



**NATIONAL  
CONSERVATION  
LANDS**

New Mexico

# Rio Grande del Norte

National Monument

**Annual Manager's Report—Fiscal Year 2014**



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# 1 Rio Grande del Norte Profile

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## Designating Authority

**Designating Authority:** Presidential Proclamation 8946

**Date of Designation:** March 25, 2013

## Acreage

**Total Acres in Unit** 242,555

**BLM Acres** 242,555

**Other Federal Acres** 0

**State and Private Acres\*** 68,020

\*State and Private acres are not part of the total of the unit acres

## Contact Information

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**Field Office Name** Taos  
**District Office Name** Farmington  
**State Office Name** New Mexico

## Budget

**Total Fiscal Year 2014 Budget** \$2,055,000  
**Subactivity 1711** \$200,000  
**Other Subactivities' Contributions** \$1,855,000  
**Other Funding** \$0



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## Managing Partners

The Rio Grande del Norte National Monument does not currently have established partnerships to assist with the management of the unit.

## Staffing

In June 2014, the BLM appointed a Monument Manager. In addition, several employees in the Taos Field Office Division of Recreation and Division of Multi-Resources were reassigned to the Monument, including the Monument Manager, wildlife biologist, outdoor recreation planner, Lower Gorge manager, Upper Gorge manager, river manager, river ranger, and assistant Gorge manager.

The BLM also assigned five seasonal park/river rangers who work about five months each year.

The landscape has long been a major focus of the Taos Field Office, particularly for recreation, forestry, wildlife, and range management. Resource specialists who have major duties within the Monument (primarily associated with managing the four objects of value—cultural, geological, wildlife, and ecological diversity) include the equivalency of one full-time position in cultural, wildlife, range, and two in facility maintenance. Taos Field Office staff who have partial duties within the Monument (generally 40 percent or less of their time) include a forester, fisheries biologist, and lands specialist. Two law enforcement rangers each spend about half of their field time in the Monument.

# 2 Planning and NEPA

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## Status of the Resource Management Plan

Current management direction for the Monument is provided by the May 2012 Taos Resource Management Plan (RMP). Because of the important resource values located here, most of the land in what is now the Monument was designated in the RMP as the Taos Plateau Area of Critical Environmental Concern.

While the current land use plan is mostly consistent with the Proclamation that established the Monument, a plan amendment was initiated this year to specifically address the management of resources, objects, and values (ROVs) and, where needed, update management decisions to assure their conservation and protection. A new Monument-specific plan was required in the Proclamation. The Monument Plan will amend the Taos RMP through an environmental assessment (EA), in compliance with the National Environmental Policy Act (NEPA).

The formal scoping period began with the publication of the Notice of Intent in the Federal Register on January 3, 2014, and ended on March 6, 2014. During this period, the BLM received approximately 1,200 public comments on issues and opportunities to address in the Monument Plan. Of these, 126 were unique comments, and 1,110 were form letters addressing a broad spectrum of planning issues. A detailed scoping report was completed and made available to the public on May 23, 2014, which captures the management opportunities, potential conflicts, and other planning issues to resolve.

The Taos Field Office is now working closely with its six cooperating agencies (the New Mexico Department of Game and Fish, Taos Soil and Water Conservation District, New Mexico State Historic Preservation Officer, Village of Questa, San Antonio del Río Colorado Land Grant, and the New Mexico Land Grant Council) to develop a reasonable range of alternatives for the Monument Plan. Once the alternatives are formulated, and their potential impacts evaluated, a Draft Plan Amendment EA, the draft Monument Plan, will be released for public review and comment. This is projected to occur late in 2015.

## Status of Activity Plans

The BLM is deferring substantial activity (project-level) planning for special recreation management areas, transportation and access, wildlife habitat, and other key components of the Monument landscape until a new Monument Plan is approved. However, the current management of the Monument does provide for a variety of on-going activities. For example, the Taos Field Office is currently conducting an environmental review process to consider special recreation permits for non-motorized, competitive events including trail running and mountain biking races on developed recreation sites and trails within the Monument. As part of its review process, the BLM's primary consideration is whether or not these activities, allowable under the current management, are consistent with

conserving and protecting the ROVs identified in the Proclamation.

The current management guidance of the Río Grande Corridor Plan includes activity-level management for the river corridor, which is where the majority of the recreational opportunities within the Monument occur. Opportunities for livestock grazing, noxious weed removal, fuelwood gathering, and rangeland improvement treatments are also covered by existing activity plans. The Taos Field Office is making certain that any action it considers under these existing activity plans is consistent with the conservation and protection of the Monument's ROVs. While ongoing management of resources and uses will continue under the current RMP, no new long-term commitment of resources will be made until a new Monument Plan is approved.

### **Status of the RMP Implementation Strategy**

Since management decisions pertaining to the Monument are currently under development, the BLM has not yet developed a plan implementation strategy.

### **Key National Environmental Policy Act Actions and/or Project Authorizations**

In FY 2014, four vegetation treatment projects were authorized within the Monument, providing for a total of roughly 52,000 acres of rangeland enhancement and controlled fuelwood gathering opportunities. Though these projects were developed prior to the Monument's designation, their designs were later refined to ensure consistency with the Proclamation establishing the Monument. The Taos Field Office also implemented a spot treatment of invasive species within the Monument, which was evaluated in compliance with the NEPA.

The BLM also considered the construction of water catchments in support of livestock and wildlife. This proposal was evaluated for consistency with the conservation and protection of Monument ROVs, and a few were approved, while others were denied.

Proposals to authorize three non-motorized (one mountain biking and two train running), competitive events were received, and the BLM began the process to analyze the proposals. Planned to be held in developed special recreation management areas at the Taos Valley Overlook and Wild Rivers area, any decision to authorize these events would be on an annual basis until the completion of the Management Plan, and consistent with the conservation and protection of area's ROVs.



**Scoping meeting in Taos, February 2014**

# 3 Year's Projects and Accomplishments

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## General Accomplishments

### 1st Birthday Celebration

On April 5, 2014, conservationists, sportsmen, businessmen, and local elected officials who supported the Monument designation came together to celebrate the first anniversary of the Monument. It was held at the Taos Mesa Brewing Company, where the designation celebration was held in 2013. The celebration was kicked off by a presentation by County Commissioner Dan Barrone. In honor of the Monument's objects of value, presentations were made by biologists involved in the reintroduction of river otter and big horn sheep to the Río Grande Gorge, and by Paul Bauer with New Mexico Tech on geological research.

## Current Areas of Focus

### Assessment, Inventory, and Monitoring (AIM)

The AIM Strategy is a national priority that provides a process for the BLM to collect quantitative information on the status, condition, trend, amount, location, and spatial pattern of renewable resources on the Nation's public lands. Each AIM-monitoring survey uses a set of core indicators, standardized field methods, remote sensing, and a statistically-valid study design to provide nationally-consistent and scientifically-defensible information to track changes on public lands over time. The 2014 Taos Field Office AIM Program was the first full landscape design monitoring program for the BLM in New Mexico. The core indicators sampled included amount of bare ground and vegetation composition; non-native species composition; plant species of management concern (i.e. forbs, special status species, etc.); proportion of site in large inter-canopy gaps; soil aggregate stability; and shrub density.

During the FY 2014 field season, the Taos AIM crew completed a total of 67 plots in the Monument. These plots are being used to characterize ecological trends across the Monument, monitor the range, and measure treatment effectiveness. The BLM plans to continue with the Project, which provides critical information to multiple resource areas, programs, and agencies.

### NLCS Branding Initiative

The BLM chose the Monument as one of two pilot sites for implementing a new BLM-wide branding initiative to standardize the 'look and feel' for Monuments, National Conservation Areas, and other units of the National Conservation Lands. First deployed on the portal entry signs, the standard will be used on all other signs, brochures, and web pages. The BLM installed most of the portal entry signs with the new standard in 2014.

### Fire Treatments

Taos Field Office's objective for fire treatment is to emulate nature within the Monument. Because of human-caused changes to vegetation through grazing and past fire suppression, naturally-ignited fires would result in larger, more intense fires and a

catastrophic loss of vegetation, accelerated erosion, and a recovery period of hundreds of years. Since 2000, the BLM has treated about 10,000 acres in the Monument by hand thinning (including allowing the gathering of firewood), pile burning, and 'broadcast' burning, which is designed to cover larger areas that emulate natural, non-catastrophic fire. In 2014, thinning treatments were applied on Cerro Montoso (200 acres) and the Guadalupe Mountains (100 acres). Small scale burns in previously thinned areas were conducted on Cerro Montoso (100 acres) and the Guadalupe Mountains (400 acres). In the Guadalupe Mountains, the burn type applied was called 'jackpot' burning, where the branches from previous thinning projects were left where they were cut, and burned a year or two later. On Cerro Montoso, the thinned material was piled in areas with less tree cover to prevent an excessively hot fire.



**Prescribed burning**

## **Education, Outreach, and Interpretation**

Residents of northern New Mexico enjoy the lands of the Monument for the outstanding hiking, boating, bird-watching and nature study, hunting, fishing, and biking opportunities. In FY 2014, there were over 128,000 visits to the Monument, primarily the Río Grande Gorge area. The BLM provided over 70 guided hikes and lectures from May through September to help introduce the Monument to residents and visitors to the Taos area. Guided hikes were primarily offered on the developed trails in the Río Grande corridor. Others were hikes to the tops of several of the volcanoes, including Ute Mountain. All programs addressed the Monument's ROVs. In the future, we will also educate visitors with outdoor ethics principals through the Leave No Trace and Tread Lightly programs.

The lands in the Monument attract high school and college classes focusing on geology, watershed health and management, and cultural resources. The Monument's visitor services staff is available to give an orientation to the lands and their resources prior to the visits.

A Río Grande Guide Seminar was held to educate river guides on the values of the wild and scenic river, history of the village of Pilar, reasons for the rules established by the Río Grande Corridor Plan in 2000, and the resources, objects, and values of the Monument.

In April 2014, the BLM held a public meeting on the Orilla Verde Riparian Restoration Project at the Río Grande Gorge Visitor Center. The BLM described the treatment effects of

three plots and two control sites, and monitoring data on the southwestern willow flycatcher, an endangered species that migrates through the area.

## Partnerships

A major factor in the establishment of the Monument was years of tireless work by a coalition of local conservationists, 'ecotourism' businesses, landowners, and elected officials collectively known as the Río Grande Coalition. Since designation, the coalition has been meeting monthly to develop a "Friends of the Río Grande del Norte" group, with help from the Conservation Lands Foundation.

A long-standing agreement with the Public Land Interpretive Association (PLIA) allows the BLM to provide books, maps, and other interpretive items for sale at two visitor centers and the Taos Field Office. Sales in 2014 were about \$60,000. PLIA, in turn, supports many environmental education efforts by providing funding to transport school children to the Monument for environmental education programs, and to assist with special events such as National Public Lands Day.

The BLM and New Mexico Department of Game and Fish work in partnership on numerous wildlife programs including monitoring and management of bighorn sheep, river otter, and Río Grande cutthroat trout.

## Volunteers

The Taos Field Office has an active volunteer program, with a major focus on visitor services, including campground hosting, daily maintenance, and visitor center staffing. The Taos Field Office also has a Site Watch Stewardship Program to monitor cultural resource sites in the Monument. In FY 2014, the volunteers contributed over 12,000 hours.



**A BLM volunteer assists a visitor**

Twenty-three individuals volunteered to work as campground hosts (usually for a minimum of three months) and/or staffing the two visitor centers that serve the Monument. Most volunteer 5-days a week. One of the part-time volunteers curated a photography exhibit at the Río Grande Gorge Visitor Center in Pilar, showcasing the Monument's features and objects of value through the eyes of the Taos area's artist community.

About 25 amateur or retired archaeologists participated in the Site Watch Stewardship Program to monitor cultural resource sites in the Monument. Some of these volunteers also assisted in documenting new sites.

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Seven Student Conservation Association volunteers from all over the country worked at Ute Mountain for a week of closed road rehabilitation, trail work, and general cleanup.

A small group of volunteers contributed a good part of a day to hand carry and install a bench along one of our trails in the Lower Gorge. The bench was a gift to the BLM from a family to commemorate the lives of their parents who loved this part of the Río Grande Gorge.

### **Land (or Interests in Land) Acquisitions**

Several landowners with property within the Monument approached the BLM with an interest in selling all or a portion of their property. The BLM has initiated the steps needed to work towards these acquisitions. The Taos Field Office applied for 2016 funding through the Land and Water Conservation Fund to acquire private lands in the Monument. If funded, the BLM would acquire 2,400 acres near Cerro Montoso and 2,500 acres of near Cerro de la Olla.

# 4 Science

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## Science

A science plan has not yet been prepared for the Monument, but several projects have been underway, particularly for geologic and cultural resources. Scientific research that is ongoing in 2014 includes:

### **Río Grande Gorge Cultural Resources Project**

**Principal Investigator: Dr. Severin Fowles, Department of Anthropology, Barnard College, Columbia University**

This Project is an ongoing investigation that began in 2007 and is permitted, but not directly funded, by the BLM. A generous National Science Foundation grant award funded the 2013 effort, and has carried over. Undergraduate and graduate students conduct field work in the Monument. The Project and is particularly focused on the identification, recording, evaluation, and analysis of archaeological remains located in the Río Grande Gorge environment. Moreover, the research is landscape-oriented regarding how the remains of different ethnic groups over time are manifested within the Gorge environment. A number of student research projects, professional papers, theses, and dissertations have been produced or are in progress as a component output of the Project. The BLM benefits directly from this work in receiving data, as well as interpretative information on the cultural resources located within the Monument.

### **Annual Rocky Mountain Bighorn Sheep Survey**

**Principal Investigator: New Mexico Department of Game and Fish.**

The population of Rocky Mountain Bighorn Sheep continues to increase in size and is now estimated at approximately 175-200. The reintroduction of these species was started in 2006 in a partnership between the BLM Taos Field Office, Taos Pueblo, and New Mexico Department of Game and Fish.

### **NASA Astronaut Training**

**Principal Investigator: Dr. Paul Bauer, New Mexico Bureau of Geology and Mineral Resources (NMBGMR) at New Mexico Tech**

The planning for this project began in early 2013, and was completed in July 2014. It is a collaboration between NASA, the New Mexico Bureau of Geology and Mineral Resources, the U.S. Geological Survey (USGS), and several universities. Since the early 1970s, NASA has brought astronauts to Taos County for earth science training. In early 2013, it was decided that the astronaut class of 2013 would train in geology and geophysics in the Wild Rivers Area of the Monument. Eight astronauts, plus a dozen instructors and support staff,

spent a week camping at Wild Rivers, where they learned about geologic mapping and field geophysical exploration techniques. BLM staff from the Taos Field Office, specifically the staff of Wild Rivers, were major collaborators on this project. Funding was provided by NASA and the Universities Space Research Association of Houston.

### **The Springs of the Río Grande Gorge**

**Principal Investigator: Dr. Paul Bauer, NMBGMR at New Mexico Tech**

This project began in 2007, with funding from the New Mexico Interstate Stream Commission and the NMBGMR. The long-range goal is to complete an inventory and geologic/geochemical/ hydrogeologic analysis of all of the springs in the Río Grande Gorge, from the Colorado border to the Embudo gage. Although most of the spring inventory was completed in 2010, in FY 2014, the NMBGMR continued to add data to the spring inventory, and to analyze geologic and geochemical data collected in previous years. The BLM Taos Field Office is a collaborator on this project.

### **Subsurface Geology of the Questa/Guadalupe Mountain Area**

**Principal Investigators: Dr. Paul Bauer, NMBGMR at New Mexico Tech, and Dr. V.J.S. Grauch, USGS, Denver, CO**

In 2014, the NMBGMR, the USGS, and New Mexico Tech (NMT) combined efforts to perform an integrated geologic/geophysical/hydrogeologic investigation of the Questa/Guadalupe Mountain area. The NMBGMR was responsible for development of the geologic map and geologic cross sections. The USGS was responsible for developing a detailed geophysical model to be incorporated into the NMBGMR products. NMT was responsible for providing a graduate student to develop a geochemical and groundwater flow model. The objective of the study was to characterize and interpret the shallow three-dimensional geology and preliminary hydrogeology of the area. The focus of this effort was to compile existing geologic and geophysical data, integrate new geophysical data, and interpret it in a geologic context in order to draw three, detailed geologic cross sections across the Questa area. These cross sections can be used by the Village of Questa to make decisions about municipal water-well development, and can be used in the future to help in the development of a conceptual model of groundwater flow for the region. Funding was provided by the Healy Foundation and the NMBGMR.

### **Geologic Investigations of the Southern San Luis Basin**

**Principal Investigator: Dr. Ren A. Thompson, USGS, Denver, CO**

This multi-year effort is part of a large interdisciplinary USGS project (Cenozoic Landscape Evolution of the Southern Rocky Mountains – R. Thompson & S. Minor, Project Chiefs) funded by the FEDMAP component of USGS National Cooperative Geologic Mapping Program. This research includes geologic mapping and regional geologic synthesis investigations of the Taos Plateau region of the southern San Luis Basin area. Geologic mapping includes 1:24,000-scale mapping of northern Taos County. Mapping of the Ute

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Mountain and Sunshine quadrangles was completed, and preliminary mapping of the San Antonio Mountain, Los Pinos, Pinabetoso Peaks, La Segita Peaks NE, Cerro de la Olla, and La Segita Peaks quadrangles was conducted. Integration of USGS and NMBGMR geologic mapping will result in seamless 1:50,000 geologic map coverage of the Monument (coordinated with Paul Bauer, NMBGMR).

### **Geophysical Investigations of the San Luis Basin**

**Principal Investigator: Dr. V.J.S. Grauch, USGS, Denver, CO**

This multi-year effort is part of a large interdisciplinary USGS project (Cenozoic Landscape Evolution of the Southern Rocky Mountains - R. Thompson & S. Minor, Project Chiefs) funded by the FEDMAP component of the USGS National Cooperative Geologic Mapping Program. This research effort is focused on 1) development of a regional-scale gravity model for the San Luis Basin and derivative basin depth and geometry determinations; and 2) aeromagnetic and ground magnetic modeling studies of the Taos Plateau region for identification of faults, stratigraphic correlations, and subsurface geologic characterizations. Ongoing acquisition of regional gravity data was conducted within the Monument, and the group assessed a strategy for a detailed geophysical studies of the Wild Rivers Recreation Area (Guadalupe Mountain quadrangle).

# 5 Resources, Objects, Values, and Stressors

## Cultural Resources

The Monument contains the archaeological remains of over 12,500 years of land use by diverse and ethnically distinct groups of humans. These cultural groups range from late Pleistocene hunters and gatherers to the remnants of Homesteaders who in the 1920s and 1930s attempted to carve out a better life for themselves in this extraordinary, but generally harsh and inhospitable landscape.



Petroglyphs

Thousands of archaeological sites and millions of individual artifacts are testimony to the long human experiment with traversing through, and living upon, the Monument landscape. The most successful were small groups of nomadic hunters and gatherers whose way of living was particularly suited to the landscape. Other cultural groups, including Pueblo, Spanish, Mexican, and Anglo-Americans laid claim to this vast landscape, but their presence upon the landscape is less pronounced, and their remains more tenuous or less enduring than those of the early nomadic peoples. Archaeological remains common to the area include artifact scatters, structural features, petroglyphs, trails, tipi rings and tipi village sites, small pueblo ruins, homesteader cabins and dugouts, sheep and cow herder camps, rockshelters and caves, shrines, and battlefields. Collectively, overlapping cultural landscapes showcase particular patterns of land use.

### Cultural Resources Status and Trend Table

Status of Resource, Object, or Value	Trend
Good	Stable

### Cultural Resources Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY14
242,555	200	242,555	2,600

## Stressors Affecting Cultural Resources

Natural erosion is pervasive across the Monument, but is more severe in some environments than others. Erosion is affecting all cultural resources to some degree.

Off-road vehicle travel is a direct physical threat to cultural resources. This illegal activity

also accelerates erosion and disrupts the pristine condition and appearance of individual sites and cultural landscapes.

Unregulated visitor use in some environments is affecting resource conditions

## Geological Resources

The Monument is a dazzling, volcanic landscape, which is a result of the Río Grande Rift, a continental-scale geologic feature that runs from central Colorado to Mexico, and forms a series of north-south elongate basins that are flanked by high mountains. The Rift basin in northern New Mexico and southern Colorado, named the San Luis Basin, is 150 miles long, generally between 7000' and 8000' in elevation, and is considered to be the largest high-elevation valley on Earth. The San Luis Basin contains the Taos Plateau Volcanic Field, and the largest (580 square miles), and most diverse volcanic landscape in the Río Grande Rift. The Monument is located almost entirely within the Taos Plateau Volcanic Field

At least 40 distinct volcanic vents have been identified on the Plateau, and most of these are located within the Monument. The volcanoes of the Taos Plateau are notable due to their great variety of shapes and compositions. They range from the massive, steep-sided lava domes such as Ute Mountain, to the 50 cubic miles of Servilleta Basalt that erupted



over millions of years to engulf the entire Plateau. An unusual rhyolite lava dome, Brushy Mountain, adds to the diversity of volcanic features of the Monument. The volcanic rocks in the Monument have been the focus of numerous scientific studies, including early pioneering work on Earth's paleomagnetic record from the exposures of stacked basalt flows in the Río Grande Gorge, studies of the origin of basalts, and developing techniques for precise age dating of volcanic rocks.

Perhaps the most readily identifiable geologic feature of the Monument landscape is the Río Grande Gorge, a spectacular canyon that was rapidly eroded by the Río Grande during Pleistocene time. The Río Grande, North America's fourth-longest river, flows nearly 2,000 miles from headwaters in the San Juan Mountains of Colorado to the Gulf of Mexico. The 70-mile stretch of the river through the Monument is arguably the most beautiful scenery of the entire river. Its sublime geology provides the setting for recreational opportunities highly sought out by visitors.

Hundreds of springs nourish the Río Grande. Each spring occurrence is the direct result of the specific combination of the geology and the groundwater hydrology at that location. It is estimated that the springs provide about 126 cubic feet per second (55,000 gallons per minute) of continuous fresh water to the river. During times of low river discharge, such as during times of drought, most of the flow of the Río Grande through the Monument is the result of these springs. The springs of the Río Grande Gorge display a wide variety of sources, ages, and characteristics. For example, spring waters range from cold (50<sup>0</sup>F) to hot (100<sup>0</sup>F), from old (19,000-year-old water) to young (<50-year-old water), and from small trickles to huge springs that emit thousands of gallons per minute. Perhaps the most notable spring in the Monument is Lava Tube Spring. It is subaqueous (it emerges from the river bed), and is strongly artesian (it has blasted out a 12-foot deep crater in the river). In 2009, its discharge was measured at 13 cfs (6000 gpm), enough water to fill a large tanker truck in 90 seconds. These inflows are very important to the fishery, ecology, and recreation within the Monument.

[abridged from 'Río Grande del Norte National Monument - A Summary of Geologic and Hydrologic Highlights' by Dr. Paul Bauer, March 2014, by permission].

### Geological Resources Status and Trend Table

Status of Resource, Object, or Value	Trend
Good	Stable

### Geological Resources Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY14
242,555	242,555	242,555	242,555

### Stressors Affecting Geological Resources

No threats have been identified for the Río Grande Rift, the volcanoes, or the Río Grande Gorge as they are of such a scale that, with the exception of surface disturbances that would impair their scenic values, their scientific values are not threatened by the acts of man. The springs and aquifers of the Monument are the only geologic feature that could potentially be impacted, for example, from well drilling and increase in water use upstream from the springs.

### Wildlife Resources

Within the Monument, there is a wide variety of wildlife, from common animals to more rare and sensitive species. Full-time residents and migratory species utilize the wide variety of habitats present in the Monument. These habitats vary from the fisheries

provided by the river and riparian habitats; cliff terrain as nesting substrate for raptors of the Río Grande Gorge; vernal pools and playas on the Plateau; shrublands and grasslands for rare migratory birds; woodlands of the volcanic cones as thermal and hiding cover for big game; and forested slopes on the higher and northern aspects of the larger volcanoes for upland specialist species such as Virginia's warbler.



The Monument ROVs include a diverse and viable population of native wildlife of conservation and scientific interest. Though too numerous to list in their entirety, a description of notable species includes the following: Rocky Mountain Bighorn Sheep have been reintroduced to the Río Grande Gorge and are growing in population and distribution; river otters have also been reintroduced, and a

sustainable population is now established to this part of the Río Grande; the Río Grande cutthroat trout, a BLM sensitive species, has been stocked by New Mexico Department of Game and Fish; and raptors, such as golden eagle, red-tailed hawk, and prairie falcon, use the unique cliff habitat of the Río Grande Gorge. Bats also utilize the Río Grande Gorge, finding roosting habitat within the cracks and caves of the rocky cliffs. Migratory birds are found throughout the Monument, including sagebrush and piñon-juniper woodland communities, river corridors, and drainages where microclimate conditions allow for shelter, vegetation diversity and structure, and sufficient prey base.

Annually, the endangered Southwestern willow flycatcher migrates through the entire length of the Río Grande to nesting grounds north of the Monument in Colorado. The rare Yuma Skipper Butterfly (subspecies *Anasazi*) utilizes small, diverse, and critical areas provided by riparian and upland habitat in the Monument. Sage sparrow, Brewer's sparrow, and Sage thrasher are sagebrush obligate species, which are found on a portion of the Taos Plateau.

These ecosystems provide important winter range for big game such as Mule deer and Rocky Mountain elk. These communities also provide for scaled quail and a host of migratory birds. Gentle rolling hills of winterfat and grama grass on the Taos Plateau contain keystone species such as Gunnison's prairie dog, as well as Mountain plover, White-tailed and Black-tailed jackrabbit, Western burrowing owl, Pronghorn, Swift fox, Ferruginous hawk, Badger, Snakes, Box turtle, Tarantula, and a rich variety of migratory

birds. Foraging habitat for cliff-nesting raptors is found throughout the Monument. Spadefoot toads, tiger salamanders, and fairy shrimp are found in playa lakes and grassland marshes, while Woodhouse's toads are found in streams, rivers, and marshes. Black bears and Mountain lions, turkey, bobcat, and fox are found throughout the area in appropriate habitats. Migratory birds include species of concern such as Piñon Jay, Black-throated gray warbler, broad-tailed hummingbird, Western bluebird, Mountain bluebird, and Mourning dove.

**Wildlife Resources Status and Trend Table**

Status of Resource, Object, or Value	Trend
Good	Stable

**Wildlife Resources Inventory, Assessment, Monitoring Table**

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY14
242,555	242,555	242,555	1,600

**Stressors Affecting Wildlife Resources**

Development of private lands in and adjacent to the Monument brings light pollution, visual intrusion, and domestic pets closer to wildlife populations. There is also noise pollution from engines or human habitation, increased potential for wildfires, increased fire suppression, and reduction of areas burned decreasing the ability to return to natural fire regimes. In addition, there is introduction of invasive species, reduction of habitat and/or increased fragmentation, and decreased core habitat intactness for species with larger home ranges (e.g. Rocky Mountain elk, Mule deer, Pronghorn, etc.).

More developed recreational facilities and increasing recreational use has a cumulative impact on wildlife through direct disturbance due to human presence. This can cause a disturbance to vegetation and habitat and importation of invasive species. Hunting occurs throughout the Monument, and is a valued traditional use of the area. However, unauthorized hunting does occur and threatens viability of gene pools due to selective pressure on large bulls and bucks.

Drought and continued habitat fragmentation threaten the viability and resiliency of rangelands for all species. Climate change is expected to alter rainfall timing and amount, as well as soil and air temperatures. This threatens to decrease the amount of water flowing to New Mexico from Colorado along the Río Grande. This, in turn, would alter plant physiology, water use patterns, and community composition in the region, making the Monument an excellent place to study global climate change.

## Ecological Diversity Resources

The Monument includes highly diverse soils, geology, vegetative communities, and habitat that provide nesting, foraging, hiding, thermal, resting, and fawning cover for a variety of species at multiple trophic levels. Ecological diversity of the Monument is based on resistance to degradation, resilience to change, and integrity of the biotic and abiotic components of the ecosystems. The diversity of both ecosystems and species in the Monument allows for, and has been the subject of, substantial scientific research. Although there is no single definition for ecological diversity, the Monument Proclamation describes ecological diversity in terms of biological diversity (or biodiversity) and ecosystem diversity.

Biodiversity refers to the number and variety of living organisms. This includes plant, animal, and fungi species, including invertebrates and microorganisms. Biodiversity also includes genetic diversity, which is the heritable variation within and between populations of organisms. Ecosystem diversity refers to the number and variety of ecosystems. In addition to the biotic community (i.e. plants, animals, and fungi), an ecosystem includes the physical or abiotic environment that sustains the biotic community. The abiotic environment includes, but is not limited to, the soil or substrate, topographic relief and aspect, hydrology, weather and climate, atmospheric conditions, nutrient regime, and salinity regime.

Ecological diversity is directly affected by the resistance, resilience, and integrity of the ecosystems. Resistance refers to an ecosystem's ability to maintain its structural and functional attributes when faced with stress and disturbance. Resilience refers to an ecosystem's ability to regain structural and functional attributes that have been harmed by stress or disturbance. Ecosystem integrity involves the condition of an ecosystem that displays biodiversity of the system and is capable of sustaining normal ecosystem function. It is impossible to remove all forms of stress and disturbance from an environment, thus the resistance and resilience of the ecosystem play an important role in maintaining ecosystem integrity and health while protecting ecosystem diversity.

In addition to the fish and wildlife species described in the wildlife ROV, the Monument Proclamation identifies several plant species and plant communities as important for contributing to the ecological diversity within the Monument. These include, but are not limited to, riparian species such as cottonwood and willows; canyon and woodland species such as piñon-juniper, spruce, aspen, and Douglas fir trees; and upland playa, sagebrush, and grassland communities.



### Ecological Diversity Resources Status and Trend Table

Status of Resource, Object, or Value	Trend
Good	Stable

### Ecological Diversity Resources Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY14
242,555	215,000	242,555	215,000

### Stressors Affecting Ecological Diversity Resources

Incomplete inventory on which to establish a baseline; climate change can impact ecological integrity, resistance, and resilience; an increase in invasive species cover. Species of current concern are black henbane, and species for future encroachment are cheatgrass and non-native thistles; soil erosion and loss; unregulated visitor use, and an increase in visitors overall, including off-road vehicle use; and loss of continuous herbaceous cover, causing a lack of fuel to carry fire in piñon-juniper and sagebrush communities.

# 6 Summary of Performance Measure

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A major emphasis will be to develop strategies to fill in the gaps on our knowledge of the Monument's objects of value, particularly related to cultural resource sites and the cultural landscape and habitat conditions, both past and present. Once a Science Plan is prepared for the Monument, some great opportunities will exist to work with colleges and universities to acquire some of the data we will need for proper management of these resources.

<b>Resources, Objects, and Values Status Summary Table</b>		
<b>Resource, Object, or Value</b>	<b>Status</b>	<b>Trend</b>
Cultural	Good	Stable
Geological	Good	Stable
Wildlife	Good	Stable
Ecological Diversity	Good	Stable

# 7 Manager's Letter

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**Dear Friends of the Río Grande del Norte National Monument,**

It remains a great privilege to be involved in the management of one of our country's newest National Monuments! On a tour of the Monument in May 2014, we had the privilege of showing BLM's leadership team some areas within the Monument that are the focus of research on certain petroglyphs that have meaning for elders of the Comanche Tribe. Research is being conducted by one of their tribal members who now works for the State Office of Archaeological Studies. We also had the privilege of seeing the Monument through the eyes of Dr. Paul Bauer with New Mexico Tech, who has spent his career researching what is at its heart, a volcanic landscape with structures and processes that are of international interest. These two interactions really brought to light the true significance of this Monument.

Our highest priority this year, and for the next year, will be the development of a Monument Plan. I have never before been involved in a planning effort that included so many cooperators. Our discussions concerning the range of alternatives to be consider in the plan have been robust, and I think will lead to a Plan that will address the delicate balance required to protect the Monument's objects of value, while continuing the traditional uses and recreational pursuits enjoyed by so many residents and visitors to this area.

Sincerely,

John Bailey

Monument Manager



**NATIONAL  
CONSERVATION  
LANDS**

## **Rio Grande del Norte**

### **National Monument**

**Bureau of Land Management**

**Taos Field Office**

**226 Cruz Alta Road**

**Taos, NM 87557**

**Phone: 575-758-8851**

**April 23, 2015**

**The mention of company names, trade names, or commercial products does not constitute endorsement or recommendation for use by the federal government.**