



Prehistoric Trackways National Monument
Bureau of Land Management
FY 2011 Manager's Report



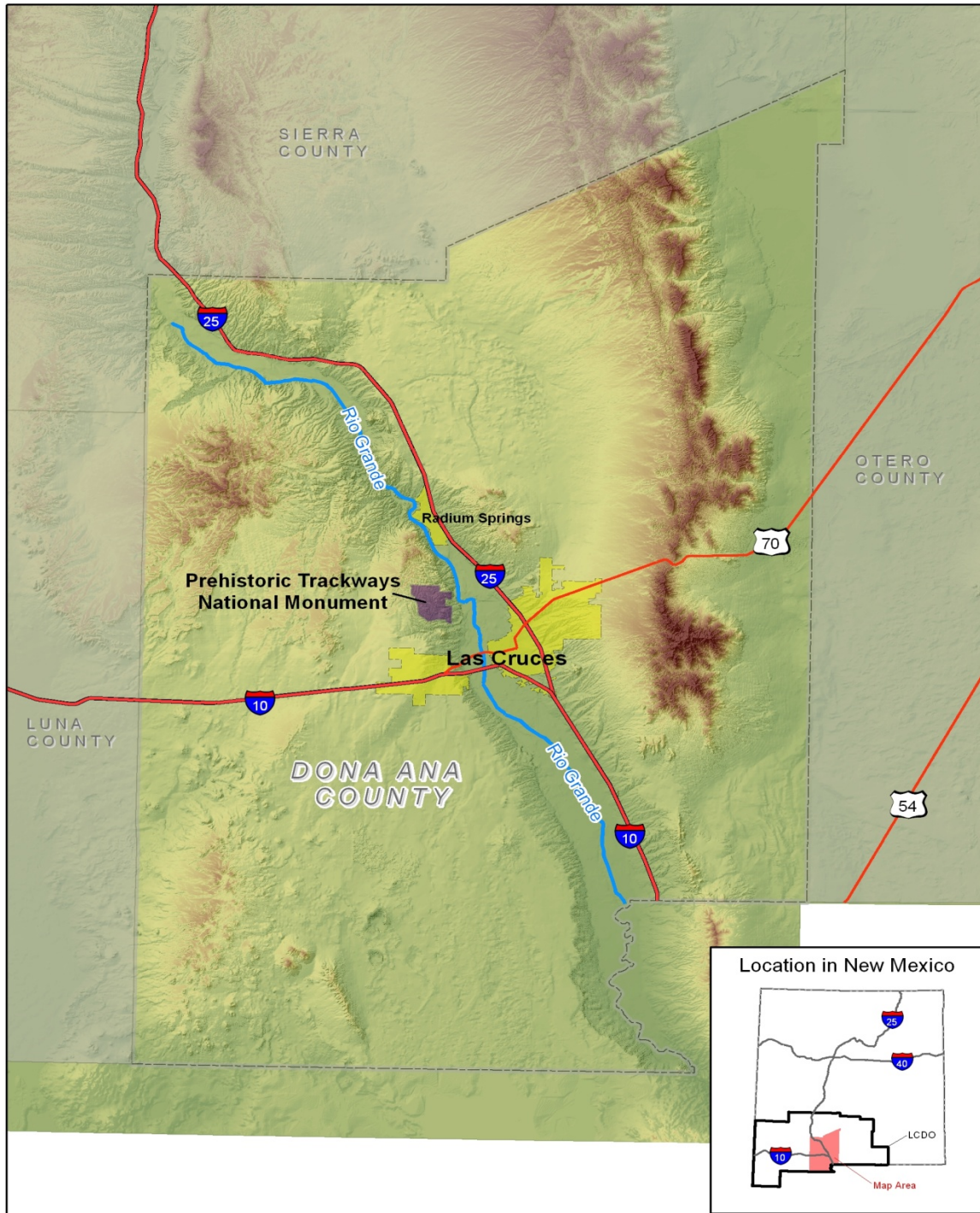
Bureau of Land Management
National Landscape Conservation System

Prehistoric Trackways National Monument FY 2011 Manager's Report

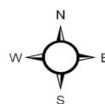
- Unit: Prehistoric Trackways National Monument
Las Cruces District Office
BLM New Mexico State Office
- Contact Information: 1800 Marquess Street
Las Cruces, NM 88005-3370
575-525-4300
www.blm.gov/nm/st/en/prog/recreation/las_cruces/trackways.html
- Manager: Tom Phillips, Monument Manager
tphillip@blm.gov
575-525-4377
- Established: Public Law 111-11 (Omnibus Public Land Management Act of 2009), March 30, 2009
- Acreage: 5,280 BLM acres
- Estimated Annual Visitation: 4,360 visitors

NOTE: There is no direct public right-of-way access to the Prehistoric Trackways National Monument (Monument). However, there are multiple unofficial ways to access the Monument. On any weekend throughout the year, park rangers have observed anywhere between 10-to-50 people within the Monument. The purpose of these visits is exploring the natural resources, driving vehicle routes, hiking across the landscape, or mountain biking on trails. There have been many Bureau of Land Management (BLM) hosted events (e.g. school groups, interpretive hikes, permitted scientific outings, and other organized events). The estimation of 4,360 visits is based on anecdotal observations resulting in an estimated 30 people per weekend and an average of 5 people per day during the week.

Map 1-1 - Regional Map



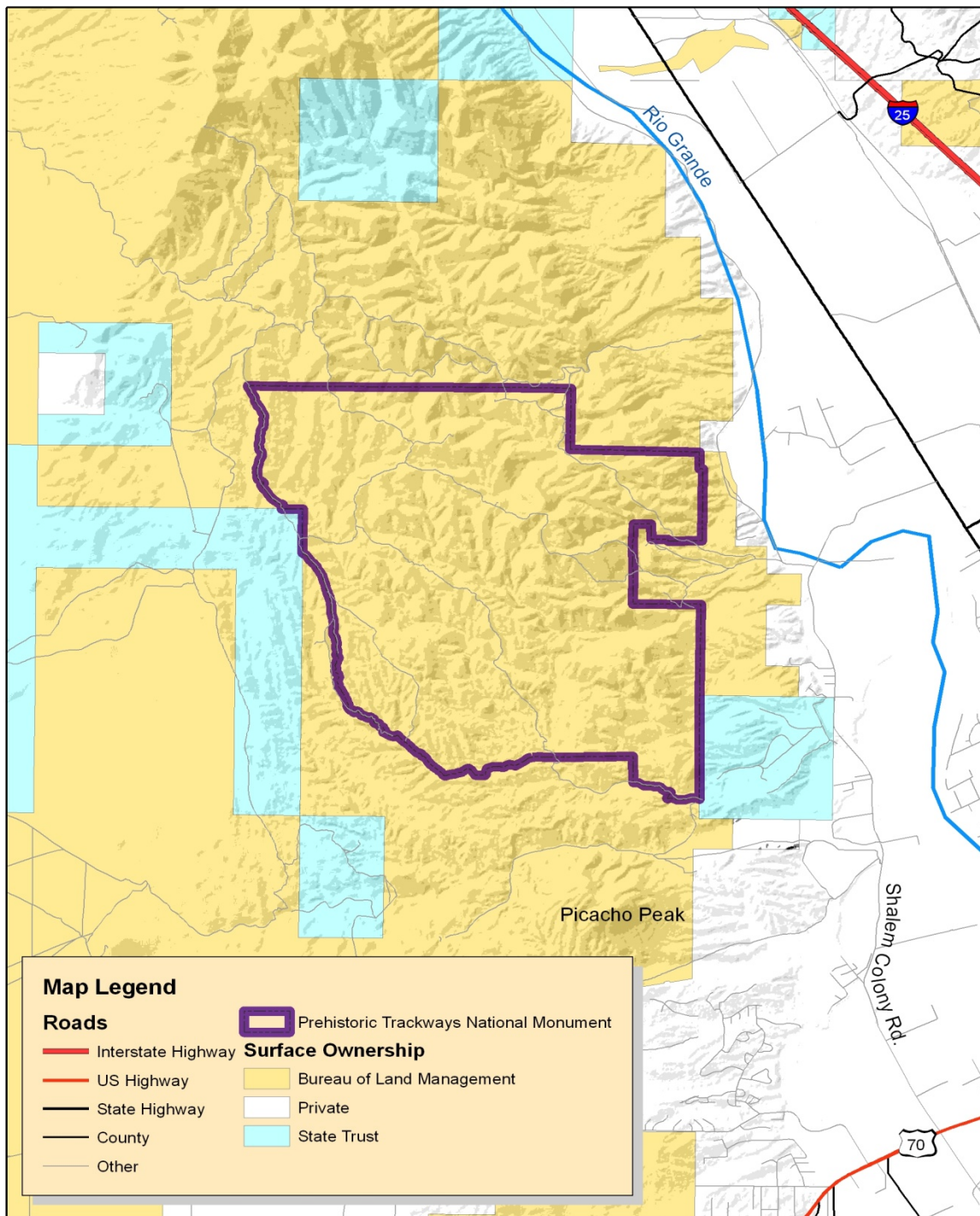
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0 9 18 Miles

Projection: UTM, Zone 13
Datum: NAD 1983

Map 1-2 - Prehistoric Trackways National Monument



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0 0.5 1 Miles

Projection: UTM Zone 13
Datum: NAD 1983

SECTION 1 – NATURAL AND HERITAGE RESOURCE CONDITIONS

Natural Resource Trends

- The vegetation in the Monument is a prime example of the Chihuahuan Desert, which consists of grama grasses, agave, yucca, barrel cactus, button cactus, Scheer's pincushion cactus, claret cup cactus, prickly pear, ocotillo, acacia, juniper, and honey mesquite.

Heritage Resource Trends

- There are no known cultural sites within the Monument.
- There are approximately 150 paleontological sites within the Monument, 28 of which the BLM monitors on a monthly basis.

Land Health Assessments

- The majority of the Monument is within the Picacho Peak allotment. The northern end of the Monument is within the Altamira allotment. Rangeland conditions have improved from mid-poor to low-fair on limestone hills sites and from mid-fair to low-good on gravelly sites.
- One noted departure from the standards is the increase of creosote bush (*Larrea tridentata*) density, which is at high enough levels to be considered an invasive native plant.

Inventory

- Citizen-scientist, Jerry MacDonald, documented plant fossils, trackways, and petrified wood and made site evaluations and rankings. See Figure 1.

Restoration

- Pending finalization of the Monument's Resource Management Plan (RMP), no restoration activities have occurred.

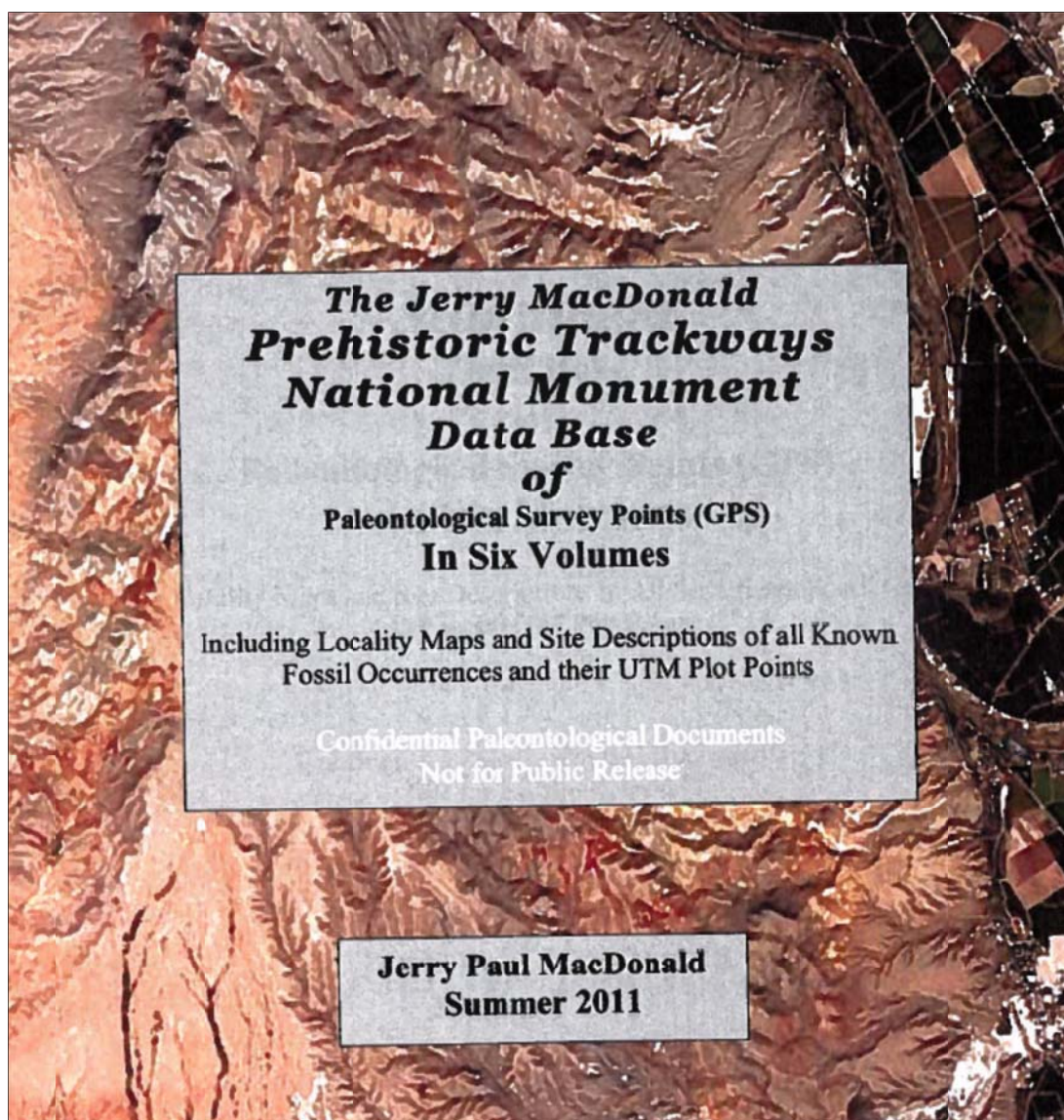


Figure 1- Jerry MacDonald's cover page for the data base

SECTION II – RECREATION FACILITIES, ROADS, AND TRAILS CONDITIONS

Overview

- Thirty-two miles of designated off-highway vehicle routes exist in the Monument. These routes are nationally recognized for extreme off-roading and rock crawling activities. All of the routes within the Monument require high clearance, four-wheel drive vehicles. Fifty percent of these trails require modified vehicles and special driving skills. These trails are not used for access purposes; rather, the trails are used for specialized recreational pursuits. The Monument also has a very difficult 5.5-mile mountain bike route.

Construction and Maintenance

- Construction and maintenance of facilities, routes, or trails will occur after the final RMP is approved.

Signage

- In January 2011, the BLM installed a 3-panel interpretive kiosk. Two panels have information about Monument resources and the middle panel is available for time sensitive postings and maps. See Figure 2.



Figure 2- Installing interpretive kiosk near the Monument entrance

SECTION III – OUTREACH, ENVIRONMENTAL EDUCATION, INTERPRETATION, AND VOLUNTEERS

Outreach

- There are two park rangers who present the Monument and its resources to visitors, community members, and school groups. In FY 2011, nearly 1,500 people attended formal outreach activities. On an informal and impromptu basis, the park rangers talk with the public on-site, at the BLM office, and in other community venues.

Visitor Centers

- The Monument does not have a dedicated visitor center. Instead, the BLM has partnered with the City of Las Cruces Museum of Nature and Science (MoNaS) to present displays of Monument resources.

Environmental Education

- The Monument hosted 10 events in which the park rangers educated almost 1,150 students through guided hikes, field trips, in-classroom presentations, paleontological day camps, and science fairs. See Figure 3.



Figure 3- Engaging students during Paleontology Camp

Interpretation

- Almost 300 people were involved in formal interpretive activities related to the Monument. These programs were at community centers, the local museum, a state park, the BLM's Dripping Springs Visitor Center, and the National Park Service's White Sands National Monument. See Figure 4.



Figure 4- Park Ranger McKinney Briske at an evening interpretive presentation

Volunteers

- Jerry MacDonald volunteered thousands of hours to unearth the trackways in the 1980s and continues volunteering to educate the public. Mr. MacDonald assists BLM staff to identify and preserve paleontological resources. See Figure 5.



Figure 5- Citizen-scientist and site discoverer Jerry MacDonald giving a presentation about the Monument

SECTION IV – SCIENCE

Overview

- The BLM partnered with the Smithsonian Institute to study the taxonomic composition and ecological structure of two Permian-age forested landscapes. The floras representative of these landscapes are found at different geological levels in the Monument. The older of the two floras is dominated by two plant species, the conifer *Ullmannia* sp. and the callipterid peltasperm *Lodevia* sp. The flora is preserved in a carbonate mud-filled paleochannel of probable tidal origin. The second flora is dominated by the conifer *Walchia pinniformis* and the supaoid peltasperm *Supaia thinnfeldioides*. This flora grew in a coastal plain setting. The two vegetation types are similar in their exceptionally low diversity and in their co-dominance by conifer and peltaspermous seed plants. They differ in the specifics of the dominant plants and possibly in the dominant climates in which they grew.
- Photographs/Artwork



Figure 6- Smithsonian artist Mary Parish's rendition of the Permian era landscape

SECTION V – PARTNERSHIPS

Overview

- The BLM, the New Mexico Museum of Natural History and Science (Museum), and the Smithsonian completed the following tasks through the National Landscape Conservation System Science Grant:
 - Intensely collected each of the fossiliferous horizons to ascertain quantitatively the dominant species and capture as many rare species as possible. Each collecting unit was sampled by experienced paleobotanists for one week.
 - Documented in detail the depositional environments within which the plants are entombed. This required sedimentological study of the encasing rocks.
 - Reconstructed the two environments through collaboration with a Smithsonian staff artist.
- The BLM developed a series of videos documenting collecting and site study activities, scientist interviews, and student interactions. The BLM partnered with New Mexico State University's (NMSU) media department to create ten videos of this paleontological work, creating virtual access into the Monument for thousands. The Smithsonian has created a webpage with the videos located at: <http://paleobiology.si.edu/trackways/index.html> or on the BLM's YouTube site: www.youtube.com/blmnewmexico.



Figure 7- The Smithsonian, the Museum, and Jerry MacDonald strategize on the day's activities

- In March 2011, scientists, students, and BLM staff were on-site while NMSU Creative Media Institute students filmed three days of footage. The students edited, inserted photographs and artwork, and added music in order to create ten short videos including, “The Discovery!” and “Ocean Front Property in New Mexico: Marine Fossils”.



Figure 8- Smithsonian paleobotanist, Bill DiMichele talks to high school students about paleontology

The BLM, in partnership with the Museum, developed a 50-page book that exhibits Permian Era fossils and information with color illustrations. See Figure 9. An electronic version can be found at: http://www.blm.gov/nm/st/en/prog/recreation/las_cruces/trackways.html.

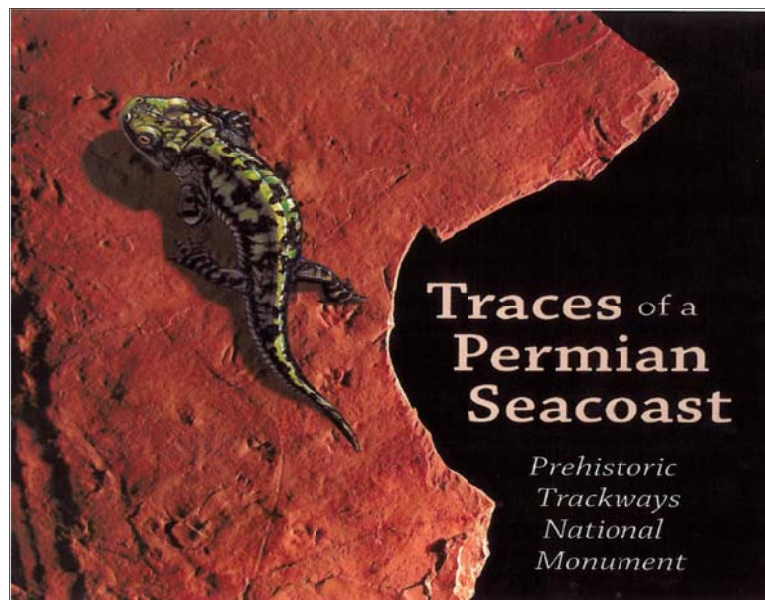


Figure 9- Cover of popular book “Traces of a Permian Seacoast”

- Las Cruces’ MoNaS is developing a new museum which is slated to open in November 2012. The BLM is partnering with MoNaS to showcase Permian Era paleontological resources from excavations within Monument.

Museum
of Natural
History



Figure 10- Partnership with the Las Cruces MoNaS

SECTION VI – PLANNING AND BUSINESS PRACTICES

Planning

- The BLM is currently working to complete a RMP for the Monument. Consequently, the BLM is currently limiting its management so as not to preclude selection of any of the range of alternatives considered in the RMP. The Draft RMP/Environmental Impact Statement should be available for public review during the summer of 2012.
- FY 2011 was the second year of in-house RMP development. Specific legislative points to be addressed in the RMP include the following:
 - Manage the Monument in a manner that conserves, protects, and enhances the resources and values of the Monument.
 - Describe the appropriate uses and management of the Monument, consistent with the provisions of the legislation.
 - 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.
 - The Secretary of the Interior 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.
- On September 22, 2010, the BLM held a preliminary alternatives management workshop in Las Cruces with the informal comment period ending on November 15, 2010. The workshop allowed the public to review preliminary alternatives and provide feedback as to whether a reasonable range of alternatives was presented. The public is split on whether off-road vehicles should be allowed within the Monument.

Budget

- The FY 2011 budget provided for \$50,000 in base funding for management of the Monument. A one-time funding of \$329,000 was made available for completion of the RMP. Base funding to implement the RMP is expected to increase after its completion.

SECTION VI – MANAGER’S CORNER

The BLM’s interim management plan strikes a balance between managing current uses and anticipating potential accommodations that may be necessary following approval of the RMP. The interest from many public and scientific entities to make some changes is tempered by a need for patience to allow for the RMP process to run its course.