

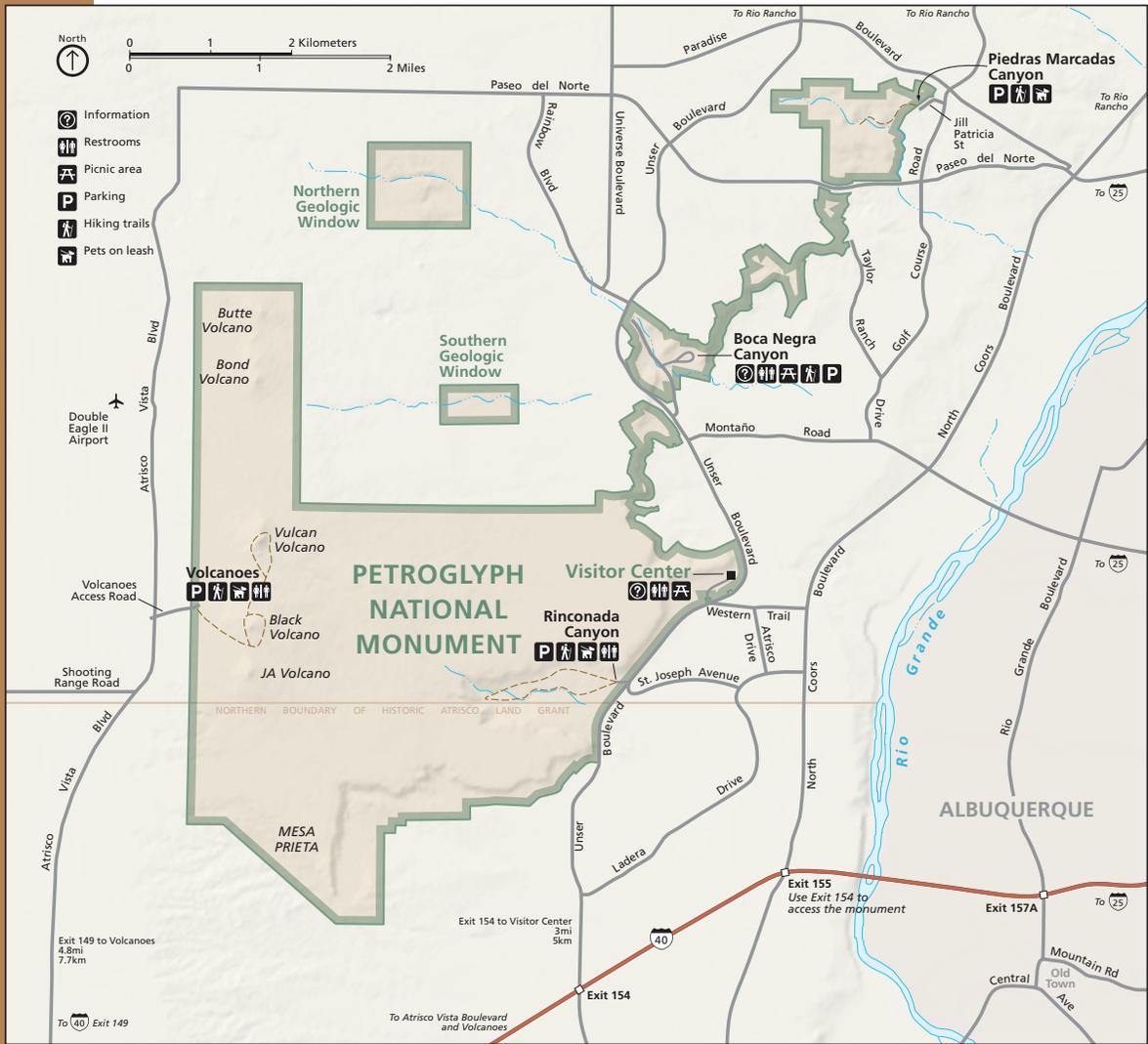


Foundation Document Petroglyph National Monument

New Mexico

August 2017





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Mission of the National Park Service

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared stewardship:** We share a commitment to resource stewardship with the global preservation community.
- **Excellence:** We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity:** We deal honestly and fairly with the public and one another.
- **Tradition:** We are proud of it; we learn from it; we are not bound by it.
- **Respect:** We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.



The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park’s purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for Petroglyph National Monument can be accessed online at: <http://insideparkatlas.nps.gov/>.



Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, other important resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Brief Description of the Park

Petroglyph National Monument stretches 17 miles along the Albuquerque, New Mexico, West Mesa, a volcanic basalt escarpment that dominates the city's western horizon. Authorized on June 27, 1990, the 7,236-acre monument is cooperatively managed by the National Park Service and the City of Albuquerque Open Space Division. The western boundary of the monument features a chain of dormant fissure volcanoes. Beginning in the northwest corner, Butte Volcano is followed to its south by Bond, Vulcan, Black, and JA volcanoes. These dormant volcanic cones and the long basalt escarpment show how a series of eruptions over 100,000 years ago formed the West Mesa. The dark basalt boulders that tumbled down to the escarpment's edge provided an ideal material for carving the Puebloan and Spanish petroglyphs.

It is estimated that 90% of the monument's 24,000 petroglyphs were created by the ancestors of today's Pueblo people. Puebloans have lived in the Rio Grande River Valley since before AD 500, but a population increase around AD 1300 resulted in numerous new settlements. It is believed that the majority of the petroglyphs were carved from about 1300 through the late 1680s.

The arrival of Spanish people in 1540 had a dramatic impact on the lifestyle of the Pueblo people. In 1680, the Pueblo tribes rose up in revolt of Spanish rule, and drove the settlers out of the area and back to El Paso, Texas. In 1692, the Spanish resettled in the Albuquerque area. As a result of their return, there was a renewed influence of the Catholic religion, which discouraged participation by the Puebloans in many of their traditional ceremonial practices. As a consequence, many of these practices went underground, and much of the image making by the Puebloans decreased. A small percentage of the petroglyphs found within the park pre-date the Puebloan time period, perhaps reaching as far back as 2000 BC. Other images date from historic periods starting in the 1700s, with petroglyphs carved by early Spanish settlers.

The monument protects one of the largest petroglyph sites in North America. Many of the images are recognizable as animals, people, brands, and crosses; others are more complex. Their meaning was, possibly, understood only by the carver. The petroglyphs and landscape hold a valuable record of cultural expression and hold profound spiritual significance for contemporary American Indians and for the descendants of the early Spanish settlers.



Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Petroglyph National Monument was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established when the enabling legislation adopted by Congress was signed into law on June 27, 1990 (see appendix A for enabling legislation and subsequent amendments). The purpose statement lays the foundation for understanding what is most important about the park.

The purpose of PETROGLYPH NATIONAL MONUMENT is to protect and promote the understanding of petroglyphs in context with the cultural and natural features of Albuquerque's West Mesa (Escarpment) and perpetuate the heritage of traditional communities connected to these landscapes.



Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Petroglyph National Monument, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Petroglyph National Monument. (Please note that the sequence of the statements does not reflect the level of significance.)

- Petroglyph National Monument contains the largest concentration of Rio Grande-style rock images in North America and was the first national park unit established specifically to protect petroglyphs.
- The monument's cultural resources and landscape hold profound meaning and significance for traditional communities, especially those within the middle Rio Grande Valley.
- The monument contains more than 350 archeological sites, providing evidence of human occupation and use for more than 12,000 years. This includes the Piedras Marcadas Pueblo, one of the largest pueblos of its time period (AD 1300–1600) in the Rio Grande Valley.
- The geologic resources of Petroglyph National Monument (such as volcanic cinder cones, lava flows, and dramatic surface erosional features) facilitate both an understanding of the formation of the Rio Grande Rift Valley and how natural landforms have influenced culture over time.
- Petroglyph National Monument provides outstanding opportunities for a broad spectrum of research, including understanding of petroglyphs, ethnographic studies, geomorphology, volcanism, and cultural preservation techniques.



Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Petroglyph National Monument:

- **Petroglyphs.** While some petroglyphs date back for more than 3000 years, approximately 90% were created using the Rio Grandestyle, which developed about AD 1300 and continued to the end of the 1600s. Images include human figures in various activities, hands and feet; animal figures and tracks; and spirals and a variety of geometric designs. There are approximately 25,000 prehistoric and historic images that reflect the human cultural history of the area.
- **Geologic Resources.** Petroglyph National Monument is located on Albuquerque's West Mesa and volcanic escarpment within the greater Rio Grande Rift Valley. The park has examples of volcanic cones along a rare example of fissure eruptions, lava tubes, approximately a 17 mile escarpment, geologic windows, basalt rock, drainage ways, and patina suitable for images.
- **Cultural and Ethnographic Landscape.** With a human history of at least 10,000 years, the West Mesa encompasses countless landscape elements including petroglyphs, built shrines, volcanoes, caves, ancestral villages, archeological sites, human pathways, plants, animals, and vistas that continue to have essential cultural and spiritual significance for traditional communities.
- **Archeological Sites.** The park contains many different types of archeological sites, including the ruins of Piedras Marcadas Pueblo, one of the largest villages in the Middle Rio Grande Valley during its period of occupation. The Las Imágenes Archaeological District has 350 known sites (includes habitations, gardens, sheep corrals, lithic fragments) providing excellent opportunities for research.

Other Important Resources and Values

Petroglyph National Monument contains other resources and values that are not fundamental to the purpose of the park and may be unrelated to its significance, but are important to consider in planning processes. These are referred to as "other important resources and values" (OIRV). These resources and values have been selected because they are important in the operation and management of the park and warrant special consideration in park planning.

The following other important resources and values have been identified for Petroglyph National Monument:

- **Flora and Fauna.** Petroglyph National Monument is transitional between three key natural ecosystems—the shortgrass prairie, upper Chihuahuan Desert, and Great Basin Desert. Plants commonly seen are four-wing saltbush, sand sage, rabbit brush, snakeweed, indigo bush, wildflowers, Indian rice grass, and many more. Also present are hawks, owls, turkey vultures, road runners, flycatchers, along with mammals, reptiles, and other fauna.
- **Recreational Opportunities.** As an urban park experience and part of Albuquerque Open Space, the monument provides opportunities for solitude, and multiple low-impact forms of recreation.

Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental and other important resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for Petroglyph National Monument:

- The rich concentration of petroglyphs that helps define the cultural landscape at Petroglyph National Monument, recognized as important by the native peoples of the mid-Rio Grande Valley and others, offers opportunities to contemplate the meaning of cultural continuity in our world of accelerating change.
- This geologically active area, formed by rifting, volcanism, and erosional forces including the Rio Grande and its tributaries, has attracted people for thousands of years and powerfully influenced their lifeways, traditions, and beliefs—exemplifying how landscapes shape and influence human societies.
- The symbols connected to this place—petroglyphs, land grant deeds, Christian crosses, livestock brands, and inscriptions—provide opportunities to explore the many uses and stewardship of the land, identity, and ideas in the ongoing history of the American Southwest.
- The continuity of the Atrisco Land Grant from 1692 to the present provides an opportunity to understand 300 years of land grant ownership in the face of an ever-changing urban landscape and continued use by the heirs of the original Spanish settlers.



Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental and other important resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Petroglyph National Monument.

Special Mandates

- **Cooperative Management Agreement for Petroglyph National Monument (May 2013).** The monument is cooperatively and collaboratively managed between the City of Albuquerque and the National Park Service. Within the monument, the National Park Service administers and manages the Atrisco Unit and the City of Albuquerque manages the Boca Negra and Piedras Marcadas Units.
- **Rock Art Research Center.** The monument's enabling legislation states that a Rock Art Research Center is to be created to produce research data and educational materials that will enhance public understanding of prehistoric rock art.

Administrative Commitments

For more information about the existing special mandates and administrative commitments for Petroglyph National Monument, please see appendix B.



Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental and other important resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

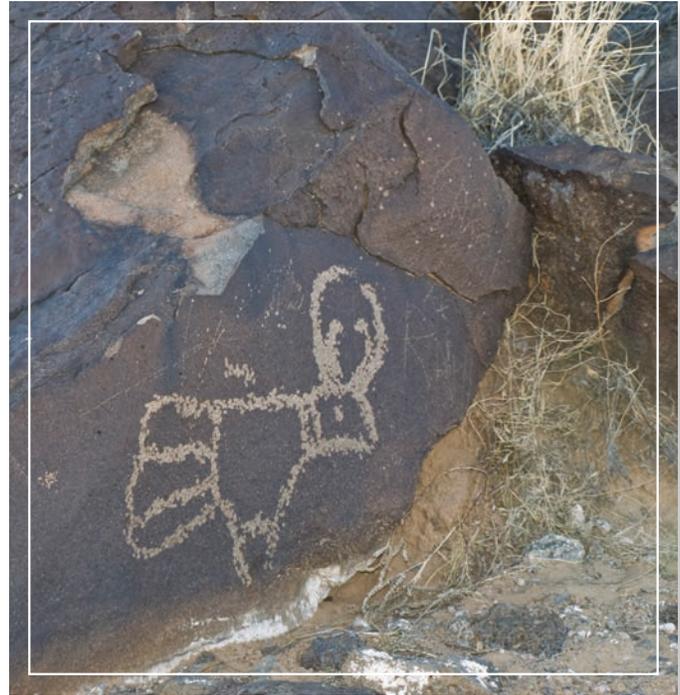
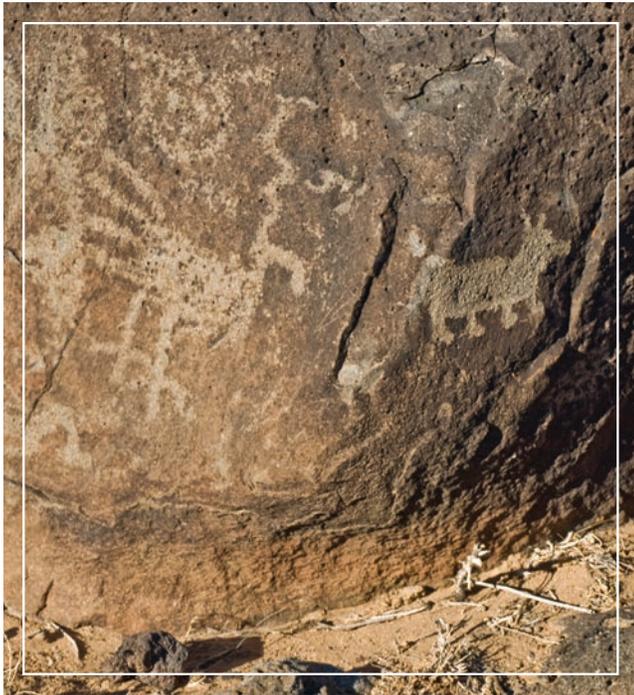
There are three sections in the assessment of planning and data needs:

1. analysis of fundamental and other important resources and values
2. identification of key issues and associated planning and data needs
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental and other important resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Analysis of Fundamental Resources and Values

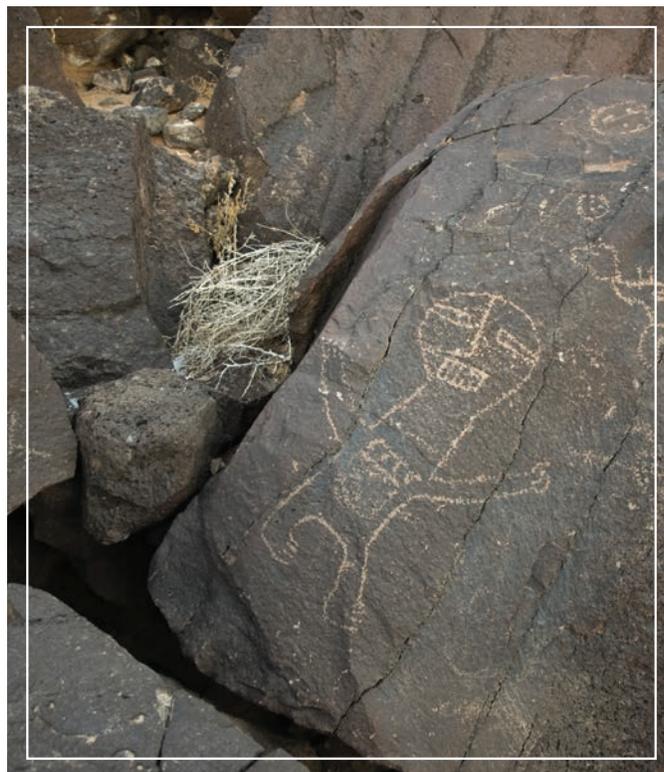
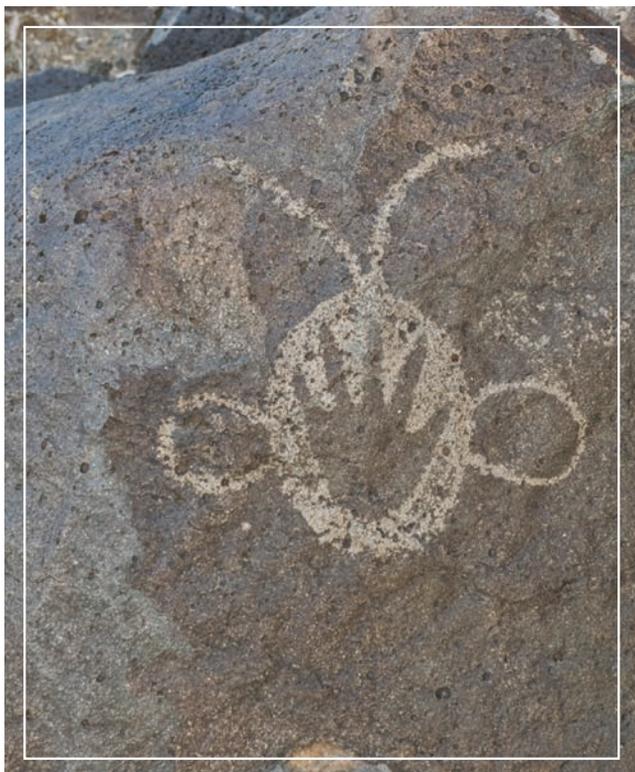
The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value.

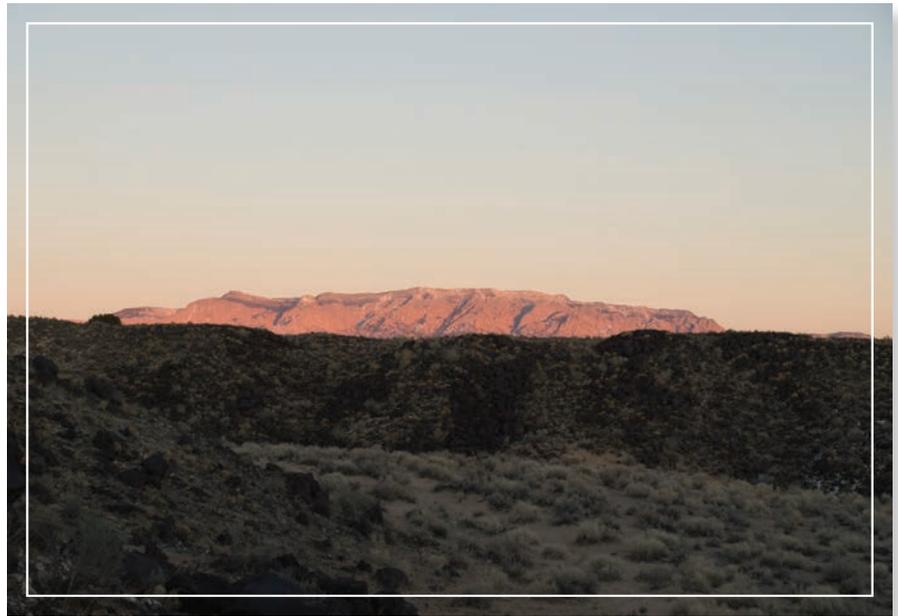
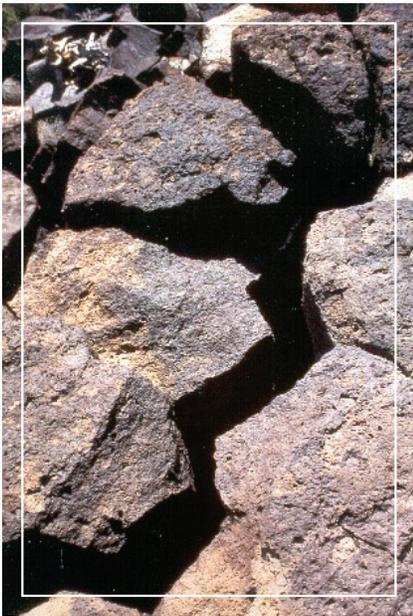


Fundamental Resource or Value	Petroglyphs
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Petroglyph National Monument contains the largest concentration of Rio Grande-style rock images in North America and was the first national park unit established specifically to protect petroglyphs. • The monument’s cultural resources and landscape holds profound meaning and significance for traditional communities, especially those within the middle Rio Grande Valley. • Petroglyph National Monument provides outstanding opportunities for a broad spectrum of research, including understanding of petroglyphs, ethnographic studies, geomorphology, volcanism and cultural preservation techniques.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • In general, the petroglyphs are in good to fair condition. Some areas show evidence of human-caused destructive impacts to petroglyphs and nearby basalt surfaces, such as scratch graffiti, markings, discoloration, and gunshot damage. • The Boca Negra Canyon section of the monument was impacted by the construction of the Unser Boulevard connection to Rainbow Boulevard. This activity affected cultural resources along the monument’s boundary and impacted visitor experiences due to increased traffic volume, and associated increase in noise and air pollution. This section of the monument is one of the most heavily visited and shows the broadest range of impacts including some localized vandalism to rock images. • The Rinconada Canyon petroglyph area has been moderately impacted by urban visitation. There is evidence of theft and vandalism to petroglyphs. • The Piedras Marcadas Canyon site is relatively pristine, and few examples of resource impacts or vandalism are recorded. <p>Trends</p> <ul style="list-style-type: none"> • The City of Albuquerque is expanding to the west. Increasing urbanization along the park boundary is impacting park resources. Effects from growing population include increasing number of social trails, pet waste, litter, and vandalism. Negative impacts from stormwater runoff are increasing. Fugitive dust from construction and road grading is increasing.

Fundamental Resource or Value	Petroglyphs
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Increased occurrence of extreme weather events due to climate change. Dynamics of prolonged drought and intense thunderstorms are altering soil processes and increasing erosion. • There is a correlation between increased visitation and inappropriate uses of the monument, including scratch and paint graffiti, and other forms of defacement, which are difficult to repair, provide a negative impact to visitor experience, and potentially encourage additional damage to resources. • Unstable tumbling boulders and rockfall off the West Mesa has the potential to destroy petroglyphs or create safety hazards for visitors. • Windblown sand, over time, impacts the integrity of rock images by direct alteration of the image surface. • Increased risk of climate change-induced wildfire also threatens petroglyphs through spalling. <p>Opportunities</p> <ul style="list-style-type: none"> • Engage more neighbors and neighborhood watch groups. Through focused training and empowering these groups, the monument can generate more volunteers, and more respectful eyes on the resources. • Extended hours for having uniformed employees roving in critical petroglyph areas for a visible presence and to extend interpretation and resource protection. • Develop a parkwide friends group to support stewardship efforts needed to protect the petroglyphs and archeological features. • Finalize planning and formally implement the Rock Image Research Center as proposed in the monument legislation. This would provide strong academic interest in the area. • Engage local educational institutions to develop an “adopt a petroglyph” program with schoolchildren to aid in site maintenance, resource education, and foster continued relevancy to the site. • Continue to research and train maintenance crews and staff in new techniques and materials for low impact graffiti mitigation. • Continue to recruit, retain, and train volunteers to aid in resource management, education, interpretation, and monument operations. • Support and assist Albuquerque Open Space in its educational and stewardship efforts and continue to work collaboratively to protect all resources, foster access, and encourage sustainable recreation.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Petroglyph database needs quality assurance and control assessments to be finalized. • Update archeological sites and features condition assessments. • Research on preservation and restoration of petroglyphs. • Monitoring protocols (for petroglyphs).
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Development concept plans for petroglyph high visitation viewing areas (Boca Negra Canyon). • Rock Image Research Center development plan. • Petroglyph management plan, including conservation and preservation techniques. • Climate change scenario planning.

Fundamental Resource or Value	Petroglyphs
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Antiquities Act of 1906 (54 USC §320301-320303, 34 Stat 225) • Historic Sites Act of 1935 (54 USC §320101 et seq.) • National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.) • Archeological and Historic Preservation Act of 1974 (54 USC §312502 et seq.) • American Indian Religious Freedom Act of 1978 (42 USC 1996 and 1996a, PL 95-341, 92 Stat 469) • Archaeological Resources Protection Act of 1979 (54 USC §302902) • Museum Properties Management Act of 1955, as amended (54 USC §102501-102504) • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13007, "Indian Sacred Sites" • "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) • "Protection of Historic Properties" (36 CFR 800) • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" • Director's Order 24: <i>NPS Museum Collections Management</i> • Director's Order 28: <i>Cultural Resource Management (1998)</i> • Director's Order 28A: <i>Archeology (2004)</i> • NPS <i>Museum Handbook</i>, parts I, II, and III • NPS <i>Management Policies 2006</i> (§4.1.4) "Partnerships" • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>





Fundamental Resource or Value	Geologic Resources
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • The geologic resources of Petroglyph National Monument (such as volcanic cinder cones, lava flows, and dramatic surface erosional features) facilitate both an understanding of the formation of the Rio Grande Rift Valley and how natural landforms have influenced culture. • Petroglyph National Monument provides outstanding opportunities for a broad spectrum of research, including understanding of petroglyphs, ethnographic studies, geomorphology, volcanism, and cultural preservation techniques.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Current geologic resources are in good to fair condition. Past mining in the volcanoes area of the monument and associated surface disturbances have resulted in areas in need of restoration. • Natural erosion and human-caused erosion through social trails and off-trail hiking have created visual impacts and damage within the volcanoes area of the monument and remaining cinder cones. • Soil deposition caused by grading for new development and road construction is altering local conditions. Changes are altering storm and water runoff, creating new channels and associated erosion. • Current activity along the volcanic rift and volcanoes is dormant; however, the basalt edge of the West Mesa is eroding and slowly reducing in size. • Most basaltic flows along the escarpment edge are eroding at normal rates; however, some areas with high visitation are eroding faster due to off-trail hiking. <p>Trends</p> <ul style="list-style-type: none"> • Key geologic areas are experiencing increasing impacts due to rising visitation and urban development along the western and southern boundaries. • Impacts due to grading over large areas along monument borders have increased stormwater runoff, carving arroyos and altering soil deposition. • Social trailing and off-trail hiking is increasing. This activity degrades stable areas within the volcanic landscape. Degradation is due to soil compaction, erosion, and landscape visibility of unmarked trails. • More public attention and use is increasing multiple-use activities along the volcanic rift and from volcanic cone to volcanic cone.

Fundamental Resource or Value	Geologic Resources
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Erosion parkwide caused by extreme weather events (climate change), social trails, and upstream development. • Surrounding development, including road construction and utility easements, could increase storm water drainage and soil deposition. • Undefined social trails are continuing to expand in many areas within the monument. This unrestricted movement is increasing the potential for erosion on critical landforms, impacting the visual quality of the landscape and hydrologic function. • Theft of the monument’s volcanic rocks. <p>Opportunities</p> <ul style="list-style-type: none"> • Continue to pursue partnership opportunities with the New Mexico Museum of Natural History, the University of New Mexico, Central New Mexico Community College, and Southwestern Indian Polytechnic Institute, which can provide student interns, expertise, and peer review for new science related to monument geologic resources. • Further integration with school curriculum and New Mexico common core standards to use the monument’s geologic resources as tangible examples. This can be accomplished by developing lesson plans designed to match common core outcomes along with community outreach. • Increase uniformed staff and volunteer presence on the trails to interpret monument geology to visitors and to monitor impacts. • Partner with the Albuquerque Metropolitan Arroyo Flood Control Authority and the City of Albuquerque on hydrologic monitoring. Continue cooperation with the NPS Southern Colorado Plateau Inventory and Monitoring Network on photogrammetry and arroyo profiling.
Data and/or GIS Needs	<ul style="list-style-type: none"> • More research on the dynamic nature of the landscape. • Monitoring protocols to measure soil impacts. • LiDAR data on the West Mesa.
Planning Needs	<ul style="list-style-type: none"> • Visitor use management plan. • Park partner action strategy. • Resource stewardship strategy. • Climate change scenario planning.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Paleontological Resources Preservation Act of 2009 (16 USC §470aaa et seq.) • Clean Water Act (33 USC §1251-1387, 33 USC §1151) • Secretarial Order 3289, “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources” <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (§4.1) “General Management Concepts” • NPS <i>Management Policies 2006</i> (§4.6.1) “Protection of Surface Waters and Ground Waters” • NPS <i>Management Policies 2006</i> (§4.6.2) “Water Rights” • NPS <i>Management Policies 2006</i> (§4.8) “Geologic Resource Management” • NPS <i>Natural Resource Management Reference Manual 77</i>



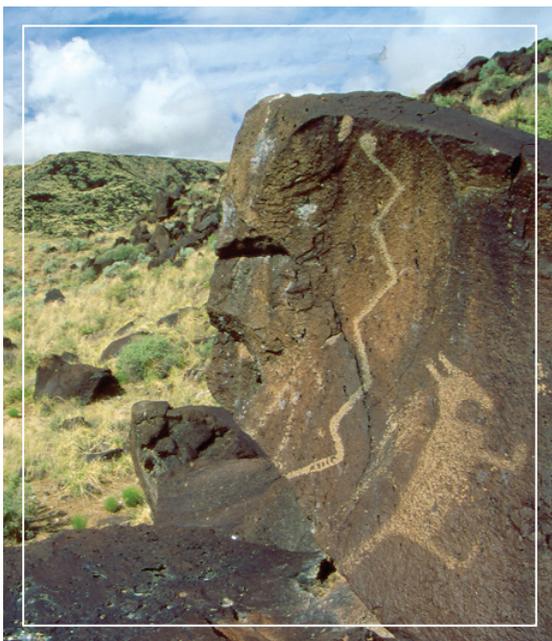
Fundamental Resource or Value	Cultural and Ethnographic Landscape
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Petroglyph National Monument contains the largest concentration of Rio Grande- style rock images in North America and was the first national park unit established specifically to protect petroglyphs. • The monument’s cultural resources and landscape holds profound meaning and significance for traditional communities, especially those within the middle Rio Grande Valley. • The monument contains more than 350 archeological sites, providing evidence of human occupation and use for more than 12,000 years. This includes the Piedras Marcadas Pueblo, one of the largest pueblos of its time period (AD 1300–1600) in the Rio Grande Valley.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • The monument contains numerous cultural and ethnographic features that collectively are part of a larger cultural landscape. Multiple tribes and indigenous groups across the southwestern United States maintain significant traditional connections to the natural and cultural landscape and its features. • Landscape conditions vary from good to poor depending on location and level of visitation. Locations that offer tribes the privacy needed for traditional activities are in good condition. Locations such as those very close to neighborhoods are in poor condition due to the loss of important defining characteristics. • Views are sometimes obscured by pollution-caused haze. • Tribes are attempting to reconnect with this landscape and are frequent visitors. • Some tribal activity is private and the National Park Service is not always notified when areas are being traditionally used. • The monument fosters and is used by other cultural groups who have associations with the landscape. <p>Trends</p> <ul style="list-style-type: none"> • Increasing development and construction along the park boundary is leading to an increase in visitation. • Viewsheds to and from the monument are deteriorating due to increasing surrounding development. • The trend in visibility remained relatively unchanged on both the clearest and haziest days. • Illegal activity such as graffiti, disturbing archeological sites, and vehicle trespass are impacting character-defining resources such as the petroglyphs, volcanic landscapes, and the West Mesa.

Fundamental Resource or Value	Cultural and Ethnographic Landscape
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Climate change and extreme weather events can damage the context of where some of the petroglyphs were created by shifting, eroding, and altering the landscape. • The cultural and ethnographic landscape is threatened by external development and accompanying population increase. Impacts include: social trails, vandalism, artifact collecting, light pollution, significant traffic sounds, and impacts on viewshed from urban development. • Illegal trash and construction debris dumping along the park boundary impacts the visual integrity of the park. It is also creating rodent habitat and consequently attracting predators, which can be seen as threats to neighbors. • Increased noise caused by overflying aircraft, increase of vehicle traffic, and influx of development is impacting the quality of the visitor experience and altering the integrity of the natural soundscape. • Light pollution from nearby Albuquerque and surrounding developments is impacting the night sky. At night, air pollution scatters artificial light, increasing the effect of light pollution on the visitor experience and night sky. • Sporadic graffiti directly threatens the monument’s resources (petroglyphs), altering the general integrity of the landscape and petroglyph associations important to understanding aspects of the culture and landscape. Attempts are made to remove graffiti as soon as possible. • Coal-fired power plants, vehicle exhaust, oil and gas development, and fires are contributors to air quality impacts regionally. Power plant emissions reductions are scheduled by 2018. • Climate change may increase threat of wildfire, increase invasive species, and cause a northward shift in ecosystems, altering the landscape. <p>Opportunities</p> <ul style="list-style-type: none"> • Increase tribal involvement through open, meaningful consultation and dialogue and continue to build and earn trust. • Continue to foster partnerships with academic institutions such as the University of New Mexico, Southwestern Indian Polytechnic Institute, and others to further understand and research critical aspects of the cultural landscape. • Work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the monument from sources of air pollution. Partnering with additional nearby landowners, planners, and developers could similarly help increase awareness and protection of the monument’s cultural landscape, viewshed, air quality, night sky, and acoustical environment. • Recruit volunteers and employees from area tribes to share their stories, knowledge, and experience about the landscape and its significance to monument and Albuquerque Open Space staff and visitors. • Seek Atrisqueño involvement in interpreting the landscape and meanings from a Hispanic perspective. • Expand the interpretive programming of ethnographic use of the monument through new media development such as new publications and handouts, or exhibit development.

Fundamental Resource or Value	Cultural and Ethnographic Landscape
Threats and Opportunities	<p>Opportunities (continued)</p> <ul style="list-style-type: none"> Expand interpretive and educational tools to communicate the connections between the cultural landscape, viewshed, air quality, night sky, acoustical environment, flora and fauna, recreation, human health, climate change, and other associated resources. Continue to seek and engage potential stakeholder groups to gather current and historic information to better define the ethnographic and cultural landscape. Continue to work with Double Eagle II airport staff to provide information to airport users to expand the educational outreach of the monument's ethnographic and cultural landscape to larger audiences.
Data and/or GIS Needs	<ul style="list-style-type: none"> Cultural landscape inventory. Ethnographic landscape study.
Planning Needs	<ul style="list-style-type: none"> Visitor use management plan. Resource stewardship strategy. Climate change scenario planning.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> Antiquities Act of 1906 (54 USC §320301-320303, 34 Stat 225) Historic Sites Act of 1935 (54 USC §320101 et seq.) National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.) Archeological and Historic Preservation Act of 1974 (54 USC §312502 et seq.) American Indian Religious Freedom Act of 1978 (42 USC 1996 and 1996a, PL 95-341, 92 Stat 469) Archaeological Resources Protection Act of 1979 (54 USC §302902) Native American Graves Protection and Repatriation Act of 1990 (25 USC §3001) Museum Properties Management Act of 1955, as amended (54 USC §102501-102504) Executive Order 11593, "Protection and Enhancement of the Cultural Environment" Clean Air Act (42 USC §7401 et seq.) Executive Order 13007, "Indian Sacred Sites" Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments" "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) "Protection of Historic Properties" (36 CFR 800) Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" NPS <i>Management Policies 2006</i> (§1.6) "Cooperative Conservation Beyond Park Boundaries" NPS <i>Management Policies 2006</i> (§4.9) "Soundscape Management" Director's Order 24: <i>NPS Museum Collections Management</i> Director's Order 28: <i>Cultural Resource Management (1998)</i> Director's Order 28A: <i>Archeology (2004)</i> NPS <i>Museum Handbook</i>, parts I, II, and III <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>

Fundamental Resource or Value	Archeological Sites
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Petroglyph National Monument contains the largest concentration of Rio Grande-style rock images in North America and was the first national park unit established specifically to protect petroglyphs. • The monument contains more than 350 archeological sites, providing evidence of human occupation and use for more than 12,000 years. This includes the Piedras Marcadas Pueblo, one of the largest pueblos of its time period (AD 1300–1600) in the Rio Grande Valley. • Petroglyph National Monument provides outstanding opportunities for a broad spectrum of research, including understanding of petroglyphs, ethnographic studies, geomorphology, volcanism, and cultural preservation techniques.
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Most archeological sites are in fair to good condition; however, several sites are being threatened by erosion due to extreme weather events, multiple social trails throughout the area, and adjacent development. • Currently there are no site excavations within the monument except at Piedras Marcadas Pueblo. There are some excavations of various archeological sites adjacent to the monument. • Many types of sites are scattered throughout the monument and cover a range of human history, from Paleo-Indian (12,000 years BP) to a World War II-era bombing range. • Some sites appear to be ephemeral due to sedimentation and wind scour. • Material and artifacts collected during site surveys are housed in the Petroglyph Museum collection and are professionally curated, documented, and well protected and managed. <p>Trends</p> <ul style="list-style-type: none"> • Most sites are generally remaining stable; however, some are declining due to artifact removal and erosion. • Sites are being increasingly impacted by social trails, poor trail planning, and illegal removal of material with data potential. • New sites are being discovered within the monument and around the area that alter the interpretation of cultures and the history of the West Mesa.
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Erosional issues caused by extreme weather events (projected to increase with climate change), social trailing created by off-trail hiking, and visitors exploring unmonitored archeological sites. • Visitor impacts in sensitive areas, including social trails, object collecting, graffiti, and vandalism. • The inadvertent removal of archeological and ethnographic material assumed to be trash such as cans, bottles, and ceramics may lead to information loss about early settlers. • Neighbors who border monument lands using rocks to make cairns, line trails, and campfire rings inadvertently destroy archeological sites, which leads to information loss. <p>Opportunities</p> <ul style="list-style-type: none"> • Expand “leave no trace” interpretation for visitors with emphasis about how to explore the monument with little or no impact. • Continue to foster relationships with neighbors for education and protection of all sites within the monument. • Continue to coordinate with Albuquerque Open Space to send out consistent messaging and signage demonstrating proper etiquette in visiting sensitive areas. • Initiate bilingual educational efforts geared at fostering stewardship and resource protection. • Update and continue ongoing condition assessments of archeological sites. Updated information would be valuable especially for sites near planned development and trails.

Fundamental Resource or Value	Archeological Sites
Data and/or GIS Needs	<ul style="list-style-type: none"> • Digitization of objects currently in the museum collection.
Planning Needs	<ul style="list-style-type: none"> • Resource stewardship strategy.
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Antiquities Act of 1906 (54 USC §320301-320303, 34 Stat 225) • Historic Sites Act of 1935 (54 USC §320101 et seq.) • National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.) • Archeological and Historic Preservation Act of 1974 (54 USC §312502 et seq.) • American Indian Religious Freedom Act of 1978 (42 USC 1996 and 1996a, PL 95-341, 92 Stat 469) • Archaeological Resources Protection Act of 1979 (54 USC §302902) • Native American Graves Protection and Repatriation Act of 1990 (25 USC §3001) • Museum Properties Management Act of 1955, as amended (54 USC §102501-102504) • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13007, "Indian Sacred Sites" • "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) • "Protection of Historic Properties" (36 CFR 800) • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management" • Director's Order 24: <i>NPS Museum Collections Management</i> • Director's Order 28: <i>Cultural Resource Management (1998)</i> • Director's Order 28A: <i>Archeology (2004)</i> • NPS <i>Museum Handbook</i>, parts I, II, and III • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>





Analysis of Other Important Resources and Values

Other Important Resource or Value	Flora and Fauna
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • Extreme weather events are impacting flora and fauna. Ground disturbance in areas in the monument and along the borders have allowed nonnative vegetation the opportunity to increase. • Wildlife corridors are being restricted or eliminated due to habitat loss from expanding urban development along the western and southern borders. The corridors from the Rio Grande are already impacted. • Off-trail use and social trails can impact wildlife by disturbing their natural behavior and potentially disrupting habitats. • A degree of impacts on flora and fauna is proportionate to the varying levels of visitation. Impacts in more remote areas are less than those that border an urban interface. • Upland habitats appear to be improving in areas where off-road vehicle traffic and cattle grazing have been restricted. <p>Trends</p> <ul style="list-style-type: none"> • Biodiversity is declining due to habitat loss, urban encroachment, and extreme weather events (flooding and drought). • Mammal fauna is decreasing due to habitat loss and expansion of roads surrounding the monument. Additional roads have increased the number of road kills of badgers, coyotes, mountain lions, and bobcats.

Other Important Resource or Value	Flora and Fauna
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Invasive species have increased as a result of xeriscaping along monument boundaries. This has increased the potential for unintentional release of drought-tolerant nonnative vegetation. • Expanding highways and infrastructure to support new development, such as Unser/Paseo del Norte, and adjacent roads such as Atrisco Vista, have impacted wildlife movement and migration. Road construction has increased the numbers of animal road kills and resulted in fragmentation and loss of suitable contiguous habitat. • Noise and artificial light from expanding highways and development can impact wildlife health and behavior. • Reduced rainfall, increased annual average temperature, and extreme storms projected under climate change may cause increased erosion, flooding, wildfire, tree dieback, invasive species, and northward shift in ecosystems. • Deposition of nitrogen air pollutant is above the critical load for grassland vegetation. Grassland vegetation is highly sensitive and at risk for harmful effects of nutrient enrichment from excess nitrogen deposition, which can help invasive plant species to grow faster and out-compete native vegetation adapted to lower nitrogen conditions. • The threat of wildland fire has increased due to accumulation of Russian thistle (tumbleweeds) along fence lines and in low-lying areas. • Occasional dumping of debris along the monument boundary may aid in the dispersal of invasive plants and increase the risk of wildfire. <p>Opportunities</p> <ul style="list-style-type: none"> • Partner with local neighborhoods and community groups to provide educational material and foster opportunities to collaborate in mitigating human-caused impacts on wildlife, and provide practical advice on how to coexist with local wildlife. • Continue to foster and support neighborhood watch programs to aid in habitat protection and stimulate volunteer and youth engagement. • Work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the monument from sources of air pollution. • Increase the number of flora and fauna hikes and presentations by uniformed staff and volunteers, to foster appreciation and protection of the natural environment. • Continue to patrol the park boundary on a regular basis to maintain fence integrity and reduce trespass. • Expand interpretative and educational tools to communicate the connections between the flora and fauna, viewshed, air quality, night sky, natural sounds, cultural landscape, recreation, human health, climate change, and other associated resources to tell more of the story.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Invasive species mapping and monitoring program. • Aerial comparisons and analysis of park units within the monument. • Research on impacts on flora and fauna with urban development (coyotes, snakes, etc.).
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Resource stewardship strategy. • Invasive species management plan. • Climate change scenario planning.

Other Important Resource or Value	Flora and Fauna
<p>Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none"> • Endangered Species Act of 1973, as amended (16 USC §1531 et seq.) • National Invasive Species Act (16 USC §4701) • Lacey Act, as amended (16 USC §3371-3378) • Migratory Bird Treaty Act (16 USC §703-712) • Bald and Golden Eagle Protection Act (16 USC §668) • National Environmental Policy Act of 1970 (42 USC §4321) • Federal Noxious Weed Act of 1974, as amended (7 USC §2801 et seq.) • Clean Water Act (33 USC §1251-1387, 33 USC §1151) • Clean Air Act (42 USC §7401 et seq.) • Paleontological Resources Preservation Act (16 USC §470aaa et seq.) • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS <i>Management Policies 2006</i> (§4.1) "General Management Concepts" • NPS <i>Management Policies 2006</i> (§4.1.4) "Partnerships" • NPS <i>Management Policies 2006</i> (§4.4) "Biological Resource Management" • NPS <i>Management Policies 2006</i> (§4.7.2) "Weather and Climate" • NPS <i>Management Policies 2006</i> (§4.9) "Soundscape Management" • Director's Order 18: <i>Wildland Fire Management</i> • Director's Order 47: <i>Soundscape Preservation and Noise Management</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • NPS Reference Manual 18: <i>Wildland Fire Management</i>





Other Important Resource or Value	Recreational Opportunities
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • By working collaboratively with Albuquerque Open Space, diverse recreational opportunities are available throughout the monument. This provides visitors and the urban community the ability to hike and explore open space, study petroglyphs, view night skies, and much more. • Trails providing access to key features are available and some are accessible. A comprehensive visitor use management plan that addresses public access, appropriate uses, and identifies a trail system is scheduled for completion in 2017. • Collaborative management of the monument with Albuquerque Open Space can lead to some visitor confusion regarding monument rules and regulations. The park visitor use management plan and an updated cooperative management agreement between the City of Albuquerque and the National Park Service will attempt to reduce the potential for visitor confusion. • Efforts at the Boca Negra Canyon unit and the Las Imágenes Visitor Center have been undertaken to make experiences and key monument features fully accessible to all visitors. <p>Trends</p> <ul style="list-style-type: none"> • Increased use by local populations walking dogs and not picking up after their pets. Many pets are unleashed. • Mountain bike use within the monument has been increasing. Impacts have not been quantified, but there are concerns about creation of new trails, increasing erosion, and compatibility with park purposes.

Other Important Resource or Value	Recreational Opportunities
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Extreme weather events due to climate change are impacting the landscape throughout the monument. • The potential for management staffing and related issues due to recent studies that indicate a potential increase of up to 33% in visitation during off seasons due to an annual rise in temperature for the area. • Ground-level ozone sometimes reaches levels that can make breathing difficult for sensitive groups: children, the elderly, people with existing health problems, and active adults are most vulnerable. • Coal-fired power plants, vehicle exhaust, oil and gas development, and fires are contributors to air quality impacts regionally. Significant power plant emissions reductions are scheduled by 2018 for the protection of regional Class I areas. U.S. Environmental Protection Agency requirements for cleaner engines and cleaner fuels for vehicle exhaust are also expected by 2018, which will also improve air quality conditions at the monument. • Increasing neighborhoods and neighbors on all borders of the monument are impacting viewsheds, soundscapes, and night skies. • Incompatible uses in certain sensitive monument areas, including mountain biking, horses, off-road vehicles, and ultralight aircraft, are negatively impacting natural and cultural resources, natural quiet, and the visitor experience. • Unleashed or leashed dogs are impacting natural and cultural resources and visitor experiences through digging, small mammal predation, or uncollected excrement. • Frequent illegal target practice and shooting along the boundary of the monument impacts the natural quiet and is a human health and safety hazard. • Hot-air ballooning is a popular activity in Albuquerque and low overflights and landings have the potential to impact sensitive resources and visitors. • Monument neighbors illegally extending their backyards into the monument, adding structures and equipment and introducing nonnative vegetation. <p>Opportunities</p> <ul style="list-style-type: none"> • Continue to actively engage the public and tribes through interpretive messaging and coordinated activity with Albuquerque Open Space to increase understanding and how to prevent unintended impacts due to recreational activities. • Contact multiple user groups to help them understand recreational needs and methods and to work collaboratively to foster sustainable recreation within the monument. • Improve monument sustainability and environmental leadership through the Climate Friendly Park certification with the corresponding Environmental Management System. • Engage tribal youth groups and others to get actively involved in restoration of damaged landscapes and in construction of accessible trails. • Continue and expand policies to educate neighbors and visitors with dogs to the impacts of not cleaning up excrement and allowing dogs to run free. Work with Albuquerque Open Space to provide dispensers for bags and disposal of refuse. Establish thresholds for management actions to regulate unrestricted dog activity. • Actively engage neighborhood associations and monument neighbors regarding appropriate monument uses. • Offer off-site educational presentations on Petroglyph National Monument, especially on the west side of the Rio Grande.

Other Important Resource or Value	Recreational Opportunities
<p>Threats and Opportunities</p>	<p>Opportunities (continued)</p> <ul style="list-style-type: none"> • Expand interpretive and related educational tools to communicate connections between, recreation, health, air quality, night sky, viewshed, and natural sounds. • Recommend or change maps to inform visitors of surrounding recreational opportunities. • Work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the monument from sources of air pollution. • Support the acquisition of Albuquerque Open Space lands adjacent to the monument to provide a buffer zone.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Monitoring protocols for resource damage. • Accessibility assessment. • Sustainable trail location analysis (least cost path analysis).
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Complete visitor use management plan including thresholds for management action. • Wayside exhibit plan. • Comprehensive interpretive plan. • Wayfinding plan and standards. • Resource stewardship strategy. • Trail management plan.
<p>Laws, Executive Orders, and Regulations That Apply to the OIRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the OIRV</p> <ul style="list-style-type: none"> • Americans with Disabilities Act of 1990 (42 USC §12101 et seq.) • Architectural Barriers Act of 1968 (42 USC §4151 et seq.) • “Accessibility Guidelines” (36 CFR 1191.1) • Rehabilitation Act of 1973 (29 USC §701 et seq.) • Clean Air Act (42 USC §7401 et seq.) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</p> <ul style="list-style-type: none"> • NPS Management Policies 2006 (chapter 7) “Interpretation and Education” • NPS Management Policies 2006 (chapter 8) “Use of the Parks” • NPS Management Policies 2006 (chapter 9) “Park Facilities” • NPS Management Policies 2006 (§1.6) “Cooperative Conservation Beyond Park Boundaries” • NPS Management Policies 2006 (§4.9) “Soundscape Management” • NPS Management Policies 2006 (§4.10) “Lightscape Management” • Director’s Order 6: <i>Interpretation and Education</i> • Director’s Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i> • Director’s Order 47: <i>Soundscape Preservation and Noise Management</i> • NPS Transportation Planning Guidebook

Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental and other important resources and values. For example, a key issue may pertain to the potential for a fundamental or other important resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but that still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for Petroglyph National Monument and the associated planning and data needs to address them:

- **Lack of trails and unrestricted and illegal access.** The monument resources are being impacted through extensive social trailing and sometimes illegal access and use. Trailing and erosion is occurring due to a lack of defined trails and specific trailheads. Much of the unrestricted access is occurring along the eastern borders with housing backing up directly along the monument borders.
 - *Associated data/GIS needs:* aerial comparison and analysis of park units within the monument, sign inventory and survey, visitor use survey, fence boundary survey, fence condition assessments, sustainable trail location analysis (least cost path analysis)
 - *Associated planning needs:* visitor use management plan, trail standards, wayfinding plan
- **Urban encroachment.** Extensive development is underway along the monument's southern boundary and is planned for the southwestern boundary as well. Currently, development borders areas near Piedras Marcadas Canyon, Boca Negra Canyon, Rinconada Canyon, and the Northern Geologic Window. Houses border directly on the monument and both accidental and deliberate impacts have and continue to occur. Infrastructure development and housing is expanding. This includes both commercial and residential communities. This is increasing light pollution, degrading the natural soundscape, allowing illegal access and other concerns.
 - *Associated planning needs:* law enforcement needs assessment update, communications plan, park partner action strategy
- **Land status.** The monument requested a cadastral survey for all units of the monument in 2007. To date this has not been fully completed. The monument is currently involved in a land exchange with the City of Albuquerque. This was needed due to issues with subdivision plans executed along the monument boundary and subsequent engineering concerns.
 - *Associated planning needs:* land protection plan revision
- **Public perception.** The monument benefits from close collaboration with the City of Albuquerque and co-manages the monument with Albuquerque Open Space. While this management structure can benefit the operational and recreational aspects of the monument, it can lead to public misunderstanding of the purposes of the monument and how the monument is managed.
 - *Associated data/GIS needs:* visitor use survey, review of stakeholders, review of civic organizations, updated lists of neighborhood organizations and associations, updated list of local school contacts and groups
 - *Associated planning needs:* communications plan, marketing plan, comprehensive interpretive plan

Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these core foundation elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
FRV,OIRV, Key Issue	Visitor use management plan	H	Fully complete and implement the monument’s visitor use management plan, assuring full public engagement. Increasing local development and population expansion along the monument’s border enhances the need for managing high visitation areas, minimizing impacts to resources, enhancing visitor experiences, and fully aligning visitor expectations with opportunities.
FRV, OIRV	Climate change scenario planning	H	Develop plausible science-based objectives along with adaptive management strategies for specific resources within the monument. This is a high priority because continuing extreme weather events have the potential for significant resource damage.
OIRV, Key Issue	Wayfinding plan/ standards	H	This plan would provide an opportunity for continued collaboration with Albuquerque Open Space on visitor orientation to monument sites. Due to new and ongoing development, roads have changed and access to monument resources can be challenging. This would work to resolve this issue. It would also assist monument neighbors to distinguish monument areas with privately owned property.
Key Issue	Marketing plan	H	Because Petroglyph National Monument is an urban park managed jointly by both the National Park Service and Albuquerque Open Space, there is confusion regarding conflicting recreational rules and conduct within the monument. Accurate understanding of the roles of each agency from visitors would benefit both management organizations in meeting their respective missions.
OIRV, Key Issue	Trail management plan	H	The monument needs to finalize a trail management plan. This planning effort would identify issues, resource access, establish objectives and actively engage the public. The plan would evaluate impacts on proposed locations for trails and trailheads; allowable uses; and construction, management, and operational guidelines.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
OIRV, Key Issue	Comprehensive interpretive plan	H	This would clarify monument interpretive themes, identify levels of visitor experience, designate locations for interpretive opportunities, and suggest media to maximize those opportunities. Outreach programming would work to communicate monument identity to a broad area (west side of river). The plan would be fully collaborative and assure that the National Park Service and Albuquerque Open Space are fully represented throughout the process.
Key Issue	Law enforcement needs assessment; visitor management-resource protection assessment program	H	A law enforcement needs assessment is scheduled for 2017. The assessment will evaluate the complexity of the monument's jurisdictions, the evolving relationships with cooperating agencies, and the increasing demands and expectations placed upon NPS law enforcement staff as the urban interface increases around the monument.
FRV, OIRV	Resource stewardship strategy	H	A resource stewardship strategy is a strategic document that refers to existing management plans regarding desired conditions of the monument resources, measurable goals, and actions to achieve them. This document would be dynamic and focused on identifying and tracking indicators of desired conditions, recommending strategies to achieve and maintain those conditions over time, and assessing and changing strategies based on new information.
FRV	Development concept plan for Boca Negra Canyon	M	This area receives the highest visitation within the monument, and as a result has significant safety and resource issues. Policies regarding oversized vehicles, regular parking, and facilities for shade, picnicking and interpretation of monument resources need to be evaluated and adjusted to meet the current demands.
FRV	Petroglyph management plan	M	Petroglyphs are exposed to all environmental conditions and the process that created them leads to slow degradation. The same process also allows for easy and permanent vandalism. Studies indicate that areas that exhibit high levels of graffiti attract more graffiti. Methods to obscure graffiti and partially restore surfaces minimize repeat vandalism. This plan would identify methods to restore resources directly and provide strategies for educating against further vandalism.
OIRV	Wayside exhibit plan	M	This plan would be a sub-plan under the comprehensive interpretive plan, geared toward the specifics of on-site interpretive opportunities presented through the media of wayside exhibits. As a static program this plan would evaluate topic, theme, location, materials, and methods of presentation.
FRV	Rock Image Research Center development plan	M	As codified and required within the enabling legislation, a research center plan would help focus partnerships with academic institutions and ascertain the scope and goals of this type of facility.
Key Issue	Business plan	L	The monument would benefit from a business plan to aid in developing revenue-sharing agreements to support monumentwide efforts. It would aid in financial sustainability and help in establishing staffing priorities.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV, OIRV, or Key Issue?	Planning Needs	Priority (H, M, L)	Notes
FRV, Key Issue	Park partner action strategy	L	Vital partnerships and collaboration help the monument carry out its mission. A partner action strategy would help the monument establish a clear direction to help guide new relationships among organizations. It could suggest ways to energize existing relationships. It would work to define roles and responsibilities among partnerships.
Key Issue	Land protection plan revision	L	Revisions in the current version of the land protection plan would assist the monument in identifying minor or major boundary adjustments designed to the protect park resources for which the monument unit was created. It could provide effective controls for boundary enforcement and work as an effective communication tool for local governments and land managers.
Key Issue	Communications plan	L	The monument would benefit from the development of a communication plan in clarifying messaging among managing agencies, determining media to match content and achieve critical monument goals such as altering public perception about allowable activities within monument boundaries.
OIRV	Invasive species management plan	L	This plan or guidance document would work to provide the monument with current best practices for the prevention, early detection, rapid response, control, and containment of one or more invasive species.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
FRV	Cultural landscape inventory	H	This inventory would be a core document that would identify the range, diversity, and scope of cultural landscape resources within the monument’s units and surrounding area. It could also establish priorities for restoration and adaptive management for protection. The data would support the visitor use management plan.
ORIV	National Register of Historic Places determination of eligibility report	H	A determination of eligibility for nomination to the National Register of Historic Places has not been completed for the monument’s visitor center and adjacent cultural landscape. This study and its findings are essential for guiding park managers in future operations and maintenance needs for the building and surroundings.
OIRV, Key Issue	Sustainable trail location analysis	H	These are critical data that would be integrated into the visitor use management plan and trail management plan.
Key Issue	Finish boundary survey	H	The Bureau of Land Management cadastral surveys need to be completed. This has become increasingly evident with key monument issues regarding land exchanges and development along monument boundaries. This would also support planning efforts such as the petroglyph management plan, resource stewardship strategy, land protection plan, and visitor use management plan.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Key Issue	Fence condition assessments	H	With development continuing along the monument’s west side, coupled with housing developments directly on the border, vandalism and destruction of monument fencing to provide illegal access exists. These data are useful for both operational strategies and information to support land management plans and law enforcement needs assessments.
FRV	More research on dynamic nature of landscape	M	The landscape is being heavily impacted outside the borders of the multiple park units. Expansion of the city of Albuquerque is westward and new development is occurring regularly. This is changing the area’s hydrology, soil composition, and movement. New research could support efforts in the development of a resource stewardship strategy, trail management plan, and working with partners, co-managers, and stakeholders.
Key Issue	Expand visitor use surveys to include those who currently do not visit	M	This data need reflects a broader collaboration with tribes, stakeholders, local, state and national publics. It would be both an internal review and understanding of why the public visits the monument and their respective opinions regarding experience and opportunities. It would also reflect the need to understand what obstacles are out there that inhibit or prevent visitation. These data could inform several planning efforts including the visitor use management plan, interpretive plans, signage plans, monument publications, and bilingual conveyance of information and programs.
Key Issue	Review stakeholders and update relations—list of stakeholders, civic organizations, volunteers, neighborhood organizations and associations, and local schools K-12	M	These data need to be fully updated. These groups, along with specific individuals, are critical to the successes made in preservation and protection of monument resources. These data work to support and increase relevancy for future generations. They support many ongoing efforts as well as future marketing and partnership planning.
OIRV	Invasive species mapping and monitoring	M	This is an ongoing need to continue to monitor changes and spread. This is critical to stay ahead of new introductions of nonnatives by monument neighbors or other external sources. Accurate data would support the resource stewardship strategy and related cultural and natural resource management plans.
FRV	Update archeological site(s) condition assessments	M	Current assessments are out of date and need to be updated and reviewed.
Key Issue	Sign inventory and survey	M	These data would support overall efforts to work with Albuquerque Open Space, the monument’s co-management organization, to consistently communicate visitors’ orientation to monument features and locations. These data would support development of a comprehensive wayfinding plan.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV, OIRV, or Key Issue?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
FRV, OIRV	Monitoring protocols for petroglyphs and resource damage	M	This effort would involve developing consistent protocols to ascertain, scope, condition, and levels of impacts to the monument's petroglyph resources and surrounding archeological sites. This would support the resource stewardship strategy and petroglyph management plan.
FRV	LiDAR information on West Mesa	L	This information would help document areas under threat from nearby development and help to understand changing conditions on the mesa.
FRV	Digitize objects currently in the museum collections	L	Computerized data on museum collections would aid significantly on current and future research of archeological sites, including chronology and use of specific areas. Digitalization of the Voucher collection would aid in evaluation of flora diversity, density, and presence in the area.
FRV	Ethnographic landscape study	L	A comprehensive ethnographic study was completed in 2002. The document provides background and understanding for the cultural significance of the landscape for traditional peoples affiliated with this landscape.
OIRV	Research on impacts on flora and fauna with urban development (coyotes, snakes, etc.)	L	This would consist of specifically targeted research on the ecological consequences of unrestricted urban development along monument borders and the associated impacts on monument resources and habitats. This would support the resource stewardship strategy and various resource management planning efforts.
FRV	Quality assurance and control of existing petroglyph data	L	Review existing data and petroglyph inventory, potentially to upgrade or add to the data. This would support the petroglyph management plan.
FRV	Research techniques to mitigate scratch graffiti and vandalism of petroglyphs	L	This type of data would be a valuable resource both in restoration of damaged petroglyphs and other forms of vandalism as well. It would support the petroglyph management plan.
OIRV, Key Issue	Aerial comparisons and analysis of park units within the monument	L	These data would contribute to vegetative restoration plans, the land protection plan, resource stewardship strategy, trail management plan, and visitor use management plan. Hard data would be forwarded to the NPS Intermountain Region GIS Program for analysis.
OIRV	Accessibility assessment	L	The monument would benefit from a monumentwide assessment of both structures and programs. Many facilities were constructed in 1973, before the monument was established, and are not accessible. Work is ongoing to remedy that; however, an assessment would help the monument prioritize efforts.

Part 3: Contributors

Petroglyph National Monument

Dennis Vásquez, Park Superintendent
Shantell Rector, Administrative Officer
Diane Souder, Chief of Interpretation and Outreach
Andre Perera, Chief of Facilities Management
Matt Fuller, Chief Ranger
Michael Medrano, Chief of Natural and Cultural Resources
Ronald Fields, Archeologist
Susanna Villanueva, Lead Interpreter
Dale Kissner, Chief of Visitor Protection and Resources Management
David Leyba, Lead Facility Maintenance System Specialist

NPS Intermountain Region

Skip Meehan, Project Manager, Outdoor Recreation Planner
Erica Cole, Transportation Planner
Jeffrey Orłowski, GIS Specialist
Eric Delynko, GIS Specialist
Attila Bality, Planner, Rivers, Trails, and Conservation Assistance Program

Other NPS Staff

Phillip Viray, Publications Branch Chief, Denver Service Center – Planning Division
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Ken Bingenheimer, Contract Editor (former), Denver Service Center – Planning Division
Laura Watt, Contract Editor, Denver Service Center – Planning Division
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Pam Holtman, Quality Assurance Coordinator, WASO Park Planning and Special Studies

Partners

Matthew Schmader, Superintendent, Albuquerque Open Space
Mark Chavez, Assistant Superintendent, Albuquerque Open Space
James Lewis, Assistant Superintendent, Albuquerque Open Space
Jim Sattler, Chief of Visitor Services and Trails, Albuquerque Open Space
Sarah Brown, Outdoor Recreation Planner, Albuquerque Open Space
Tom Menicucci, City Council of Albuquerque Services Staff

Appendixes

Appendix A: Enabling Legislation and Legislative Acts for Petroglyph National Monument

Calendar No. 429

101ST CONGRESS } <i>1st Session</i>	SENATE	{ REPORT 101-230
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PETROGLYPH NATIONAL MONUMENT ESTABLISHMENT ACT OF 1989

DECEMBER 20, 1989.—Ordered to be printed

Filed under authority of the order of the Senate of November 22 (legislative day,
November 6), 1989

Mr. JOHNSTON, from the Committee on Energy and Natural
Resources, submitted the following

R E P O R T

[To accompany S. 286]

The Committee on Energy and Natural Resources to which was referred the bill (S. 286) to establish the Petroglyph National Monument in the State of New Mexico, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill, as amended, do pass.

The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

That this Act shall be cited as the "Petroglyph National Monument Establishment Act of 1989".

(b) The Congress finds that—

(1) The nationally significant Las Imagines National Archeological District on Albuquerque's West Mesa Escarpment contains more than fifteen thousand documented prehistoric and historic petroglyphs;

(2) this district also contains approximately 65 other archeological sites;

(3) the West Mesa Escarpment and the petroglyphs are threatened by urbanization and vandalism, and hundreds of petroglyphs have already been destroyed;

(4) the State of New Mexico has shown great leadership by recognizing the importance of the archeological resources of the West Mesa Escarpment through the establishment of the Las Imagines National Archeological District;

(5) the city of Albuquerque has played a significant role in the preservation of the natural, cultural, and recreational resources of the West Mesa Escarpment;

(6) the Middle Rio Grande Pueblo Tribes have shown a strong and sincere interest in preservation of their heritage through protection of the West Mesa Escarpment;

39-010

SEC. 9. There are authorized to be appropriated such sums as may be necessary for the purposes of this Act.

PURPOSE OF THE MEASURE

The purpose of S. 286 is to establish the 7,274 acre Petroglyph National Monument near Albuquerque, New Mexico.

BACKGROUND AND NEED

Lying just west of Albuquerque, New Mexico is the West Mesa, a 17-mile long basalt escarpment. As many as 17,000 petroglyphs are located within the escarpment. The entire escarpment is located within the Las Imagines Archeological District, which is listed on the National Register of Historic Places. A large section of the West Mesa is now threatened by development from nearby Albuquerque. In some areas, houses have already been built within a few feet from some of the petroglyphs.

The majority of the petroglyphs date from the Pueblo IV period (1300 to 1600, A.D.) although some figures date back as far as 1000, B.C. The escarpment contains one of the largest remaining concentrations of Rio Grande style rock art, evidenced by bold, complex figures. Among the petroglyphs within the monument boundary are drawings of human ceremonial figures, animals, serpents, star beings and kachina masks.

S. 286 provides for joint land acquisition for the monument by the City of Albuquerque, the State of New Mexico and the Federal government, with the Federal Government to acquire approximately 5,150 acres.

LEGISLATIVE HISTORY

S. 286 was introduced by Senators Domenici and Bingaman on January 31, 1989. The Subcommittee on Public Lands, National Parks and Forests held a hearing on S. 286 in Albuquerque, New Mexico on April 28, 1989 and in Washington, D.C. on July 27, 1989. Companion legislation, H.R. 745, has been introduced in the House of Representatives.

At the business meeting on November 15, 1989, the Senate Committee on Energy and Natural Resources ordered S. 286, as amended, favorably reported.

COMMITTEE RECOMMENDATIONS AND TABULATION OF VOTES

The Senate Committee on Energy and Natural Resources, in open business session on November 15, 1989, by unanimous vote of a quorum present, recommends that the Senate pass S. 286, if amended as described herein.

The rollcall vote on reporting the measure was 19 yeas, 0 nays, as follows:

YEAS	NAYS
Mr. Johnston	
Mr. Bumpers	
Mr. Ford	
Mr. Metzenbaum	
Mr. Bradley*	

104 STAT. 272

PUBLIC LAW 101-313—JUNE 27, 1990

Public Law 101-313
101st Congress

An Act

June 27, 1990
[S. 286]

To establish Petroglyph National Monument and Pecos National Historical Park in the State of New Mexico, and for other purposes.

Public lands.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Petroglyph
National
Monument
Establishment
Act of 1990.
16 USC 431 note.

TITLE I—PETROGLYPH NATIONAL MONUMENT

SECTION 101. SHORT TITLE AND CONGRESSIONAL FINDINGS.

(a) This title may be cited as the "Petroglyph National Monument Establishment Act of 1990".

(b) The Congress finds that—

(1) the nationally significant Las Imagines National Archeological District on Albuquerque's West Mesa Escarpment contains more than 15,000 documented and prehistoric and historic petroglyphs;

(2) the district also contains approximately sixty-five other archeological sites;

(3) the West Mesa Escarpment and the petroglyphs are threatened by urbanization and vandalism, and hundreds of petroglyphs have already been destroyed;

(4) the State of New Mexico has shown great leadership by recognizing the importance of the archeological resources of the West Mesa Escarpment through the establishment of the Las Imagines National Archeological District;

(5) the city of Albuquerque has played a significant role in the preservation of the natural, cultural, and recreational resources of the West Mesa Escarpment;

(6) the Middle Rio Grande Pueblo Tribes have shown a strong and sincere interest in the preservation of their heritage through protection of the West Mesa Escarpment;

(7) the Atrisco Land Grant, now held by Westland Development Company, Incorporated, a corporation whose stock is owned primarily by heirs of the Atrisco Land Grant, has played a significant role in the settlement of the West Mesa area since 1692, and the corporation's shareholders have shown a strong interest in the preservation of their traditional lands;

(8) the National Park System has no unit established for the specific purpose of protecting, preserving, and interpreting prehistoric and historic rock art; and

(9) in light of the national significance of the West Mesa Escarpment and the petroglyphs and the urgent need to protect the cultural and natural resources of the area from urbanization and vandalism, it is appropriate that a national monument be established in the West Mesa Escarpment area, near Albuquerque, New Mexico.

SEC. 102. ESTABLISHMENT OF PETROGLYPH NATIONAL MONUMENT.

(a) In order to preserve, for the benefit and enjoyment of present and future generations, that area in New Mexico containing the nationally significant West Mesa Escarpment, the Las Imagines National Archeological District, a portion of the Atrisco Land Grant, and other significant natural and cultural resources, and to facilitate research activities associated with the resources, there is hereby established the Petroglyph National Monument (hereinafter in this title referred to as the "monument") as a unit of the National Park System. The monument shall consist of approximately 5,280 acres generally known as the Atrisco Unit, as depicted on the map entitled "Boundary Map, Petroglyph National Monument", numbered NM-PETR-80,010C and dated June 1990, which shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior, in the offices of the Department of Energy, Minerals, and Natural Resources of the State of New Mexico, and in the office of the mayor of the city of Albuquerque, New Mexico.

(b) The monument shall be administered by the Secretary of the Interior (hereinafter in this title referred to as the "Secretary") or, if the monument is expanded pursuant to section 104(a), by the Secretary in cooperation with the State of New Mexico (hereinafter in this title referred to as the "State") or the city of Albuquerque, New Mexico (hereinafter in this title referred to as the "city"), in accordance with section 105.

(c) Within 6 months after the date of enactment of this title, the Secretary shall file a legal description of the monument with the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the United States House of Representatives. Such legal description shall have the same force and legal description as if included in this title, except that the Secretary may correct clerical and typographical errors in such legal description. The legal description shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior, in the offices of the Department of Energy, Minerals, and Natural Resources of the State of New Mexico, and in the office of the mayor of the city of Albuquerque, New Mexico: *Provided*, That the Secretary may from time to time, after completion of the general management plan referred to in section 108(a), may make minor adjustments to the monument boundary by publication of a revised map or other boundary description in the Federal Register.

SEC. 103. LAND ACQUISITION AUTHORITY.

(a) The Secretary is authorized to acquire lands and interests therein within the monument boundary by donation, purchase with donated or appropriated funds, exchange, or transfer from any other Federal agency, except that lands or interests therein owned by the State or a political subdivision thereof may be acquired only by donation or exchange.

Gifts and
property.

(b) Where the surface and subsurface estates of private land to be acquired are separately owned, the Secretary shall acquire the subsurface estate to such land prior to or at the same time the surface estate is acquired: *Provided*, That this subsection shall not be applicable if the Secretary determines that the prior acquisition of the surface estate is necessary—

- (1) to prevent damage to the resources of the monument; or

(2) to properly manage and interpret the monument in accordance with sections 102 and 105.

(c)(1) The Secretary is authorized to exchange Federal lands within the area described on the map referred to in section 102(a) as the Piedras Marcadas Unit for lands owned by the city within the area described as the Atrisco Unit on such map.

(2) The Secretary is authorized to exchange Federal lands within the area described on the map referred to in section 102(a) as the Boca Negra Unit for lands owned by the State within the area described as the Atrisco Unit on such map.

(3) Exchanges shall be on the basis of equal value, and either party to the exchange may pay or accept cash in order to equalize the value of the properties exchanged.

(d) Prior to acquiring fee simple ownership of private lands or interests therein within the monument boundary, the Secretary is authorized to acquire an appropriate interest in such land by donation or for a nominal fee from the owner or owners of such lands for the purpose of providing immediate protection against trespass or vandalism or initiating any resource inventories necessary to carry out the purposes of this title.

Gifts and
property.

SEC. 104. EXPANSION OF THE MONUMENT.

(a) Upon the execution of a binding agreement between the Secretary, the State, and the city that the lands identified in this subsection shall be perpetually managed in accordance with section 105, the Secretary shall include such lands, totaling approximately 1,994 acres, within the monument boundary. The lands referred to in this subsection are:

(1) the approximately 1,779 acres generally known as the Piedras Marcadas Unit, as depicted on the map referred to in section 102(a); and

(2) the approximately 215 acres generally known as the Boca Negra Unit, as depicted on the map referred to in section 102(a).

(b)(1) The Secretary is authorized to acquire, as provided in section 103(a), some or all of the approximately 95 acres of land, or interests therein, within the area identified as "Potential Addition" on the map referred to in section 102(a), if, after consultation with the Petroglyph National Monument Advisory Commission established under section 110, the Secretary determines that such acquisition would further the purposes of this title.

(2) The authority of the Secretary to make acquisitions pursuant to paragraph (1) shall expire on the date three years after the date of enactment of this Act.

(3) Any lands acquired pursuant to paragraph (1) shall be incorporated into the monument and managed accordingly.

SEC. 105. ADMINISTRATION AND MANAGEMENT OF THE MONUMENT.

(a) The Secretary shall administer, manage, and protect the monument in accordance with the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), the Act of August 21, 1935 (49 Stat. 666; 16 U.S.C. 461 et seq.), and this title, and in such a manner as to preserve, for the benefit and enjoyment of present and future generations, its cultural and natural resources, and to provide for the interpretation of and research on such resources.

(b) Units of the monument which may be added pursuant to section 104(a) shall be managed and developed in accordance with management and operational plans prepared concurrently with the

National Park Service, consistent with section 108. Visitor use and interpretive programs within such units shall be undertaken consistent with plans developed with the assistance of the National Park Service.

(c) The Secretary is authorized to enter into cooperative agreements with either the State or the city under which the Secretary may manage and interpret any lands owned by the State or the city, respectively, within the boundaries of the monument.

Contracts.

(d) In order to encourage a unified and cost effective interpretive program of the natural and cultural resources of the West Mesa Escarpment and its environs, the Secretary is authorized to enter into cooperative agreements with other Federal, State, and local public departments and agencies, Indian tribes, and nonprofit entities providing for the interpretation of these resources. Such agreements shall include, but need not be limited to, a provision for the Secretary to develop and operate interpretive facilities and programs on lands and interests in lands outside the monument boundary, with the agreement of the owner or the administrator thereof. Such cooperative agreements may also provide for financial and technical assistance for the planning and implementation of interpretive programs and minimal development related to these programs.

Contracts.
Conservation.

(e) Federal laws generally applicable to units of the National Park System, including but not limited to, the National Environmental Policy Act of 1969 and the Archeological Resources Protection Act of 1979, shall apply to the monument. The Secretary is authorized to pursue concurrent jurisdiction of the monument for the purposes of law enforcement and implementation of Federal regulations.

SEC. 106. LAND USE AND TRANSPORTATION PLANNING.

The Secretary may participate in land use and transportation management planning conducted by appropriate local authorities for lands adjacent to the monument and may provide technical assistance to such authorities and affected landowners for such planning.

SEC. 107. EXISTING TRANSMISSION OR DISTRIBUTION FACILITIES.

Nothing in this title shall be construed as authorizing or requiring revocation of any interest or easement for existing transmission or distribution facilities or prohibiting the operation and maintenance of such facilities within or adjacent to the monument boundary.

SEC. 108. GENERAL MANAGEMENT PLAN.

(a) Within 3 years from the date funding is made available for the purposes of this section, the Secretary, in cooperation with the city and the State, shall develop and transmit to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the United States House of Representatives, a general management plan for the monument consistent with the purposes of this title, including, but not limited to—

- (1) a statement of the number of visitors and types of public use within the monument which can be accommodated in accordance with the protection of its resources;
- (2) a resource protection program;
- (3) a general interpretive program;

(4) a plan to implement the joint resolution entitled "American Indian Religious Freedom", approved August 11, 1978 (42 U.S.C. 1996);

(5) a general development plan for the monument, including proposals for a visitors' center, and the estimated cost thereof; and

(6) a plan for the Rock Art Research Center established in section 109.

(b) The general management plan shall be prepared in consultation with the Petroglyph National Monument Advisory Commission established pursuant to section 110, appropriate Indian tribes and their civil officials, the heirs of the Atrisco Land Grant, the New Mexico State Historical Preservation Office, and other interested parties.

Contracts.

(c) The Secretary shall undertake, in consultation and cooperation with appropriate New Mexico Indian tribes and their civil officials, research on other Rio Grande style rock art sites on Federal lands in New Mexico, and through cooperative agreements with State and willing private landowners, on non-Federal lands. The Secretary shall provide the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the United States House of Representatives within 3 years of the date funding is made available for the purposes of this section, a report that—

Reports.

- (1) lists various locations of Rio Grande style rock art;
- (2) identifies the ownership of the rock art;
- (3) identifies the condition of the resources; and
- (4) identifies the appropriate type of technical assistance needed for the protection and care of these resources.

The report shall be updated and transmitted to such committees every 2 years thereafter.

Cultural programs.
Indians.
Minorities.
Public buildings and grounds.

SEC. 109. ROCK ART RESEARCH CENTER.

(a) In order to provide for research relating to Rio Grande style rock art, undertake comprehensive evaluations of petroglyphs within the monument, prepare interpretive programs that are sensitive to the concerns of the Indian and Hispanic peoples, and relate monument resources to other styles and forms of rock art, the Secretary, acting through the National Park Service and in cooperation with the University of New Mexico, other educational institutions, foundations, Indian tribes, and private entities, shall establish a Rock Art Research Center (hereinafter in this title referred to as the "Center").

(b) The Center shall function as a focal point for the systematic and scholarly collection, analysis, and dissemination of information relating to Rio Grande style rock art, and other forms of rock art within the region.

Education.

(c) The Center shall produce research data and educational materials that will enhance public understanding of prehistoric and historic rock art.

(d) The Center shall provide for a broad program of research including ethnographic studies, resource management techniques, and comparative studies of rock art forms and styles.

(e) Research shall be primarily directed toward rock art managed by the National Park Service. The Secretary may enter into cooperative agreements with other agencies and entities as may be appropriate to carry out the requirements of the Center.

Appendix B: Inventory of Administrative Commitments

Title / Agency / Organization	Purpose / Description	Dates	Signatories
Memorandums of Understanding			
Binding agreement	City & NPS agree to purchase land	1991	NPS and City of Albuquerque
Emergency operations (fire)	City of Albuquerque & Bernalillo County	2011	NPS and City of Albuquerque
Firearms training	City of Albuquerque Tactical range access	2011	NPS
Fence agreement	Construct & maintain boundary fences	2011	NPS and City of Albuquerque
Servicing Human Resource Office agreement	Human resources management	2010	NPS
IT agreement	Service level agreement for IT	2016	NPS
Mutual law enforcement assistance	Law enforcement operations with Bernalillo County Sheriff's Office	2016	NPS and Bernalillo County Sheriff's Office
Mutual law enforcement assistance	Law enforcement operations with City of Albuquerque (Albuquerque Police Department)	2016	NPS and City of Albuquerque
Memorandums of Agreement			
Cooperative management agreement	Management of monument	2013	NPS and City of Albuquerque
General Agreements			
Youth Development Inc.	Summer youth program	2015	NPS-Contracting office
Hub 8	Facility Management Software System support	2016	NPS
Special Park Uses (Rights-of-Way)			
Northwest to southeast across park	Electric power line Represents 3 different lines with adjacent rights-of-way with voltages from 345 KV to 230 KV (WN, FW and WA lines)	Utility easements established prior to the creation of the monument are retained	Public Service Company of New Mexico

Title / Agency / Organization	Purpose / Description	Dates	Signatories
Special Park Uses (Rights-of-Way) (continued)			
Northwest to southeast across park	Electric power line 115 KV transmission line (KM Line)	Utility easements established prior to the creation of the monument are retained	Public Service Company of New Mexico
North to south across park	Electric power line 115 KV transmission line (CE Line)	Utility easements established prior to the creation of the monument are retained	Public Service Company of New Mexico
East to west across park	Electric power line Distribution line to Double Eagle II Airport from headquarters across volcanoes	Utility easements established prior to the creation of the monument are retained	Public Service Company of New Mexico
Visitor center	Electric power line 115 KV transmission line runs right behind the visitor center (NW/WR line)	Utility easements established prior to the creation of the monument are retained	Public Service Company of New Mexico
Visitor center	Electric power line Distribution line to visitor center and other buildings that were moved or razed by the National Park Service	Utility easements established prior to the creation of the monument are retained	Public Service Company of New Mexico
Boca Negra	Natural gas pipeline	Utility easements established prior to the creation of the monument are retained	New Mexico Gas Co.
Headquarters	Telephone line Collocated on Public Service Company of New Mexico distribution line going to Double Eagle II Airport	Utility easements established prior to the creation of the monument are retained	CenturyLink
Headquarters	Water pipeline Water supply line from storage tank west of the monument	Utility easements established prior to the creation of the monument are retained	City of Albuquerque
Headquarters	Sewer pipeline Sanitary sewer from Double Eagle II Airport	Utility easements established prior to the creation of the monument are retained	City of Albuquerque

Title / Agency / Organization	Purpose / Description	Dates	Signatories
Special Park Uses (Rights-of-Way) (continued)			
Marsh peninsula	Water pipeline Water supply line drilled through the base of the escarpment	Utility easements established prior to the creation of the monument are retained	City of Albuquerque
81st Street	Water pipeline Easement only, no pipeline known to exist in the ground	Utility easements established prior to the creation of the monument are retained	City of Albuquerque
Special Use Permits			
Erosion control	Straw bale installation in Santa Fe Village for flood mitigation	2015	NPS and City of Albuquerque
Interagency Agreements			
Cross-designating law enforcement	Guidelines for cross-designating law enforcement authority between the Department of the Interior and U.S. Department of Agriculture in Arizona, New Mexico, Oklahoma, and Texas	Ongoing	NPS
Holder of record agreement	National Crime Information Center access	2010	NPS and New Mexico State Police
Holder of record agreement	National Crime Information Center access	2010	Arizona Criminal Justice Information System / Grand Canyon and NPS
Cooperative Agreements			
User authorization agreement	National Crime Information Center	2010	NPS and City of Albuquerque
Cooperating Association Agreements			
Western National Parks Association	To enable Western National Parks Association to carry out tasks requested by NPS-Intermountain Region parks to enhance visitor experiences	2011–2016	Western National Parks Association and NPS-Intermountain Region

Utility easements established prior to the creation of the monument are retained.

Appendix C: List of Traditionally Associated Tribes

Pueblo of Acoma
P.O. Box 309
Acoma, NM 87034

Pueblo of Cochiti
P.O. Box 70
Cochiti, NM 87072

Pueblo of Isleta
P.O. Box 1270
Isleta Pueblo, NM 87022

Pueblo of Jemez
P.O. Box 100
Jemez Pueblo, NM 87024

Pueblo of Laguna
P.O. Box 194
Laguna Pueblo, NM 87026

Pueblo of Nambe
Route 1, Box 117-BB
Santa Fe, NM 87506

Ohkay Owingeh
P.O. Box 309
Ohkay Owingeh, NM 87566

Pueblo of Picuris
P.O. Box 127
Penasco, NM 87553

Pueblo of Pojoaque
78 Cities of Gold Road
Santa Fe, NM 87506

Pueblo of Sandia
481 Sandia Loop
Bernalillo, NM 87004

Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, NM 87004

Pueblo of Santa Clara
P.O. Box 580
Española, NM 87532

Pueblo of San Felipe
P.O. Box 4339
San Felipe Pueblo, NM 87001

Pueblo of Santo Domingo
P.O. Box 99
Santa Domingo Pueblo, NM 87052

Pueblo of San Ildefonso
2 Tunyo Po
Santa Fe, NM 87506

Pueblo of Taos
P.O. Box 1846
Taos, NM 87571

Pueblo of Tesuque
Route 42, Box 360-T
Santa Fe, NM 87506

Pueblo of Yselta del Sur
P.O. Box 17579
119 S. Old Pueblo Road
El Paso, TX 79917

Pueblo of Zia
135 Capital Square Drive
Zia Pueblo, NM 87053

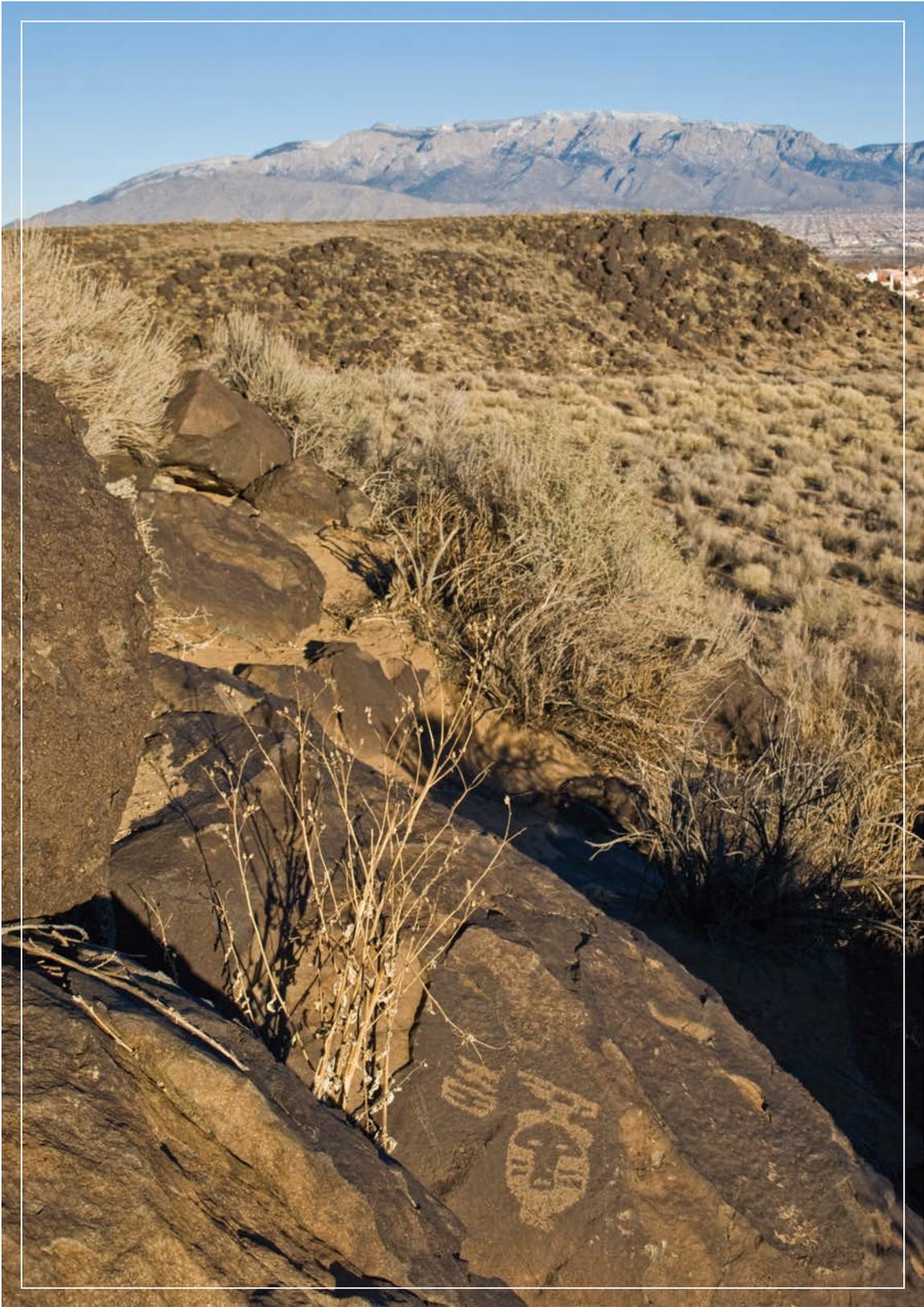
Pueblo of Zuni
P.O. Box 339
Zuni, NM 87327

Hopi Tribe
P.O. Box 123
Kykotsmovi, AZ 86039

Jicarilla Apache Nation
P.O. Box 507
Dulce, MNM 87528

Mescalero Apache Tribe
P.O. Box 227
Mescalero, NM 88340

Navajo Nation
P.O. Box 7440
Window Rock, AZ 86515



Intermountain Region Foundation Document Recommendation Petroglyph National Monument

May 2017

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Intermountain Regional Director.



5/31/2017

RECOMMENDED

Dennis A. Vásquez, Superintendent, Petroglyph National Monument

Date



8/4/2017

APPROVED

Sue E. Masica, Regional Director, Intermountain Region

Date



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

PETR 153/134148
August 2017

Foundation Document • Petroglyph National Monument

