The Secretary of the Interior has the authority to make these adjustments independent of the RMP/EIS process. If additional lands are added to the Monument at a later date, these lands will be managed in accordance with the management decisions made in this RMP/EIS.

Actions regarding the adjacent Community Pit #1 are beyond the scope of the RMP for several reasons:

- Conditions in Community Pit #1 are hazardous and pose a danger to visitor safety; it has been closed to the public since 2010.

- Enhancing safety and reclaiming the Community Pit will be costly in terms of time and resources; creating a site suitable for inclusion within a National Monument will take many years.

- Community Pit #1 is outside the RMP Decision Area.

Cumulative impacts from the actions taken in Community Pit #1, however, will be addressed in the RMP/EIS.

1.4 PLANNING CRITERIA/LEGISLATIVE CONSTRAINTS

The BLM's land use planning guidance (Handbook H-1601-1) states that planning criteria are the constraints or ground rules that guide and direct the development of the RMP. The RMP planning criteria tailor the document to the identified issues and ensure that unnecessary data collection and analyses are avoided. Planning criteria for the PTNM RMP are as follows:

- The RMP will be consistent with *the Omnibus Public Land Management Act of 2009* (Appendix A), *New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management* (2001), FLPMA, NEPA, and all other applicable laws, regulations, and policies.

- The RMP will be in compliance with the BLM *National Monuments, National Conservation Areas, and Similar Designations Manual 6220*.

- The RMP will comply with the BLM *Management of Paleontological Resources 8270* Manual and Handbook and all applicable Instruction Memorandums (IMs):

- 2012-140 Collecting Paleontological Resources Under the Paleontological Resources Preservation Act of 2009
- 2012-141 Confidentiality of Paleontological Locality Information Under the Omnibus Public Lands Act of 2009, Title VI, Subtitle D on Paleontological Resources Preservation
- 2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources
- 2009-113 Casual Collecting of Common Invertebrate and Plant Paleontological Resources under the Paleontological Resources Preservation Act of 2009
- 2009-138 Confidentiality of Paleontological Locality Information under the Omnibus Public Lands Act of 2009
- 2008-009 Potential Fossil Yield Classification System for Paleontological Resources on Public Lands

- Land use decisions will apply to the surface and subsurface estate managed by the BLM.
- For program-specific guidance for decisions at the land use planning level, the process will follow the BLM's policies in the *Land Use Planning Handbook, H-1601*.
- BLM staff will strive to make decisions in the RMP compatible with the existing plans and policies of adjacent local, state, and Federal agencies and local American Indian tribes, as long as the decisions are consistent with the Legislation.
- BLM staff will work cooperatively and collaboratively with cooperating agencies and all other interested groups, agencies, local governments, tribes, and individuals.
- The planning process will provide for ongoing consultation with American Indian tribal governments and the public regarding strategies for protecting recognized traditional uses and heritage resources if such are subsequently identified within the Monument.
- Broad-based public participation and collaboration will be an integral part of the RMP process.
- In the RMP, the BLM will recognize the State's responsibility and authority to manage wildlife. The BLM will coordinate with the New Mexico Department of Game and Fish.
- The RMP will recognize valid existing rights.
- The RMP will incorporate, where applicable, management decisions brought forward from existing planning documents.
- The BLM will consider public welfare and safety when addressing recreational target shooting, hazardous materials, and fire management.
- The WSA will continue to be managed pursuant to FLPMA Section 603(c) and the BLM *Management of Wilderness Study Areas, Manual 6330*, until Congress either designates all or portions of the WSA as wilderness or releases the lands from further wilderness consideration.

- Where practical and timely for the planning effort, the best available scientific information, research, and new technologies will be used.

- GIS and metadata information will meet Federal Geographic Data Committee standards, as required by Executive Order 12906. All other applicable BLM data standards will also be followed.

- Local Fire Management Plan(s) will provide specific implementation strategies, evaluation criteria and accomplishment reporting as referenced in the fire management portion of the RMP.

- Planning and management direction will focus on the relative values of resources and not the combination of uses that will give the greatest economic return or economic output.

- Actions must comply with all applicable laws and regulations and must be reasonable, achievable, and allow for flexibility while supporting adaptive management principles.

- The RMP will identify specific goals, objectives, and actions for the use, conservation, protection, interpretation and possible restoration of the Monument's resources.

- The RMP will identify BMPs or mitigation measures to be applied to existing uses and planned uses to ensure protection of the Monument's resources, objects, and values.

As stated in the BLM Instruction Memorandum No. 2009-215:

> *. . ."according to Section 302(a) of FLPMA, the National System of Public Lands is to be managed under the principles of multiple use and sustained yield except that where a tract of such public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law."*

When an area of public land is set aside by an Act of Congress, the designating language is the controlling law. Therefore, as a general rule, if the management direction of the designating Legislation conflicts with FLPMA's multiple-use mandate, the designating Legislation supersedes that portion of FLPMA.

1.5 PLANNING PROCESS

The RMP process follows ten steps according to the BLM *Land Use Planning Handbook, H-1601*. These steps allow the BLM to act in accordance with NEPA and FLPMA.

NEPA requires that actions whose effects are expected to be significant and are not fully covered by an existing EIS be analyzed in a new EIS. Approval of an RMP is considered a Federal action that normally requires the preparation of an EIS. The public is encouraged to participate throughout the RMP process, and the BLM is mandated to support and allow for public participation and review. This process also requires the expertise of an interdisciplinary team of resource specialists to complete each step.

FLPMA mandates the BLM to prepare and maintain a current inventory of public land and its resources and values. It also mandates the BLM to develop, maintain, and where appropriate revise land use plans for the public land. Section 202 of FLPMA states that land use plans must observe and use the principles of multiple-use and sustained yield, use a systematic interdisciplinary approach, give priority to ACECs, rely on the available inventory of public land, consider present and potential uses, consider the scarcity of

the values involved, weigh the long- and short-term benefits, comply with applicable laws and regulations, and coordinate with state and local governments.

The designating Legislation also states that a comprehensive management plan for the long-term protection and management of the Monument shall be developed.

Development of the PTNM RMP followed the BLM land use planning process as outlined in the BLM *Land Use Planning Handbook (H-1601-1).* Below is a description of the steps of the process and how those steps were taken with respect to the PTNM RMP.

Step 1: Prepare to Plan

In January 2010, the BLM finalized the PTNM Preparation Plan. This Preparation Plan was developed to identify the preliminary planning issues and management concerns, identify data needs, identify potential cooperating agencies and public scoping opportunities, and create a schedule and budget.

Step 2: Issue Notice of Intent

On January 5, 2010, a Notice of Intent (NOI) was published in the *Federal Register* (Volume 75, Number 2, Pages 431-432), which notified the public of the BLM's intent to prepare the RMP/EIS and to begin public scoping.

Step 3: Scoping

The BLM held one formal scoping meeting in Las Cruces on January 26, 2010 to share information about the Monument, preliminary issues, and the planning process. The BLM asked the public for comments and suggestions regarding the management and interpretation of the natural, cultural, recreational, and scientific resources within the Monument. The results of the public scoping are found in the Scoping Report, Appendix F of the *Proposed RMP/Final EIS.*

Step 4: Analysis of Management Situation

The BLM analyzed available inventory data, portrayed the existing management situation, and identified management opportunities to respond to identified issues, which are presented in the *Analysis of Management Situation* (AMS). The AMS is the basis for formulating reasonable alternatives, and identifying the resources suitable for development or protection. This analysis also results in identification of the *"No Action Alternative"* - the baseline (current) management condition, which includes the Monument Legislation.

Step 5: Formulate Alternatives

Four alternatives are presented and analyzed in the RMP/EIS. These alternatives address planning issues identified by the Legislation and during both internal and external scoping and they meet the goals and objectives developed by the interdisciplinary team. In compliance with NEPA, CEQ regulations, and BLM planning policy and guidance, the alternatives are reasonable and can be implemented. These alternatives are described in detail in the *Proposed RMP/Final EIS* (December 2014).

Step 6: Analyze Effects of Alternatives and Select a Preferred Alternative

The resulting physical, biological, economic, and social impacts from implementation of each of the alternatives have been predicted and assessed (*Proposed RMP/Final EIS*, December 2014). The District

Manager evaluated the alternatives and estimated impacts. The District Manager then identified Alternative C as the preferred alternative and made this recommendation to the State Director.

Step 7: Preparation of the Draft RMP/EIS

The *Draft RMP/EIS* was distributed for a 90-day public comment period. In addition, a public meeting was held by the Las Cruces District Office in Las Cruces, New Mexico on August 7, 2012.

Step 8: Preparation of the Proposed RMP/Final EIS

After the comment period, the BLM evaluated comments and updated the RMP/EIS. The District Manager recommended a proposal to the State Director, who selected the Preferred Alternative. The Notice of Availability for the *Proposed RMP/Final EIS* was published in the *Federal Register* (Vol. 79, No. 248) on December 29, 2014. This initiated a 60-day Governor's Consistency Review and a 30-day protest period.

Step 9: Approval of the Record of Decision and Approved RMP

Upon the resolution of five protest letters, the BLM New Mexico State Director made a final decision regarding the selection of the Preferred Alternative as reflected in this Approved RMP and Record of Decision (ROD).

Unlike land use planning decisions, implementation decisions included in the *Proposed RMP/Final EIS* are not subject to protest under the BLM planning regulations, but are subject to an administrative review process, through appeals to the Office of Hearings and Appeals, Interior Board of Land Appeals pursuant to 43 CFR, Part 4 Subpart E. Implementation decisions generally constitute the BLM's final approval allowing on-the-ground actions to proceed. The Comprehensive Trails and Travel Management Plan is an implementation decision that takes effect with the signing of the ROD and is appealable to the Interior Board of Land Appeals. All Education and Interpretation Alternatives are Implementation Level Decisions to be carried out in the future after subsequent implementation planning and analysis. Livestock management and visitor facilities site planning are also implementation decisions that will require further NEPA analysis.

Step 10: Implementation and Monitoring of Planning Decisions

The BLM will formulate an implementation and monitoring plan after the RMP is finalized. This will provide for periodic evaluations (minimum every 5 years) to determine if management and mitigation measures are satisfactory for the resources. This will allow the BLM to detect any issues early on or to ensure that management goals are being met.

1.6 COLLABORATION

Tribal Consultation

Letters inviting participation in the planning process as cooperating agencies were sent in February 2010 to the following seven tribes: Fort Sill Apache Tribe of Oklahoma, Comanche Indian Tribe, White Mountain Apache, Pueblo of Ysleta del Sur, Pueblo of Isleta, Mescalero Apache Tribe, and Navajo Nation. In September 2011, three additional tribes were invited to participate as cooperating agencies: Pueblo of Acoma, the Pueblo of Laguna and the Pueblo of Tesuque. No tribe accepted the invitation to be a cooperating agency.

Cooperating Agencies

By definition, a cooperating agency is any Federal, state, or local government agency or Indian tribe that has either jurisdiction by law or special expertise regarding environmental impacts of a proposal. In January and February 2010 and September 2011, letters were sent to the following agencies inviting recipients to become a cooperating agency for this project: City of Las Cruces, Doña Ana County, New Mexico State Parks, New Mexico Museum of Natural History and Science, and the New Mexico Department of Game and Fish. Formal status for cooperating agency was not requested by any invited party. The State Historic Preservation Office was notified of the planning process, as required by Section 106 of the National Historic Preservation Act.

Other Stakeholder Relationships

Various groups not defined as cooperating agencies have worked with the BLM and provided valuable information: Las Cruces Museum of Nature and Science, Las Cruces Four-Wheel Drive Club, New Mexico State University, Paleozoic Trackways Foundation, Smithsonian Institution, and New Mexico Museum of Natural History & Science.

1.7 RELATIONSHIP TO OTHER PLANS

The BLM must ensure that land use plans are consistent where feasible with existing officially adopted related plans, policies or programs of other Federal and state agencies, Indian tribes, and local governments that may be affected (43 CFR 1610.3-1(d)(1)). The following plans were reviewed to determine whether they were relevant to the development of the Monument RMP:

Federal

The *Mimbres RMP*, as amended, approved in April 1993, provides general guidance on a landscape level for management in Doña Ana, Grant, Hidalgo, and Luna Counties. The *PTNM RMP* will supersede the *Mimbres RMP* for the Monument and provide the framework and prescriptions to implement Legislative directives. The *Mimbres RMP* for Doña Ana County is currently under revision and will be known as the *TriCounty RMP*. The *TriCounty RMP* does not analyze the PTNM nor will it modify decisions made in the *PTNM RMP*.

The Las Cruces District Fire Management Plan provides specific implementation strategies as referenced in the fire management portion of the RMP. *Standards for Public Land Health and Guidelines for Livestock Grazing Management* (2001) amends the *Mimbres RMP* and is the underlying guidance for livestock grazing decisions on BLM land in the Monument and throughout BLM land in New Mexico. Decisions from these plans are specifically addressed in the existing management guidance and alternatives.

State and Local Government Plans

This RMP is consistent with the following resource related plans of State and local governments as described in the *Proposed RMP/Final EIS*:

- *Doña Ana County, New Mexico Natural Events Action Plan Reevaluation 2005*
- *Statewide Comprehensive Outdoor Recreation Plan*
- *New Mexico Historic Preservation Plan*
- *The 2006 Comprehensive Wildlife Conservation Strategy*

- *2000 City of Las Cruces Extraterritorial Zoning Comprehensive Plan 2000-2020*
- *2005 Las Cruces Metropolitan Planning Organization Transportation Plan*
- *2004 Rio Grande Riparian Ecological Corridor Project Report*
- *Vision 2040 Regional Planning Project- City of Las Cruces and Doña Ana County*

1.8 MONUMENT RESOURCES, OBJECTS, AND VALUES

The BLM refers to the values described in the PTNM designating Legislation as Monument Resources, Objects, and Values (ROVs). The BLM's management approach must reflect the direction from Congress to conserve, protect, and enhance the Monument ROVs in accordance with FLPMA and other appropriate laws as a component of the National Landscape Conservation System. The PTNM was designated to "*protect the unique fossil resources for present and future generations*" and Congress directed the BLM to "*conserve, protect, and enhance the unique and nationally important paleontological, scientific, educational, scenic, and recreational resources and values*." The following legislative directives were considered in the development of the ROVs:

- Provide for public interpretation of, and education and scientific research on, the paleontological resources of the Monument.

- Enter into cooperative management agreements or other instruments with interested parties or agencies, as appropriate, to coordinate and collaborate management of the Monument.

- Continue to manage that portion of the Robledo Mountains WSA within the Monument.

- Continue to manage that portion of the Robledo Mountains ACEC within the Monument.

- The use of motorized vehicles in the Monument shall be allowed only on roads and trails designated in this plan for use by motorized vehicles.

- Subject to valid existing rights, close the Monument to entry, appropriation, or disposal under the public land laws.

- Subject to valid existing rights, close the Monument to location, entry, and patent under the mining laws; and the operation of the mineral leasing laws, geothermal leasing laws, and mineral materials laws.

Where ROVs are described in the designating legislation in broad categories, BLM identifies the specific resources that fall into those categories. The BLM has interpreted the PTNM ROVs to be the following:

Paleontological: Fossil resources are predominantly Permian Age fossil material, but may be expanded to encompass subsequent discoveries.

Scientific: Science-based research conducted on paleontological and geologic resources, especially Permian Age fossils and their geologic context.

Educational: Educational and interpretive opportunities on the Permian fossils.

Recreation: Recreational uses related to the enjoyment, appreciation, and protection of the fossil resources and their geologic context.

Scenic: Distinct geologic exposures of the Robledo Mountains in the context of the Permian fossils.

1.9 MISSION STATEMENT AND OVERALL VISION

The PTNM is a unit of the BLM National Landscape Conservation System (NLCS). The mission of the NLCS is to conserve, protect, and restore Nationally-significant landscapes that are recognized for their outstanding cultural, ecological, and scientific values. The PTNM was designated in order to conserve, protect, and enhance the unique and Nationally-important paleontological, scientific, educational, scenic, and recreational resources and values of the public land.

The PTNM preserves a moment in time when the world was poised on the brink of cataclysmic change that would usher in the era of the dinosaurs. Our vision is to tell this story to the Nation through education and interpretation, and through scientific research. The BLM will maintain the rugged and scenic setting while providing opportunities for recreationists to enjoy these lands now, and for future generations, while ensuring the sustainability and protection of the paleontological resources. We will work collaboratively with partners to optimize Monument management which will enhance our ability to serve the public and meet the needs of the Monument resources, objects, and values.

Batrachichnus (baa-track-ICK-nuss) meaning “frog trace”. Illustration by Mary Sundstrom.

2 MANAGEMENT DECISIONS

Here the goals and objectives for the Prehistoric Trackways National Monument (PTNM) are identified and defined. Guidance for land use planning in National Monuments is found in *Manual 6220-National Monuments, National Conservation Areas, and Similar Designations* (2012). This guidance directs the BLM to identify:

- management actions
- allowable uses
- restrictions
- management actions regarding any valid existing rights
- mitigation measures to ensure that the Monument resources, objects and values are protected

Goals and objectives were developed through the planning process for every applicable resource. Goals describe broad direction and desired conditions for each resource or resource use, as interpreted through the Monument resources, objects, and values, BLM policy guidance, and public scoping input.

Objectives describe more detailed outcomes or desired future conditions for different components of the resource or resource use that meet the overall goals. Objectives are usually quantifiable and measurable and may have established timeframes for achievement (as appropriate).

Walchia (WALL-chee-uh), conifer branch impressions. Photo by Spencer G. Lucas.

2.1 PALEONTOLOGICAL RESOURCES

GOAL 1: Conserve, protect and enhance unique and important paleontological resources and values in the PTNM while allowing for scientific research.

OBJECTIVE 1: Protect and enhance paleontological resources by ongoing research and documentation, which establishes the scientific, educational, or recreational merit of the localities.

OBJECTIVE 2: Facilitate research that increases our knowledge and understanding of the paleontological resources.

OBJECTIVE 3: Make all ensuing scientific material/data available to the public except locality data and certain details which are considered restricted for the preservation and protection of the resource. Ensure materials are properly curated.

OBJECTIVE 4: Actively work with organizations, schools, and the scientific community to provide for scientific research on the fossil resources.

Management Directives:

1. The BLM will develop a Monument Monitoring Plan within 2 years of the signing of the PTNM RMP ROD that will establish baseline conditions of fossil resources, and track changes to those resources based on management, research, and other factors (such as weathering).

2. The BLM will use the criteria for determining which localities are suitable for scientific research or interpretation, education, and recreation in accordance with the *Omnibus Public Land Management Act of 2009-Paleontological Resources Preservation* (16 USC 470aaa et seq.):

    a. Furthers paleontological knowledge or public education
    b. Provides additional information about the history of life on earth
    c. Increases public awareness about the significance of paleontological resources
    d. Promotes the scientific and educational use of paleontological resources
    e. Will not threaten significant natural or cultural resources
    f. Will not create risk of harm to, or theft or destruction of, the paleontological resources or the locality

3. All proposed research projects will be evaluated by the BLM staff, including the Regional Paleontologist, for all proposed paleontological research projects. The following items will be considered prior to authorization:

    a. An assessment of whether the proposed research is the appropriate current use of the resource
    b. An assessment of its priority level if there are multiple proposals
    c. An appropriate level of environmental analysis (NEPA)
    d. Incorporating project-specific stipulations for resource protection
    e. A final written determination, which will be in the form of an authorization

4. The BLM will identify research priorities and update or revise on an as-needed-basis.

5. The BLM will obtain copies of research projects and published research articles based on work conducted in the Monument and establish an in-house reference collection for primary research.

6. The BLM will maintain, encourage, and enter into partnerships or cooperative agreements with appropriate entities and individuals to conduct research within the Monument.

7. The BLM will provide existing GIS, or other data as available and appropriate, to qualified researchers when requested.

8. Localities deemed suitable for scientific research will be preserved and used for scientific research only. Localities appropriate for interpretation, educational and recreational use will be developed for that use.

Allowable, Restricted or Prohibited Uses:

1. Closed to casual collecting of common invertebrate and plant fossils and ichnofossils. A permit will be required for any collecting [16 USC 470aaa-3(e) at 123 Stat. 1174].

2. Collection of petrified wood will be allowed only with a permit (BLM Manual 8270.09 B. 1.).

3. Unauthorized collection of vertebrate fossils is not allowed under 43 CFR 8365.1-5 and the Paleontological Resources Protection Act (PRPA) (Public Law 111-11, Section 6034.a.1). Permits are required for the collection of vertebrate fossils, including their trace fossils, such as trackways and coprolites.

4. The PTNM legislation withdraws the Monument from operation under the mineral materials laws. The PTNM is closed to free-use or casual collection of petrified wood without a permit (43 CFR, 3622; BLM Manual 8270 .09 B. 1; and PRPA Public Law 111-11 Section 6304.e.).

5. Paleontological resources collected under a research permit will be stored in Federally-approved repositories as government property for research, and used in exhibits. Paleontological collection permits will be issued with consideration of protecting the integrity of the site from which it is being collected, the protection of the resources, and the value of the scientific research or educational aspect for which it will be collected.

6. All contractors, cooperators, partners, volunteers, and permittees conducting or assisting with scientific activities in the Monument must comply with the requirements of the Department of the Interior and the BLM policies on scientific integrity, including professional conduct.

Batrachichnus (baa-track-ICK-nuss), small amphibian tracks with tail drag. Photo by Sebastian Voigt.

2.2 EDUCATION AND INTERPRETATION

GOAL 1: Provide interpretive and educational opportunities supporting and protective of the fossil resources.

OBJECTIVE 1: Partner with organizations (e.g. museums, research and academic institutions) on local and National levels to assist the BLM in providing educational and interpretive opportunities to the public within the Monument.

OBJECTIVE 2: Develop interpretive trails and visitor facilities.

Management Directives:

1. Continue BLM and partner-led interpretive tours to the *Discovery Site* and other appropriate sites.

2. Develop interpretative materials for programs and events.

3. Develop a K-12 paleontological curriculum, in partnership with local school districts, in accordance with State/National standards.

4. Develop paleontological and other natural resources interpretive materials for websites.

5. Develop and deliver paleontological interpretive and educational programs to school and civic groups.

6. Support the development of paleontological exhibits for venues in Doña Ana County and beyond.

Implementation Level Decisions:

1. Develop interpretive materials on paleontological resources such as wayside exhibits, brochures and smart phone applications to support self-guided interpretive activities.

2. Develop interpretive programs on paleontological resources for ranger or docent-led field tours of the PTNM for school groups and for public and civic groups.

3. Develop pedestrian trails with orientation kiosks (with or without brochures) and wayside exhibits interpreting PTNM resources in place, based on the site development plan described in Recreation and Visitor Services.

4. Develop exhibits for on-site interpretation at a visitor contact station(s) and other destinations. A Visitor Contact Station is a minimal facility that is a point of contact for BLM staff or volunteers to be available to interact with the public and does not necessarily provide a range of amenities such as indoor restrooms or exhibits. It is a building, or possibly a shade shelter, where public can expect to find information about PTNM.

2.3 RECREATION AND VISITOR SERVICES

GOAL 1: Plan recreational opportunities that protect unique and Nationally-important paleontological values of the PTNM.

OBJECTIVE 1: Manage approximately 4,227 acres for front-country public visitation. Manage approximately 800 acres of the Robledo Mountains WSA and 253 acres of lands with wilderness characteristics for primitive visitation classification.

OBJECTIVE 2: Manage recreation in a safe and reasonable manner while protecting and enhancing the Monument's paleontological resources, with emphasis on Leave No Trace principles.

OBJECTIVE 3: Designate the Monument as an Extensive Recreation Management Area (ERMA) to support and sustain paleontological resources.

Management Directives:

1. Manage the Monument to provide visitor safety and minimize user conflicts. Visitors engage in self-directed recreation. The BLM will install minimal directional and informational signs for fossil resources, and basic improvements to reduce impacts from recreation activities and to assist in the visitor experience.

2. Primary recreation activities are permitted OHV use, mountain biking, hiking, horseback riding, picnicking, camping, hunting, and sightseeing.

3. Visitors may develop outdoor recreational skills; spend time with one's self or in small groups; enjoy nature, fossil resources, landscapes, and physical rest; and escape personal/social pressures. They may experience improved physical and mental health; skills for outdoor enjoyment; relationships with family and friends; awareness of public and private lands; and become more outdoor-oriented. Visitation to the monument leads to self-renewal, pride in one's community and heritage, greater family bonding.

4. Visitors also experience increased awareness and protection of distinctive natural, paleontological and landscape features, and reduce negative impacts such as litter and vegetative trampling.

Allowable, Restricted or Prohibited Uses:

1. Designate 5,255 acres as ERMA.

2. Recreational target shooting will be prohibited.

3. Closed to casual collection of minerals, petrified wood and paleontological resources (See Section 2.1, Paleontological Resources).

4. Dispersed camping will be allowed. If resource damage is demonstrated as a result of dispersed camping, primitive campsites will be developed. To deter resource damage, the BLM will sign sensitive areas as "no camping," reduce evidence of inappropriate camping and educate visitors to use Leave No Trace principles. However, if the Monument Monitoring Plan demonstrates impacts to resources, objects, and values from dispersed camping, a primitive campground and designated camping areas will be established within, or on lands adjacent to, the Monument. Monitoring criteria

that will establish the need for a primitive campground include: campsites and fires near or on sensitive paleontological sites, large campsites damaging vegetation and/or game trails, and camping on routes. If a primitive campground is established, campfires will be limited to designated campsites with campfire rings.

5. The BLM will authorize commercial, competitive, and organized group activities on a discretionary, case-by-case basis per 43 CFR Part 2930, Special Recreation Permits, and in compliance with NEPA.

6. SRPs for OHV events will be limited by the following requirements, or other restrictions that provide for the protection of fossil resources:

    - Will not degrade fossil resources;
    - No more than three permitted OHV events per year (first-come, first-served, no multiple year events permits will be considered);
    - No permits will be issued for OHV events lasting for more than 4 consecutive days.
    - No more frequently than 1 every 3 months;
    - No more than 250 vehicles per event;
    - No more than 20 vehicles per "*run*";
    - No more than two "*runs*" per trail route will be authorized during each event;
    - Only Registered Event vehicles (including event support and BLM staff vehicles) will be allowed on the routes, during the event.

Implementation Level Decisions:

1. BLM will prepare an activity and site development plan to explore opportunities in locating an appropriate site to install, staff, and maintain a Visitor Contact Station within or adjacent to PTNM to house interpretive exhibits and to use for interpretive programs (multi-purpose use).

2. BLM will prepare an activity and site development plan to explore opportunities in locating appropriate sites to develop visitor facilities. This plan will include possibilities to install, develop, and maintain toilets, shade shelters, information kiosks, trail markers, and picnic sites.

3. BLM will prepare an activity plan to identify opportunities for a trail system for recreational opportunities (bike, OHV, hiking, etc.).

2.4 TRAILS AND TRAVEL MANAGEMENT

GOAL 1: Designate and manage areas in the Monument to the appropriate level of motorized and mechanized vehicle use so that fossils are protected. Areas must be classified as *open*, *limited*, or *closed* for motorized travel activities.

*OBJECTIVE 1***:** Develop a Comprehensive Trails and Travel Management (CTTM) Plan to identify and designate routes within the Monument according to type and condition of use (see Appendix D).

*OBJECTIVE 2***:** Determine appropriate level of maintenance for mechanized or motorized access to the Monument.

Allowable, Restricted or Prohibited Uses:

1. The portion of the Robledo Mountains WSA located within the Monument is CLOSED to motorized and mechanized use (789 acres).

2. The area to be managed as lands with wilderness characteristics is CLOSED to motorized and mechanized use (253 acres).

3. Motorized and mechanized travel will be LIMITED (this acreage will be the remaining 4,213 acres) to designated routes. Recreational use by motorized and mechanized vehicles (not associated with a permitted event) will require a no-fee Day Use Pass. These passes, along with maps and resource protection information, will be available online and at the local BLM office.

4. PTNM will be LIMITED to designated routes for recreational use by mechanized vehicles. The *SST* Mountain Bike Trail is open for year-round mechanized and non-motorized use (see Map 2-1)

5. Exceptions to OHV travel restrictions or closures may be authorized for any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes, and any vehicle in official use or expressly authorized in writing by the authorized officer.

6. Dispersed pedestrian recreation will be allowed.

7. The Monument will be open to equestrian use.

Implementation Level Decisions:

1. Where off-road vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until they are eliminated and measures implemented to prevent recurrence (43 CFR §8341.2). The Monument Monitoring Plan will track changes to fossil resources based on trails and travel management actions. Based on the findings of the CTTM Plan, implementation-level closures to certain routes are proposed across the various alternatives. Any future closures would be additional implementation-level decisions.*

2. A total of 33.2 miles of current routes will be available for motorized or mechanized use.*

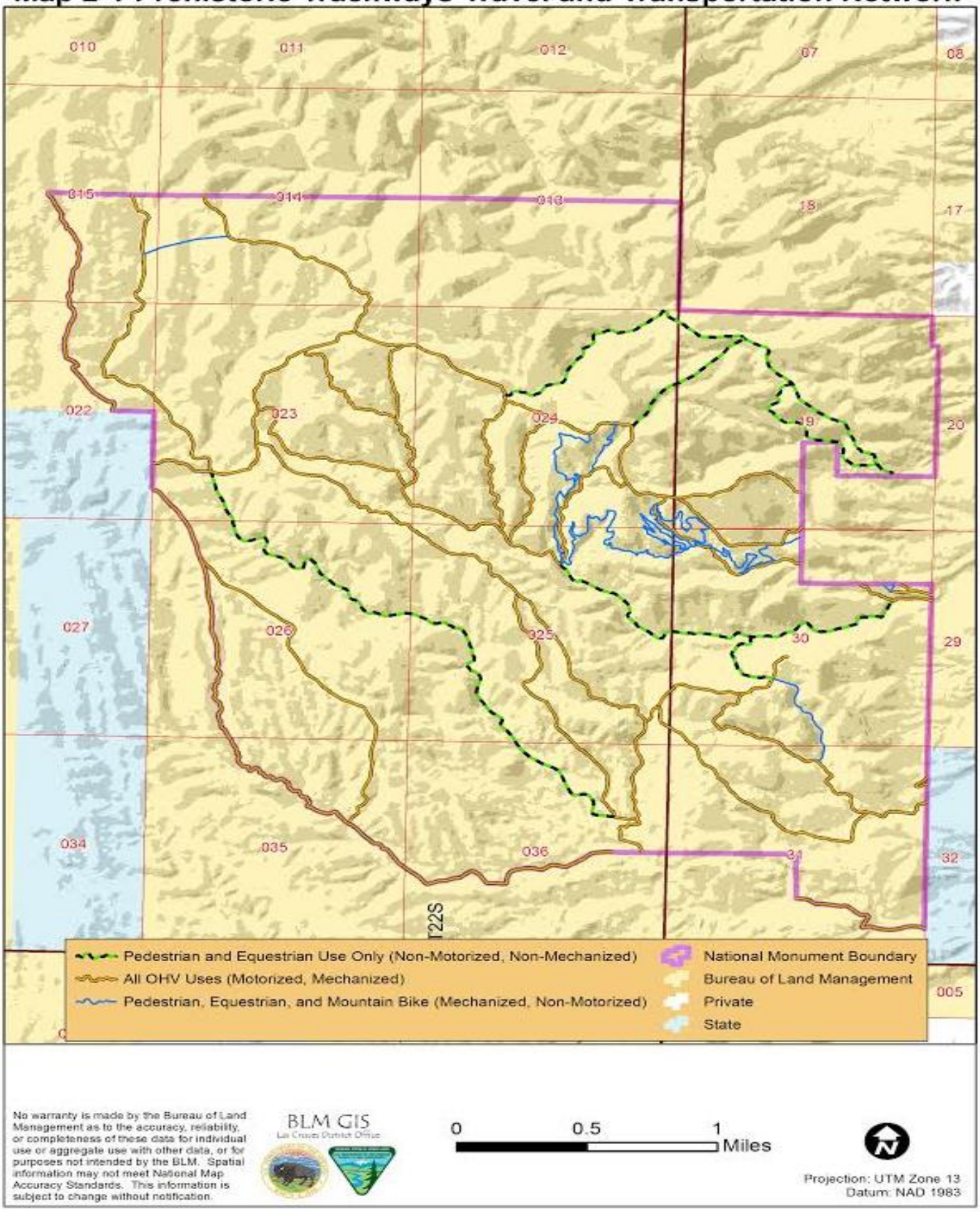
3. A total of 4.9 miles of previously designated OHV routes will be closed to motorized and mechanized vehicle use to protect fossil resources from their impacts (see Map 2-1 and Appendix D):*

    - Tabasco Twister OHV Route - 2.7 miles
    - Patzcuaro's Revenge OHV Route - 1.8 miles
    - Cayenne Crawler - 0.4 miles

4. Designated routes that do not damage sensitive resources could be maintained or improved as necessary to facilitate designated visitor use.**

* This is an Implementation Decision and not a Land Use Planning Decision.
****** This is an Implementation Level Decisions to be carried out in the future after subsequent implementation planning and analysis.

Map 2-1 Prehistoric Trackways Travel and Transportation Network



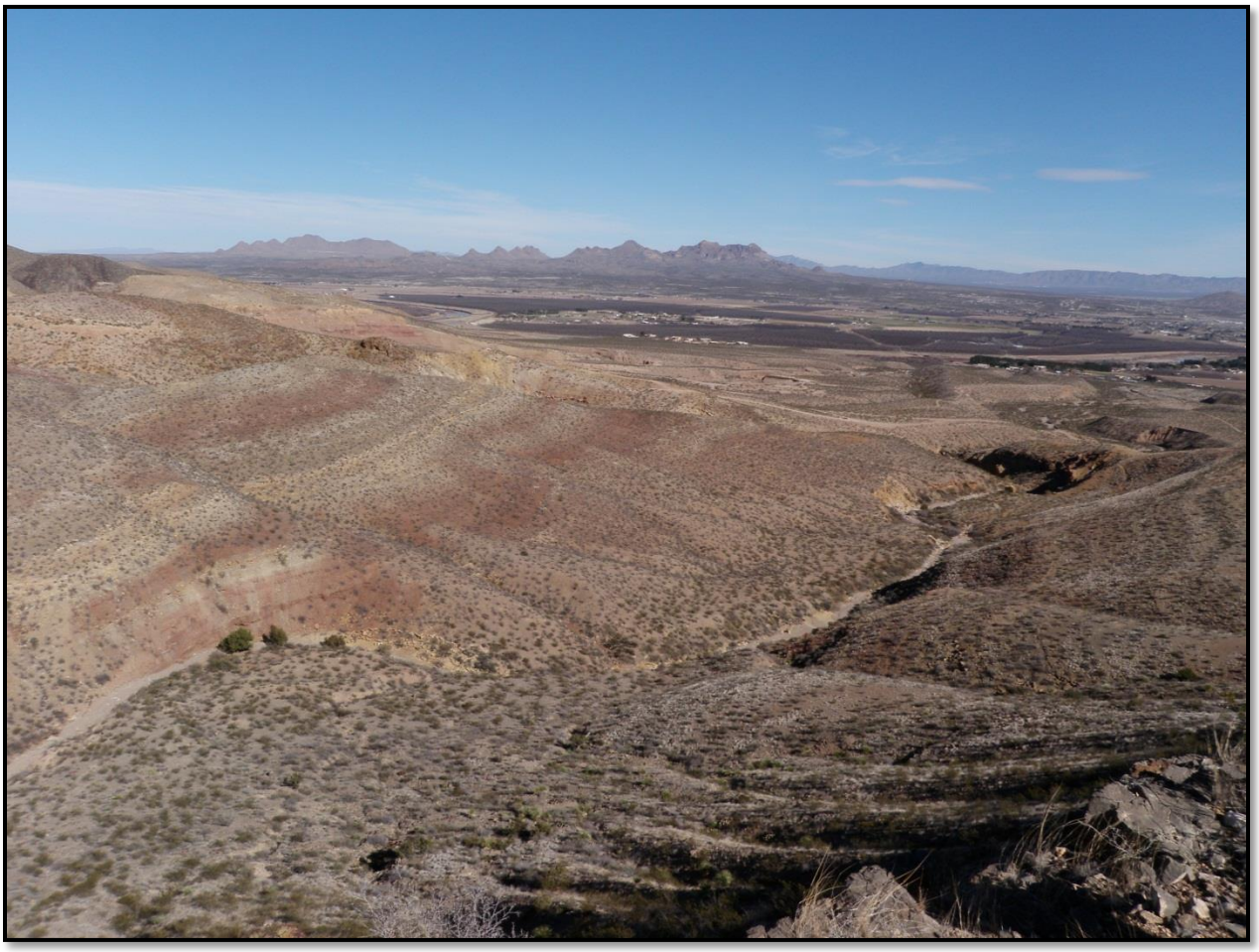
2.5 AIR RESOURCES

GOAL 1: Manage uses to maintain Federal, State and local air quality standards.

*OBJECTIVE 1***:** Manage activities on public land to maintain air quality consistent with the Clean Air Act and FLPMA.

Management Directives:

Prevent and reduce air quality impacts from authorized activities on public land by implementing mitigation measures developed on a case-by-case basis, described in Appendix B. These processes would be applicable to all BLM authorized activities.



Eastern edge of the Monument.

2.6 CULTURAL RESOURCES

GOAL 1: Identify, preserve, and protect significant cultural resources and ensure they are available for use by present and future generations consistent with the BLM cultural resources program and appropriate to the goals of the PTNM.

*OBJECTIVE 1***:** Recognize potential public and scientific uses of cultural resources within the Monument, managing them in such a manner that these values and uses are appropriately protected.

*OBJECTIVE 2***:** Protect and preserve in place representative examples of the full complement of cultural resources that may exist within the Monument.

GOAL 2: Reduce imminent threats and resolve potential conflicts from natural or human caused deterioration, or potential conflict with other resource uses consistent with the BLM cultural resources program and appropriate to the goals of the PTNM.

*OBJECTIVE 1***:** Ensure that proposed land uses avoid inadvertent damage to cultural resources on Federal, State, and non-Federal lands.

Management Directives:

1. Cultural resource inventories will be done in response to specific land-use proposals in accordance with Section 106 of the National Historic Preservation Act (NHPA).

2. Should at a later time a Native American entity express concern about a specific place or resource, the BLM will consult accordingly.

3. The BLM will comply with Section 106 of the NHPA through the National Programmatic Agreement and the Protocol Agreement between New Mexico BLM and the State Historic Preservation Officer.

Allowable, Restricted or Prohibited Uses:

1. Allocate historic properties to either scientific use or discharge from management. The latter are sites that have been determined to be not eligible or no longer eligible for the National Register of Historic Places; therefore no longer constituting a historic property requiring a management action.

2.7 LANDS AND REALTY

GOAL 1: Manage the acquisition of lands or interests therein to meet the mandates of the Monument Legislation.

OBJECTIVE 1: Retain all public land within the PTNM in Federal ownership.

GOAL 2: Manage rights-of-way and land use authorizations within the Monument to meet the needs of the BLM and Monument Legislation.

OBJECTIVE 1: Acquire the mineral estate within the boundaries of the Monument to further protect the overall purposes of the Monument.

Management Directives:

1. Federal land within the PTNM is withdrawn from entry, appropriation, or disposal under the public land laws. Federal land is not open to disposal through land exchange, land sales, State grants, Recreation and Public Purpose Act leases or sales, desert land entries, Indian allotments or commercial or agricultural leases.

2. Public land within the PTNM will continue to be classified for retention under Section 7 of the Taylor Grazing Act, as amended (43 U.S.C. 315f).

3. If additional lands and minerals are added to the Monument at a later date, these lands will be managed in accordance with the management decisions made in this RMP.

4. The BLM will attempt to acquire access easements for public use from private landowners. Easements will be acquired only from willing sellers and will be in accordance with the provisions of Section 205 of FLPMA.

5. Non-Federal mineral estate will be acquired only from a willing seller. Acquisition of the mineral estate will be in accordance with the provisions of Section 205 of FLPMA.

6. The PTNM will be excluded from commercial communication site, transmission line, solar, and wind energy rights-of-way.

7. Realty actions such as rights-of-way or land use authorizations will be allowed within the Monument that are compatible with the values identified in the PTNM, while respecting existing uses. New uses will be in accordance with the provisions of Title III and Title V of FLPMA.

8. Retain all public land.

Allowable, Restricted or Prohibited Uses:

1. Acquire approximately 640 acres of all non-Federal mineral estate within and adjacent to the Monument in sec. 36, T. 23 S., R. 1 W. (See Map 2-2.)

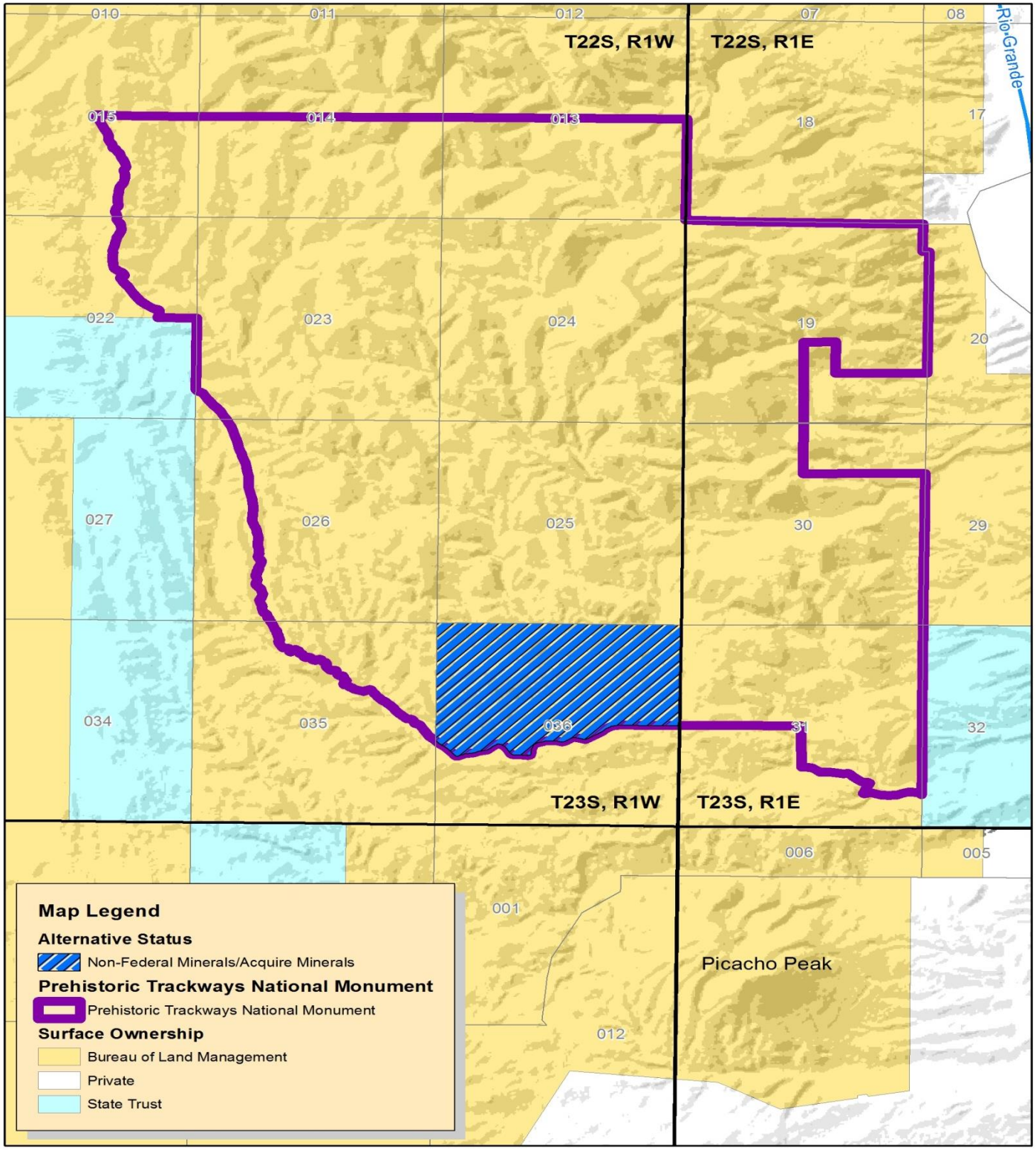
2. Exclude new right-of-way authorizations, except when uses of the rights-of-way would further the purposes for which the Monument was established or when mandated by law.

3. Access routes can be considered on a case-by-case basis.

4. Existing rights-of-way within exclusion areas are recognized as grandfathered; operation, maintenance, and renewal of these facilities will be allowed to continue within the scope of the right-of-way grant.

5. Surface and non-surface disturbing activities will be authorized on a case-by-case basis.

Map 2-2 - Minerals Acquisition



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2.8 LANDS WITH WILDERNESS CHARACTERISTICS

GOAL 1: For lands with wilderness characteristics identified for protection in the RMP, maintain wilderness characteristics by preventing incompatible activities.

GOAL 2: For lands with wilderness characteristics not identified for protection in the RMP, allow for activities that do not conform to the maintenance of wilderness characteristics while minimizing the impacts of the activity to the extent possible.

*OBJECTIVE 1***:** Manage surface disturbing activities such that the natural quality of lands with wilderness characteristics identified for protection is maintained.

Management Directives:

1. Manage the 253 acres (located in sec. 19, T. 22 S., R. 1 E.; see Map 2-3) that is contiguous with the Robledo Mountains WSA to maintain wilderness characteristics.

2. Manage as an exclusion area for rights-of-way.

3. Manage as a Visual Resource Management (VRM) Class I.

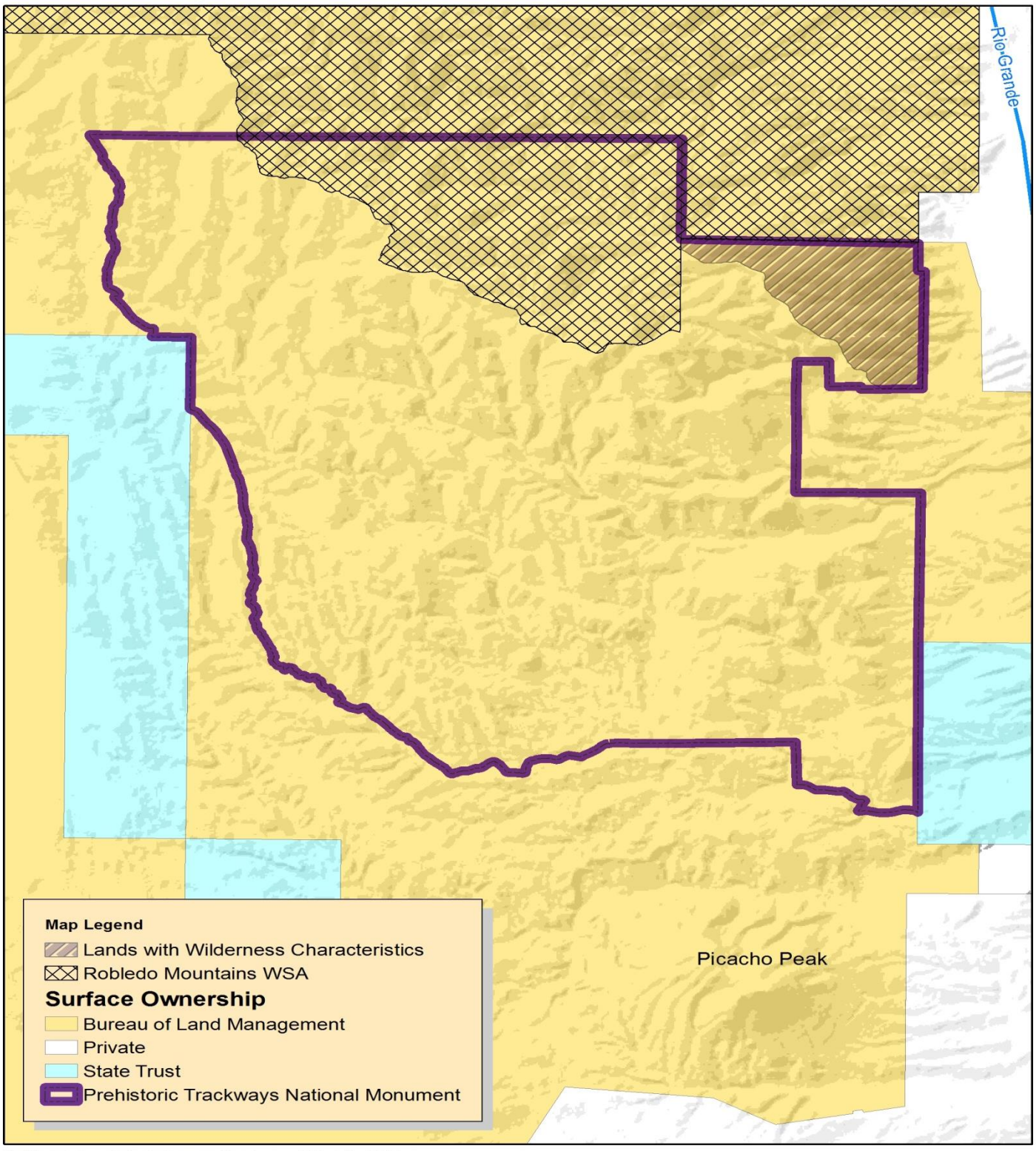
Allowable, Restricted or Prohibited Uses:

1. Prohibit all surface disturbing activities except those associated with permitted scientific exploration and emergencies.

2. Close to motorized and mechanized vehicles.

3. No new trails or interpretation signage will be constructed within the area.

Map 2-3 - Lands with Wilderness Characteristics



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2.9 LIVESTOCK GRAZING

GOAL 1: Manage livestock grazing on public land in a manner that ensures progress toward achieving the *New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management* (BLM 2001). The Standards and Guidelines are consistent with protecting the resources, objects and values for which the Monument was designated.

OBJECTIVE 1: Maintain quality and quantity of key forage and browse species for use by livestock and wildlife through continued implementation of appropriate grazing systems and management practices.

Management Directives:

1. Continue monitoring range health and productivity within the National Monument to ensure standards for public land health are being achieved.

2. Existing rangeland improvements will be maintained (See Map 2-4).

3. New rangeland improvements will not be authorized in the Robledo Mountains WSA.

Allowable, Restricted or Prohibited Uses:

1. Livestock grazing will be allowed when consistent with applicable laws and regulations and with protection of the Monument objects.

2. Existing rangeland improvements will continue to be maintained by the assigned entity for livestock and wildlife use.

3. Implement new rangeland improvements as needed within the Monument to facilitate livestock management and minimize conflicts with other uses and management objectives.

4. Forage increases as a result of grassland restoration treatments will first be reserved to meet the needs for watershed function. Forage in excess of those needs will be allocated to wildlife and livestock with wildlife receiving priority over livestock.

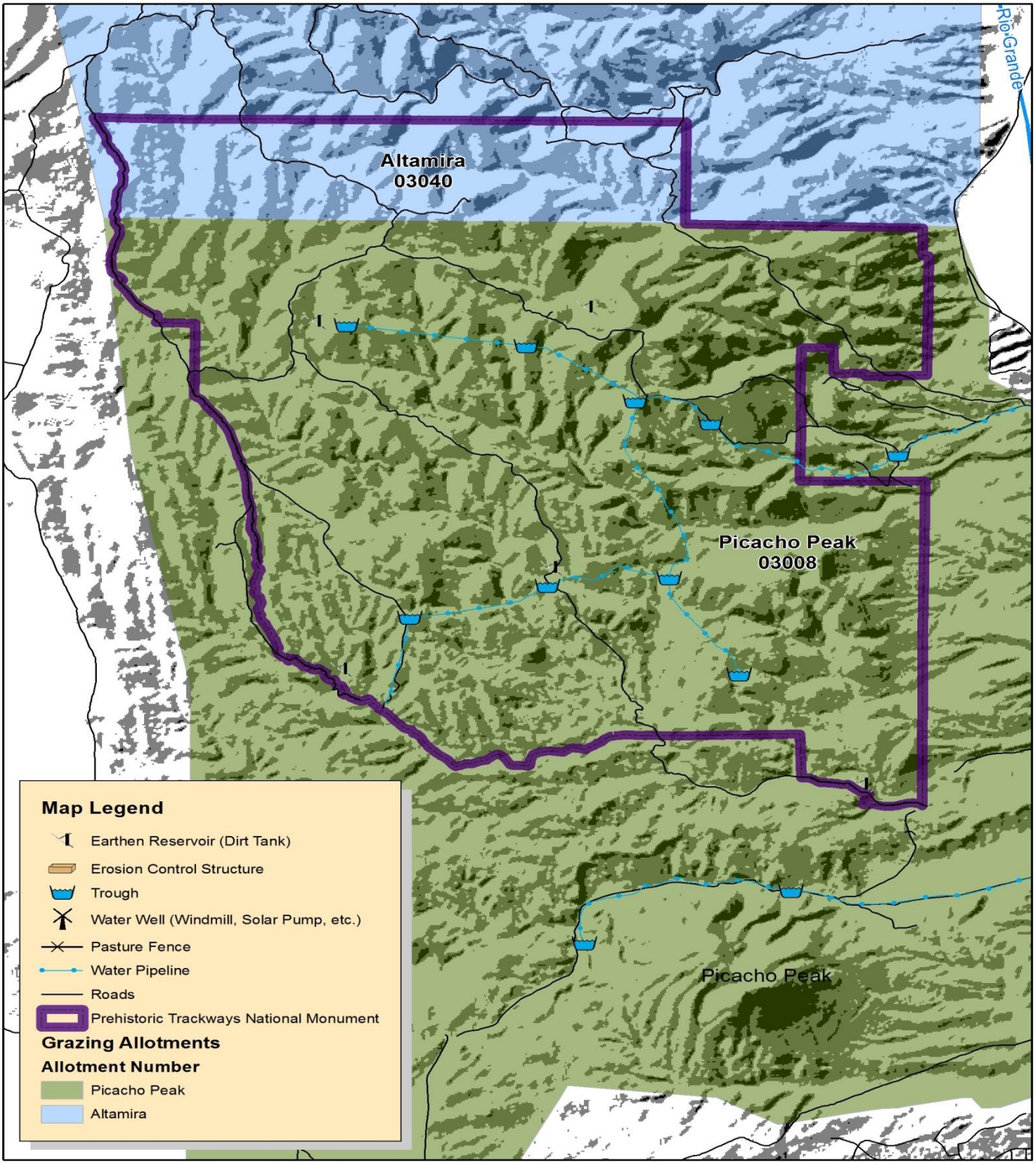
Implementation Decisions:

1. Develop a Monument Monitoring Plan within 2 years of the signing of the PTNM RMP Record of Decision. If monitoring indicates fossil resources or other Monument objects require protection from livestock, adjust the allotment management plan to exclude grazing from specific sites.

2. Adjustments could be made to the allotment management plan, in consultation with the permittee, to change grazing systems, number of livestock and season of use as needed.

NOTE: These are Implementation Decisions to be carried out after subsequent implementation planning and analysis.

Map 2-4 - Livestock Grazing Allotments



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2.10 SOILS

GOAL 1: Meet or move toward upland health standards consistent with the *New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management* (2001) to protect and restore natural ecosystems and the fossil resources.

OBJECTIVE 1: Maintain and restore watersheds through enhanced soil stability and productivity, increased soil moisture, decreased erosion, and thriving desired vegetation communities.

*OBJECTIVE 2***:** Stabilize soils and hydrologic processes by maintaining appropriate amounts of standing live vegetation and protective litter or rock cover, and minimize surface disturbances.

Management Directives:

1. Soils will be managed to meet the *New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management* (2001).

2. Develop a Monument Monitoring Plan within 2 years of the signing of the PTNM RMP Record of Decision that will identify locations where soil erosion may impact fossil resources.

Allowable, Restricted or Prohibited Uses:

1. Manage soil resources and areas needing restoration using both passive and active methods, with an emphasis on non-structural approaches whenever possible, to increase the site stability and the hydrologic function to the capability of the ecological site.

2. Passive restoration methods will focus on prohibiting surface disturbing activities that will result in unnatural degradation of soil resources and allow soil recovery and production to occur through natural processes. Passive methods could include, but not be limited to, removing grazing, closing roads and trails, and prohibiting actions requiring heavy machinery.

3. Active restoration methods will include maintenance and rehabilitation of soil resources through actions such as construction of water-bars, dikes, drop-structures, re-contouring, and seeding.

4. Stabilize and rehabilitate areas where accelerated erosion, runoff, and physical or chemical degradation have resulted in unacceptable soil conditions through the use of non-structural approaches whenever possible.

5. Prohibit new surface disturbing activities for areas that contain a high potential for soil erosion and storm water runoff, except for activities required to meet resource goals and objectives, provided impacts could be fully mitigated.

2.11 SPECIAL DESIGNATIONS

Robledo Mountains Area of Critical Environmental Concern

GOAL 1: Designate and manage areas that have special values, meet the relevance and importance criteria, and require special management to prevent risk of loss of or damage to those values.

OBJECTIVE 1: Manage ACECs where relevance and importance criteria are met and special management is required to protect the identified values.

Management Directives:

1. Follow the Robledo Mountains ACEC management prescriptions described in the Mimbres RMP to protect biological, cultural, scenic, research values, and interpret paleontological values. Management will follow these prescriptions:

    a. Retain all public land.
    b. Limit vehicle use to designated roads and trails.
    c. Exclude authorizations for new rights-of-way.
    d. Withdraw from location, entry, and patent under the mining laws.
    e. Withdraw from the mineral leasing laws, geothermal leasing laws, and mineral materials laws.
    f. Acquire legal public access.
    g. Maintain current livestock grazing practices.
    h. Allow natural fires to burn under prescribed conditions.
    i. Manage for primitive and semi-primitive recreation opportunities (no developed facilities).
    j. Manage as VRM Class I.

Robledo Mountains Wilderness Study Area

GOAL 1: Manage areas that have special values to prevent risk of loss or damage to those characteristics and values.

OBJECTIVE 1: Prevent impairment of the WSA suitability for preservation as wilderness by protecting naturalness, and outstanding opportunities for solitude and a primitive, unconfined type of recreation.

Management Directives:

Recreation opportunities within the Robledo Mountains WSA portion of the Monument (See Map 2-3) will remain primitive with no motorized or mechanized vehicle traffic in order to preserve the wilderness characteristics. The WSA will be managed in accordance with BLM Manual 6330.

Paleozoic Trackways Research Natural Area

GOAL 1: Manage the fossil resources within the Paleozoic Trackways RNA to prevent loss or damage.

OBJECTIVE 1: Manage resources according to the designating Legislation to protect, research, and interpret paleontological resources.

Management Directive:

1. The Paleozoic Trackways RNA designation will be discontinued within the Monument. Resources will be managed according to the Legislation and the management actions determined in this RMP.

2.12 SPECIAL STATUS SPECIES

GOAL 1: Manage public land to maintain, restore, improve or enhance habitats that lead to the recovery of Federally-listed species populations and preclude the need for listing proposed, candidate, State protected or sensitive species.

OBJECTIVE 1: Over the life of this RMP, achieve "*no net loss*" of special status species habitats by maintaining, restoring, and improving special status species habitat.

***Management Directives*:**

1. The BLM will ensure that appropriate management, protections, and mitigations are developed and applied by continuing to monitor and inventory special status species and their habitats throughout the Monument. Any future proposed surface disturbing activities will require surveys for special status species and appropriate mitigation.

Night-blooming cereus (Peniocereus greggii) is a special status species that has never been documented in the Monument but there is potential habitat for it. Photo by Patrick Alexander.

2.13 VEGETATION

GOAL 1: Manage vegetation resources to produce healthy and vigorous native plant communities with an abundance and distribution of vegetative density and diversity within the PTNM.

OBJECTIVE 1: Provide a mosaic of vegetative communities through protection and restoration of vegetation resources to protect soils, watersheds, air quality, wildlife and scenic views.

OBJECTIVE 2: Monitor for the potential introduction and spread of noxious weeds within the Monument and manage any noxious weeds and native invasive species.

Management Directives:

1. The Monument is closed to commercial and recreational plant collecting. The BLM retains plant/seed collecting authority for administrative purposes (e.g. Seeds of Success).

2. Vegetation treatments will be in compliance with the *Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic EIS Record of Decision* (2007*)*.

3. An emphasis will be on enhancing habitat for special status species.

4. Manage for multiple-use values while maintaining or enhancing habitat for special status species.

5. The BLM will develop a Monument Monitoring Plan that will track changes to fossil resources based on vegetation management actions.

6. Where restoration, rehabilitation, or reclamation efforts require reseeding activities, or use of other plant materials (such as potted plants, poles, etc.), non-native plant species will be used only if native species are not readily available in sufficient quantities. Care will be taken in selecting non-native species that are not likely to become invasive. If non-native plant species are used in restoration, rehabilitation, or reclamation projects, the BLM will identify and develop native replacements for the non-native species. Seed mixes used in these actions will use the closest locally adapted selections, varieties, or cultivars of native species available to improve success of the seeding effort (Executive Order 13112, BLM Manual 1745, and subject to BLM policy and guidance).

Allowable, Restricted or Prohibited Uses:

1. Manage vegetation communities and areas needing restoration using passive and active treatments to increase native vegetation to the capability of the site. Active methods include activities designed to enhance or improve the vegetation resource, including mechanical, cultural, biological or chemical restoration practices.

2. Manage transitioning areas and other stable-state areas for a desired state and condition to meet ecological site potential.

3. Use integrated management techniques including passive, manual, mechanical, chemical, and biological treatment methods to manage noxious weeds and non-native invasive species.

2.13 VISUAL AND SCENIC RESOURCES

GOAL 1: To manage Federal land in a manner that maintains the scenic values.

OBJECTIVE 1: Ensure that activities and land uses are consistent with, and meet, VRM Class objectives.

***Management Directives*:**

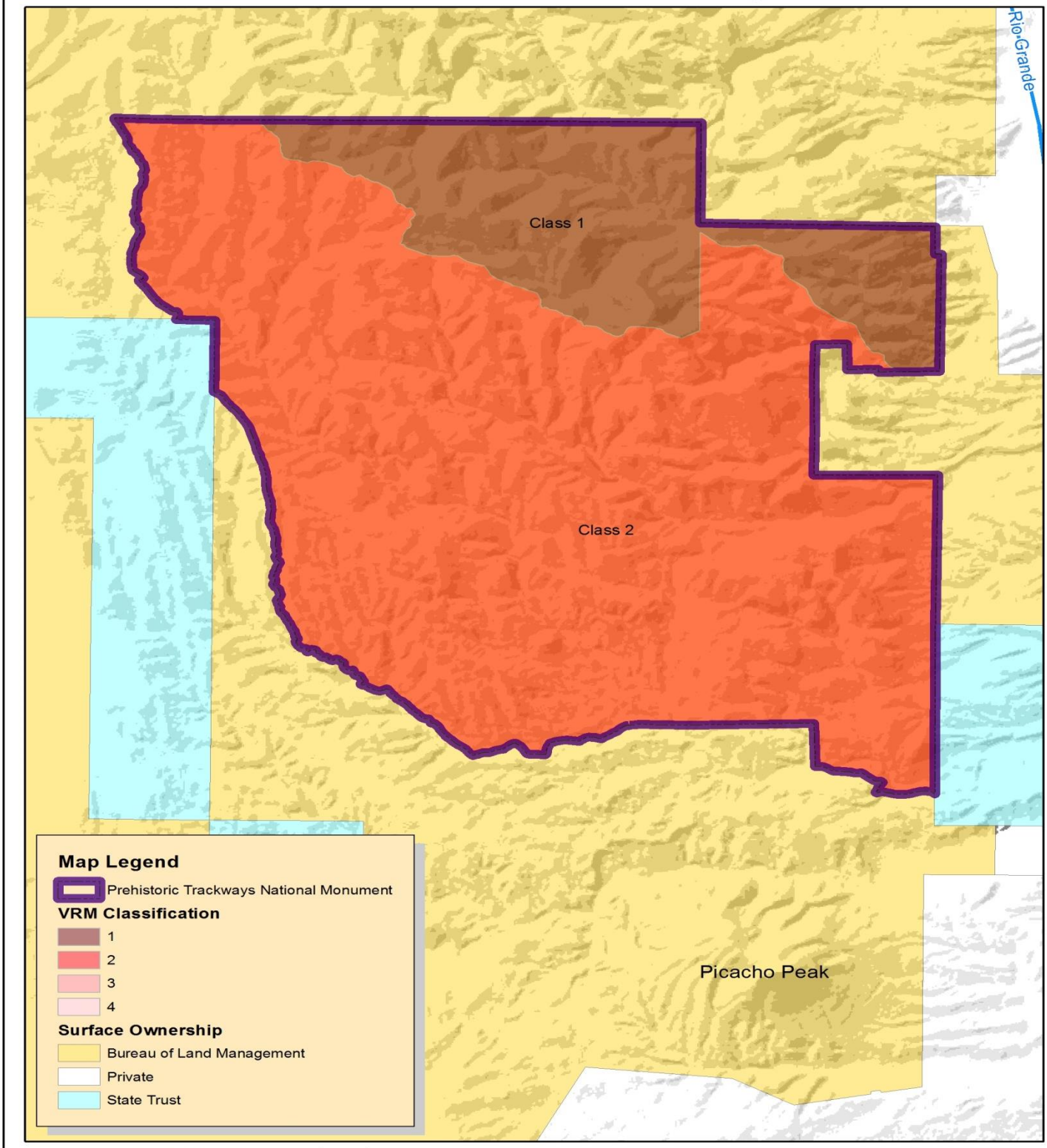
1. Wilderness Study Areas, until such time as these areas are designated as wilderness or released for other uses by Congress, will be managed as VRM Class I (*BLM IM 2000-096*).

2. Lands managed for wilderness characteristics will be managed as VRM Class I.

Allowable, Restricted or Prohibited Uses:

1. PTNM is classified in the following VRM Classes: Class I- 1,042 acres; Class II- 4,213 acres (see Map 2-5).

Map 2-5 - Visual Resource Management



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2.14 WATER RESOURCES

GOAL 1: Ensure surface and ground water influenced by BLM activities comply with or are making significant progress toward achieving New Mexico water quality standards consistent with the New Mexico Environment Department and the U.S. Environmental Protection Agency.

OBJECTIVE 1: Fully mitigate any action which may contribute nonpoint source pollutants into the Rio Grande and to protect the State's water resources.

Management Directives:

1. Enter into cooperative management agreements or other instruments with interested parties or agencies, as appropriate, to coordinate and collaborate watershed management of the Monument.

2. Consult and coordinate with other Federal, State, and local agencies, as directed by the Watershed Protection and Flood Prevention Act (16 U.S.C. 1001-1009), and the Clean Water Act (33 U.S.C. 1251).

Allowable, Restricted or Prohibited Uses:

1. Fully mitigate surface disturbing activities on public land within the Rio Grande watershed and use non-structural approaches whenever possible.

2.15 WILDLAND FIRE MANAGEMENT

GOAL 1: Reduce the risk to human life and property from wildland fire; reduce the risk and cost of fire suppression in areas of hazardous fuels buildup; and improve landscape health through returning fire to its natural role in the ecosystem.

OBJECTIVE 1: Reduce the potential for escaped fire or loss of life or property in surrounding areas.

OBJECTIVE 2: Improve landscape health through treating lands in Fire Regime Condition Classes 2 and 3 to achieve the desired future condition of the landscape of Fire Regime Condition Class 1**.** Maintain Condition Class 1 where it occurs (see Map 2-6).

Management Directives:

Incorporate current management as outlined in the *Resource Management Plan Amendment for Fire and Fuels Management on Public Lands in New Mexico and Texas* (2004).

1. Fires will be suppressed and hazardous fuels will be treated in wildland urban interface areas.

2. A cultural and paleontological resource advisor will be consulted during a pre-fire season meeting. Aerial drops of fire retardant will avoid Monument resources, objects and values, and water will be the preferred method of suppression.

3. Any improvements will be protected from all fire by preplanned defendable space and fire suppression tactics as needed.

4. Resources and fire management will be integrated as potential new issues arise or objectives change.

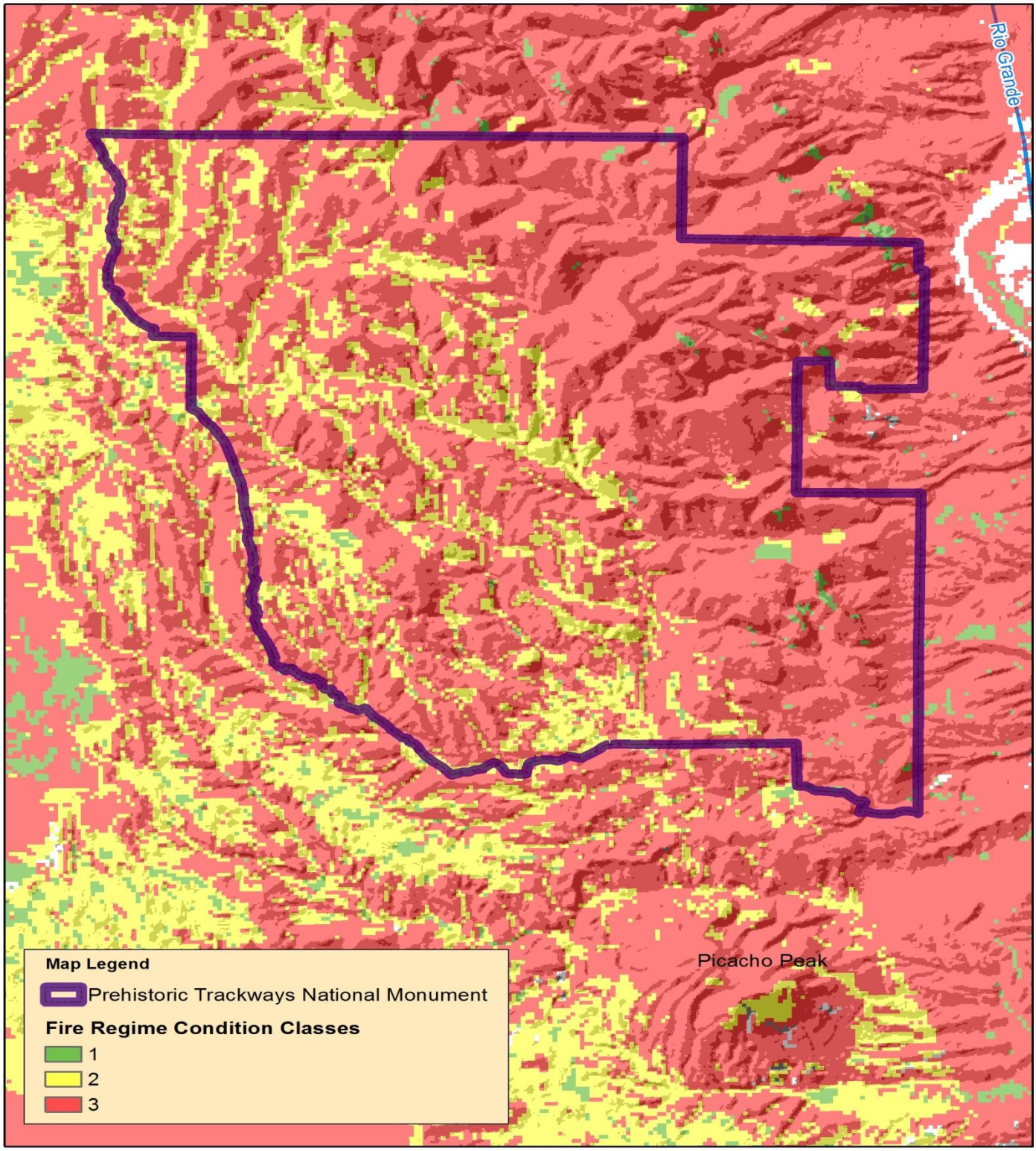
5. In Fire Management Units (FMU) categorized as C or D, natural ignitions (lightning started fires) could be managed for resource benefit. The Robledo Mountains Wilderness Study Area will be managed as FMU D; the remainder of the Monument will be managed as FMU C.

6. The BLM will develop a Monument Monitoring Plan within 2 years of the signing of the PTNM RMP Record of Decision that will track changes to fossil resources based on fire management.

Allowable, Restricted or Prohibited Uses

1. Management tools such as prescribed fire and mechanical thinning will not be considered for use in the Monument.

Map 2-6 - Fire Regime Condition Classes



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the BLM. Spatial information may not meet National Map Accuracy Standards. This information is subject to change without notification.

BLM GIS
Las Cruces District Office

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Projection: UTM Zone 13
Datum: NAD 1983

2.16 WILDLIFE

GOAL 1: In cooperation with the New Mexico Department of Game and Fish (NMDGF), manage the PTNM to provide sufficient quantity and quality of wildlife habitat and to maintain or enhance wildlife populations and biological diversity.

OBJECTIVE 1: Protect, enhance, and restore native wildlife and wildlife habitats.

Management Directives:

1. Manage public land to attain the biotic and other standards for public land health in conjunction with the *Standards for Public Land Health and Guidelines for Livestock Grazing Management* (2001).

2. Manage for Species of Greatest Conservation Need and Key Habitats identified in the NMDGF's *Comprehensive Wildlife Conservation Strategy*.

3. Implement BLM activity plans or other Federal, or State plans and wildlife habitat projects consistent with habitat management goals and objectives.

4. Manage public land to allow for reintroductions, transplants, and augmentations of native wildlife populations in coordination with the NMDGF or the U.S. Fish and Wildlife Service and consistent with applicable agency policies and habitat and population management plan goals.

5. Maintain and restore habitat connectivity in and between public land including breeding, foraging, dispersal, and seasonal use habitats.

6. Implement the Robledo Mountains Habitat Management Plan (1993), which includes the installation of water developments as needed.

7. Wildlife Services will continue to operate in accordance with their annual plans.

3 MANAGEMENT PLAN IMPLEMENTATION

3.1 Public Involvement

This RMP has been prepared with close coordination and collaboration with other Federal agencies; State, local and tribal governments; and other interested parties. Collaborative approaches to implementation are necessary to ensure success. While the BLM retains the responsibility and authority for land management decisions, these decisions are more meaningful, effective, and longer lasting if done in a collaborative and open process. Therefore, close working relationships between management and regulatory agencies need to be developed and maintained. In addition, others outside of the BLM (e.g. State and local agencies, universities, volunteers) should be involved in subsequent analysis, monitoring, evaluation, research, and adaptive management processes. Efforts will include forming partnerships to complete assessments, establish baseline data, monitor, and modify management actions as a result of these processes.

3.2 Management Plan Implementation

Implementation of the RMP will begin upon publication of the ROD and public notification via a Notice of Availability published in the *Federal Register*. Some decisions in the RMP require immediate action and will be implemented upon publication of the ROD and RMP. Other decisions will be implemented over a period of years. The rate of implementation is tied, in part, to the BLM's budgeting process.

The RMP will be implemented over a roughly 10-15 year timeframe, as funding allows. Some of the land use plan decisions are effective upon approval of this document. However, many decisions will take a number of years to implement on the ground. Project-level (implementation) decisions in this RMP will require the preparation of detailed, project-level National Environmental Policy Act (NEPA) analyses prior to implementation.

3.3 Plan Evaluation/Adaptive Management

During the life of the RMP, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the RMP, the BLM will integrate the data through a process called plan maintenance or updating. This process includes the use of an adaptive management strategy. As part of this process, the BLM will review management actions and the RMP periodically to determine whether the objectives set forth in this and other applicable planning documents are being met. Where they are not being met, the BLM will consider adjustments of appropriate scope. Where the BLM considers taking or approving actions which would alter or not conform to overall direction of the RMP, the BLM will prepare a plan amendment and environmental analysis of appropriate scope in making its determinations and in seeking public comment.

3.4 Adaptive Management

The evaluation process will generate new information that needs to be incorporated into management actions. Ongoing assessments and integrated activity planning will also uncover new information that can be used to make changes to projects, strategies, objectives, and monitoring elements. New information may result in any of the following:

- *Concluding that management actions are moving the landscape towards the plan objectives.* In this case, management actions are affirmed and may not need to be adjusted.

- *Concluding that further research needs to be initiated or actions must be adjusted to more efficiently achieve landscape objectives.* If new information or research demonstrates better ways to achieve plan objectives, changes in activity planning and project implementation can be made (i.e., plan maintenance). Depending upon the nature of the management changes, NEPA analysis may be required.

- *Concluding that landscape objectives should be altered based on new information*. If the new information indicates reconsideration of plan objectives, a plan amendment could be considered to re-examine targeted future conditions and the means to reach those conditions.

The Monument technical staff is responsible for implementing monitoring and adaptive management protocols and ensuring that documentation is sufficient to facilitate feedback into the adaptive management process. These specialists, representing the major land management disciplines (e.g. botany, hydrology, paleontology, wildlife, range, and recreation) are responsible for ensuring that monitoring results and other new information are compiled, evaluated, and incorporated into future rounds of planning and implementation.

The credibility of an adaptive management process rests in part on the routine application of an outside check on the use of technical and scientific information, including monitoring. Independent reviews and partnerships with outside groups can provide verification that plans, evaluations, and changes in management strategies are consistent with current scientific concepts. In addition, collaboration with the local communities, Monument interest groups, and users of the Monument ensure credibility and the success of managing the unique elements of the PTNM.

3.5 Mitigation Measures

Mitigation measures have been built into the RMP. Sensitive resources are protected through resource allocations, route and cross-country vehicle closures, and limitations and restrictions placed on developments and other activities. All practicable means to avoid or minimize environmental harm were carried forth in the RMP, including the adoption of the Best Management Practices (Appendix B). During the next tier of planning, which allows for more detailed and site-specific analysis, additional measures will be taken, as necessary, in order to mitigate subsequent impacts to the environment. Monitoring will tell how effective these measures are in minimizing environmental impacts. Additional measures to protect the environment may be taken during or following monitoring.

3.6 List of Preparers

TABLE 5-1 LIST OF PREPARERS AND REVIEWERS		
NAME	**TITLE**	**RMP/EIS RESPONSIBILITY**
BUREAU OF LAND MANAGEMENT – LAS CRUCES DISTRICT OFFICE INTERDISCIPLINARY TEAM		
Jennifer Montoya	Planning and Environmental Specialist	Team Leader 2013 to Present
Lori Allen	Planning and Environmental Coordinator	Team Leader 2010 to 1012
Dwayne Sykes	Planning and Environmental Coordinator	Technical Assistance
Michael Bailey	Outdoor Recreation Specialist	Wilderness
Kathryn Lloyd	Wilderness Specialist	Wilderness
Greg Bettmann	Rangeland Management Specialist	Livestock, Vegetation/ Noxious Weeds
McKinney Briske	Park Ranger	Recreation and Visitor Services
Ricky Cox	Fire Management Specialist	Fire Management
Cory Durr	Hydrologist	Soil And Water Resources
Rena Gutierrez	Writer and Editor	Editor/Document Management
Patricia Hester	Paleontologist	Paleontology
Ray Hewitt	GIS Specialist	Geographic Information System
Tom Holcomb	Archeologist	Cultural Resources
Lorraine Salas	Realty Specialists	Lands and Realty
Kendrah Penn	Realty Specialist	Lands and Realty
Mike Smith	Geologist	Geology and Minerals
Chris Teske	AML/HazMat/Safety	Abandoned Mine Lands & Hazmat
John Thacker	Outdoor Recreation Planner	Trails And Travel Management
Steven Torrez	Wildlife Biologist	Wildlife and Special Status Species
Jane Childress	NMSO Interpretation and Heritage Education Lead	Interpretation and Education
BUREAU OF LAND MANAGEMENT – LAS CRUCES DISTRICT OFFICE MANAGEMENT OVERSIGHT		
William Childress	District Manager	
Jim McCormick	Assistant District Manager, Renewable Resources	
Dave Wallace	Assistant District Manager, Multi-Resources	
Tom Phillips	Recreation/Cultural Supervisor	
Rusty Stovall	Engineering/Operations/GIS Supervisor	
Ray Lister	Supervisory Natural Resource Specialist	
Leticia Lister	Supervisory Rangeland Resource Specialist	
Edward Seum	Lands & Minerals Supervisor	
BUREAU OF LAND MANAGEMENT – NEW MEXICO STATE OFFICE REVIEWERS		
Megan Stouffer	Planning & Environmental Coordinator	
Melanie Barnes	Planning & Environmental Coordinator	
Dave Goodman	Planning & Environmental Coordinator	
William Auby	Geologist	
Roger Cumpian	Rangeland Management Specialist	
Jeanne Hoadley	Air Resources	
Mary Uhl	Air Resources	
Roger Jaggers	Outdoor Recreation Planner	
Powell King	Mining Engineer	
Billy “Link” Lacewell	Soil/Air/Water, Hazmat	
Philip Gensler	Regional Paleontologist	
Sherrie Landon	Paleontologist	
Signa Larralde	Archeologist	
Debby Lucero	Lands and Realty Team Leader	
John Selkirk	Fire Management Specialist	
Lisa Bye	Fuels Specialist	
John Sherman	Wildlife Biologist	
Marikay Ramsay	T&E Wildlife Biologist	
James Sippel	NLCS Program Lead	
Jay Spielman	Geologist	

APPENDICES

APPENDIX A
The Omnibus Public Lands Management Act 2009

APPENDIX B
Best Management Practices

APPENDIX C
Paleontology

APPENDIX D
Prehistoric Trackways National Monument Comprehensive Trails and Travel Management Plan

THE OMNIBUS PUBLIC LANDS MANAGEMENT ACT OF 2009

APPENDIX A

APPENDIX A
THE OMNIBUS PUBLIC LANDS MANAGEMENT ACT 2009

Subtitle B—Prehistoric Trackways National Monument

SEC. 2101. FINDINGS.

Congress finds that—

(1) in 1987, a major deposit of Paleozoic Era fossilized footprint megatrackways was discovered in the Robledo Mountains in southern New Mexico;

(2) the trackways contain footprints of numerous amphibians, reptiles, and insects (including previously unknown species), plants, and petrified wood dating back approximately 280,000,000 years, which collectively provide new opportunities to understand animal behaviors and environments from a time predating the dinosaurs;

(3) title III of Public Law 101–578 (104 Stat. 2860)—

(A) provided interim protection for the site at which the trackways were discovered; and

(B) directed the Secretary of the Interior to—

(i) prepare a study assessing the significance of the site; and

(ii) based on the study, provide recommendations for protection of the paleontological resources at the site;

(4) the Bureau of Land Management completed the Paleozoic Trackways Scientific Study Report in 1994, which characterized the site as containing ‘‘the most scientifically significant Early Permian tracksites’’ in the world;

(5) despite the conclusion of the study and the recommendations for protection, the site remains unprotected and many irreplaceable trackways specimens have been lost to vandalism or theft; and

(6) designation of the trackways site as a National Monument would protect the unique fossil resources for present and future generations while allowing for public education and continued scientific research opportunities.

SEC. 2102. DEFINITIONS.

In this subtitle:

(1) MONUMENT. — The term ‘‘Monument’’ means the Prehistoric Trackways National Monument established by section 2103(a).

(2) PUBLIC LAND. — The term ‘‘public land’’ has the meaning given the term ‘‘public lands’’ in section 103 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1702).

(3) SECRETARY. — The term ‘‘Secretary’’ means the Secretary of the Interior.

SEC. 2103. ESTABLISHMENT.

(a) IN GENERAL.—In order to conserve, protect, and enhance the unique and nationally important paleontological, scientific, educational, scenic, and recreational resources and values of the public land described in subsection (b), there is established the Prehistoric Trackways National Monument in the State of New Mexico.

(b) DESCRIPTION OF LAND.—The Monument shall consist of approximately 5,280 acres of public land in Doña Ana County, New Mexico, as generally depicted on the map entitled ‘‘Prehistoric Trackways National Monument’’ and dated December 17, 2008.

(c) MAP; LEGAL DESCRIPTION.—

(1) IN GENERAL.—As soon as practicable after the date of enactment of this Act, the Secretary shall prepare and submit to Congress an official map and legal description of the Monument.

(2) CORRECTIONS.—The map and legal description submitted under paragraph (1) shall have the same force and effect as if included in this subtitle, except that the Secretary may correct any clerical or typographical errors in the legal description and the map.

(3) CONFLICT BETWEEN MAP AND LEGAL DESCRIPTION.—In the case of a conflict between the map and the legal description, the map shall control.

(4) AVAILABILITY OF MAP AND LEGAL DESCRIPTION.—Copies of the map and legal description shall be on file and available for public inspection in the appropriate offices of the Bureau of Land Management.

(d) MINOR BOUNDARY ADJUSTMENTS.—If additional paleontological resources are discovered on public land adjacent to the Monument after the date of enactment of this Act, the Secretary may make minor boundary adjustments to the Monument to include the resources in the Monument.

SEC. 2104. ADMINISTRATION.

(a) MANAGEMENT.—

(1) IN GENERAL.—The Secretary shall manage the Monument—

(A) in a manner that conserves, protects, and enhances the resources and values of the Monument, including the resources and values described in section 2103(a); and

(B) in accordance with—
(i) this subtitle;
(ii) the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.); and
(iii) other applicable laws.

(2) NATIONAL LANDSCAPE CONSERVATION SYSTEM.—The
Monument shall be managed as a component of the National Landscape Conservation System.

(b) MANAGEMENT PLAN.—

(1) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Secretary shall develop a comprehensive management plan for the long-term protection and management of the Monument.

(2) COMPONENTS.—The management plan under paragraph (1)—
(A) shall—
(i) describe the appropriate uses and management of the Monument, consistent with the provisions of this subtitle; and
(ii) allow for continued scientific research at the Monument during the development of the management plan; and
(B) may—
(i) incorporate any appropriate decisions contained in any current management or activity plan for the land described in section 2103(b); and
(ii) use information developed in studies of any land within or adjacent to the Monument that were conducted before the date of enactment of this Act.

(c) AUTHORIZED USES.—The Secretary shall only allow uses of the Monument that the Secretary determines would further the purposes for which the Monument has been established.

(d) INTERPRETATION, EDUCATION, AND SCIENTIFIC RESEARCH.—

(1) IN GENERAL.—The Secretary shall provide for public interpretation of, and education and scientific research on, the paleontological resources of the Monument, with priority given to exhibiting and curating the resources in Doña Ana County, New Mexico.

(2) COOPERATIVE AGREEMENTS.—The Secretary may enter into cooperative agreements with appropriate public entities to carry out paragraph (1).

(e) SPECIAL MANAGEMENT AREAS.—

(1) IN GENERAL.—The establishment of the Monument shall not change the management status of any area within the boundary of the Monument that is—
(A) designated as a wilderness study area and managed in accordance with section 603(c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1782(c)); or

(B) managed as an area of critical environmental concern.

(2) CONFLICT OF LAWS.—If there is a conflict between the laws applicable to the areas described in paragraph (1) and this subtitle, the more restrictive provision shall control.

(f) MOTORIZED VEHICLES.—

(1) IN GENERAL.—Except as needed for administrative purposes or to respond to an emergency, the use of motorized vehicles in the Monument shall be allowed only on roads and trails designated for use by motorized vehicles under the management plan prepared under subsection (b).

(2) PERMITTED EVENTS.—The Secretary may issue permits for special recreation events involving motorized vehicles within the boundaries of the Monument—

(A) to the extent the events do not harm paleontological resources; and

(B) subject to any terms and conditions that the Secretary determines to be necessary.

(g) WITHDRAWALS.—Subject to valid existing rights, any Federal land within the Monument and any land or interest in land that is acquired by the United States for inclusion in the Monument after the date of enactment of this Act are withdrawn from—

(1) entry, appropriation, or disposal under the public land laws;

(2) location, entry, and patent under the mining laws; and

(3) operation of the mineral leasing laws, geothermal leasing laws, and minerals materials laws.

(h) GRAZING.—The Secretary may allow grazing to continue in any area of the Monument in which grazing is allowed before the date of enactment of this Act, subject to applicable laws (including regulations).

(i) WATER RIGHTS.—Nothing in this subtitle constitutes an express or implied reservation by the United States of any water or water rights with respect to the Monument.

SEC. 2105. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such sums as are necessary to carry out this Act.

APPENDIX B

BEST MANAGEMENT PRACTICES

APPENDIX B
BEST MANAGEMENT PRACTICES

INTRODUCTION

Best management practices (BMPs) are those land and resource management techniques designed to maximize beneficial results and minimize negative impacts of management actions. BMPs are defined as methods, measures, or practices selected on the basis of site-specific conditions to provide the most effective, environmentally sound, and economically feasible means of managing an activity and mitigating its impacts. Interdisciplinary site-specific analysis is necessary to determine which management practices would be necessary to meet specific goals. Selection and implementation of any BMPs will be evaluated against the New Mexico Public Land Health Standards to ensure progress toward public land health attainment. BMPs include, but are not limited to, structural and nonstructural controls, operations, and maintenance procedures. BMPs can be applied before, during, and after pollution producing or surface-disturbing activities to reduce or eliminate the introduction of pollutants into receiving waters (40 Code of Federal Regulation 130.2(m), Environmental Protection Agency Water Quality Standards Regulation) or to prevent unnecessary or undue degradation of resources such as water and air.

BMPs are identified as part of the National Environmental Policy Act process, with interdisciplinary involvement. Because the control of nonpoint sources of pollution and prevention of damage to other resources is an ongoing process, continual refinement of BMP design is necessary. This process can be described in five steps, which are:

1. selection of design of a specific BMP;
2. application of BMP;
3. monitoring;
4. evaluation; and
5. feedback.

Data gathered through monitoring are evaluated and used to identify changes needed in BMP design, application, or in the monitoring program.

BMPs described in this appendix are a compilation of existing policies and guidelines and commonly employed practices designed to assist in achieving the objectives for maintaining or minimizing water quality degradation from nonpoint sources; preventing the loss of soil productivity; providing guidelines for aesthetic conditions within watersheds; reducing particulate matter and emissions; and mitigating impacts to soil, vegetation, or wildlife habitat from surface-disturbing activities. BMPs are selected and implemented as necessary, based on site-specific conditions, to meet a variety of resource objectives for specific management actions. Therefore, this document does not provide an exhaustive list of BMPs, as additional BMPs or modifications may be identified to minimize the potential for negative impacts when evaluating site-specific management actions through an interdisciplinary process.

In addition, implementation and effectiveness of BMPs need to be monitored to determine whether the practices are achieving resource objectives and accomplishing desired goals. Adjustments will be made as necessary.

Each of the following BMPs are a part of the coordinated development of land use plans in the Las Cruces District and may be updated as new information becomes available to ensure objectives are met

and to conform with changes in Bureau of Land Management (BLM) regulations, policy, direction, or new scientific information. Applicants also may suggest alternative procedures that could accomplish the same result. These guidelines will apply, where appropriate, to all use authorizations, including BLM initiated projects. Any BMP listed may be used in any program wherever it may be effective.

ROAD DESIGN AND MAINTENANCE

- Design roads to minimize total disturbance, to conform to topography, and to minimize disruption of natural drainage patterns.

- Base road design criteria and standards on road management objectives such as traffic requirements of the proposed activity, overall transportation objectives, and to meet environmental objectives such as minimizing damage to natural surroundings. Locate roads on stable terrain such as ridge tops, natural benches, the flatter transitional slopes near ridges and valley bottoms, and moderate side slopes. Locate roads away from slumps, slide-prone areas, concave slopes, clay beds, and places where rock layers dip parallel to the slope. Locate roads on well-drained soil types; avoid wet areas.

- Construct cut-and-fill slopes to be approximately 3(h):1(v) or flatter where feasible. Locate roads to minimize heights of cutbanks. Avoid high, steeply sloping cutbanks in highly fractured bedrock.

- Avoid head walls; midslope locations on steep, unstable slopes; fragile soils; seeps; old landslides; sideslopes in excess of 70 percent; and areas where the geologic bedding planes or weathering surfaces are inclined with the slope. Implement extra mitigation measures when these areas cannot be avoided. Construct roads for surface drainage by using outslopes, crowns, grade changes, drain dips, waterbars, or in sloping to ditches as appropriate.

- Sloping the road base to the outside edge for surface drainage is normally recommended for local spurs or minor collector roads where traffic volume is low and low traffic speeds are anticipated. This is also recommended in situations where long intervals between maintenance will occur and where minimum excavation is wanted. Outsloping is not recommended on steep slopes. Sloping the road base to the inside edge is an acceptable practice on roads with steep sideslopes and where the underlying soil formation is very rocky and not subject to appreciable erosion or failure.

- Crowning and ditching are recommended for arterial and collector roads where traffic volume, speed, intensity, and user comfort are considerations. Recommended gradients range from 0 to 15 percent where crowning and ditching may be applied, as long as adequate drainage away from the road surface and ditch lines is maintained.

- Where possible, reroute or reengineer vehicle routes that divert overland flow and contribute to declines in public land health (watershed and vegetation standards).

- Minimize excavation when constructing roads through balancing earthwork, narrowing road widths, and end-hauling where sideslopes are between 50 and 70 percent.

- If possible, construct roads when soils are dry and not frozen. When soils or road surfaces become saturated to a depth of 3 inches, BLM-authorized activities should be limited or cease unless otherwise approved by the Authorized Officer.

- Consider improving inadequately surfaced roads that are to be left open to public traffic during wet weather by using gravel or pavement to minimize sediment production and maximize safety.

- Retain vegetation on cutslopes unless it poses a safety hazard or restricts maintenance activities. Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (i.e., avoid using excavators for brushing).

- Retain adequate vegetation between roads and streams to filter runoff caused by roads. Avoid riparian/wetland areas where feasible; locate in these areas only if the roads do not interfere with the attainment of proper functioning condition and riparian management objectives.

- Minimize the number of unimproved stream crossings. When a culvert or bridge is not feasible, locate drive-thru (low-water crossings) on stable rock in the drainage channel. Harden crossings with rock and gravel if necessary. Use angular rock if available.

- Locate roads and limit activities of mechanized equipment within stream channels to minimize their influence on riparian areas. When stream crossing is necessary, design the approach and crossing perpendicular to the channel, where practical. Locate the crossing where the channel is well defined, unobstructed, and straight.

- Avoid placing fill material in a floodplain unless the material is heavy enough to remain in place during flood events.

- Use drainage dips instead of culverts on roads where gradients would not present a safety issue. Locate drainage dips in such a way that water will not accumulate or where outside berms will prevent drainage from the roadway.

- Locate and design drainage dips immediately upgrade of stream crossings and provide buffer areas and catchment basins to prevent sediment from entering the stream.

- Construct catchment basins, brush windrows, and culverts so as to minimize sediment transport from road surfaces to stream channels. Install culverts in natural drainage channels in a way that conforms with the natural streambed gradients so the drainage flows to outlets that discharge onto rocky or hardened, protected areas.

- Design and locate water-crossing structures in natural drainage channels to offer adequate passage for fish, provide for minimum impacts to water quality, and be capable of handling a 100-year event for runoff and floodwaters.

- Use culverts that will withstand, at a minimum, a 50-year storm event and/or that have a minimum diameter of 24 inches for permanent stream crossings and a minimum diameter of 18 inches for drains that cross roads.

- Replace undersized culverts and repair or replace damaged culverts and downspouts. Provide energy dissipaters at culvert outlets or drainage dips.

- Locate culverts or drainage dips to avoid discharging onto unstable terrain such as head walls or slumps.

- Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Place culverts on solid ground to avoid road failures.

- Use properly sized aggregate and riprap during culvert construction. Place riprap at culvert entrance to streamline water flow and reduce erosion.

- Establish adapted vegetation on all cut–and-fill slopes immediately following road construction and maintenance.

- Remove berms from the downslope side of roads, consistent with safety considerations.

- Leave abandoned roads in a condition that provides adequate drainage without further maintenance. Close abandoned roads to traffic. Physically obstruct the road with gates, large berms, trenches, logs, stumps, or boulders as necessary to accomplish permanent closure.

- Abandon and rehabilitate roads no longer needed. Leave these roads in a condition that provides adequate drainage and remove culverts.

- When plowing snow for road use during winter, provide breaks in snow berms to allow for road drainage.

- Avoid plowing snow into streams. Plow snow only on existing roads.

- Perform maintenance to conserve existing surface material; retain the original crowned or outsloped, self\draining cross-section; and prevent or remove rutted berms (except those designed for slope protection) and other irregularities that retard normal surface runoff. Avoid casting loose ditch or surface material past the shoulder where it can cause stream sedimentation or weaken slump-prone areas. Avoid undercutting backslopes.

- Do not disturb the toe of cutslopes while pulling ditches or grading roads. Avoid side casting road material into streams.

- Grade roads only as necessary. Maintain drain dips, waterbars, road crown, insloping, and outsloping, as appropriate, during road maintenance.

- Maintain roads in special management areas according to special management area guidance. Generally, retain roads within existing disturbed areas and side cast material away from the special management area.

- When landslides occur, save all soil and material usable for reclamation and stockpile it for future reclamation needs.

- Avoid side casting slide material where it can damage, overload, or saturate embankments or flow into downslope drainage courses.

- Reestablish vegetation as needed in areas where it has been destroyed due to side casting.

- Strip and stockpile topsoil before construction of new roads, if feasible. Reapply soil to cut-and-fill slopes prior to revegetation.

SURFACE-DISTURBING ACTIVITIES

- Require special design and reclamation measures, as appropriate, to protect scenic and natural landscape values. This may include transplanting trees and shrubs, mulching and fertilizing disturbed areas, removing surfacing material, imprinting, irrigating, using low-profile permanent facilities, and painting to minimize visual contrasts. Surface-disturbing activities may be moved to avoid sensitive areas or to reduce the visual effects of the proposal.

- Design aboveground facilities that requiring painting to blend in with the surrounding environment.

- Restrict surface disturbances in areas that have special topographic (steep or broken terrain and/or benches) and soil concerns in order to reduce impacts caused by soil erosion and habitat disturbance.

- Development in these areas will be considered on a case-by-case basis and will contain site-specific mitigation designed to prevent increased sediment from being transported into drainages and to prevent fragmentation of areas determined to provide important wildlife habitat.

- Excavate topsoil and subsoil only where it is absolutely necessary. Consider brush-beating, mowing, and/or parking on vegetation for surface disturbing activities.

- Contour disturbed areas to blend with the natural topography. Blending is defined as reducing form, line, and color contrast associated with surface disturbance. Disturbances should be contoured to match the original topography, where matching is defined as reproducing the original topography and eliminating the form, line, and color caused by the disturbance as much as possible.

- Implement interim reclamation concurrent with construction and site operations to the extent possible.

- Initiate final reclamation actions within six months of the termination of operations unless otherwise approved in writing by the Authorized Officer.

- Push the fill material into cut areas and over backslopes. Do not leave depressions that could trap water or form ponds unless the authorized officer has determined that dips or depressions may be used to assist reclamation and seed propagation efforts.

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate at active and inactive sites during workdays, weekends, holidays, and windy conditions.

- Make certain that reclaimed soil is free of contaminants and has adequate depth, texture, and structure for successful reclamation of vegetation. Vegetation reclamation will be considered successful when healthy, mature perennials are established with a composition and density that closely approximates the surrounding vegetation, as prescribed by the BLM, and the reclamation area is free of noxious weeds.

- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.

- In compliance with E.O.13112 and BLM Manual 1745, and subject to future revisions to Bureau policy and guidance, where restoration, rehabilitation, or reclamation efforts (including Bureau authorized actions such as rights-of way) require reseeding activities, or use of other plant materials (such as potted plants, poles, etc.), non-native plant species would be used only if native species are not readily available in sufficient quantities. Care would be taken in selecting non-native species that are not likely to become invasive. If non-native plant species are used or identified for use in restoration, rehabilitation, or reclamation projects, the BLM, through the Bureau Plant Conservation Program and partner organizations, would work to identify and develop native replacements for the non-native species. Additionally, seed mixes used in these actions would use the closest locally adapted selections, varieties, or cultivars of native species available to improve success of the seeding effort.

- Prevent spillage when hauling material and operating non-earthmoving equipment and limit speeds to 15 miles per hour. Limit speed of earthmoving equipment to 10 mph.

- Construct a BLM-standard barbed-wire fence if necessary to exclude livestock for a minimum of at least two successful growing seasons after reclamation.

- Plan construction scheduling to minimize vehicle trips.

- Limit idling of heavy equipment to less than 5 minutes and verify through unscheduled inspections.

- Maintain and tune engines per manufacturer's specifications to perform at EPA certification levels, prevent tampering, and conduct unscheduled inspections to ensure these measures are followed.

- Include a restoration plan for habitat of special status species when the BLM determines it is appropriate. Develop the restoration plan, in consultation with BLM, for BLM approval.

- Require additional reclamation measures, if needed, based on the conditions existing at the time of abandonment.

- Carefully handle and dispose of oil and fuel from equipment and vehicles to prevent contamination of soil or water.

- Develop a spill contingency plan that identifies all actions to be taken in the event of a chemical spill, including phone numbers for Federal, State, and local agencies that must be notified.

- Time activities to avoid wet periods of the year, if possible.

RIGHTS-OF-WAY

- Use areas adjoining or adjacent to previously disturbed areas for rights-of-way whenever possible rather than traverse undisturbed vegetation communities.

- Construct waterbars or dikes on all rights-of-way and across the full width of the disturbed area, as directed by the Authorized Officer.

- Stabilize disturbed areas within road rights-of-way by implementing vegetation practices designed to hold soil in place and minimize erosion.

- Construct sediment barriers when needed to slow runoff, allow deposition of sediment, and prevent transport from the site. Employ straining or filtration mechanisms as needed for the removal of sediment from runoff.

FIRE SUPPRESSION

- Minimize surface disturbances and avoid the use of heavy earth-moving equipment where possible, on all fire suppression and rehabilitation activities, including mop-up, except where high value resources (including lives and property), are being protected.

- Install waterbars and seed all constructed fire lines with native or adapted nonnative species as appropriate and in accordance with the BLM's *Emergency Fire Rehabilitation Handbook* (BLM 1999).

- Avoid dropping fire retardant that is detrimental to aquatic communities on streams, lakes, ponds and in riparian/wetland areas.

- Locate and construct handlines to result in minimal surface disturbance while effectively controlling the fire. Hand crews should locate lines to take full advantage of existing land features that represent natural fire barriers. Whenever possible, handlines should follow the contour of the slope to protect the soil, provide sufficient residual vegetation to capture and retain sediment, and maintain site productivity.

PRESCRIBED BURNING

- Protect soil productivity by using a low-intensity burn, if possible, to accomplish stated objectives. Burn only when the organic surface or duff layer has adequate moisture to minimize effects on the physical and chemical properties of the soil. When possible, maximize the retention of the organic surface or duff layer.

- Do not pile or burn slash within riparian/wetland areas. If riparian/wetland areas are within or adjacent to the prescribed burn unit, piles should be fire lined or scattered prior to burning.

- Avoid piling concentrations of large logs and stumps when preparing the unit for burning; pile small material (3 to 8 inches in diameter) instead. Burn slash piles when soil and duff moisture are adequate to reduce potential damage to soil resources.

- All fire management activities will be subject to the BMPs identified in the *Decision Record and Resource Management Plan Amendment for Fire and Fuels Management on Public Land in New Mexico and Texas* (BLM 2004c). BMPs are identified in these documents, which can be viewed online at http://www.nm.blm.gov.

LIVESTOCK GRAZING MANAGEMENT

- All rangeland projects and vegetation land treatments will meet current BLM policy and objectives of the *Prehistoric Trackways National Monument Resource Management Plan.* This includes the BMPs for Surface Disturbing Activities and Invasive/Noxious Weed Management. Other BMPs may be required depending on the rangeland improvement project.

- Rangeland improvements projects and vegetation treatments are constructed as a portion of adaptive management to reduce resource conflicts and to achieve multiple-use objectives. They have been standardized over time to mitigate impacts and will be adhered to in the construction and maintenance of rangeland projects within the Planning Area. Rangeland improvements are structures, facilities, and practices intended to improve or facilitate grazing management and improve resources.

- Grazing management practices are developed through consultation on allotment-specific objectives and progress toward multiple-use objectives and sustainability of resources. Grazing management practices may include herding, grazing, and deferment periods; use of supplements; change of class of livestock; and increase or decrease of livestock numbers.

INVASIVE/NOXIOUS WEED MANAGEMENT

- Inspect and clean all surface-disturbing equipment prior to its coming onto public lands. This is especially important on vehicles from out of state or coming from a weed-infested area.

- Make sure the source of fill dirt or gravel brought onto public land is free of noxious weeds.

- Monitor construction sites for the life of the project for the presence of invasive/noxious weeds (including maintenance and construction activities). If weeds are found, the BLM Las Cruces District Office will be notified and will determine the best method for the control of the particular weed species.

- Certify all seed as noxious-weed free. Areas will be monitored to determine the success of re-vegetation and the presence of invasive/noxious weeds and will be reseeded if necessary.

- Consider livestock quarantine, removal, or timing limitations in areas infested with invasive/noxious weeds.

- Certify all seed, hay, straw, mulch, or other vegetation material transported and used on public land for site stability, rehabilitation, or project facilitation as free of all reproductive parts of noxious weeds upon the passage of a weed-free law by the State of New Mexico. All baled feed, pelletized feed, and grain used to feed livestock also shall be certified as free of the seeds of noxious weeds.

- Consider having all vehicles that travel in or out of weed-infested areas clean their equipment before and after use on public land, including off-road and all-terrain vehicles. (This precaution is recommended.)

DEVELOPED RECREATION

- Construct recreation sites and provide appropriate sanitation facilities to minimize impacts on resource values and on public health and safety and to minimize user conflicts concerning approved activities and access within an area, as appropriate.

- Minimize impacts on resource values or enhance the recreational setting and recreation experience.

- Harden sites and locations subject to prolonged/repetitive, concentrated recreational uses with selective placement of gravel or other porous materials and allow for dust abatement, paving, and engineered road construction.

- Use public education and/or physical barriers (such as rocks, posts, vegetation) to direct or preclude uses and to minimize impacts on resource values and the quality of recreation experience.

- Employ land use ethics programs and techniques such as "*Leave No Trace*" and "*Tread Lightly*" programs. Use outreach efforts of such programs to lessen needs to implement more stringent regulatory measures to obtain resource protection and a quality recreation experience.

WILDLIFE AND RIPARIAN HABITAT

- Before a surface-disturbing activity begins, the project area will be surveyed for raptor nests or active prairie dog towns. Surveys will be conducted by professional biologists approved by the Authorized Officer. All raptor nests and active prairie dog towns will be avoided by the following distances and seasonal periods:

    - Eagle – 0.5 mile, February 1-July 15
    - Prairie falcon – 0.5 mile, March 1-August 1
    - Ferruginous hawk – 0.5 mile, February 1-July 15
    - Aplomado falcon – 0.5 mile, January 1-July 31
    - Gunnison prairie dog – 0.25 mile, February 15-June 15
    - Black-tailed prairie dog – 0.25 mile, January 1-June 15
    - All other raptor species – 0.25 mile, during observed nest establishment through fledging

- Require site-specific mitigation to avoid disturbance within a half mile of occupied special status species habitat.

- Make all livestock waters on public land available to wildlife yearlong, so long as this meets grazing rotation objectives and there is no danger of damage to facilities from freezing.

- Situations where the rotation of livestock is achieved through turning off of water sources, a fence will be constructed around the watering facility to allow for opening/closing of a gate to facilitate movement of livestock. This will allow wildlife yearlong access to the watering facility. If freezing of the pipeline/trough system is a concern, fill up trough once a month during winter period to allow wildlife continued access to a water source. All watering facilities on public land will be fitted with an escape ramp to keep small mammals and birds from becoming trapped.

- Avoid constructing new roads within critical wildlife habitats. Permanent or seasonal closures may be instituted where problems exist or are expected. Where major road projects are proposed in wildlife corridors, use fencing and wildlife passes to mitigate wildlife impacts.

- Manage wildlife habitat on lands identified for disposal as a low priority, unless site specific analysis determines that changes in the existing situation have resulted in higher resource values warranting retention of these lands to protect fish and wildlife habitat values consistent with existing laws, regulations, and policies. Conduct a site specific assessment of environmental impacts before disposal of Department of Game and Fish (NMDGF).

- Construct protective exclosures/fences around riparian areas, wildlife watering facilities, and other areas of resource concern.

- Long-term land use activities will not be allowed within the species-specific buffer zones surrounding the active raptor nests or occupied prairie dog towns of the identified species. Short-term activities will be avoided within the species-specific buffer zones during the listed dates. Short-term activities will be limited to the buffer zone outside the boundary of an occupied prairie dog town and will not occur within the occupied town. All raptor nests, including those of non-listed species, will be avoided within the vicinity is defined as an activity that would begin outside a given breeding season and end prior to initiation of a given breeding season. A long-term activity is defined as an activity that would continue into or beyond a given nesting/breeding season. An active nest is defined as any nest that has been occupied in the last 7 years. A nest will be determined active or inactive by the Authorized Officer. Surveys will be conducted by professional biologists approved by the Authorized Officer.

- Ensure that all fences are constructed to the fence specifications of the BLM Socorro Field Office to mitigate impacts on wildlife.

- Ensure that escape wildlife ramps are installed and maintained on all applicable water development projects on public lands (see the BLM *Water Developments Handbook* dated November 6, 1990 and IM No. 2004-156).

- Construct all new water improvements so they are located a minimum of 30 meters away from fences or other structures likely to pose a collision threat to bats.

- Do not allow surface disturbance within 0.5 mile of the outer edge of 100-year floodplains, playas, all artificial water developments (tanks, guzzlers, etc.), and riparian habitats (seeps, arroyos, etc.). Exceptions to this requirement will be considered on a case-by case basis.

- Avoided adverse impacts on the landscape by minimizing or excluding certain surface-disturbing activities that may degrade the objectives or intent of the project in areas where habitat or rangeland enhancement projects have been implemented, with the exception of large landscape projects (prescribed burns, chemical treatments, and mechanical treatments). Exceptions to this requirement will be considered on a case-by-case basis.

- Achieve habitat enhancement by limiting and/or mitigating existing and proposed commodity uses and by proactive habitat management practices including, but not limited to, fire management; water development; chemical, mechanical, or biological brush control; and fence modifications.

- Avoid all surface-disturbing activities, permanent or temporary, during the appropriate time periods in crucial calving, lambing, kidding, and fawning areas and wintering ranges.

- Survey the area for the presence of raptor nests prior to initiating geophysical or other preliminary surveys during the raptor breeding season.

- Follow these measures when siting facilities:

    1. In areas that constitute occupied or potential aplomado falcon habitat, a protocol survey for this species will be conducted along with the above general raptor nest survey prior to surveying/flagging locations.

    2. During operations at any time, all habitat features (pinnacles, cliffs, ledges, caves, and trees and shrubs greater than 6 feet high) containing or capable of containing raptor nests or bat habitat will be avoided by vehicular traffic or other surface-disturbing activities likely to remove or destroy them, unless approved by the BLM Authorized Officer.

    3. Tree and vegetation clearing will be limited to the minimum area required.

    4. Construction activities will be timed to avoid wet periods.

    5. Power lines will be constructed to standards outlined in the most recent version of *Suggested Practices for Raptor Protection on Power Lines* published by the Edison Electric Institute/Raptor Research Foundation, unless otherwise agreed to by the Authorized Officer. The holder is responsible for demonstrating that power pole designs not meeting these standards are raptor safe. Such proof will be provided by a raptor expert approved by the Authorized Officer. BLM reserves the right to require modifications or additions to power line structures constructed under this authorization, should they be necessary to ensure the safety of large perching birds. The modifications or additions will be made by the holder without liability or expense to the United States.

    6. All equipment installed on Federal lands will be constructed to prevent birds and bats from entering them and, to the extent practical, to discourage perching and nesting.

    7. Open-top tanks, reserve pits, disposal pits, or other open pits will be required to be equipped to deter entry by birds, bats, or other wildlife.

- Continue to coordinate arroyo habitat management with other programs and activities throughout the Monument, as needed. Specific programs include Range, Wildlife, Watershed, Recreation, and Lands. Riparian and arroyo habitat values will be addressed in all surface and vegetation-disturbing actions.

VISUAL RESOURCES MANAGEMENT

BMPs to address visual resource concerns have been incorporated into the preceding resource discussions, as appropriate. To the extent practicable, existing facilities or substantial existing visual contrasts would be brought into visual resource management class conformance as the need or opportunity arises. Additional BMPs dealing with visual resource management considerations in oil and gas development can be found on the BLM Web site at www.blm.gov/bmp.

BMPs dealing with visual resource management considerations in general are available at www.blm.gov/nstc/VRM/destech.

APPENDIX C

PALEONTOLOGY

APPENDIX C
PALEONTOLOGY

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

October 10, 2008

In Reply Refer To:
8270, 1790 (240) P

EMS TRANSMISSION 10/29/2008
Instruction Memorandum No. 2009-011
Expires: 09/30/2010
To: All State Directors

From: Assistant Director, Renewable Resources and Planning

Subject: Assessment and Mitigation of Potential Impacts to Paleontological Resources

Program Areas: Paleontological Resources Management, Environmental Assessment

Purpose: This Instruction Memorandum (IM) provides guidelines for assessing potential impacts to paleontological resources in order to determine mitigation steps for federal actions on public lands under the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA). These guidelines also apply where a federal action impacts split-estate lands. In addition, this IM provides field survey and monitoring procedures to help minimize impacts to paleontological resources from federal actions in the case where it is determined that significant paleontological resources will be adversely affected by a federal action.

Policy/Action: It is the policy of the BLM that potential impacts from federal actions on public lands, including land tenure adjustments, be identified and assessed, and proper mitigation actions be implemented when necessary to protect scientifically significant paleontological resources. This policy also applies to federal actions impacting split-estate lands and is subject to the right of landowners to preclude evaluation and mitigation of paleontological resources on their land. Paleontological resources removed from public lands require a Paleontological Resources Use permit for collection. Significant paleontological resources collected from public lands are federal property and must be deposited in an approved repository. Paleontological resources collected from split-estate lands are the property of the surface-estate owner, and their disposition will be in accordance with the surface agreement between the landowner and the permittee.

Timeframe: This guidance is effective immediately for all BLM offices.

Background: Surface disturbing activities may cause direct adverse impacts to paleontological resources through the damage or destruction of fossils; or loss of valuable scientific information by the disturbance of the stratigraphic context in which fossils are found. Indirect adverse impacts may be created by increased accessibility to important paleontological resources leading to looting or vandalism. Land tenure adjustments may result in the loss of significant paleontological resources to the public if paleontological resources pass from public ownership. Generally, the project proponent is responsible for the cost of implementing mitigation measures including the costs of investigation, salvage and curation of paleontological resources.

This IM together with the Potential Fossil Yield Classification system (PFYC; see IM 2008-009) will provide guidance for the assessment of potential impacts to paleontological resources, field survey and monitoring procedures, and recommended mitigation measures that will better protect paleontological resources impacted by federal actions. This guidance expands and clarifies the

guidance in the Handbook H-8270-1 (General Procedural Guidance for Paleontological Resource Management) Chapter III (Assessment & Mitigation) and will be incorporated into the next Handbook revision.

Impact on Budget: Costs are minimal for implementation of this guidance since mitigation of paleontological resources is already part of any approval of surface-disturbing actions on public lands.

Manual/Handbook Affected: Supersedes Handbook H-8270-1 (General Procedural Guidance for Paleontological Resource Management) Chapter III.B.

Coordination: Washington Office Division of Cultural and Paleontological Resources and Tribal Consultation.

Contact: For questions regarding application of this policy and guidance, please contact Lucia Kuizon, National Paleontologist, at (202) 452-5107 or lkuizon@blm.gov.

Signed by:
Edwin L. Roberson
Assistant Director
Renewable Resources and Planning

Authenticated by:
Robert M. Williams
Division of IRM Governance,WO-560

2 Attachments

1- Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources (19 pp)

2- Paleontological Resources Assessment Flowchart (2 pp)

Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources

Contents:

Introduction

Surface disturbing federal actions on public and split-estate lands may cause direct adverse impacts to paleontological resources through the damage or destruction of fossils or the disturbance of the stratigraphic context in which they are located. Indirect adverse impacts may be created from increased accessibility to fossils leading to looting or vandalism activities. Land tenure adjustments may result in the loss of significant paleontological resources to the public if fossils pass from public ownership.

Under the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA), federal actions and land tenure adjustments that may impact or result in a loss of paleontological resources on public or split-estate lands are evaluated, and necessary mitigation is identified.

I. ASSESSMENT OF POTENTIAL IMPACTS TO PALEONTOLOGICAL RESOURCES

The following sections outline general steps designed to assist in the analysis and assessment of possible impacts to paleontological resources from proposed actions. These sections are sequential in order and provide for termination of the assessment at various stages if the analysis indicates no impacts are likely to occur.

A. Scoping. Field Offices must assess all proposed federal actions to identify possible effects to significant paleontological resources (see Appendix A for definition) that are potentially recoverable and are likely to be within the zone of expected surface disturbance or relatively close to the surface. The direct effects of all surface activities and the indirect effects of increased public access and land tenure adjustments must be considered in any paleontological assessment. The assessment will determine whether further analysis will be necessary. The Paleontology Program Coordinator (Paleontology Coordinator – see Appendix A for definition) has primary responsibility for the scoping process for projects within the Field Office area, but the Paleontology Program Lead (Paleontology Lead – see Appendix A for definition) may be responsible for projects that span multiple Field or District Offices, and can support the Paleontology Coordinator as requested.

1. Surface only activities – If the proposed project will not disturb potentially fossil-yielding bedrock or alluvium, no additional work is necessary. The project file should be documented as appropriate. Examples of such projects include weed spraying, mechanical brush treatment, geophysical exploration, or surface disturbing activities such as road construction when the fossil resource is expected to be buried well below project compression or excavation depth or when surface fossil resources would be left undamaged.

2. Land Tenure Adjustments – If parcels are identified to pass from public ownership in a proposed land tenure adjustment action but contain no potential for recoverable, significant paleontological resources, no additional work is necessary. The project file should be documented as appropriate**,** and conclusions addressed in the environmental document. This situation may arise, for example, in areas consisting only of granitic bedrock where paleontological resources would not normally occur.

3. Young alluvial deposits or deep soils may cover and obscure sedimentary bedrock, and any fossils that may occur in that bedrock would be unidentifiable or irretrievable prior to disturbance actions. In most of these cases, the fossil resources cannot be quantified, but the potential for impacting paleontological resources should be mentioned in the evaluation of the proposal, i.e., the planned disturbance will pass through the soil layer and impact a bedrock unit which is known to contain significant fossils elsewhere.

If the initial scoping identifies the possibility for adversely affecting significant paleontological resources, further analysis is necessary. If there will be no impact or potential impact based on the action or the fossil resource may be impacted, but is too deep to be recovered, e.g., deep well bore passing through a fossil formation, the project file must be documented, and no additional assessment is necessary.

B. Analysis of Existing Data. If scoping suggests the possibility of disturbing fossil-yielding bedrock or alluvium that is near to the surface and that may contain significant paleontological resources that are potentially recoverable, more in-depth analysis is necessary. Geologic mapping reflecting the Potential Fossil Yield Classification (PFYC) should be consulted, along with any other easily accessible information, such as GIS-based locality data, other known paleontological locality information, and existing paleontological reports for the area, aerial photos, or soils maps.

1. Potential Fossil Yield Classification (PFYC) – This is a system for categorizing the probability of geologic units to contain scientifically significant paleontological resources or noteworthy fossil occurrences. It has five levels or Classes, with Class 1 applied to geologic units that are not likely to contain significant fossils through Class 5 for geologic formations that have a high potential to yield scientifically significant fossils on a regular basis (see IM No. 2008-009). This classification does not reflect rare or isolated occurrences of significant fossils or individual localities, only the relative occurrence on a formation- or member-wide basis. Any rare occurrences may require additional assessment and mitigation if they fall within the area of anticipated impacts.

2. If the results of the preliminary analysis determine that the proposed project will only affect geologic units not likely to contain significant fossils or that have a very low or low potential for significant fossils (PFYC Class 1or 2), and no scientifically important localities are known to occur in the area, the project file should be documented, and no additional paleontology assessment is necessary.

3. The results of an analysis of a proposed project may indicate the potential to disturb PFYC Class 3, 4, or 5 formations or potentially fossil-bearing alluvium, or known significant localities, which may then suggest the need for field surveys and/or other mitigation measures. The results may also identify areas where little or nothing is known of the fossil record so that additional attention may be given to these areas during field survey. The analysis should consider the likely impacts on the known or potential fossil resource and should be the basis for determining the need for or level of additional assessments.

C. Determining the Need for Field Surveys and Mitigation. The previously discussed procedures may result in the determination that the project may encounter bedrock or an alluvial zone that has a moderate or high potential to contain significant paleontological resources. However, it does not determine the appropriate action, such as a field survey, on-site monitoring, special stipulations, avoidance, or other mitigation.

1. If the need for further work is not clearly evident after the analysis, the Authorized Officer and/or Project Leader should be consulted for a final decision. The Paleontology Lead or Regional Paleontologist may also be consulted. A brief written report of findings should be prepared, including the rationale for supporting the decision not to require a field survey or additional monitoring. The report should be signed by the Authorized Officer and placed in the project file. For example, a seismic survey using vibroseis trucks may be proposed on areas of deep soils, or a temporary recreational event may be planned in an area of low fossil potential. These types of projects are not likely to have a reasonable potential to adversely affect important

paleontological resources. The file should be documented and a standard discovery stipulation attached to the permit proposal.

2. If the analysis in Sec. I.B indicates a reasonably high expectation of not just encountering a potential fossil-bearing zone and also causing adverse impacts to significant paleontological resources, the determination must be made as to (1) whether adverse effects cannot be avoided; (2) whether the adverse impacts can be avoided by altering the location or scope of the project; (3) whether the impacts can be mitigated through development of special stipulations such as requiring on-site monitoring; or (4) whether field surveys will be necessary to determine the presence or absence of significant paleontological resources.

3. In the case where it is known that significant paleontological resources will be adversely impacted, the preferred course of action is avoidance of the impact by moving or rerouting the site of construction, or eliminating or reducing the need for surface disturbance.

4. Application of specific stipulations may reduce or eliminate adverse impacts in many cases. A standard discovery stipulation should be included in any permit approval that is likely to affect significant paleontological resources. The stipulation should mandate an immediate work stoppage in the area of discovery, notification to the Authorized Officer, and protection of the material and geological context. Other stipulations may be appropriate on a case-by-case basis.

(a) A suggested standard discovery stipulation for a discretionary federal action is:

> The permittee shall immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operations under this authorization. The permittee shall suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and shall protect the discovery from damage or looting. The permittee may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with the operator. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

Note: C.1 and C.2 above would be conducted at the permittee's expense. By regulation, after a 3809 plan of operations is approved or where there is no plan, the BLM is responsible for the cost of any investigation and recovery of fossil materials.

(b) Other stipulations may be developed to reduce potential impacts, preferably in consultation with the project proponent. These may include (1) techniques to reduce surface

disturbance, (2) briefings for all personnel about the potential for discovery, (3) requiring all finds be reported, and (3) using a "light touch" in sensitive areas. These should be made a formal part of the authorization for the project and discussed at a preconstruction meeting or an on-site meeting in the case of oil and gas operations.

(c) All proponents should be directed to share the current rules and regulations regarding fossil theft and the limitations to free use collecting of invertebrate and plant fossils on BLM-administered lands with all employees and subcontractors under their direction. Unlawful removal, damage, or vandalism of paleontological resources will be prosecuted by federal law enforcement. Theft or damage to government property by a proponent, a proponent's employee, or a subcontractor that is under a proponent's direction may lead to legal actions against the proponent.

5. If avoidance actions or stipulating measures are insufficient to protect known paleontological resources, a written assessment must be completed to determine the need for field survey or monitoring. This assessment must include the anticipated direct or indirect impacts associated with the project, the inadequacies of avoidance or special stipulations to protect the resource, existing paleontological information and known localities, relevant geologic information, and the potential for additional discoveries. The assessment must be completed by the Paleontology Coordinator.

(a) In some cases, bedrock will not be visible at the surface in the project area (for example, where thin soils or alluvium obscure all outcrops), but the proposed excavation will likely penetrate into bedrock with known significant paleontological resources. Because fossil material will not be visible at the ground surface in these cases, it may be appropriate to forego a field survey prior to excavation, but require on-site monitoring or spot-checks when bedrock is finally encountered. If construction monitoring is proposed, the written assessment must include a thorough justification for the recommendation.

(b) The State Office may require the Paleontology Coordinator to notify the Paleontology Lead that a field survey or monitoring is deemed appropriate prior to the final decision to require the survey or monitoring. The notification should minimally include the name of the project, the legal description of the location or other locational information, a brief summary of the proposed action, reason(s) for the decision to require a survey or monitoring, and any other relevant information. Concurrence of the Paleontology Lead or Regional Paleontologist may be required prior to the final decision for requiring a survey or monitoring.

(c) A standardized assessment document may be developed that can be applied to projects that are similar in nature, relatively small, and repetitive in approach for use within a Field Office or District. This written assessment is intended to simplify the documentation process for those projects that are likely to have minimal impacts, and may be structured as a programmatic assessment, a form, a checklist, or other document with standard items. This assessment must include the name of the project, the legal description of the location or other locational reference, a brief summary of the proposed action, reason(s) for the decision, and any other relevant information. The parameters in the assessment should be designed to identify the need for a field survey. For example, the parameters may indicate a field survey may be required

for road and well pad construction activities occurring on Class 4 or 5 formations where the formation is likely to be encountered during surface disturbing activities. The Field Manager, in consultation with the Paleontology Lead, must approve the use of a programmatic assessment prior to initial implementation.

6. The decision to require a field survey or monitoring must be made by the Authorized Officer and documented in the project file. If required, a copy of the decision must be furnished to the Paleontology Lead.

II. PROCEDURES FOR CONDUCTING A PALEONTOLOGICAL FIELD SURVEY

If the assessment of existing data indicates: (a) the presence or high probability of occurrence of vertebrate fossils or uncommon nonvertebrate fossils (PFYC Class 4 or 5), or that the probability is unknown (Class 3), in the area of a proposed federal action or transfer of title, and (b) a reasonable probability that those resources will be adversely affected by the proposed action, a paleontological field survey should be conducted.

A. Definition of Field Surveys. Field Surveys are pedestrian surveys to be performed in areas where significant fossils can be expected to occur within the boundary and immediate vicinity of the anticipated disturbance, or where the probability of encountering significant fossils is unknown.

1. Field surveys are performed prior to any surface disturbing activities. Before conducting field surveys, the project location should be as final as possible and any staking of the location should be complete.

2. Surveys are conducted by a BLM Regional Paleontologist, Paleontology Lead, Paleontology Coordinator, appropriately trained and supervised BLM staff, or by a BLM-permitted consulting paleontologist hired by the project proponent.

(a) At the Field Manager's discretion, other qualified BLM staff may conduct surveys on small projects. Performance of surveys by BLM staff must also be approved by the Regional Paleontologist, Paleontology Lead, or Paleontology Coordinator.

(b) Surveys that are complex in nature, constrained by construction schedules, or otherwise cannot be performed by BLM staff should be performed by a consulting paleontologist holding a valid BLM Paleontological Resources Use Permit. Submission of reports may be done directly by the paleontologist to the BLM. The project proponent is also responsible for all costs associated with the survey, including the consulting paleontologist's fees and charges, all survey costs, fossil preparation to the basic identification stage, analyses, reports, and curation costs directly related to mitigation of the project's anticipated impacts. Any required monitoring and mitigation costs are also the responsibility of the project proponent. These costs are to be negotiated between the project proponent and the consulting paleontologist prior to beginning any data gathering, analysis, or field work, and these negotiations do not require BLM

involvement or approval. Any new, additional, or modified curation agreements between the paleontologist and the official repository must be in place prior to starting field work.

(c) Authorization for an activity to proceed cannot be given by a consulting paleontologist. Performance of the survey, either by a consulting paleontologist or BLM staff, or submission of the report DOES NOT constitute approval for the activity to proceed. The BLM must review the report, including adequacy of the field methods and findings. The Authorized Officer must approve the findings and determine the need for monitoring prior to approval to proceed.

B. Conducting Field Surveys. Field surveys must be performed by the Principal Investigator or an approved Field Agent or Field Monitor (see section IV.C., Types of Field Personnel for descriptions of these individuals) as authorized under a Paleontological Resource Use Permit, or by a BLM Regional Paleontologist or qualified BLM designee. Field surveys and collections performed as a mitigation measure are not intended to be scientific research studies, but are meant to identify, avoid, or recover paleontological resources to prevent damage or destruction from project activities. However, proper scientific techniques and procedures must be utilized during all mitigation efforts. Safety should be an important consideration; therefore, surveys should not be attempted on cliff faces, in open, non-reinforced trenches deeper than five feet, or other unsafe areas.

1. The scope of the survey is dependent upon the scale of the project. Small projects are defined as less than 10 acres, or, if linear, less than five miles; large projects exceed those dimensions.

2. At the start of field work, the consulting paleontologist (paleontologist) must contact the Paleontology Coordinator in each affected Field Office who may require a visit to that office. After an initial visit each year, the paleontologist may contact the Field Office by telephone or email prior to subsequent field trips, at the discretion of the Field Office. Information about the survey schedule, additional personnel, emergency field contact information, and any other pertinent data should be provided to the Paleontology Coordinator. The Field Office will inform the paleontologist of any conditions that may impact the survey, such as fire danger or restrictions, drought restrictions, wildlife timing restrictions, management restrictions, road restrictions or construction, and any other relevant information.

3. During the field survey, the paleontologist surveys, locates, and documents all paleontological resources within 200 feet of the proposed project location or corridor, or less distance upon approval.

(a) Where significant paleontological resources are at risk, data collection alone does not constitute mitigation of damage. All significant fossils that may be damaged or destroyed during project activities must be collected, along with all relevant contextual and locational data. Specimens must be collected during the survey or prior to commencement of any surface-disturbing activities.

(b) In many cases, isolated gar scales, chelonid (turtle) carapace or plastron fragments, crocodile and fish teeth, and unidentifiable bone fragments do not need to be collected. The location must be recorded and a description of the fossil material noted in the field notes and on a BLM Locality Form as part of the report. The context of these types of fossils should be considered, as they may represent rare occurrences or unusual faunal associations, and thus may be scientifically important and must be documented and voucher specimens collected where appropriate.

(c) Occurrences of plant or invertebrate fossils should be recorded and representative examples or voucher specimens collected where appropriate. Additional mitigation measures may be appropriate in some cases for these types of localities.

(d) If a large specimen or a concentration of significant fossils is located during the field survey, the available time and/or personnel may not allow for full recovery during the survey. The specimen(s) and locality(ies) should be stabilized as needed, and a determination made as to whether avoidance is necessary or whether full recovery of the specimen is required at a later time prior to disturbance activities. The Authorized Officer and project proponent must be notified, the mitigation alternatives discussed including funding for recovery, and a decision reached as soon as possible. If avoidance or later recovery is selected for mitigation, the find should be stabilized, buried if needed to protect the fossils and context, and appropriate measures implemented to reduce adverse effects from natural or human causes.

4. During the survey, locations or areas that exhibit a lithology suggesting a high probability of subsurface fossil material must be recorded, and a recommendation for the need for on-site monitoring, spot-checking, or testing should be made in the report. This may include areas where no fossil material was found on the surface during the survey. The recommendation should consider the size and type of planned disturbance, such as the depth of a trenching operation or the acreage of surface disturbance.

5. Surveys must be performed only during times when the ground is visible and not frozen. This will often preclude surveys during winter months in many areas. Biological timing restrictions, such as critical nesting or birthing times, may confine or delay field activities. Project proponents should be informed of BLM's requirement for performing any field surveys as soon as possible and should be advised of the possibilities for delays in survey completion based on seasonal weather conditions or other management restrictions to allow for adequate scheduling of available time.

C. Report of Survey Findings. After completion of the field survey, the paleontologist must file a written report with the BLM and the designated repository. If required, a copy should also be filed with the project proponent. This report must summarize the results of the survey as well as appropriate geological and paleontological background information as described below. It should also include any recommendations for on-site monitoring or other mitigation. For small projects (less than 10 acres), the report must be filed within 30 days after completion of the survey unless specific approval for a different time frame has been received from the BLM. The time frame for submission of the report for large projects should be negotiated during project scoping. On a case-by-case basis, approval to begin project activities may be granted for those

portions of the project area noted to be less paleontologically sensitive prior to final approval of the report.

1. Reports of the general findings and the background information must be submitted to the BLM project manager or Authorized Officer (if appropriate), the Paleontology Lead or Regional Paleontologist, and each affected Field Office. Reports must include the following details, as applicable. Items (a) and (b) should appear at the beginning of the report and may be presented as a title page in multi-page reports. Some of these categories may be combined.

(a) Name, affiliation, address, date of report, and permit number (if consultant) of paleontologist doing the survey.
(b) Project name and number (if used), name of proponent, and general location of project.
(c) Date(s) of survey and names of any personnel assisting with the survey.
(d) Brief description of the proposed project, emphasizing potential impacts to paleontological resources.
(e) Description of background research conducted. (Include overview of known paleontological information, institutions consulted, previous surveys in the area, previous projects of similar nature in the area, and general description of survey techniques employed).
(f) Summary of regional and local geology. May reference earlier projects for relevant information.
(g) Summary of regional and local paleontology. May reference earlier projects for relevant information.
(h) Summary of the survey results.
(i) Significance of findings.
(j) Potential impacts to paleontological resources resulting from the project.
(k) Detailed mitigation recommendations that may lessen potential adverse impacts.
(l) Potential fossiliferous areas to allow for future assessment of sites if applicable.
(m) Cited and other pertinent references.
(n) Map of project area, indicating areas surveyed, known localities, and new discoveries.
(o) Relevant photos, diagrams, tables to aid in explaining, clarifying, or understanding the findings.
(p) Listing of collected material, including field numbers, field identifications, and elements, cross-referenced to locality field numbers. This list may be submitted in electronic format, preferably in spreadsheet format.
(q) BLM locality form (8270-3) or equivalent for each new locality (including localities where fossils were observed but not collected) with a 1:24000 scale map showing the localities (not reduced in scale during photocopying) (see items 2 and 3 below).

2. Exact locations of fossil localities contained in these reports are considered sensitive and must not be included in any public document. The BLM locality form (8270-3) or

equivalent, 1:24000 scale map showing the localities, and any other information containing specific fossil locations may be bound separately or placed in a separate section to allow for preservation of confidential locality data. A copy of this confidential section must be submitted to the Paleontology Lead (in some cases, two copies may be required). A copy for each affected Field Office may be required. Another copy must be submitted to the official repository with the collected materials.

3. BLM GPS recording and data standards must be used to report paleontological locality data. Existing USGS topographic maps are often based on the NAD27 standard, so locality data calculated from a map base must be converted before submission. Data must be recorded and reported with a mean error of +/- 12.5 meters or less, at a 95 percent confidence level. For small localities, data should be reported as point data. Larger polygonal localities should be reported using coordinates of a centroid and a description of the approximate size, or the key coordinate points of a bounding polygon. Linear features, such as roads or surveyed project boundaries, must be reported as line data. The 1:24000 scale map(s) accompanying the locality forms should graphically illustrate the locality, either as a point or an outline of the locality as appropriate, and be clearly labeled with the locality or field number.

D. Report Approval. The Authorized Officer will analyze the Survey Report for adequacy within 10 working days of receipt. Notification accepting the report, or explaining any identified deficiencies, will be sent to the consulting paleontologist and the project proponent with a copy placed in the project file. Any deficiencies must be corrected as soon as possible, usually initiated within five working days, and the report must be resubmitted for approval. Any resubmissions must be prompt, but consideration will be made for the amount of time needed for major corrections. Deficiencies directly affecting the survey, such as inadequate survey procedures or incomplete data, must be corrected before granting approval for the project to proceed. Deficiencies not directly affecting the survey, such as curation issues, will not prevent approval of the project, but must be corrected as soon as possible.

III. DETERMINATION OF FURTHER MITIGATION REQUIREMENTS

The need for additional mitigation to protect paleontological resources will be determined on a case-by-case basis. The Authorized Officer, in consultation with Regional Paleontologist or the Paleontology Lead, will analyze the Survey Report for survey findings and any mitigation recommendations. If no further mitigation is needed, the Authorized Officer will promptly notify the project proponent that there are no additional paleontological surveys or mitigation measures required, and the project may proceed pending any other approvals. The project file must be documented indicating acceptance of the survey report and identifying any additional mitigation requirements. If it is determined that additional mitigation efforts are needed to protect or preserve the paleontological resources, the project proponent will be notified as soon as possible. The Authorized Officer and/or the Paleontology Lead usually develop and approve the mitigation procedures or recommend a project be redesigned in consultation with the project proponent. Factors such as locality or specimen significance, economics, safety, and project urgency will be considered when developing mitigation measures. Additional mitigation

measures will be developed and implemented as timely as possible so as not to delay project actions.

A. Relocation. The preferred mitigation technique is to change the project location based on the results of the field survey. Relocation, however, may necessitate a field survey of the new area, as well as resurveys by other resource specialists. Anticipation of this contingency prior to or during the original survey may allow for survey of an expanded area at the same time. If relocation will eliminate impacts and is acceptable to all parties, then a report to the file, including a map showing the original and revised locations, must be completed documenting the change. Approval for the project to proceed in the revised location may then be granted by the Authorized Officer to the project proponent. When avoidance is not possible, appropriate mitigation may include excavation or collection (data recovery), stabilization, monitoring, protective barriers and signs, or other physical and administrative protection measures.

B. Deferred Fossil Collection. In some cases, fossil material may have been identified, but not completely collected during the initial field survey, such as a partial dinosaur or other large fossil assemblage. It may be possible to complete the recovery of this material and all related data prior to beginning construction activities, and thus mitigate the adverse impact. This may require a shift in the project schedule and must be coordinated with the project proponent. Approval by the Authorized Officer for the project to proceed will only be granted when recovery of the fossil material and field data is completed. A report to the file and the project proponent documenting the recovery and indicating that no further mitigation is required must be completed, and the report signed by the Authorized Officer. If the discovery cannot be fully collected within the available time frame, it may have to be avoided by relocating or redesigning the project.

IV. PROCEDURES FOR FIELD MONITORING

The purpose of on-site monitoring is to assess and collect any previously unknown fossil material uncovered during the project activities or soon after surface-disturbing actions. Based on the initial scoping, the field survey and recommendations, and the plan of operations, it may be necessary to require monitoring of surface-disturbing activities. Monitoring may be required as part of an overall mitigation for a project which was developed during the NEPA process, or upon the discovery of paleontological resources during project activities.

A. Monitoring Plan. A monitoring plan can be developed by a BLM paleontologist or a qualified paleontologist hired by the proponent. The plan must be appropriately scaled to the size and complexity of the anticipated monitoring. If developed by a third party, the appropriate Paleontology Lead or Regional Paleontologist shall review the plan for sufficiency prior to acceptance. Monitoring of the project may proceed when the monitoring plan is approved by the Authorized Officer. A monitoring plan indicates the treatments recommended for the area of the proposed disturbance and must minimally address the following:

1. The recommended approach to additional specimen collection, such as total or partial recovery or sampling; and

2. The specific locations and intensity of monitoring or sampling recommended for each geologic unit, stratigraphic layer, or area impacted.

Monitoring intensity is determined based on the analysis of existing data and/or field surveys and any previous monitoring efforts.

B. Types of Monitoring. There are two types of monitoring: 1) on-site, performed during ongoing operations, and 2) spot-checks, performed during or after disturbance, or at key times during the progress of the project.

1. On-site monitoring – In areas with a high probability for buried fossils, the presence of a monitor at the site of disturbance at all times that disturbance is occurring may be warranted. The need for a full-time monitor is based on the findings of the survey, the local geology, and the proposed actions. Efforts will be made to complete fossil recovery with minimal work stoppage. However, in some cases, an extended period of work stoppage may be required, so coordination with the project proponent or representative is important (see D below). Prior to beginning the monitoring work, the monitor, company supervisor, and machinery operators should agree on procedures for brief work stoppages to allow for examination of finds. It is critical that safety be of utmost concern because of the presence of heavy machinery and open trenches.

The monitor must assess any finds, collect loose fossil material and related data, and take appropriate steps to mitigate any current or potential damage. Consideration of the size of the expected fossils must also be considered; for example, microfossils may not be visible during excavation activities. It may be appropriate to collect samples of matrix for later recovery of microvertebrate fossils or other analyses. Activities planned to occur during night time should be assessed relative to the potential to uncover significant fossils. Fossils may not be visible at night in trenching or grading operations, so construction activities may need to be suspended during night time in sensitive areas.

2. Spot-checking – In areas with a moderate to high probability for unknown fossil material, it may be more appropriate to check only at key times rather than maintain continuous monitoring of operations. Key times for scheduling spot-checking are when the fossil-bearing bedrock is exposed to view or prior to placing spoil material back into the excavation. Examples of these key times may be when a pipeline trenching operation is complete but before pipe is placed and the trench backfilled or prior to redistribution of topsoil. Spot-checking requires close coordination with the project proponent and the paleontologist, and usually requires the paleontologist to be available on short notice. In some instances, it may be advantageous to allow rain and/or wind to erode away loose matrix and concentrate fossil material to increase visibility. The paleontologist will coordinate with the project proponent to allow sufficient time for this action to occur, as appropriate to conditions, expected fossil material, and construction schedules.

The paleontologist should report potentially fossiliferous areas in the final report to allow for future assessment of sites, even if no fossils were located during the project monitoring.

C. Types of Field Personnel. Depending on the complexity of the project, it may be necessary to employ a number of paleontology field personnel simultaneously. There may be a lack of fully qualified paleontologists to perform all the necessary monitoring during the scheduled times of construction. Use of additional personnel for field work is permissible, but Field Agents and Field Monitors (described below) must be requested by the Permittee and authorized by the BLM prior to field work.

1. **Principal Investigator** – The person listed as Permittee (Permit item 1a) on the Paleontological Resources Use Permit is the Principal Investigator (PI) and is responsible for all actions under the permit, for meeting all permit terms and conditions, and for the performance of all other personnel. This person is also the contact person for the project proponent and the BLM.

2. **Field Agent** – Other qualified paleontologists may perform field work independently of the PI under the conditions of this permit. Résumés must be submitted to BLM and must demonstrate qualifications equivalent to those of Permittees. Field Agents must be listed on the permit under "Name(s) of individual(s) responsible for planning, supervising, and carrying out fieldwork" (Permit item 8) or authorized in a separate letter from BLM. They must follow all the permit terms and conditions applicable to field work and must carry a copy of the permit, included terms and conditions, and separate authorizing letter (if used) while in the field. Field work results must be reported to the PI, who will then submit required reports.

3. **Field Monitor** – Field Monitors may be utilized for supplemental on-site monitoring of surface-disturbing activities when the PI or a Field Agent is performing field work elsewhere. Field Monitors must have sufficient field experience to demonstrate acceptable knowledge of fossil identification, collection methods, and paleontological techniques. The PI must supply a summary of each person's experience to the BLM prior to field work. Field Monitors must be approved by the BLM prior to performing field work and must carry a copy of the permit while in the field. The PI or Field Agent must be in communication with the Field Monitor using a portable communication device, such as a cell phone or two-way radio, and are required to be near enough to the Field Monitor to allow for prompt examination of all fossil discoveries (no more than two hours away) by the PI or Field Agent.

4. **Field Assistant** – Additional personnel not meeting the previously cited experience or knowledge levels may be utilized during field work, but must be under direct, on-site supervision of either the PI or a Field Agent as part of a supervised crew. Field assistants must have at least four to eight hours of training or experience received from a qualified paleontologist in identifying paleontological resources prior to performing field work or when first utilized in this capacity. A listing of all Field Assistants (including contact information) must be supplied prior to any field work. All discoveries made by a Field Assistant must be immediately reported to the PI or Field Agent on site. To ensure proper supervision, an appropriate ratio of Field Assistants per PI or Field Agent must be maintained. The complexity of the project, the area to be covered, and the experience of the assistants are some of the factors that should be considered in determining the proper ratio, but commonly five to seven assistants is the maximum number that can be supervised by one PI or Field Agent.

D. Work Stoppage. If significant fossil material is discovered during construction activities, the PI, Field Agents, and Field Monitors have the authority to temporarily halt surface disturbing actions until an assessment of the find is completed and appropriate protection measures taken. Efforts will be made to complete fossil recovery with minimal work stoppage. However, in some cases, an extended period of work stoppage may be required. If the paleontological resource can be avoided, mitigated, or collected within approximately two hours, work may resume after approval from the PI or Field Agent, and the Authorized Officer must be notified as soon as possible of the discovery and any mitigation efforts that were undertaken. If the find cannot be mitigated within a reasonable time (two hours), the concurrence of the Authorized Officer or official representative for a longer work stoppage must be obtained. Work may not resume until approval is granted from both the PI or Agent and the Authorized Officer.

V. FINAL PROJECT REPORT

Upon completion of all field work, including survey and monitoring, the PI must submit within 30 days, a written final report to the Authorized Officer, Paleontology Lead, and the designated repository. A copy of the report may be provided to the project proponent if required**,** but without the BLM Locality forms. Reports must include the following details. Items 1 and 2 should appear at the beginning of the report, and may be presented as a title page in multi-page reports.

1. Name, affiliation, address, date of report, and permit number (if consultant) of the paleontologist doing the survey.
2. Project name and number (if used), name of proponent, and general location of project.
3. Date(s) of the survey and names of any personnel assisting with the survey.
4. Brief description of project and expected impacts to paleontological resources.
5. A summary of mitigation performed.
6. A summary of findings, including important discoveries.
7. A description of potentially fossiliferous areas to allow for future assessment of sites, even if no fossils were located during the project monitoring.
8. A completed BLM locality form 8270-3 or equivalent for each new locality using Universal Transverse Mercator (UTM) NAD 83 coordinates, and 1:24000 scale maps with new localities plotted using points or polygons as appropriate. Locality forms, maps, and any other information containing specific fossil locations should be bound separately or assembled as a separate section to allow for preservation of confidential locality data.
9. List of specimen field numbers and field identifications of collected material, cross-referenced to the locality field number. This list may be submitted in electronic format, preferably in a spreadsheet format.

If the survey was performed by BLM, a report similar in contents must be written and filed in the project file, and the project proponent notified as soon as possible upon completion.

VI. COMPLETION OF MITIGATION RESPONSIBILITY

When the final report with the specimen inventory and the signed receipt of confirmation of museum deposition are accepted by the BLM, mitigation for paleontological resources related to the project will be considered completed. The project proponent will be notified in writing as soon as possible by the Authorized Officer after consulting with the Paleontology Lead or Regional Paleontologist and a copy of the notification placed in the project file.

The responsibility of the project proponent ends when appropriate mitigation related directly to the project is completed and final approval is received from the Authorized Officer. Any additional field collection, quarrying, final specimen preparation, etc. will be considered to be research, and will be the responsibility of the consulting paleontologist or another approved party. The project proponent will not be held responsible for completion of any research project. However, the project proponent can choose to sponsor further research. A separate research permit will be required for additional research activities.

VII. COLLECTIONS RESULTING FROM ASSESSMENT AND MITIGATION

Fossil specimens and related data collected from public lands during field surveys and mitigation remain the property of the Federal government. They must be placed in the approved repository(s) identified on the Paleontological Resource Use Permit held by the consulting paleontologist as soon as practical and receipt(s) of collections submitted to the BLM, but no later than 60 days after all field work is completed. Written approval from the Paleontology Lead or Regional Paleontologist is required if additional time is needed for transfer of all specimens and field data.

VIII. RESOURCE MANAGEMENT UPDATES

Based on findings resulting from any of the above steps, the project file, locality and specimen information, and other BLM data should be updated to reflect any new or modified information. Paleontology permit files should be checked and updated, as well as any other administrative information.

The PFYC Class assignments can be assessed based on the analysis, survey, and monitoring results. New information may indicate a change in the PFYC Class is appropriate for one or several geologic units. Other applications of the PFYC system should be considered, such as the use for impact analyses in planning documents or for survey and mitigation determinations for other projects. Any changes in classification must be made in consultation with the Paleontology Lead or Regional Paleontologist to maintain consistency across Field Office boundaries.

APPENDIX A – DEFINITIONS

(As applicable to BLM management of paleontological resources)

Alluvium – A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material [fragments of rock or mineral material derived from older rocks] deposited during relatively recent geologic time by a stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or its flood plain or delta, or as a cone or fan at the base of a mountain slope; especially, such a deposit of fine-grained texture (silt or silty clay) deposited during a time of flood (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.)

Alluvium may contain paleontological resources in older alluvial deposits. The location on the landscape often will provide clues to the potential for paleontological resources within alluvial deposits. As an example, alluvium developed near major river courses or lake margins has a much higher potential to contain significant paleontological resources than alluvium (colluvium) formed from slope wash.

Approved Repository – Meets the Department of the Interior 411 Departmental Manual (DM) provisions for museum property, including capability for providing adequate long-term curatorial services, such as a physically secure environment, and maintaining professional staff qualified to catalog, care for, preserve, retrieve, and loan, where appropriate, these materials and associated records.

Bedrock – A general term for the rock, usually solid, that underlies soil or other unconsolidated, surficial material (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.) For paleontological purposes, bedrock generally excludes alluvium, colluvium, sand dunes, and loess (fine-grained blanket deposit of marl or loam). In certain situations, bedrock may contain recent soils/sediments with fossils.

Colluvium – A general term applied to any loose, heterogeneous, and incoherent mass of soil material or rock fragments deposited chiefly by mass-wasting, usually at the base of a steep slope or cliff; e.g., talus, cliff debris, and avalanche material. Also, alluvium deposited by unconcentrated surface run-off or sheet erosion, usually at the base of a slope (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.)

Field Agent – Other qualified paleontologists may perform field work independently of the PI under the conditions of this permit. Résumés must be submitted to BLM and must demonstrate qualifications equivalent to those of Permittees. Field Agents must be listed on the permit under "Name(s) of individual(s) responsible for planning, supervising, and carrying out fieldwork" (Permit item 8) or authorized in a separate letter from BLM. They must follow all the permit terms and conditions applicable to field work and must carry a copy of the permit, included terms and conditions, and separate authorizing letter (if used) while in the field. Field work results must be reported to the PI, who will then submit required reports.

Field Assistant – Additional personnel not meeting the previously cited experience or knowledge levels may be utilized during field work, but must be under direct, on-site supervision

of either the PI or a Field Agent as part of a supervised crew. Field assistants must have at least 4 to 8 hours of training or experience received from a qualified paleontologist in identifying paleontological resources prior to performing field work or when first utilized in this capacity. A listing of all Field Assistants (including contact information) must be supplied prior to any field work. All discoveries made by a Field Assistant must be immediately reported to the PI or Field Agent on site. To ensure proper supervision, an appropriate ratio of Field Assistants per PI or Field Agent must be maintained. The complexity of the project, the area to be covered, and the experience of the assistants are some of the factors that should be considered in determining the proper ratio, but commonly five to seven assistants is the maximum number that can be supervised by one PI or Field Agent.

Field Monitor – Field Monitors may be utilized for supplemental on-site monitoring of surface-disturbing activities when the PI or a Field Agent is performing field work elsewhere. Field Monitors must have sufficient field experience to demonstrate acceptable knowledge of fossil identification, collection methods, and paleontological techniques. The PI must supply a summary of each person's experience to the BLM prior to field work. Field Monitors must be approved by BLM prior to performing field work and must carry a copy of the permit while in the field. The PI or Field Agent must be in communication with the Field Monitor using a portable communication device, such as a cell phone or two-way radio, and are required to be near enough to the Field Monitor to allow for prompt examination of all fossil discoveries (no more than two hours) by the PI or Field Agent.

Field Survey – Pedestrian (walking) surveys performed in areas where significant fossils are expected to occur within the boundary or immediate vicinity of an anticipated disturbance. Surveys are performed by a qualified paleontologist or BLM Regional Paleontologist or other officially appointed BLM employee prior to any surface disturbing activities. Survey activities also include concurrent collection of significant fossils.

Land Tenure Adjustments/Change in Title – Changes in ownership or administration of surface or mineral estates, typically exchanges or sales, which may result in a change in ownership or control of paleontological resources.

Monitoring – a) On-site observation during all surface disturbing activities to assess and collect any previously-unknown fossil material uncovered by the project activities. b) Examination of excavation or spoil piles at key times during project activities. Monitoring must be performed by a permitted paleontologist, field agent, or field monitor (see section ***IV.C***.), Regional Paleontologist, or other officially appointed BLM employee, and occurs during or soon after surface disturbing actions.

Paleontological Locality (Locality) – A geographic point or area where a fossil or associated fossils are found in a related geological context. A paleontological locality is confined to a discrete stratigraphic layer, structural feature, or physiographic area.

Paleontology Program Coordinator (Paleontology Coordinator) – The employee designated by the local BLM Office Manager to manage paleontological resource issues, including planning, mitigation, budget, and other administrative duties. The local point of contact for

paleontological resource use permittees, the State Office Paleontology Program Lead, and the Regional Paleontologist. The employee is usually a geologist or archaeologist.

(a) In some offices, additional employees may be designated by the supervisor to determine the need for field surveys and monitoring for some projects, or other duties in support of the paleontology program. The scope of duties for these additional employees must be approved by the Paleontology Program Lead and closely coordinated with the Paleontology Coordinator.

(b) A few current BLM employees may meet the same professional qualifications that are required for a BLM Paleontological Resources Use Permit applicant. BLM-approved training and field experience may also allow employees to gain sufficient background to achieve competency in the field. With the approval of the Regional Paleontologist and the Office Manager or Deputy State Director, these employees may be designated as qualified to perform field surveys or monitoring. The current availability of these employees must also be approved by the unit manager or Deputy State Director, typically on a project-by-project basis or within a defined time period. Depending on official duties, local roles and responsibilities, and management preferences, these employees may or may not be the Paleontology Coordinator.

Paleontology Program Lead (Paleontology Lead) – Any one of the following: the Regional Paleontologist in the states with an identified position; the paleontologist at Grand Staircase-Escalante National Monument; or the State Office Archeologist in the states without a Regional Paleontologist.

Principal Investigator – The person listed as Permittee (Permit item 1a) on the Paleontological Resources Use Permit is the Principal Investigator (PI) and is responsible for all actions under the permit, for meeting all permit terms and conditions, and for the performance of all other personnel. This person is also the contact person for the project proponent and the BLM.

Regional Paleontologist – The BLM paleontologist that provides professional expertise in paleontology, and is responsible for interpreting relevant laws, authorities, and policy for the administration of the BLM paleontology program for all States in his/her respective region, and as the program interface between Field and/or District Offices, State Offices, and the Washington Office. In some cases, the Regional Paleontologist also serves as the State Office Paleontologist.

Significant Paleontological Resource (syn. **Significant Fossil Resource**) – Any paleontological resource that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be scientifically important because it is a rare or previously unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has identified educational or recreational value. Paleontological resources that may be considered to not have paleontological significance include those that lack provenience or context, lack physical integrity because of decay or natural erosion, or that are overly redundant or are otherwise not useful for research.

Vertebrate fossil remains and traces include bone, scales, scutes, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities.

Soil – The natural medium for growth of land plants (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.) Generally, well-developed soils do not contain paleontological resources. However, the C horizon (the substratum above bedrock that is little affected by soil forming processes) may occasionally contain Pleistocene-aged fossils.

Stipulations – Written conditions that may restrict or impose limits on approved activities, or require that certain procedures be followed. The general usage herein encompasses several formal terms specific to other use authorizations such as Mitigation, Terms and Conditions, Conditions of Approval, and Standard Stipulations.

Surface disturbance – Disruption of the ground surface and subsurface. Disruption may damage or destroy significant paleontological resources and their geological context.

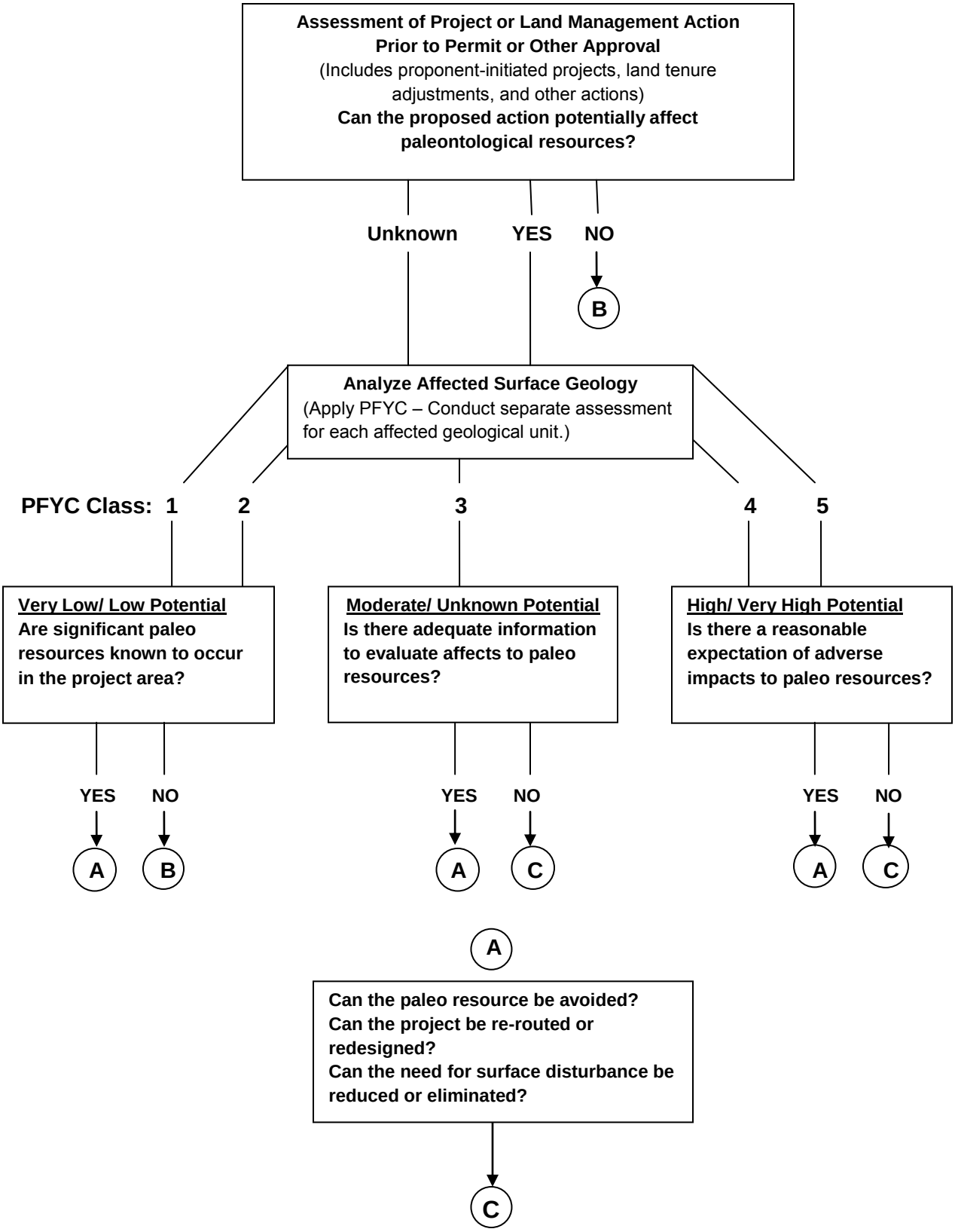
– Generally excludes: fire (but not fire activities, see below), vegetation mowing, weed spraying, grazing, natural erosion, fence building

– Some activities that may impact the ground surface and must be assessed on a case-by-case basis are:

* Mechanized vegetative treatments – chaining, sagebrush chopping, etc
* Seismic activities – vibroseis techniques, cross-country travel
* Fire management activities – line building, brush removal and thinning using mechanized equipment
* Recreational activities – OHV, rock collecting, mountain biking, public events

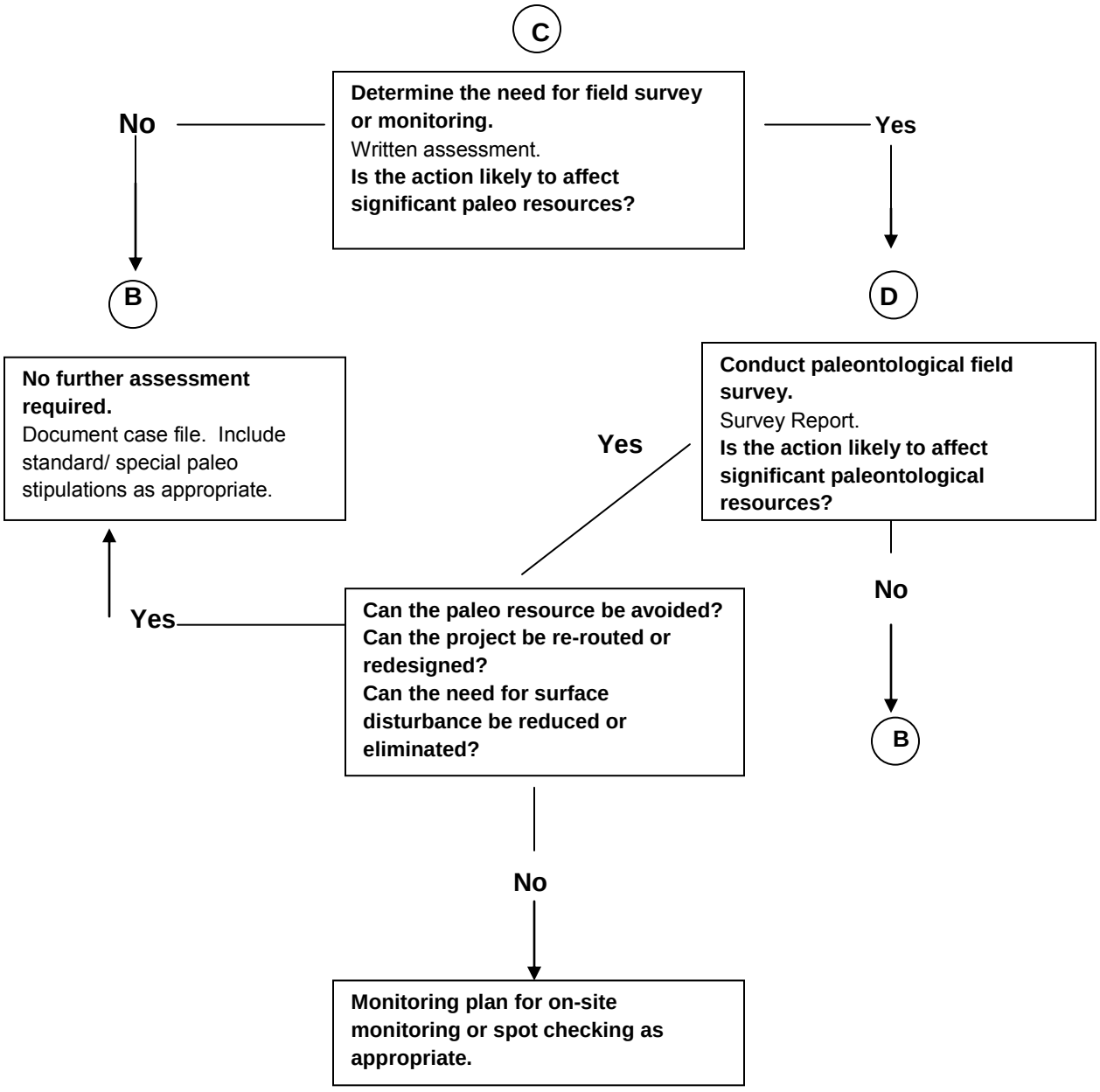
Voucher Specimen – A representative sample that verifies the kind of fossil material found during a field survey, and is collected and curated in an approved repository along with its associated field data.

Paleontological Resources Assessment Flowchart



Attachment 2-1

Paleontological Actions



Attachment 2-2

APPENDIX D

PREHISTORIC TRACKWAYS NATIONAL MONUMENT COMPREHENSIVE TRAILS AND TRAVEL MANAGEMENT PLAN

APPENDIX D
PREHISTORIC TRACKWAYS NATIONAL MONUMENT COMPREHENSIVE TRAILS AND TRAVEL MANAGEMENT PLAN

1 INTRODUCTION

Comprehensive Travel and Transportation Management (CTTM) planning is the process of developing and managing access and travel systems on public land. The CTTM planning process is an interdisciplinary approach that takes into account all resource values/uses along with all modes of transit; motorized, mechanized, pedestrian, and equestrian. Though historically focused on motor vehicle use, comprehensive travel management also encompasses all forms of transportation including travel by mechanized vehicles such as bicycles, as well as the numerous forms of motorized vehicles from two-wheeled (motorcycles) and four-wheeled such as all-terrain vehicles (ATVs) to cars and trucks.

In the CTTM process, routes are designated for specific uses. These are implementation decisions that involve the selection and identification of specific roads and trails to be included in a travel plan system for both motorized and non-motorized travel. Implementation decisions also include the production of signs, maps, and other types of public information and the preparation of a subsequent monitoring plan to ensure compliance.

This Appendix describes the recommended CTTM Plan that will be utilized by the Bureau of Land Management (BLM) for the Prehistoric Trackways National Monument (PTNM). All CTTM decisions pertaining to the National Monument will be in accordance with the establishing statute.

A. BACKGROUND

The PTNM encompasses approximately 5,255 acres in the southern Robledo Mountains in Doña Ana County, New Mexico. While the primary objectives of the PTNM are concerned with the unique fossil resources of the area, the Robledo Mountains have long provided the local community with a variety of convenient opportunities to hike, ride horses, mountain bike, and enjoy the challenges of off-highway vehicle (OHV) activities. Management of OHVs within the Monument on BLM-managed public land is necessary to address resource protection while maintaining recreational uses.

In the Mimbres Resource Management Plan (RMP) (1993), the area that is now the PTNM was designated as an area either Limited to Designated Routes or Limited to Existing Routes. In a subsequent activity level Environmental Assessment (EA), *Robledo Mountains Vehicle Management* (EA-NM-036-97-83), 30-miles of route in the area were designated for OHV use. Upon the designation of the PTNM by Congressional action (2009 Omnibus Public Land Management Act), a RMP was initiated of which the CTTM Plan is a component. In the PTNM RMP/Environmental Impact Statement (EIS), four alternatives for travel and transportation were analyzed; this CTTM Plan was part of the Preferred Alternative (Alternative C).

B. AUTHORITIES AND GUIDANCE

- National Environmental Policy Act, (NEPA), 42 U.S.C. 4321.
- Executive Order No. 11644, Feb 8, 1972 - This order established criteria by which Federal agencies were to develop regulations for the management of OHVs on lands under their management.
- Executive Order No. 11989, May 25, 1977 (This order modified ED 11644) – This order authorized agencies to adopt a policy that particular lands can be considered closed to OHVs once it is determined that OHV use "will cause or is causing considerable adverse effects" to particular resources.
- 43 C.F.R. Part 8340 – the OHV Regulations – Establish criteria for designating lands as open, limited, or closed to the use of OHVs.
- Archeological Resources Protection Act (ARPA), 1979, as amended. And other Cultural protection laws and regulations.
- Taylor Grazing Act, 43 U.S.C. 315a.
- Endangered Species Act, 16 U.S.C. 1531 – Federal agencies shall give consideration to ensure agency actions do not jeopardize the continued existence of any endangered species.
- National Historic Preservation Act, as amended, 1966.
- IB 99-181, OHV Use in Wilderness Study Areas (WSAs).
- IM [WO] No. 2004 – Clarification of Cultural Resource Considerations for Off-Highway (OHV) Route Designation and Travel Management.
- OHV – National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands, USDI, BLM, January 2001.
- Standards for Public Land Health and Guidelines for Livestock Grazing Management for BLM Lands in New Mexico, 2001.
- BLM Travel and Transportation Manual-1626, 2011.

A Trails and Travel Management Plan is not intended to provide evidence bearing on or addressing the validity of any Revised Statute 2477 (R.S. 2477) assertions. R.S. 2477 rights are determined through a process that in entirely independent of the BLM's planning process. Consequently, travel management planning should not take into consideration R.S. 2477 assertions or evidence. Currently, the Monument does not have any R.S. 2477 assertions.

C. PLANNING APPROACH

The CTTM planning is the comprehensive process of developing and managing access and travel systems on public land at the implementation level. Considerations of both social and physical elements help define the planning criteria for CTTM. The social aspects include public demands, historical uses, permitted uses, resource development, law enforcement and safety, conflicts between existing or potential users, recreation opportunities, and cultural and economic issues. Physical considerations include such things as terrain, soils, vegetation and watersheds, special designations (such as WSAs), and public interest in specific types of vehicle use.

A CTTM Plan is not a static document; it is a dynamic approach to resource management that can be adjusted and modified to accommodate changes in resource allocations. Guidelines for these changes are described in Section 2, Trails and Travel Management Plan Process.

Purpose and Need

The Bureau of Land Management (BLM) has the responsibility to prepare a RMP for the Monument. The RMP establishes guidance, objectives, policies and management actions and contains two types of land management decisions for travel management: (1) land use decisions, and (2) implementation decisions. The purpose of the PTNM CTTM is to identify, promote, and establish compatible recreational uses while protecting PTNM resources, objects, and values.

The purpose and need for a CTTM are examined in relation to existing management practices and compliance with Public Law 111-11. The following planning criteria were also considered in development of the PTNM CTTM:

- Compliance with laws protecting paleontological resources
    - Public Law 111-11, Title VI, Subtitle D, Paleontological Resources Preservation Act.

- Special designation prescriptions, including Areas of Critical Environmental Concern (ACECs) and WSAs.

- Recreation opportunities and experiences
    - Compliant use of designated routes for permitted OHV activities.
    - Visitor interest in unique paleontological resources.

Relationship to the PTNM RMP

A CTTM Plan is a component of the RMP and incorporates by reference all analysis (including Alternative Analysis) contained in that RMP. The Federal Regulations at 43 CFR Part 8340 and Executive Order 12608 require BLM to designate all public land as Open, Limited, or Closed for OHV use. These designations are made in a RMP or in plan amendments.

Travel Planning Decisions

The designation of routes within the areas specified as "Limited to Designated" is an implementation decision. Designation involves the selection and identification of roads and trails to be included in a travel plan system.

The BLM transportation system is divided into three main categories:

Roads – Linear routes which are declared a road by the owner, managed for use by low clearance vehicles having four or more wheels, and maintained for regular and continuous use.

Primitive Roads – Linear routes managed for use by four wheel-drive (4WD) or high-clearance vehicles. These routes do not normally meet any BLM road design standards.

Trails – Linear routes managed for human-powered, stock, or OHV forms of transportation or for historical or heritage values. Trails are not generally managed for use by 4WD or high-clearance vehicles.

Administrative Remedies

The BLM may use a single land use planning/NEPA process to make both land use plan and implementation decisions, provided both types of decisions are adequately addressed with the appropriate

level of NEPA analysis. Land use planning decisions are subject to protests only. Land use plan protests occur after publication of the Proposed RMP/Final EIS and prior to signature of the record of decision (ROD). Land use plan decisions are signed by the State Director, and protests are resolved by the BLM Director (delegated to the Assistant Director for Renewable Resources and Planning). The BLM's protest procedures are contained in 43 CFR § 1610.5-2.

Implementation level decisions or proposed actions that are associated with an RMP are only subject to appeals. An example of an appealable implementation level decision within an RMP is the designation of an individual route as closed to OHV use. Appeals are typically done after a final decision (the signing of a ROD for an RMP) has been made by the BLM. All appeals go to the Interior Board of Land Appeals (IBLA) to be decided upon – essentially asking the IBLA to make the BLM change its initial decision.

Comprehensive Travel and Trails Management Outcomes

The CTTM Plan includes:

- Classification of all roads, primitive roads and trails, designated for travel in a travel management plan, as assets into the Facilities Asset Management System (FAMS as described in Section 2, Trails and Travel Management Plan Process).

- Criteria to select or reject specific roads, primitive roads, and trails in the final travel management network; to add new roads, primitive roads or trails; and to specify limitations.

- Guidelines for managing and maintaining the system such as the development of route specific, primitive road and trail management objectives, a sign plan, education plan, enforcement plan, and a process requiring the application of engineering best management practices.

- Indicators to guide future plan maintenance, amendments, or revisions related to the travel management network.

- Provisions for new route construction and use or adaptation/relocation of existing routes.

- A plan for decommissioning and rehabilitating closed or unauthorized routes.

2 TRAILS AND TRAVEL MANAGEMENT PLAN PROCESS

The CTTM process was initiated with the official scoping process for the PTNM RMP in 2010. Three action alternatives and a no action alternative were analyzed in the RMP/EIS process. The preferred alternative, Alternative C, includes this CTTM Plan.

A. IDENTIFICATION OF ISSUES

During the RMP scoping period (2013), comments regarding travel and access were widely varied and covered many concerns. Travel and access comments ranged from wanting improved access to keeping the Monument primitive. Others wanted the Monument to be closed to vehicular access. Comments summarized in the Scoping Report are as follows;

- Put specific conditions on all forms of motorized use
- Consider and improve access from Interstate 10 and/or Rocky Acres Trail
- Build a parking lot

- Create a driving route with short hikes to the resources
- Keep the roads and trails primitive
- Build a fence to keep vehicular traffic out of the Monument
- Install signs to inform users to stay on existing, designated routes

These scoping comments were then formulated into analysis questions:

- ❖ *What is the current demand for motorized and non-motorized access and what is it likely to be in the future?*
- ❖ *What is the best way to provide for that access?*
- ❖ *Is there a need to provide vehicle access to exposed or excavated locations?*
- ❖ *Where should the main access points of the Monument be located?*
- ❖ *How will motorized vehicular use be managed within the Monument?*

The following concerns were recognized during the scoping process for the RMP and are addressed through this CTTM Plan:

- Route designations need to be periodically reviewed and revised when necessary to protect other resources.
- Maps need to be prepared to identify designated routes for the public.
- Recreational use and interest may increase.
- There are conflicts between OHV use and other resources.

B. ROUTE IDENTIFICATION AND VERIFICATION

Data collection and verification was accomplished using a combination of Geographic Information System (GIS) and Global Positioning System (GPS) technology. Designated routes were originally identified on 1:24,000 topographic maps. This data was systematically ground-truthed by the BLM during the preparation of the Robledo Mountains Off-Highway Vehicle Trail System Implementation Plan. These routes were later digitized on 1:24,000 digital orthophoto-quads (DOQQ) map images. Inasmuch as the routes follow either drainage bottoms or ridge lines, visual confirmation of the relationship between the original topographic maps and the later aerial images was reliable.

The ultimate result of the proper application and interpretation of these combined technologies is a highly reliable map of the OHV routes in the PTNM (see Map D-1). Detailed imagery enables accurate (± 5 meters) measurement of route distances. There is some latitude for route distance measurements owing to slight seasonal variations in drainage channel bottoms. Inasmuch as a vehicle odometer is the standard measurement for OHV vehicles, distances along routes and between points are given to the nearest tenth (0.1) mile.

The Robledo Mountains Off-Highway Vehicle Route Designation EA was a planning effort that identified and designated routes by association with various chilies (e.g., Patzcuaro's Revenge Trail, Hopping Jalapeno, and Tabasco Twister). The Robledo Mountains OHV EA identified and designated 30 miles of primitive roads. An additional 13 miles of linear disturbances were subsequently identified within the boundary of the PTNM.

The Draft RMP/EIS and Proposed RMP/EIS CTTM did not describe several routes that were depicted on the CTTM maps. These routes were inadvertently omitted from the Route Designation Table (Table D-2) but are now addressed in this Final RMP/CTTM as routes PTNM 20 through PTNM 27.

None of the designated routes satisfy the definition of "road" as provided in BLM Instruction Memorandum (IM) 2006-173, *"Implementation of the Roads and Trails Terminology Report."* In this IM, *road* is defined as: *A linear route declared a road by the owner, managed for use by low clearance vehicles having four or more wheels, and maintained for regular and continuous use. The current travel and transportation system is managed as a combination of primitive roads and trails.*

The RMP administrative record contains the inventory of linear disturbances including maps of verified route segments, photo and route logs, linear disturbance evaluation forms, and maps.

Route Names and Numbers Identification

For ease of mapping and database tracking, route segments associated with the Robledo Mountains OHV EA have been numbered sequentially beginning with PTNM 01 (see Table D-2).

C. DESIGNATION CRITERIA

The guidance found at 43 CFR §8342.1 lists the following criteria that must be met by the BLM in the travel planning process:

§8342.1 Designation criteria.
The authorized officer shall designate all public lands as either open, limited, or closed to off-road vehicles. All designations shall be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands; and in accordance with the following criteria:

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

Designation criteria were based on the protection of the Monument resources, objects and values, as well as meeting goals established for other resources and resource uses described below.

Cultural Resources: The transportation network will preserve and protect significant cultural resources. If newly identified sites are found to be impacted by designated routes, the BLM will mitigate, or change location of the route, or change the designation.

Lands with Wilderness Characteristics: The transportation network will not include motorized or mechanized uses in areas identified for protection of their wilderness characteristics.

Livestock Grazing: The transportation network will support the management of livestock grazing that ensures progress toward achieving the New Mexico Standards for Rangeland Health.

Paleontological Resources: The transportation network will provide protection of the fossil resources.

Recreation and Visitor Services: The transportation network will provide for recreational uses related to the enjoyment, appreciation, and protection of the fossil resources and their geologic context.

Soils: The transportation network must ensure that soils within the PTNM meet or move toward upland health standards consistent with New Mexico Standards for Rangeland Health.

Special Status Species: The transportation network will ensure that the BLM can maintain, restore, improve or enhance habitats that lead to the recovery of Federally-listed species populations and preclude the need for listing proposed, candidate, State-protected or sensitive species.

Vegetation: The transportation network will allow the BLM to manage for healthy and vigorous native plant communities with an abundance and distribution of vegetative density and diversity.

Visual Resources: The transportation network must protect the distinct geologic exposures of the Robledo Mountains in the context of the Permian fossils.

Wilderness Study Areas: The transportation network will not impinge on naturalness; outstanding opportunities for primitive, unconfined recreation; and outstanding opportunities for solitude.

Water Resources: The transportation network will not impair the BLM's ability to comply with New Mexico water quality standards.

Wildland Fire: The transportation network will support the BLM's ability to reduce the risk to human life and property from wildland fire; reduce the risk and cost of fire suppression in areas of hazardous fuels buildup; and improve landscape health through returning fire to its natural role.

Wildlife: The transportation network will support the BLM's management of wildlife to provide sufficient quantity and quality of wildlife habitat and to maintain or enhance wildlife populations and biological diversity.

Public land roads or trails determined to cause considerable adverse effects or to constitute a nuisance or threat to public safety would be considered for relocation or closure and rehabilitation, after appropriate coordination with applicable agencies and partners. The transportation network will address user-caused route proliferation such as route redundancy and braids.

D. ALTERNATIVES ANALYSIS

The known network of linear disturbance features was mapped and is described in Section B, Route Identification and Verification. The linear disturbances fell into three categories:

- 30 miles of designated route in the Robledo Mountains Vehicle Management EA (1997)
- 5.3 miles of trails designated in the Doña Ana County Mountain Bike Trails EA (1998)
- 8 miles of User-Defined and Other Routes (nondesignated linear transportation features)

The criteria for assessing suitability for inclusion into the CTTM plan were: (1) whether or not the route met the goals of the Monument resources, values, and objectives (as described above in Section C); (2) the purpose and need for the route; and (3) the designation criteria guidance found at 43 CFR §8342.1. Where conflicts with other resources or resource uses existed, mitigation was proposed or the route was not designated. The no action alternative and three action alternatives were developed during the PTNM RMP/EIS process for the CTTM:

Alternative A - The BLM would continue to manage the current 38 miles of designated routes.

Alternative B - PTNM would be closed to mechanized and motorized travel.

Alternative C - Motorized use would be limited to 23 miles and mechanized travel would be limited to 5 miles of route in PTNM.

Alternative D - Motorized use would be limited to 24.4 miles and mechanized travel would be limited to 5 miles of route in PTNM.

E. RESOURCE MANAGEMENT PLAN DECISIONS

OHV Area Designation Decisions are RMP decisions that fall under Federal Regulations 43 CFR §8342.1 which require the BLM to identify and designate areas of public land as "Open", "Limited", or "Closed" to motorized OHV use (see Table D-1). For the purpose of this plan, OHV area designations may also include restrictions on non-motorized/mechanized vehicles. Restrictions or closures to any and all non-motorized OHV activities would be authorized through publication of Supplementary Rules (43 CFR 8365.1-6).

Land use decisions are broad scale and address how subsequent activity level and implementation plans are composed and administered. Land use decisions have two components: (1) goals and objectives and (2) management actions that describe how those desired outcomes will be realized.

Open: The BLM designates areas as "Open" for intensive OHV use where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross country travel.

Limited: The "Limited" designation is used where OHV use must be restricted to meet specific resource management objectives.

Closed: An area is designated as "Closed" if all vehicle use is prohibited as a necessary measure to protect resources, reduce user conflicts, or provide for public safety.

The PTNM Proposed RMP/Final EIS designates the entire Monument as Limited to Designated Routes (5,255 acres) based on the analysis of four alternatives presented in this CTTM (see Table D-1).

TABLE D-1 OHV AREA DESIGNATIONS BY ALTERNATIVE				
CATEGORY	**ALTERNATIVE A**	**ALTERNATIVE B**	**ALTERNATIVE C**	**ALTERNATIVE D**
Closed	0 acres	5255 acres	0 acres	0 acres
Limited to Designated	5,255 acres	0 acres	5,255 acres	5,255 acres
Open	0 acres	0 acres	0 acres	0 acres
Total Acres	5,255	5,255	5,255	5,255

3 IMPLEMENTATION DECISIONS

Implementation decisions are actions to implement land use plans and generally constitute the BLM's final approval allowing on-the-ground actions to proceed. These types of decisions are based on site-specific planning and NEPA analyses (in the case of the CTTM, alternatives were analyzed in the PTNM RMP/EIS) and are subject to the administrative remedies set forth in the regulations that apply to each BLM resource management program (see Section 1, **C**. Planning Approach).

The linear features (or routes) within the PTNM were evaluated and analyzed for Purpose and Need and Potential Resource Conflicts. The designation criteria found in 43 CFR §8342.1 were utilized to protect resources, promote safety of all users, and minimize the conflicts among various uses. The identified travel and transportation network is shown in Table D-2 and Map D-1.

Route Designation Definitions

Limited Designations – The limited designation is used where OHV use must be restricted to meet specific resource management objectives. Examples of limitations include: number or types of vehicles; time or season of use; permitted or licensed use only; use limited to designated roads and trails; or other limitations if restrictions are necessary to meet resource management objectives including certain competitive or intensive use areas which have special limitations.

Motorized Travel – Moving by means of vehicles that are propelled by motors such as cars, trucks, OHVs, and motorcycles.

Non-Motorized Travel – Moving by foot, stock or pack animal, boat, or mechanized vehicle such as a bicycle.

Mechanized Travel – Moving by a mechanical device such as a bicycle, not powered by a motor.

Administrative Access and Use

Routes considered for Administrative Use Only include routes to livestock troughs and other range improvements, guzzlers, and BLM facilities. The Las Cruces District Office reserves the right to allow travel on these routes to permittees, BLM employees, or whomever it deems appropriate on a case-by-case basis.

Map D-1 Prehistoric Trackways Travel and Transportation Network

USE TABLE D-2 FOR ROUTE NAMES AND NUMBERS.

TABLE D-2 DESIGNATED PRIMITIVE ROADS, AND TRAILS, WITHIN THE PREHISTORIC TRACKWAYS NATIONAL MONUMENT			
ROUTE'S COMMON NAME	**ROUTE NUMBER**	**LENGTH (MILES)**	**1-Motorized 2-Mechanized (e.g, Mt. bike) 3-Pedestrian/Equestrian**
Robledo Loop or Chile Canyons Loop	PTNM 1	8.0	1,2,3
Patzcuaro's Revenge	PTNM 2	1.8	3
Rocotillo Rapids	PTNM 3	1.0	1,2,3
Big Jim	PTNM 4	0.7	1,2,3
Hopping Jalapeno (up segment)	PTNM 5	0.7	1,2,3
Hopping Jalapeno (down segment)	PTNM 6	0.7	1,2,3
Amatista Ledges	PTNM 7	1.6	1,2,3
Habanero Falls (entrance)	PTNM 8	0.6	1,2,3
Habanero Falls	PTNM 9	0.8	1,2,3
Tabasco Twister	PTNM 10	2.7	3
Pasado	PTNM 11	0.7	1,2,3
Sandia Gulch	PTNM 12	1.0	1,2,3
Cayenne Crawler	PTNM 13	0.4	3
Discovery Trail	PTNM 14	0.8	3
Rocks Thru Time Trail	PTNM 15	0.6	3
Ridge Line Trail	PTNM 16	2.1	3
Hidden Canyons Trail	PTNM 17	0.3	3
SST	PTNM 18	5.3	2, 3
Calizo Trail	PTNM 19	0.5	2,3
Whiptail Ridge	PTNM 20	0.6	1,2,3
Palm Park	PTNM 21	2.1	1,2,3
Apache Canyon Access South	PTNM 22	0.3	1,2,3
Branson Access Road	PTNM 23	0.2	1,2,3
Permian Reef Road	PTNM 24	1.1	1,2,3
Apache Canyon North	PTNM 25	1.6	1,2,3
West Monument Boundary Road	PTNM 26	0.8	1,2,3
Acacia Ridge	PTNM 27	0.9	1,2,3

Emergency Limitation or Closure

Whenever the authorized officer determines that OHV use will cause or is causing considerable adverse effects on resources (i.e., soil, vegetation, wildlife, wildlife habitat, cultural, paleontological, historic, scenic, recreation, or other resources), the area must be immediately closed to the type of use causing the adverse effects (43 CFR §8341.2). Such limitation or closure is not an OHV designation. By regulation (Executive Order 11644-Use of Off-Road Vehicles on the Public Land), any fire, military, emergency, or law enforcement vehicle when used for emergency purposes is exempted from OHV decisions.

Designation Changes

Travel management networks should be reviewed periodically to ensure that current resource and travel management objectives are being met. Increases in public uses such as camping, hiking, motorized and mechanized access will be evaluated for development of additional designated routes. All proposed actions will be subject to the appropriate level of NEPA analysis.

The RMP must include indicators to guide future plan maintenance, amendments, or revisions related to OHV area designations or the approved road and trail system within "Limited" areas. Indicators for the PTNM include results of monitoring data, new information, or changed circumstances. Actual route designations within the "Limited" category can be modified without completing a plan amendment, although NEPA compliance is still required.

Guidance for Designation Changes

The BLM will collaborate with affected and interested parties in evaluating the designated road and trail network for suitability for active OHV management and envisioning potential changes in the existing system or adding new trails that would help meet current and future demands. In conducting such evaluations, the following factors would be considered:

- Needs for parking, trailheads, informational and directional signs, mapping and profiling, and development of brochures or other materials for public dissemination.

- Opportunities to tie into existing or planned route networks.

- Routes suitable for different categories of OHVs including dirt bikes, ATVs, and 4WD touring vehicles, as well as opportunities for joint trail use.

- Measures needed to avoid onsite and offsite impacts to current and future land uses and important natural resources; among others, issues include noise and air pollution, erodible soils, non-point source water pollutions, listed and sensitive species' habitats, historic and archeological sites, wildlife, special management areas, grazing operations, fence and gate security, and the needs of non-motorized recreationists.

- Based on monitoring data, public land roads or trails determined to cause considerable adverse effects or to constitute a nuisance or threat to public safety would be considered for relocation or closure and rehabilitation after appropriate coordination with applicable agencies and partners.

Regulations at 43 CFR 8342.2 require the BLM to monitor the effects of OHV use. Changes should be made to the Travel Plan based on the information obtained through monitoring. Criteria for adding new routes would also include whether or not the route met the goals of the Monument resources, values, and objectives and the purpose and need for the route. Site-specific NEPA documentation is required in order to change the route designations in this Travel Plan.

Route Construction, Adaptation, or Relocation

Route construction, adaptation, or relocation will be based on monitoring of the transportation network's impacts to resources, and whether or not the network is accommodating visitation to and research at PTNM. Any construction, adaption, or relocation will adhere to the Best Management Practices identified in Appendix B, and an appropriate level of NEPA analysis will be applied.

Maintenance Levels

The routes were evaluated and their maintenance level determined (see Table D-3). Some roads and trails are considered assets by the BLM. This is an engineering term used to describe building and non-building facility and transportation constructions which include roads, primitive roads, and trails that are included in the Facility Asset Management System (FAMS). FAMS is a BLM national database which

tracks asset inventory and maintenance needs. FAMS maintenance intensity levels (BLM Roads and Trails Terminology Technical Note - 2006) are adapted for PTNM primitive roads and trails:

PTNM Travel Network FAMS Maintenance Intensity Levels

0= No maintenance. Remove linear disturbance from transportation network.
1= Very low maintenance. Only maintain to protect resources from damage.
2=Number saved for future use.
3= Moderate maintenance. Maintain or improve as necessary to facilitate designated visitor use. Routes requiring moderate maintenance because of low volume use (e.g., seasonally or year round for commercial, recreational, or administrative access).

TABLE D-3
PRIMITIVE ROAD AND TRAIL MAINTENANCE INTENSITY LEVELS FOR THE PREHISTORIC TRACKWAYS NATIONAL MONMUNENT

ROUTE'S COMMON NAME	ROUTE NUMBER	MAINTENANCE INTENSITY
Robledo Loop or Chile Canyons Loop	PTNM 1	3
Patzcuaro's Revenge	PTNM 2	1
Rocotillo Rapids	PTNM 3	1
Big Jim	PTNM 4	1
Hopping Jalapeno (up segment)	PTNM 5	1
Hopping Jalapeno (down segment)	PTNM 6	1
Amatista Ledges	PTNM 7	1
Habanero Falls (entrance)	PTNM 8	1
Habanero Falls	PTNM 9	1
Tabasco Twister	PTNM 10	1
Pasado	PTNM 11	3
Sandia Gulch	PTNM 12	1
Cayenne Crawler	PTNM 13	1
Discovery Trail	PTNM 14	3
Rocks Thru Time Trail	PTNM 15	3
Ridge Line Trail	PTNM 16	3
Hidden Canyons Trail	PTNM 17	3
SST	PTNM 18	3
Calizo Trail	PTNM 19	0
Whiptail Ridge	PTNM 20	3
Palm Park	PTNM 21	1
Apache Canyon Access South	PTNM 22	1
Branson Access Road	PTNM 23	1
Permian Reef Road	PTNM 24	1
Apache Canyon North	PTNM 25	1
West Monument Boundary Road	PTNM 26	1
Acacia Ridge	PTNM 27	1

Transportation Network Management

Education and Public Information, No Fee Day Use Pass

Each motorized (OHV) and mechanized vehicle (i.e. mountain bike) will be required to have a no-fee day pass to use routes within the Monument. Comprehensive trail maps will be a part of the day pass, as well

as information on other recreational or educational activities, rules, and regulations. The BLM will continue to administer organized groups and commercial ventures through the Special Recreation Permit program. The BLM will assess the variety and nature of resource impacts using the no-fee day passes.

This system of day passes is authorized through 43 CFR §8365.1-6, Supplementary Rules. Passes will be available at the BLM Las Cruces District Office, online at the BLM web site, and potentially at informational kiosk(s) at approved access point(s) to the Monument. Statistics gathered from these passes will allow the BLM to accurately assess the level of public interest in motorized and mechanized activities within the Monument, and will contribute to the validity of periodic monitoring inspections designed to document and predict resource impacts and conditions.

Required information for issuance of a no-fee day pass will include the name of the vehicle operator, the number of visitors in the vehicle, the license plate number (for OHV), proposed route(s) and destination if known, and expected length of visit. Optional information would include such things as the reason for the visit (OHV recreation, mountain biking, sightseeing, camping, etc.). Implementation of the no-fee day pass will occur within 1 year of signing of the Record of Decision for the PTNM RMP.

Signs and Maps

The BLM will establish a system of trail signs to identify designated routes. These signs will be positioned at trailheads and route intersections. Comprehensive trail maps will be available at the BLM Las Cruces District Office and online. Implementation of trail signs and maps will be accomplished within 1 year of signing of the Record of Decision for the PTNM RMP. The combination of proper sign installation and maps with accompanying UTM descriptions will allow for confident public navigation of the Monument routes.

Linear disturbances requiring restoration or rehabilitation may be signed or barricaded to notify the public that the route is not authorized for motorized or mechanized use.

Map D-1, Prehistoric Trackways Travel and Transportation Network Map, depicts the designated primitive roads and trails. This map will be the basis for signage and enforcement of laws and regulations.

Goals to complete signage, create public information, and placement of kiosks will be developed during the PTNM activity and site plan process (See Recreation and Visitor Services, Section 2.3 of the Approved RMP).

Enforcement Plan

The Las Cruces District Office Law Enforcement Plan includes regular patrols of the PTNM. In addition to BLM law enforcement officers, Doña Ana County Sherriff's Office deputies provide support if needed.

Law enforcement concerns within the Monument include illegal dumping, theft of paleontological resources, damage to government property, and creation of user-caused routes. The Law Enforcement Plan will be adapted over time using information collected from the no-fee day use pass. For example, increases in visitation would lead to an increase in patrols.

Rehabilitation and Reclamation

During the route inventory and evaluation process, 5 miles of linear disturbance were identified that would not be included in the transportation network. These non-designated routes will be left to re-

vegetate naturally or be rehabilitated with the appropriate BLM-approved seed mixture. These and any other unauthorized or undesignated routes will be subject to reclamation as described in of Appendix B Best Management Practices, Surface Disturbing Activities.
Appropriate and applicable project-related clearances and consultation processes such as NHPA Section 106 cultural resources survey, mitigation and consultation with New Mexico State Historic Preservation Office, and Endangered Species Act Section 7 consultation would be completed, prior to any undertaking, including any ground-disturbing activities.

4 MONITORING

Regulations at 43 CFR 8342.2 require the BLM to monitor the effects of OHV use. Changes should be made to the Travel Plan based on the information obtained through monitoring. Procedures for making changes to route designations after the ROD is signed are established in the RMP. Site-specific NEPA documentation is required in order to change the route designations in this Travel Plan.

Current Utilization Levels

The BLM does not have adequate data to estimate the level of annual recreational use within the Monument. From 1997 to 2013, an annual commercial OHV event (the Chile Challenge) has been authorized through the Special Recreation Permit program (the event is currently held in Sierra County). This 4-day event typically attracted 200-300 participants. For the other 361 days out of the year, there are no estimates of non-permitted OHV use that takes place. The BLM has not issued any Special Recreation Permits for use of the SST mountain bike trail. There is no information regarding how frequently, or in what volumes, the local mountain bike community may use this trail. Anecdotal information suggests that most camping activity occurs in direct association with OHV use (i.e., over-night trail runs).

Day hikes whether they are organized or casual, are usually confined to the eastern periphery of the Monument due to issues of motorized access and points of interest (the Discovery site is most accessible from the eastern edge of the Monument). Currently, dispersed recreation enthusiasts may follow abandoned mining routes, designated OHV trails, or may choose to explore canyons and ridgelines where no formal pathways have been worn. The BLM does not have adequate information regarding numbers of pedestrian visitors to venture estimates of daily or annual use.

Equestrian use of the Monument occurs. There are no supporting statistics to estimate frequency and intensity of use. There are no designated bridle paths.

Previous Monitoring

In 2009, the BLM began periodic monitoring of paleontological sensitive areas within the Monument. These efforts have been largely photographic in nature, with monthly or quarterly photographic sequences from fixed UTM locations. The BLM has since modified the original monitoring regime by expanding the effort to better correspond with New Mexico Museum of Natural History and Science's documented paleontological resource sites. In addition, routes within the Monument that are accessible to conventional 4WD vehicles have been added to the monitoring activity.

Future Monitoring

Visitor use data will be collected from the no-fee day use pass system (described in Section 3, Implementation Decisions) to monitor and evaluate the number of visitors that are camping, hiking, biking, and using OHV. The traffic counters will continue to be used as well.

In partnership with universities and stakeholders, the BLM will develop a monitoring protocol that will include data collection and assessment of resource concerns such as paleontological resources, soil erosion, wildlife observations, grazing infrastructure, range improvements, and general land health conditions.

5 DEFINITIONS

All-Terrain Vehicle (ATV) – A wheeled or tracked vehicle, other than a snowmobile or work vehicle, designed primarily for recreational use of the transportation of property or equipment exclusively on undeveloped road rights-of-way, marshland, open country or other unprepared surfaces. (BLM, National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands, January 2001)

Closed Designations – Areas or trails are designated closed if closure to all vehicular use is necessary to protect resources, promote visitor safety, or reduce use conflicts. (8342.06 E)

Considerable Adverse Impacts – Any OHV related adverse environmental impact that causes: (a) significant damage to cultural or natural resources, including but not limited to historic, archaeological, soil, water, air, vegetation and scenic values, or (b) significant harassment of wildlife and/or significant disruption of wildlife habitats; or (c) significant damage to endangered or threatened species or their habitat, or (d) impairment of wilderness suitability; and is irreparable due to the impossibility or impracticality of performing corrective or remedial actions. The significance of these damages is determined on a case-by-case basis by BLM's authorized officers in the field (normally District [Field Office] Managers) in the context of local conditions. (8341.05)

Designation – The formal identification of public land areas and trails where off-road vehicles use has been authorized, limited, or prohibited through publication in the *Federal Register*. The types of designation used by the BLM are open, limited, or closed to off-road vehicle use. (8342.05)

Emergency Limitations or Closures – Limiting use or closing areas and trails on public land to OHV use under the authority of 43 CFR 8341.2. Such limitations or closures are not OHV designations. (8341.05)

Implementation Plan – A site-specific plan written to implement decisions made in the land use plan. An implementation plan usually selects and applies best management practices to meet land use plan objectives. Implementation plans are synonymous with "activity" plans. Examples of implementation plans include interdisciplinary management plans, habitat management plans, and allotment management plans.

Land Use Plan – A set of decisions that establish management direction for land within an administrative areas, as prescribed under the planning provisions of FLPMA; and assimilation of land use plan-level; decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed.

Limited Designations – The limited designation is used where OHV use must be restricted to meet specific resource management objectives. Examples of limitations include: number or types of vehicles; time or season of use; permitted or licensed use only; use limited to designated roads and trails; or other limitations if restrictions are necessary to meet resource management objectives including certain competitive or intensive use areas which have special limitations. (8342.06 F)

Mechanized Travel – Moving by a mechanical device such as a bicycle, not powered by a motor.

Minimize OHV Damage – To reduce OHV effects to the maximum extent feasible short of eliminating OHV use, consistent with established land management objectives as determined by economic, legal, environmental, and technological factors. (8342.05)

Motorized Travel – Moving by means of vehicles that are propelled by motors such as cars, trucks, OHVs, motorcycles, etc.

Non-Motorized Travel – Moving by foot, stock or pack animal, boat, or mechanized vehicle such as a bicycle.

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

OHV Area Designations – Refers to the land use plan decisions that permit, establish conditions, or prohibit OHV designations (43 CFR 8342.1). The CFR requires all BLM-managed public land to be designated as open, limited, or closed to off-road vehicles, and provides guidelines for designation. The definitions of open, limited, and closed are provided in 43 CFR 8340-5 (f), (g), and (h), respectively.

Open Designations – Open designations are used for intensive OHV use areas where there are no special restrictions or where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel. (8342.06 D)

RMP Area – Most RMPs cover a large planning and management area. As a result, the planning area may be divided into smaller areas, each with differing values, issues, needs and opportunities that may warrant differing management prescriptions. (Attachment to IM 2004-005)

Road and Trail Selection – For each limited area, the BLM should choose a network of roads and trails that are available for motorized use, and other access needs including non-motorized and non-mechanized use, consistent with the goals and objectives and other consideration described in the plan. (IM 2004-005)

Road and Trail Identification – Road and trail identification refers to the on-the-ground process (including signs, maps and other means of informing the public about requirements) of implementing the road and trail network selected in the land use plan or implementation plan. Guidance on the identification requirements is in 43 CFR 9342.2. (IM 2004-005)

User-Defined Routes – These are linear disturbances created by the public and are non-designated. Examples include short braids of less than 0.1 mile, redundant and/or parallel routes, and unauthorized routes in Wilderness Study Areas.