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

La Puebla
Special Recreation Area Management Plan

DOI-BLM-NM-F020-12-0020

U.S. Department of the Interior
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Chapter 1: Introduction

1.1 Background

The 2012 Taos Resource Management Plan (RMP) provides that public land in La Puebla be managed as a Special Recreation Management Area (SRMA) and be included in the Sombrillo Area of Critical Environmental Concern (ACEC). This elevates management to emphasize recreation and protection of cultural, paleontological, and scenic resources. Currently, the area has had a low level of management control on public use. According to the previous land use plan, it was managed for dispersed recreation with motorized travel limited to existing routes.

The La Puebla SRMA encompasses 680 acres of public land in Santa Fe County, New Mexico, within the Española Basin. It is surrounded predominately by private property with the exception of state land on a portion of the southeastern boundary in rough proximity to County Road 88. The community of La Puebla is a census designated place encompassing 2.4 miles with a population of 1,296 at the 2000 Census. Other nearby communities include Sombrillo, Arroyo Seco, Quarteles, Santa Cruz, Chimayo, Rancho Valle, and Española. The Sombrillo ditch and Santa Cruz River both cut through private land immediately north of the proposed SRMA. The Wildlife Center and the Teen Center are also located adjacent on the south and southeastern border. In addition, the Rio Grande Sportsman's Club is located on the far eastern boundary.

Paleontological and Cultural Resources

La Puebla is rich in historic, pre-historic, and paleontological resources. During a 2011 Class III archaeological survey, 14 cultural sites were recorded. Among the found objects, two could date to the Archaic period while the remainder are indicative of transitory use of the area by Anasazi people (Dicks 2011). Seven paleontological fossil sites were identified during the archaeological survey and thought to date to the Miocene-Pliocene Epochs (ibid). Other sites have been recorded as a result of expeditions made by the American Museum of Natural History. The area has been identified by the Bureau of Land Management (BLM) as Very High, or Class V for Potential Fossil Yield due to geologic features and known fossil bearing sites. Some of the geologic formations in the area associated with the Santa Fe Group include Pojoaque, Quarteles Terrace, and Skull Ridge. In addition, the Villa Nueva de Santa Cruz de los Españoles Mejicanos Del Rey Nuestro Señor Carlos Segundo Spanish Land Grant of 1695 is visible from the ridges of La Puebla on the north side of the Santa Cruz River.

The paleontological resources found on public lands are recognized by the BLM as constituting a fragile and nonrenewable scientific record of the history of life on earth and represent an important and critical component of America's natural heritage. The BLM manages these resources under the authority of the Federal Land Policy and Management Act of 1976 which requires that the public lands be managed in a manner that protects the "quality of scientific" and other values. The Act also requires the public lands to be inventoried and provides that permits may be required for the use, occupancy, and development of the public lands.

BLM Manual 8270 provides an approach to management of paleontological resources including identification, evaluation, protection, and use. In particular, it provides direction for the appropriate scientific, educational, and recreational uses of paleontological resources, such as research, interpretation, and foster public awareness and appreciation of our Nation's rich paleontological heritage. The paleontological classification rates these resources according to their potential to contain vertebrate, invertebrate, or plant fossils is set forth in the procedural guidance of Manual 8270-1.

The BLM's Cultural Program is conducted under Federal mandates as well as the 8100 manual section and H-8100 handbook which provide guidance as to how Cultural Resources should be managed. In addition, BLM New Mexico maintains a Protocol Agreement with the New Mexico State Historic Preservation Office and consults with Native Americans to identify the cultural values, religious beliefs, traditional practices, and legal rights of Native American people, which could be affected by BLM actions on Federal lands.

Recreation

The small size of La Puebla SRMA in close proximity to moderate density residential development, non-profit service businesses, and major transportation routes, such as NM Highway 68 and County Road 88 is not conducive to providing unstructured dispersed recreation use. There are no parks in this area of the County which might provide facilities, such as trails, benches, picnic tables, and interpretive signs. Consequently, adjacent landowners and neighbors from many surrounding communities escape from the city and traffic to converge on 680 acres of undeveloped public land. Public uses include hiking, running, dog walking, education activities, motorcycle and ATV riding, and picnicking primarily by people living in the surrounding communities. Public land is accessed by neighbors with residences near Wheat Street, Barton's Loop, and Tres Familias Lane. There are no formal developed facilities, however, in the 1990s a group of motorized users built a motocross loop with jumps and banked turns. Neighbors use the area for daily exercise to hike and walk their dogs and to ride their motorcycles and ATVs.

In addition, a wildlife rehabilitation center and a youth center are located adjacent to the area. This provides a great opportunity to interpret archaeological, paleontological, and wildlife values as well as to educate recreation users on land ethics, outdoor skills, motorcycle, and ATV safety.

1.2 Purpose and Need for Action

The purpose for this plan is to implement the recreation objectives in the 2012 Taos RMP providing community access to improved recreational opportunities in addition to the interpretation and protection of cultural, paleontological, and scenic resources in a rural setting. The proposed action, which includes approval of an area-specific recreation management plan, would provide for maps, clearly posted regulations, designated routes, and an increased presence of law enforcement. The purpose is also to further define activities, such as Special Recreation Permits, permitting of paleontological study and monitoring, interpretation of resources, non-motorized and motorized use as well as to provide a conceptual design for access points, designated routes, trails, and signs.

The BLM needs to take action to address on-going impacts to resource values and to alleviate user conflicts. Currently, unauthorized routes proliferate from motorized users resulting in

multiple braiding, cut offs, parallel tracks, excessive cut slopes, and accelerated erosion and damage to vegetation, cultural resources, and fossil remains. Trash dumping and littering occur including disposal of alcohol and drug paraphernalia.

With identified concentrated use, the BLM needs to implement a higher level of management in the form of signs, maps, posting regulations, designating routes, trails, facilities, such as trailhead access and parking.

1.3 Land Use Plan Conformance

Alternatives in this plan were formulated to be in conformance with the 2012 Taos RMP. La Puebla SRMA is located within the Sombrillo ACEC. Relevant and important values within the ACEC are cultural, paleontological and scenic. It is designated for Visual Resource Class II Management (VRM) Objectives. Projects underway, with the assistance from the Chimayo Conservation Corps, include fencing the perimeter of public land, trash removal, planting native seed, and soil stabilization.

1.4 Identification of Issues

BLM Taos staff worked on site and met for field trips from October 2010 through February 2011. In particular, three staff archeologists conducted a Class III survey of the area which provided important cultural, geologic, and paleontological data. The Outdoor Recreation Planner and a Park Ranger met with Chimayo Conservation Corps to define preliminary work to record existing routes and fence the BLM boundary. BLM Engineers and Cadastral Surveyors located property monuments and flagged line for boundary fencing. Resources staff representing paleontology, geology, archaeology, soils, and recreation met on site to review resources and discuss possible alternatives for planning and management of the SRMA.

Over a 2-year period, a seasonal Park Ranger working on planning for Transportation Management met with surrounding neighbors and Chimayo Conservation Corps to learn how they access and recreate in the area and get their perspective on management issues. This resulted in Chimayo Conservation Corps submitting an application and receiving a grant from the Federal Highway Administration's Recreational Trails Program to assist the BLM in future labor and construction projects for management of a new SRMA.

In addition, the BLM engaged neighbors, The Wildlife Center, and Chimayo Conservation Corps in a National Public Lands Day event in June 2010 to pick up trash and further identify issues regarding planning and management of the area. The BLM learned that users visit the area because it is close to home to recreate with their friends and family, ride motorcycles, ATVs, walk their dogs, and hike in a natural landscape. In the future, users would like modest facilities, such as trails, restrooms, drinking fountains, picnic tables, fencing, pedestrian gates, motorized access points to the SRMA, and educational information. Users identified conflicts, such as excessive motorized routes, and trash dumping. One Park Ranger met individually with neighbors to locate pedestrian gates for access from private land to public land at the boundary fence. Based on these efforts, the following issues have been determined relevant to the analysis of this action:

1.4.1 Recreation

- *Access: Where are appropriate access points to La Puebla?*
- *Trails: What type of route and trail system would meet the demands of recreation users?*
- *Interpretation: What are the stories we want to share?*
- *Visitor Use: How should Special Recreation Permits be managed?*

1.4.2 Geology/Paleontology

- *How will fossils be monitored and protected?*

1.4.3 Soils

- *What is the potential for soil erosion and stabilization?*

1.4.4 Cultural Resources

- *How will cultural resources be protected?*

1.4.5 ACEC Values

- *How will the relevant and important cultural, paleontological, and scenic values be protected?*

Chapter 2: Description of Alternatives

2.1 Alternative A: Proposed Action

The Proposed Action would address on-going impacts to resource values and alleviate user conflicts. The BLM would implement a higher level of management by providing a site specific plan designating vehicle routes, trails, and facilities, such as trailhead access and parking. Vehicle routes would be designated, two new non-motorized trails are proposed, and existing non-motorized trails would be re-designed according to adaptive management criteria over the life of the plan. Activities such as Special Recreation Permits and permitting of paleontological study and monitoring would also be defined. The plan would provide guidance for interpretation of resources as well as provide a conceptual design for access points, designated routes, trails, and signs. Full implementation of the plan would occur within approximately eight years, from 2012 to 2020, in cooperation with other state and federal agencies and community partners.

Soils: What impact will management have on soils in the area?

To reduce the impact of proposed management actions, soil protection best management practices and vegetative rehabilitation throughout the Recreation Area would be employed according to Appendix G: SOIL REHABILITATION AND STABILIZATION. These activities will be monitored for effectiveness and adapted as conditions warrant. In addition, all trails will be actively or passively (natural recovery) reclaimed to a width of 3’ or less. Avoid ground disturbing activities of any kind within 50’ of any eligible archeology site.

Access: Where are appropriate access points to La Puebla?

Trailhead access points with parking, site circulation, and interpretive and regulatory signs would be constructed northwest of Wheat Street and both east and west of County Road 88 as it intersects the SRMA. All facilities, including toilets, barriers, and shelters, will be designed to blend with the characteristic landscape and meet VRM Class II Objectives. Natural appearing forms, colors, textures, and materials will be selected along with rustic designs that blend with the architecture customarily used in the area. Refer to Appendix C: Design Guidelines/ Narrative and Appendix D: Potential Shelter Designs/Wayside Exhibit Structure Designs for more detail and direction.

If land is acquired in the future from willing sellers and sensitive resources that can be protected, access might be provided along the northern boundary near Alamo Arroyo. See also Appendix A: La Puebla SRMA Alternatives Map, Appendix B: Conceptual drawings 1: Dead Dog Trailhead, 2. Epoch Trailhead, and 3. Skull Ridge Trailhead, E: Signs F: Vegetative Rehab CX and Map, G: La Puebla Project Area Soils Map.

<u>Dead Dog Trailhead</u> (accessed by Wheat Street)

- Primary trailhead for motorized use on double loop motocross track.
- Access road signed for one way travel. Side routes blocked and closed.
- Access to limited hill climbs.
- Two loading ramps.
- Perimeter fencing around parking, hill climb, and motocross track.
- All other non-designated routes closed and rehabilitated.
- One, single vault toilet.
- Three shelters with tables and grills.
- Two panel kiosk at entry with trailhead regulations and a map.
- Two panel kiosk with interpretation (including educational messages for Tread Lightly).
- Parking: Up to 10, 40’ spaces for trucks with trailers that can double as 20 regular parking spaces.

<u>Epoch Trailhead</u> (accessed west of County Road 88 near Barton’s Loop)

- Primary trailhead for groups, education, and interpretation.
- Access to Epoch Trail (ridgeline) and old two-track routes for non-motorized use.
- Approximately six wayside exhibits for interpretation only. Exhibit structure doubles as vehicle barrier.
- Benches or seating possibly incorporated into barrier or exhibits.
- One trailhead sign.
- One, single vault toilet.
- Parking: Up to four spaces for passenger vehicles and three for tour or school buses.
- Perimeter fence or additional vehicle barriers to enclose parking area.

<u>Skull Ridge Trailhead</u> (accessed east of County Road 88)

- Primary access to Skull Ridge Trail which runs along County Road 88 to BLM public land boundary near Loma Linda subdivision.
- Parking for four passenger vehicles.
- Two panel kiosk with trailhead panel and interpretive panel.

- Perimeter fencing.

Trails: What type of trail/route system would meet the demands of recreation users?

The system would provide trails for motorized and non-motorized use with some variation in difficulty. The system would include motocross loops, hiking, biking, and horseback riding trails including an easy, flat trail, converted two track to single track trails, and an interpretive trail.

Access from Wheat Street

- The existing route off of Wheat Street to BLM would be the designated access route to the Dead Dog Trailhead. This route can be used by motorized and non-motorized modes of travel, including full size trucks and passenger vehicles.

Dead Dog Trail

- Designate existing, user created motocross track and hill climbs to accommodate motorized use and provide challenge and skill building.
- Maintain double Loop Motocross w/banked turns, jumps, and rollers: moderate to difficult.
    - Single track loop ½ mile
    - Double track loop 1.2 miles
- One-way travel.
- Allow maintenance on the trail on a case-by-case basis.

Epoch Trail

- Non-motorized two-track ridgeline trails for exercise, guided, and self-guided interpretation.
- Cairns and routed wood signs to be used for orientation along trail and between interpretive media.
- Easy to moderate difficulty.
- Provide low-key interpretive panels along trail, universally accessible.
- Benches.

Skull Ridge Trail

- Non-motorized for exercise and self-guided interpretation.
- Three foot-wide hardened surface which is accessible.
- Easy 1.7 miles of trail for hiking, biking, and horseback riding.

Walkibout Innacutt Trail

- Guided and self-guided interpretation and education from the Wildlife Center.
- Hiking only.
- Tread surface 24”; up to .13 mile, universally accessible.
- Easy.
- Provide pedestrian gate from Wildlife Center.

All other existing trails

- Open to non-motorized use only, for exercise, interpretation, and education.
- Vegetative rehabilitation will be applied to convert many trails to single track using existing disturbance.
- When possible, loop trails and/or trails from existing access points adjacent to private land will be provided using existing disturbance.
- Limited trail construction and re-routing on existing trails could occur with the objectives of erosion control and popularity or demand.
- Over time, some trails may be shown on a map and guide, while others may be closed by camouflage and seeding.
- Trail names should reflect the cultural and natural history of the area, such as:
    - Soils, geology, wildlife, etc.
    - Ex: La Senda del Rio Chimayo, Cuyamungue
- Trails would be marked with cairns or wood posts.
- Trails should avoid recorded sites by at least 50' whenever possible or apply some other mitigation.
- Mileage and length of trails will vary.
- Pursue acquisition of property with willing sellers adjacent to the Santa Cruz River.

Adaptive Management of Trails

In addition, an adaptive management approach would be used to manage changes in trail networks and impacts to soils. Trails and routes would be assessed for rehabilitation, removal, or reduction of width based on the following criteria:

1. Combine redundant or parallel trails and routes.
2. Target slopes of 15 percent or less for trails.
3. Allow a 25 percent slope maximum for trail segments where no other alignment is available.
4. Close or realign trails that are not used by visitors.
5. Close or realign trails with poor surface condition.
6. Close or realign trails with impacts to resources that cannot be mitigated.

Taos Field Office staff would use information collected on resources and from visitors to manage trail and route networks in the SRMA.

Note: All trails should avoid recorded archeological sites that are eligible for the National Register of Historic Places by at least 50'. Wherever possible, trails would be closed or re-routed around eligible sites. If a trail can't be closed and/or re-routed, other mitigation would be applied to the site.

Interpretation: What are the stories we want to share?

Focus would be on interpreting public land resources and scientific theories. However, visitors would be encouraged to *make their own connections to the resources*. Respect would be given to the varying connections and beliefs among visitors. (See the References section of this plan for interpretive research that may be used in developing interpretive program material.)

Overarching Theme: The environment in the Española Basin of the Rio Grande Rift is changing over geologic time.

Theme: 1	**Paleontology is the study of changes in life on earth.**	
Subtheme Examples: How old is it? A timescale records the relative sequence of geologic changes. Paleontology is a mixture of geology, biology, and other sciences.		
Media Prescriptions		
Location:	Media:	Topics:
Epoch Trailhead	Wayside exhibits	Geologic timescale Deep time
Epoch Trail	Low key trail signs Guided hikes Tour groups	Relative and absolute dating Extinctions Principle of superposition Principle of faunal succession
Wildlife Center	Brochures K-8 curriculum	Radiometric dating

Theme: 2	**Fossils from the mid-Miocene are buried here.**	
Subtheme Examples: Tectonics, volcanism, and deposition. Oh, my! Deposition buries fossils and ecosystems. The Rio Grande Rift tore the continent and stretched the earth's crust causing volcanic eruptions and tilting the Española Basin which is filling the rift and uplifting more earth. What is a fossil? What types of fossils are found here?		
Media Prescriptions		
Location:	Media:	Topics:
Epoch TH Epoch Trail	Wayside exhibits Interpretive trail signs Guided hikes Tour groups	Illustration of geology/deposition layers Illustrations/ models of on-site fossils Cenezoic Era, Mid-Miocene Epoch
Dead Dog TH	TH kiosk	Bone-crusher dogs, taxonomy Erosion and deposition
Wildlife Center Walkibout Innacutt Trail	K-8 curriculum Interp. trail signs	Mudstone, sandy loam, soils series Weathering, Mineralization Recrystallization, compression Quarrying, Prospecting
Theme: 3	**Environment determines what lives and what dies.**	
Subtheme Examples: Fossil evidence reveals clues to past plants, animals, and climate. The fossil and geologic record reflects changing climates. Based on history, what could be next for our environment? Holocene; the story of our Epoch.		

Media Prescriptions		
Location: Epoch Trail Wildlife Center Walkibout Innacutt Trail	Media: Trail interpretive signs Guided hikes and tour groups Brochure K-8 curriculum	Topics: Migration, adaptation, extinction Environment, demographics Illustration of site/earth's environment millions of years ago Weather, climate Ice ages, global warming Carbon cycle, ocean currents

Theme: 4	**Paleontological resources are a fragile and nonrenewable scientific record of the history of life on earth and so represent a critical component of America's natural heritage.**	
Subtheme Examples: The BLM manages and protects paleontological resources. Visitors play a critical part in monitoring and protecting these resources.		
Media Prescriptions		
Location: Epoch TH Dead Dog TH Wildlife Center	Media: Wayside exhibits TH Kiosk Brochures	Topics: Tread Lightly, LNT Collecting, permits Monitoring

Visitor Use: How should SRPs be managed?

This SRMA should provide community recreation and exercise as well as education in paleontology. There could be economic benefits for the community with interpretation and recreation through events and guided tours. The following allocations are recommended as a guide that could reflect the upper limits of permitted use that may help manage the sites carrying capacity for parking and social norms.

- Up to two Special Recreation Permits (SRPs) could be issued for large guided groups; twice during the week and twice during the weekend.
- Up to two competitive events could be permitted annually.
- Up to two SRPs for vendors such as food or equipment could be issued for the SRMA.
- School groups could be permitted twice a week for Epoch Trailhead.
- School groups could be permitted almost daily for Walkibout Innacutt Trail
- Camping could be allowed by permit only and may be connected to another activity.

Implementation

The first phase would be to begin work on the Dead Dog Trailhead. The subsequent phase would be to construct Epoch and Skull Ridge Trailheads. Next Skull Ridge and Walkibout Innacutt Trails would be constructed followed by research and design on interpretive signs and

wayside exhibits for Epoch Trailhead. Finally, adaptive management work on ridgeline and arroyo trails as well as SRPs could occur throughout all phases or at the end.

Table: 1 Potential Funding and Project Phases

PROJECTS	POTENTIAL SOURCES
1. Ongoing - Complete vegetation rehabilitation 2. Dead Dog Trailhead construction 3. Epoch and Skull Ridge Trailhead construction 4. Skull Ridge and Walkibout Innacutt Trail construction 5. Epoch Wayside Interpretive Design 6. Maintenance and construction of non-motorized single track trails	RTP Grant, NM State Parks Department NM Department of Game and Fish, OHV grant BLM Budget Planning System NM Museum of Natural History and Science National Geographic Center Chimayo Conservation Corps Santa Fe Open Space and Trails Program The Wildlife Center, Española REI Santa Fe Santa Fe Fat Tire Society Trails Alliance of Santa Fe

<u>Monitoring</u>

Monitoring would occur annually in the spring or fall through patrolling and observation by BLM staff or qualified volunteers.

Table 2: Management of Paleo Resources

MONITORING	MITIGATION	PERMITS
• Walk designated trails • Check unauthorized trails • Check for digging • Check for erosion • Check recorded sites	• Stop activity or re-route trails • Remove fossils	No permit required: Surface collection of common invertebrate and plant fossil specimens easily transported by hand and for non-commercial use.
		Permit required: Digging for vertebrate fossils - obtain from BLM Paleontologist

2.2 Alternative B: No Action

The area would be designated as an SRMA but the existing level of management would continue with little visitor services; no interpretation or defined parking, maps, and signs. In the 2012 Taos RMP, most of the 680-acre SRMA would be closed to motorized use, with the exception of the southern portion associated with the motocross track which would be limited to designated routes. SRPs could be issued on a case-by-case basis according to BLM policy.

2.3 Alternative C

Alternative C would include all actions in the Proposed Action in addition to one more designated routes from Epoch Trailhead (Barton's Loop) to Dead Dog Trailhead (Wheat Street). Use on this route would include motorcycles, ATVs, pedestrians, horses, and mountain bikes. The route may be designed for two-way travel up to 20' wide with drainage (See Appendix A).

2.4 Alternative D

Alternative D would include the Proposed Action, Alternative C, and a second additional designated route from Tres Families Lane for ATVs, bikes, horses, and pedestrians only (excluding full size vehicles). This would be maintained as a two-track primitive road with barriers installed at the BLM boundary and along the route as necessary.

Chapter 3: Affected Environment

3.1 Recreation

The 2012 Taos Resource Management Plan provides allocation of multiple resources and designates the Special Recreation Management Area. Objectives, outcomes, setting prescriptions, and implementing actions are listed in the table below.

Table 3: Recreation Program Management

LA PUEBLA SRMA		
Management Objectives: This is a community market used primarily for local residents and surrounding communities. It offers a unique setting for diverse interaction among recreational enthusiasts and the environmental educational opportunities provided by the Wildlife Center. Manage this area to provide opportunities for community access to learning, escape, and exercise in this rural setting.		
Outcomes		
Primary Activities: Hiking, dog walking, mountain biking, horseback riding, ATV, motorcycle use, interpretive learning, and picnicking.	**Experiences:** Escape from the city, routine exercise, historical discovery, access to close to home amenities, adventure, and skill development.	**Benefits:** More well-rounded youth development, lifestyle improvement, increased desirability as a place to live, increased awareness and appreciation of nature and historic resources, reduced vandalism and litter, fitness, well-being, improved skill and confidence.

Setting Prescriptions		
Physical: Rural. Close to NM Highway 68, Santa Fe County Roads, and business and residential development. Well-defined but limited facilities.	**Social:** Up to 29 encounters per visit.	**Operational:** Maps posted on site. Regulations clearly posted and intermittent law enforcement presence.

Implementing Actions	
Marketing: Provide interpretive materials onsite to increase awareness and appreciation of resources, particularly paleontological. Place trailhead signs offering information and regulations on various activities taking place in area. Interpret Tread Lightly principles.	**Monitoring:** Trail registers, vehicle counters. Patrol observations. Visitor complaints.
Management: Acquire access easements to develop trailhead/staging areas. Develop as a park with multiple access/trailhead areas, such as Country Road 88B. Define and segregate motorized/non-motorized use areas with moderate design traffic circulation and access roads/trails. Fence and sign access to provide protection of paleontological and cultural resources. Inventory and designate routes. Conduct rehabilitation of soil and vegetation. Design non-motorized trails using arroyos, existing routes, and some new construction. Establish a ranger presence.	**Administrative:** *VRM:* Class II *Travel:* Closed—180 acres, Limited to Designated—500 acres *Permits:* Consider competitive events, commercial activities, venders, and guide services. No Shooting. Camping by permit only. *Minerals:* Controlled surface use of leasable minerals.

The SRMA is undeveloped and has virtually no recreation facilities. In the 1990s, an unauthorized motocross track was built by users and consists of about three loops with rollers, jumps, and banked turns. The track is used in one way travel. Accessed by Wheat Street, the track is adjacent to a large, flat disturbed area where riders and picnickers park. Most of this use occurs on the weekends during the warmer months of the year. Youth and families offload vehicles on earthen ramps, enjoy barbeques, and increase skill and endurance by practicing jumps and turns. They hang out with friends, engage in 'jump-off' competitions on hill climbs, and practice riding different lines on the track. There is a large amount of other motorized routes, some designated but most are user created. Many were driven once or twice and abandoned. Many others are naturally reclaimed with vegetation.

Other year-round use includes running, hiking, dog walking, and horseback riding. Most use is local and from adjacent homes. Although there are no formal estimates of annual visitation, the area is close and used similarly to El Palacio Arroyos. One entrance near the Onate Center in the area of El Palacio has a traffic counter which records an average of 24,000 visitors annually. The use at La Puebla is probably less than El Palacio visitation.

Unique recreational qualities of the area include its great potential for interpretation and education of geology and paleontology as well as development of motorized riding skill and competition.

3.2 Geology/Paleontology

The regional geology of the Española Basin was shaped by sediments that filled a down-dropped block or graben associated with the early phases of development of the Rio Grande rift. Mud, sand, gravel, and volcanic rocks shed off the uplifting Sangre de Cristo Mountains to the east and accumulated in the Española Basin. By the middle Miocene, about 15 million years ago (mya), regional normal faulting began to outline a series of closed rift basins, including the Española Basin, that became the focus of internal drainage networks of the Rio Grande Rift (Lozinsky and R. H. Tedford, 1991). Eventually, the series of closed basins were connected and a through flowing Rio Grande developed. The Rio Grande Rift starts in Colorado and cuts New Mexico nearly in half. Sediment from the surrounding mountain uplifts eroded and was deposited in alluvial fans and slopes, braided streams, dune fields, and shallow, short lived lakes of the closed basins. The environment of the area during the middle Miocene to early Pliocene (16.5 – 3.6 mya) was one of savannah-like plains in areas of low relief, with more luxurious vegetation along perennial streams and tributaries, and with forests that conceivably characterized higher elevations (Kues and Lucas, 1979). Abundant ash beds and the local presence of volcanic clasts and small lava flows indicate volcanism was a significant environmental factor during the development of the Española Basin.

The Española Basin is filled with the Oligocene to Pleistocene (34–0.01 mya) sedimentary and volcanic rocks, which include the uppermost Oligocene-Pleistocene Santa Fe Group. The Santa Fe Group is the major synorogenic deposit of the Rio Grande rift (Kuhle, Smith, 2001). Sedimentary fill of the Santa Fe Group includes piedmont-alluvial, playa, fluvial, and eolian deposits that locally reach thicknesses of over 4,000 m (Lozinsky and Tedford, 1991). The Española Basin contains the type locality of the graben filling Santa Fe Group. Sedimentary deposits in the La Puebla SRMA represent the Miocene Tesuque Formation, part of the Santa Fe Group, alluvial slope deposits. The Tesuque Formation is a > 2,000m-thick sedimentary unit filling most of the Española Basin (Denny, C. S., 1938). Most of the sediments of the Tesuque Formation including the Nambé, Skull Ridge, and Pojoaque members of the formation were derived from the predominantly granitic rocks of the Sangre de Cristo Range. These sediments accumulated as part of a great system of alluvial fans along the mountain front. Nambe´ and Skull Ridge member deposits are exposed in the project area. The deposits consist of lenses of conglomerate, imbedded sandstone and mudstone, and limestone of non-marine origin, with numerous distinctive ash fall-tephra layers.

Over the years, paleontologists have collected resources (fossils) from the Española Basin, including from the area of the La Puebla SRMA. Fossil mammals that represent a variety of animals we would recognize and some would not have been collected here. The fossil record preserved in the basin fill is confined to the exposed deposits that ramp down from the flanks of the Sangre de Cristo Mountains. The first Tertiary mammal fossils found in New Mexico came from the Española Basin in 1869 by Hayden (Tedford and Barghoorn, 1993).

The first large collection of fossil mammals from the basin was made during the month of August 1874, by Professor E. D. Cope, of the University of Pennsylvania. Cope was attached to

the U.S. Army Engineer's expedition that was called the "Wheeler Geo-graphical Surveys West of the One Hundredth Meridian"(Galusha Frick, 1974).

Thirty-one species of vertebrates were reported by Cope later that year, and his work was the first on the stratigraphic paleontology of the region. In 1924, Childs Frick of the American Museum of Natural History sent a field party into the Española Basin area and initiated a field program that has continued sporadically until present time. Paleontologists from the New Mexico Museum of Natural History and Science continue to survey and collect fossil resources from the area. A collection of fossils from public land in the Española Basin is curated at the New Mexico Museum of Natural History and Science. Also, two specimens collected in the early 1990's from the region are held by Northern New Mexico Community College. The specimens consist of a Giant Tortoise and a Rhinoceros skull.

Vertebrate fossils have been diverse and abundant in some beds of the type locality of the Santa Fe Group deposits found in the Española Basin. The remains of bears, true cats, dogs, tortoises, vultures, sloths, rabbits, beavers, weasels, dog-bears, elephants, horses, rhinoceroses, camels and oreodants have been documented from the area (Kues and Lucas 1979). More than 5000 major specimens have been collected and curated by the American Museum of Natural History (Galusha Frick, 1974). The fossils range from a single jaw or limb bone to a partial or complete skeleton. Significant fossils continue to erode out of the fossiliferous Nambé and Skull Ridge members of the Santa Fe Group in the Española Basin. Continued collecting by professional paleontologists will augment collections previously made and provide more information on population structure and intraspecific variability of the taxa represented by the Santa Fe Group. The collection and study of fossils from the basin will help to preserve paleontological information and extend our knowledge of the diverse and abundant organisms that lived in Santa Fe County 5 to 17 million years ago.

3.3 Soils

There are 9 soil complexes represented within the La Puebla planning area (USDA NRCS 2008). Soil types, acreages and erosion potentials are shown in Table 4 below. The dominant soil by area is Ojito-Koshare-Quarteles complex, which covers 363 acres, occurring predominantly on slopes. The bulk of the soil in the planning area, 619 acres or 95 percent of the surface area, has high to very high water erosion potential. Of the remaining 35 acres, 11 acres of Chupe-Riverwash are rated as having very high wind erosion potential and 19 acres of Jaconita-Xenmack are rated as having severe road and trail erosion hazard. Only 5 acres of Cuyamungue-Riverwash, less than 1 percent of the surface area, appears ideal for development of roads or trails based on low erosion potential.

Table 4: Soil Types

Symbol	Name	Acres	Road and Trail Erosion Hazard	Erosion Potential	
				Water	Wind
104	Chupe-Riverwash Complex, 1-3% slopes, flooded	11	Slight	Very Low	Very High

120	Quarteles-Rock outcrop complex, 25-90% slopes	128	Severe	High	Very Low
122	Cuyamungue-Riverwash complex, 0-2% slopes, flooded	5	Slight	Very Low	Moderate
123	Koshare very fine sandy loam, 2-8% slopes	83	Moderate	High	Very High
126	Walkibout-Innacutt complex, 2-80% slopes, flooded and non-flooded	24	Moderate to Severe	High	Moderate
127	Ojito-Koshare-Quarteles complex, 5-50% slopes	363	Moderate to Severe	Very High	Very High
128	Koshare-Urban land complex, 2-8% slopes	19	Moderate	High	Very High
131	Jaconita-Xenmack complex, 25-60% slopes	19	Severe	Moderate	Low
132	Depolvo-Sueleros very fine sandy loams, 2-15% slopes	2	Severe	Very High	Very High

3.4 Cultural Resources

A Class III (100 percent) cultural resources survey was conducted on the proposed 680-acre La Puebla tract. The field phase of La Puebla SRMA cultural resources survey was conducted by Taos Field Office archaeologists from September 27 through October 6, 2010. La Puebla SRMA survey resulted in the discovery of 14 new archaeological sites. Three previously recorded sites (LA 112533, LA 112534, and LA 112535) were revisited and 14 new sites (LA 168537-LA 168549) were identified and recorded. One site (LA 261), which was depicted in the New Mexico Archaeological Resource Maps (ARMS) data base as being located within the project area and is actually miss-plotted and is located elsewhere. All three previously recorded sites were reassessed as being eligible for the National Register of Historic Places. Of the 14 newly recorded sites, LA 168546 and LA 168549 were determined to be too poorly preserved to warrant National Register of Historic Places eligibility. In addition to these cultural resources, 136 Isolated Objects and 7 paleontology sites were identified by the survey.
Sites LA 112533, 112534 and 112535 were recorded in 1996 by a previous BLM survey (Williams 1997). All three sites were determined to be National Register of Historic Places eligible by the original survey, based upon Criterion D. The current reassessment of these sites revealed that considerable damage to all three had occurred as a result of OHV traffic. Two of the sites (LA 112534 and LA 112535) exhibited evidence of having been dug into by looters, although this activity was also documented by the 1996 survey. Regardless of these disturbances, substantial evidence was encountered to indicate that major portions of all three sites were likely to be well-preserved and capable of yielding important scientific information.

All three sites are considered National Register of Historic Places eligible and should be completely avoided by ground-disturbing activities.

Of the 14 newly recorded sites, 11 are considered National Register of Historic Places eligible. Two sites, LA 168546 and LA 168549, are very poorly preserved and possess a very marginal information potential that has largely been exhausted by current documentation. The National Register of Historic Places eligibility status of one site, LA 168547, was not determined by the survey level investigation. This site contains what appears to be the remains of a small structure. The absence of any artifacts, coupled with the possibility that the site is a natural feature, renders definite determination of status problematic, based upon survey data alone.

The remaining 11 sites were all determined National Register of Historic Places eligible by the survey. These sites include LA 168536 through LA 168545, and LA 168548. LA 168537 is the remains of a regionally unique structural feature that also contains prehistoric and proto-historic petroglyphs. Although it is remotely possible that this site contains undisturbed cultural contexts, it is most notable for its uniqueness as an architectural feature. Therefore, the site is considered National Register of Historic Places eligible based on Criterion C. LA 168537 is highly visible and contains evidence of recent usage. Damage to the prehistoric and proto-historic petroglyphs has occurred as a result of recent visitation.

The remaining ten archaeological sites (LA 168536, LA 168538, LA 168539, LA 168540, LA 168541, LA 168542, LA 168543, LA 168544, LA 168545, and LA 168548) were all determined National Register of Historic Places eligible based upon Criterion D. All of these sites appear to contain well-preserved and undisturbed subsurface cultural deposits that are capable of yielding important scientific information.

3.5 ACEC Values

The relevant and important values for the Sombrillo ACEC are cultural, paleontological, and scenic. The current condition for Paleontological and Cultural resources are described in sections 3.2 and 3.4, respectively. The scenic resources in the Sombrillo ACEC are designated for VRM Class II Objectives. The objectives are to retain the existing character of the landscape. The level of change should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

La Puebla is located within the Española Basin and includes hills, ridges, and foot slopes around woodlands and shrub lands, valleys and mesas. This landscape offers complexity and harmony from green valley bottoms, to light red cliffs, to blue mesas and mountains. It is a rural valley of many repeating small meandering cliffs and bluffs with light tan, pink and rust exposed alluvium slopes. Small scale farming, grazing, and homes are common throughout the valley. Adjacent lands and additional values include demand for utility rights of ways, tribal and Forest Service land.

Chapter 4: Environmental Effects

4.1 Direct and Indirect Effects

4.1.1 Alternative A: Proposed Action

4.1.1.1 Recreation

The Proposed Action would benefit recreation users in many ways. The largest change and benefit would come by increasing the management presence in the area and providing facilities to match the demand in use. Defined access and parking with site circulation, signs, maps, posting of regulations and acceptable activities would be the primary factor in protecting the resource, enhancing the recreation opportunities, and increasing safety and security. Although the area is already enjoyed routinely by many locals for exercise close to home, an increased sense of security may draw more users.

By providing access and facilities that enhance motorized use, riders can enjoy the resource and develop skill in limited and defined areas and share responsibility in protecting resources. Designating vehicle routes and non- motorized areas will reduce conflicts among users and activities. Unauthorized routes would be closed and motorized use would be controlled and limited to the south central portion of the SRMA by designating access from Wheat Street and the motocross track. Although the motocross track would be designated where most of the motorized activity occurs, there would be a reduction in the number of motorized trails overall, and the remainder of the SRMA could not be accessed by motorized vehicles.

Highlighting the paleontological resource through interpretation and education would enrich quality of life through learning and discovery, create pride in our natural heritage, and increase the overall value of the area to the public. The potential for economic opportunities would be created through permits for motorized competitive events, tour buses, vendors, and guided interpretation.

4.1.1.2 Geology/Paleontology

Rifting fault patterns have exposed sections of the Nambé and Skull Ridge members in the La Puebla SRMA. The Nambé Member exposed in the bottom of washes and arroyos within the park rest on the Precambrian rocks of the Sangre de Cristo Mountains. Fossils have been found in the lower, coarser-grained sandstone outcrops of the unit. Most of the taxa represented in the member come from this part of the section.

The fossil rich overlying Skull Ridge Member is characterized by many inter-bedded tuffs, fine-grained siltstones, and sandstones that form slopes and mesa tops. When disturbed, the soils of these members are extremely erosive. If unmanaged, the impacts of rapid population growth and the subsequent increase of unauthorized motorized use in the SRMA could consequently lead to the destruction of specimens or the theft of exposed fossils. The proposed action will substantially reduce adverse effects to paleontological resources.

4.1.1.3 Soils

The primary impacts of this action are soil erosion from roads and trails. It is assumed that the Proposed Action would reduce the potential for soil erosion for 3 reasons:

1. The proposal would close a large number of routes on the north half of the park to motorized vehicles, thereby reducing the potential for surface erosion.

2. The proposal would increase visitor direction, thereby reducing the potential for expansion of roads and trails.

3. Over the life of the plan, existing roads and/or trails will be mitigated or rehabilitated (see Appendix G) to decrease bare ground (e.g., former vehicle trails will be reduce in width by 50 percent or more for non-motorized uses) and increase infiltration of precipitation.

It is assumed that the Proposed Action would increase the potential, relative to the No Action Alternative, for soil erosion/damage resulting from the development of the Skull Ridge Trail. Using existing route inventories, which may underestimate current routes, each alternative was analyzed for the areal cover of motorized and non-motorized route and trail surfaces. Motorized routes and trails are expected to be at least 6 feet wide, except where noted otherwise. Non-motorized trails are expected to be no wider than 3 feet. There are no routes or trails identified that occur in Cuyamungue-Riverwash soils, so it is assumed that all development will be on soils with high to severe erosion potential.

Under Alternative A, it is estimated that a total of 307,296 square feet (7 acres) of soil will be at increased risk of erosion as a result of planned routes and trails. This amount is about 37 percent lower than the No Action Alternative, 15 percent and 18 percent less than Alternatives C and D respectively.

4.1.1.4 Cultural Resources

No adverse effect will result from the proposed action since all National Register of Historic Places are eligible archaeological sites and will be completely avoided and surrounded by a minimum 50 foot buffer. Most of the proposed development tasks should provide long-term benefits to cultural resources contained within the project area, particularly as these may pertain to the control of natural erosion and damage caused by unrestricted OHV traffic.

4.1.1.5 ACEC Values

Refer to sections 4.1.1.2 and 4.1.1.4 for impacts analysis on cultural and paleontological resources. VRM Class II objectives would be met because the Proposed Action incorporates mitigating measures, design features, and vegetative rehabilitation. Refer to the first paragraphs in the Proposed Action as well as Appendices C, D, and F.

4.1.2 Alternative B: No Action

4.1.2.1 Recreation

Benefits to users from the Proposed Action would not be realized. No benefits would occur from defined access, facilities, and interpretation of resources. The motocross track, where most motorized activity occurs, would remain open.

4.1.2.2 Geology/Paleontology

There would be no benefit to the paleontological resources from Alternative B. With the existing level of management, there would be continued destruction and loss of fossil resources from unauthorized use of the area.

4.1.2.3 Soils

This alternative allows for the greatest amount of soil disturbance of the four identified. Based on the analysis outlined in Section 4.1.1.3, this alternative would result in 485,654 square feet (11.1 acres) of routes and trails. Without an increase in on-site management, defined parking areas, vehicle barriers and posted signs, there would be a greater likelihood of continued route proliferation.

4.1.2.4 Cultural Resources

The No Action alternative will ultimately result in adverse effects to the National Register of Historic Places eligible sites since these resources will continue to degrade and be affected by natural erosion, unrestricted pedestrian and OHV traffic.

4.1.2.5 ACEC Values

Refer to sections 4.1.2.2 and 4.1.2.4 for impacts analysis on cultural, scenic, and paleontological resources. There would be no positive effect from vegetative rehabilitation and adaptive management on trails or negative effects from site development.

4.1.3 Alternative C: (Designated Routes)

4.1.3.1 Recreation

All the same benefits apply to users in this alternative as the Proposed Action. Motorized users benefit from one additional designated route from Barton's Loop to Wheat Street. This would allow motorized access across the SRMA and from the east side within the residential community.

4.1.3.2 Geology/Paleontology

There would be no additional impacts since the route is pre-existing.

4.1.3.3 Soils

Due to the proposed development of a 20-foot wide motorized route, this alternative results in an increased potential of soil damage and loss relative to Alternative A. Based on the analysis outlined in Section 4.1.1.3, this alternative would result in 359,357 square feet (8.2 acres) of routes and trails. It would have less potential impact than the No Action alternative because the surface area of disturbance is smaller and implements the same management controls as described in Alternative A.

4.1.3.4 Cultural Resources

No adverse effect will result from the proposed action since all National Register of Historic Places eligible archaeological sites will be avoided by a minimum 50 foot protective buffer.

4.1.2.5 ACEC Values

Refer to sections 4.1.2.2 and 4.1.2.4 for impacts analysis on scenic, cultural and paleontological resources. There would be no negative effect from vegetative rehabilitation and adaptive management on trails or negative effects from site development.

Alternative D (Designated Routes)

4.1.4.1 Recreation

All the same benefits apply to users in this alternative as the Proposed Action. Motorized users benefit from two additional designated routes–from Barton's Loop to Wheat Street and from Tres Familias Lane to Wheat Street. This would allow motorized access across the SRMA and from both eastern and western areas of the residential community.

4.1.4.2 Geology/Paleontology

There would be no additional impacts if the routes are pre-existing.

4.1.4.3 Soils

The impacts to soils under this alternative are very similar to Alternative C. Based on the analysis outlined in Section 4.1.1.3, this alternative would result in 372,979 square feet (8.6 acres) of routes and trails. It has slightly more potential to impact soils than Alternative C because of the development of a 0.43 mile motorized route from the east side of the park to the motorized routes on the south. As with Alternative C, Alternative D would have higher potential impact on soils than Alternative A and lower potential impact than the No Action Alternative.

4.1.4.4 Cultural Resources

No adverse effect will result from the proposed action since all National Register of Historic Places eligible archaeological sites will be avoided by a minimum 50 foot protective buffer.

4.1.2.5 ACEC Values

Refer to sections 4.1.2.2 and 4.1.2.4 for impacts analysis on cultural and paleontological resources. There would be no positive effect from vegetative rehabilitation and adaptive management on trails or negative effects from site development.

4.2 Cumulative Effects Analysis

4.2.1 Cumulative Actions

4.2.1.1 Past and Present Actions

The BLM area near La Puebla has been used for motorized and non-motorized recreation since at least the early 1990s. A motocross track was authorized and built by users for skill development and motorcycle riding. Riding the track is one of the main activities occurring on site. For the purposes of recreation, BLM has managed the area for 'dispersed' use where generally no structured recreation opportunities and/or facilities were provided. An open area of 130 acres was designated with the remainder designated as Limited to Existing roads and trails. The popularity of motorized use and the lack of parks in this particular residential area of Santa Fe County had not been anticipated. Many unauthorized routes have been created. Visitor use is low and primarily local.

In northern New Mexico the Carson National Forest covers 1.5 million acres of public land and the Santa Fe National Forest covers 1.6 million acres. Since 2005 the Forest Service has been implementing a new rule to restrict OHV travel to designated roads and trails. As a result new Travel Management Plans have been written for the Carson National Forest that close areas to cross country travel.

BLM fenced public land on the east side of County Road 88 several years ago. Recently, the perimeter of the public land on the west side of the county road has been fenced and walk through gates have been provided for neighbors. Vegetative rehab work has begun in the form of drainage and erosion control as well as native grass transplants.

4.2.1.2 Reasonably Foreseeable Actions

The BLM Taos Field Office will complete up to nine Transportation Plans beginning in 2013. The Palacio and Sombrillo Transportation Planning Units are identified as the first and second priority in the 2012 Taos Resource Management Plan (RMP). Each transportation planning unit has some level of road density prescribed in the RMP. There will likely be fewer designated routes and some routes will likely be closed to protect resources. Although there is also potential to create new routes and trails, it is anticipated that the overall quantity of motorized routes will decline.

With full implementation of the proposed action and alternatives, the area may become a tourist destination for interpretation and paleontological resources. A major decline or complete end to trash dumping and route proliferation is expected.

4.2.2 Cumulative Effects

4.2.2.1 Recreation

The combination of both BLM and Forest Service designation of routes could limit the substitutes for motorized recreation in northern New Mexico. This may displace some motorized users, and further reduce opportunities for cross country vehicle travel.

The result of past actions has been damage to soils and vegetation and conflicting recreation uses. Soils and vegetation have recovered very well on the east side of County Road 88 which was fenced off from vehicle use in the 1990s.

The anticipated result of formally designated parking, vehicle routes, and trails is a decline in conflict between motorized and non-motorized recreation activity. A decline in route proliferation and trash dumping is expected as a result of installing vehicle barriers to enforce route designations and contain parking at trailheads.

Some visitors might feel safer and prefer an increase in management presence. The addition of onsite interpretive information and facilities may result in an increase in concentrated use particularly at developed trailheads. Visitation may increase overall from both local users as well as people traveling more than 50 miles.

4.2.2.2 Geology/Paleontology

The soils of these members in the park are extremely erosive when impacted by motorized vehicle use. The proposed action will substantially reduce adverse effects to the paleontological resource by providing management of motorized use in the area. Cumulative effects to the resource will occur if continued unrestricted unauthorized motorized use of the area is permitted. Overall cumulative effects to paleontological resources will be minimal due to mitigation and management over time.

4.2.2.3 Soils

The current state of soils in the planning area is at risk to damage and loss due to historic activities that have not been managed. Based on the probable change of use that would occur under Alternatives A, C, and D; and fencing and route rehabilitation that are being implemented, it is likely that the cumulative impacts will decline, resulting in a reduction in the amount of soil at risk for damage and loss. Under the No Action Alternative (B), cumulative impacts to soils would also decline as a result of management actions already being implemented, but the decline would be much lower than the other 3 alternatives for the reasons outlined in Section 4.1 analyses for soils.

4.2.2.4. Cultural Resources

Proposed actions will ultimately enhance landscape stabilization and inhibit erosion which will contribute to the preservation of National Register of Historic Places eligible archaeological sites.

4.1.2.5 ACEC Values

Refer to sections 4.1.2.2 and 4.1.2.4 for impacts analysis on scenic, cultural and paleontological resources. There would be no negative effect from vegetative rehabilitation and adaptive management on trails or negative effects from site development.

Chapter 5: Consultation and Coordination

5.1 Summary of Consultation and Coordination

See Section 1.4. for a summary of scoping prior to public review of the analysis.

5.2.1 Public Comments Analysis

To be completed following the public comment period for this EA.

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