



National Park Service
U.S. Department of the Interior
Petroglyph National Monument
Albuquerque, New Mexico

Headquarters and Maintenance Facility Improvements Environmental Assessment

September 2005



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Headquarters and Maintenance Facility Improvement

Environmental Assessment

Summary

Petroglyph National Monument is proposing to complete several projects at the headquarters and maintenance facilities. The facilities are co-located on approximately 1.41 acres at 6001 Unser Blvd. NW. The proposed projects will address current maintenance needs as well as minor future improvements and scheduled cyclic maintenance. The projects are needed to eliminate OSHA safety violations, improve park storage, protect NPS property from the elements, conform to new sign regulations and to meet new IT (Information Technology) security policies.

All of the projects fall within the existing footprint of the headquarters and maintenance facilities and are being considered jointly for their cumulative environmental impacts. No new ground disturbance is anticipated. The following is a list of the proposed projects: construction of a storage facility in maintenance boneyard; construction of an equipment/material shed in maintenance boneyard; expansion of the maintenance shop; paving of the boneyard; construction of an information technology room; in-kind replacement of a shade structure and concrete patio; sewer line replacement; installation of new headquarters sign; landscaping, including a drip irrigation system surrounding headquarters; building shelves, cabinets, and workbench in the maintenance shop; rain collection system with gutters/downspouts; rehab of headquarters conference room; rehab of office space in headquarters; construction of a foyer to headquarters building; installation of parking bollards around compressed natural gas fuel pump; and grading dirt/stone from headquarters building to improve drainage.

This Environmental Assessment evaluates two alternatives; a No Action Alternative and an action alternative. The No Action alternative is used as a baseline assessment, while the action alternative addresses the completion of the projects. This Environmental Assessment has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet project objectives, 2) evaluates potential issues and impacts to Petroglyph National Monument's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Park operation is the only topic that is being addressed in this document because the resultant impact may be greater-than-minor. All other resource topics have been dismissed because the project will result in negligible or minor effects to those resources. No major effects are anticipated as a result of this project. Public scoping was conducted to assist with the development of this document, however no comments were received.

Public Comment

If you wish to comment on the Environmental Assessment, you may mail comments to the name and address below or submit comments through the National Park Service Park Planning website at <http://parkplanning.nps.gov/>. This Environmental Assessment will be on public review for 30 days ending **21 October 2005**. Please note that names and addresses of people who comment become part of the public record. We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety. If you wish us to withhold your name and/or address, you must state this at the beginning of your comment.

Dr. Joseph Sanchez, Superintendent
Petroglyph National Monument
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Albuquerque, NM 87120

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TABLE OF CONTENTS

PURPOSE AND NEED	5
Introduction.....	5
Purpose and Need	5
Project Objectives	10
Scoping.....	10
Impact Topics Retained for Further Analysis	10
Park Operations	11
Impact Topics Dismissed From Further Analysis	11
Visitor Use and Experience.....	11
Topography, Geology, and Soils.....	11
Vegetation	11
Wildlife.....	12
Special Status Species	12
Water Resources	13
Wetlands	13
Floodplains.....	13
Archeological Resources	13
Historic Structures.....	14
Ethnographic Resources.....	14
Cultural Landscapes	15
Museum Collections.....	15
Air Quality.....	15
Soundscape Management.....	15
Lightscape Management.....	16
Socioeconomics	16
Prime and Unique Farmlands	16
Indian Trust Resources	17
Environmental Justice.....	17
ALTERNATIVES CONSIDERED	17
Alternatives Carried Forward	17
Alternative A – No Action	17
Alternative B – Complete Headquarters and Maintenance Improvement Projects	18
Alternative Summaries.....	22
Identification of the Environmentally Preferred Alternative	23
ENVIRONMENTAL CONSEQUENCES.....	24
Park Operations	26
Intensity Level Definitions	26
Impacts of Alternative A (No Action Alternative)	26
Impacts of Alternative B (Preferred Alternative)	27
External Scoping	28
Environmental Assessment Review and List of Recipients	29
List of Preparers	29

REFERENCES.....	30
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APPENDICES	31
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List of Figures

Figure 1 Map of Petroglyph National Monument	8
Figure 2 Location of Headquarters and Maintenance Facility	9
Figure 3 Diagram of Proposed Project Locations	21

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PURPOSE AND NEED

Introduction

Petroglyph National Monument was established on Albuquerque's West Mesa on June 27, 1990 "In order to preserve, for the benefit and enjoyment of present and future generations, that area...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..." The 7,200 acre Monument is jointly owned and managed by the National Park Service, the State of New Mexico and the City of Albuquerque. Monument resources include an estimated 25,000 petroglyphs, over 350 documented archeological sites and ethnographic resources important to many of the tribes of the Southwest.

This Environmental Assessment is to satisfy the requirements of the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) for evaluating proposed federal actions. The purpose of the proposal is to provide a safe, healthy, and functional working environment for Monument staff in compliance with the goals and objectives of current plans and policy. Current plans and policy that pertain to this proposal include the Petroglyph National Monument General Management Plan (NPS 1997), and the 2001 National Park Service Management Policies (NPS 2001). Following is more information pertaining to how this proposal meets the goals and objectives of these plans and policies:

- This project is consistent with the 1997 Petroglyph National Monument General Management Plan, which proposes to keep developed properties within the "Development Zone."
- The proposal is consistent with the goals and objectives of the *2001 National Park Service Management Policies* (NPS 2000), which states that major park facilities within park boundaries should be located so as to minimize impacts to park resources.

In addition to meeting the goals and objectives of these plans and policies, this project is needed to address the following management concerns:

- Address health and safety concerns associated with the present facilities.
- Protection and storage for NPS property.
- Address security issues with present facilities.

Purpose and Need

Petroglyph National Monument staff is currently occupying a maintenance building and a headquarters building co-located on approximately 1.41 acres at 6001 Unser Boulevard. The buildings were purchased for use as maintenance and headquarters facilities in 1995. The buildings did not undergo any major renovations prior to being occupied by staff. Over the years, small projects have been completed to better utilize the limited amount of space available. As the Monument's staff has grown, it is now necessary to update, remodel and create new structures to meet the expanding needs of a young, growing unit of the National Park Service.

The proposed projects will provide the monument resolution to several issues including OSHA identified violations for employee workplace health and safety, protection and dedicated storage space for monument operations and security concerns with the monument's information technology equipment. The resolution to these issues necessitates related actions such as the need to renovate existing spaces. The

monument is also attempting to keep up with cyclic maintenance schedules for utilities and structures. The following list of project items describes the needs currently facing the monument:

- **Construction of a Storage Facility in the Maintenance Bone yard** – The storage facility would provide storage and holding space for the division of administration and would house the Petroglyph National Monument recycling program. The monument already has a recycling program, however, the storage facility would allow for the proper storage of the materials until they could be recycled.
- **Construction of Equipment/Material Shed in Maintenance Bone Yard** – This will allow for the storage of NPS-owned heavy equipment and vehicles and the unloading of bulk building materials. Most of the park's vehicles and materials are already stored in the same area in the bone yard, but they are exposed to the elements. The construction of an equipment and material shed would allow for the protection of NPS property from the elements and reduce the maintenance and replacement costs and intervals. The use of the area in the boneyard would not change. The only change would be that the area would be covered to provide protection from the elements.
- **Expansion of the Maintenance Shop** -- The current maintenance facility is at it's maximum capacity for workers and work space. The expansion of the maintenance shop would allow for more appropriate space to be dedicated to various tasks such as welding. The shop would be expanded into the bone yard, where materials are presently stored that would be consolidated and moved into the equipment/material shed listed above. The expansion of the shop would also address identified OSHA recommendations for employee health and safety.
- **Paving of the Boneyard and Installation of Parking Bollards** – The current boneyard would be paved with asphalt to reduce maintenance on a dirt lot and to reduce dust, in addition, parking bollards would be installed around a compressed natural gas fuel pump, eliminating a health and safety issue as it is currently possible for a vehicle to inadvertently strike the fuel pump and rupture a natural gas line.
- **Construction of an Information Technology Room** – The Monument's primary server and phone switch is located in a room within the headquarters building that is accessible by all employees. The construction of the IT security room will provide a secure location to house the Monument's computer and phone switch and prevent any tampering.
- **In-Kind Replacement of Shade Structure and Concrete Patio** – A covered patio for use by employees was constructed on the north side of the headquarters building when it was purchased and remodeled for use as a headquarters facility. The patio is in need of rehabilitation including replacement of the concrete pad and overhead shade structure. These would be in-kind replacements.
- **Utilities** – The new construction (equipment/material shed, storage facility and maintenance shop expansion) will require utilities to be run to each location. In addition, the sewer line for the headquarters and maintenance facilities will need to be replaced. This will mean the temporary disruption of traffic flow through the employee parking lot, but are needed as part of the construction and maintenance of the facilities.
- **Installation of New Headquarters Sign** – A new headquarters sign consistent with new NPS sign standards is needed. The sign will be constructed closer to the intersection of Unser Blvd. and Montano Road in the southwest corner of the headquarters facility to be more visible to the public.
- **Construction of a Foyer into Headquarters Building** – A foyer would allow for more efficient heating and cooling of the headquarters building while allowing the efficient entrance and egress of employees without subjecting employees situated near the door to the temperature extremes

common to Albuquerque. High summer time temperatures (> 100° F) and low winter time temperatures (< 32° F) can prove to be uncomfortable.

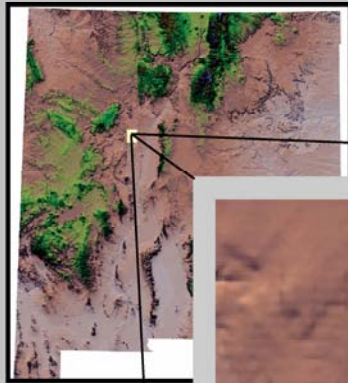
- **Office and Workspace Renovation** – To meet the needs of a growing park, interior office and workspace renovation is needed. As new construction is completed, workspace and offices will need to be reconfigured in both the headquarters and maintenance facilities. Renovation of the existing spaces includes office rehab, conference room rehab, building shelves, cabinets and workbenches.
- **Landscaping** – As projects are completed, the area around headquarters and the maintenance facility will require updates and repairs to the landscaping. The entire area around both facilities has been extensively disturbed and in most areas, landscaping is already in place. Landscaping activities include drip irrigation, rain collection system from roof run-off and grading to improve drainage. There would be an effort to use native vegetation to landscape the area.

Petroglyph National Monument New Mexico

National Park Service
U.S. Department of Interior



Vicinity Map



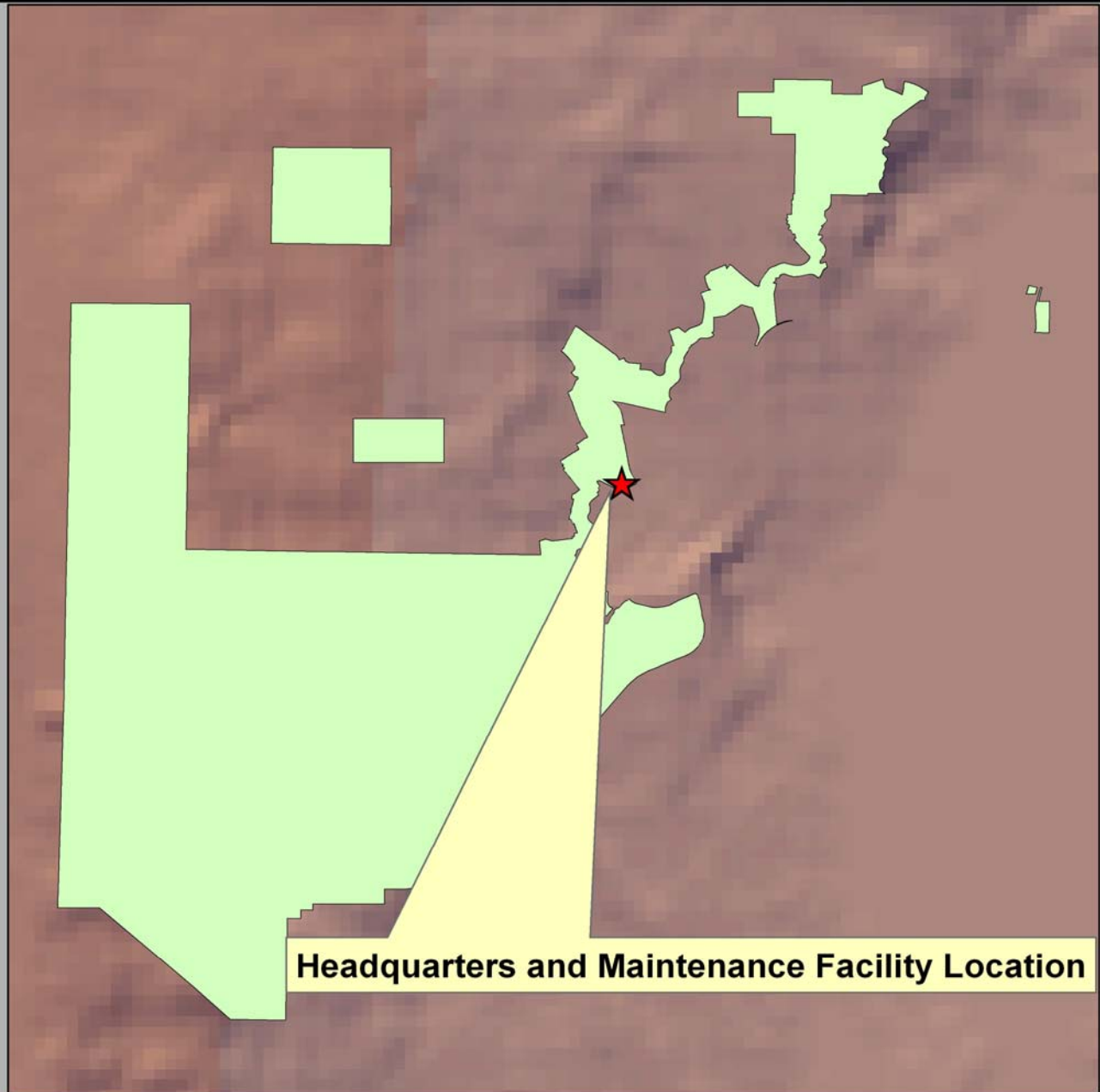
Petroglyph National Monument
Division of Resource Protection and Management
January 2005

3 1.5 0 3 6 9 12 Miles

Figure 1 Map of Petroglyph National Monument

Petroglyph National Monument New Mexico

National Park Service
U.S. Department of Interior



Natural Resource Program Manager
Petroglyph National Monument
Div. Resource Protection and Management
7 September 2005

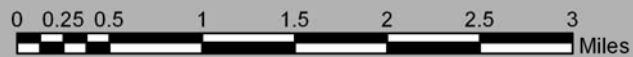


Figure 2 Location of Headquarters and Maintenance Facility

Project Objectives

Based on the Purpose and Need for the project and the scoping conducted with both the public and National Park Service staff, the following objectives have been identified to support the proposal for improvement of the headquarters and maintenance facilities at Petroglyph National Monument:

1. Meet federal and state health and safety recommendations for employee work areas, including eliminating OSHA safety violations and potential fire hazards.
2. Improve park storage problems.
3. Protect NPS property from the elements.
4. Conform to new sign regulations.
5. Conform to new IT security regulations.

Scoping

Scoping is a process to identify the resources that may be affected by a project proposal, and to explore possible alternative ways of achieving the proposal while minimizing adverse impacts. Petroglyph National Monument conducted internal scoping with appropriate National Park Service staff and with affected agencies. Public scoping was also conducted, however no responses were received.

An interdisciplinary team of professionals from Petroglyph National Monument conducted internal scoping. Interdisciplinary team members met on 20 July 2005 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. The meeting also included a site visit to determine where each of the projects would be completed.

External scoping was initiated with the distribution of a scoping letter to inform the public of the proposal to improve headquarters and maintenance facilities and to generate input on the preparation of this Environmental Assessment. The scoping letter dated 22 July 2005 was mailed to over 20 tribes, the State Historic Preservation Office and the U.S. Fish and Wildlife Service. In addition, a press release was issued to the local media. During the 30-day scoping period, no public responses were received. The State Historic Preservation Office (SHPO) responded with their eagerness to see the Environmental Assessment when it was completed. In addition to the SHPO response, two Native American tribes and the All Pueblo Indian Council responded with no objection to the proposed project and a request to be kept informed of the project's progress. More information regarding scoping can be found in *Comments and Coordination*.

Impact Topics Retained for Further Analysis

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; National Park Service *2001 Management Policies*; and National Park Service knowledge of resources at Petroglyph National Monument. The Impact topic that is carried forward for further analysis in this Environmental Assessment is listed below along with the reasons why the impact topic is further analyzed. For the topic, the following text also describes the existing setting or baseline condition (i.e. affected environment) within the project area. This information will be used to analyze impacts against the current conditions of the project area in the *Environmental Consequences* chapter.

Park Operations

The Monument's administrative and maintenance functions are based out of the project area. The proposed improvements will have a moderate beneficial impact on routine park operations and employee health and safety. Arrangements will need to be made for the Monument's staff and how/where they conduct their work. For these reasons, the topic of park operations has been carried forward for further analysis in this document.

Impact Topics Dismissed From Further Analysis

Some impact topics have been dismissed from further consideration, as listed below. The rationale for dismissing these specific topics is stated for each resource.

Visitor Use and Experience

According to *2001 Management Policies*, the enjoyment of park resources and values by people is part of the fundamental purpose of all park units (NPS 2000). The National Park Service is committed to providing appropriate, high quality opportunities for visitors to enjoy the parks, and will maintain within the parks an atmosphere that is open, inviting, and accessible to every segment of society. Further, the National Park Service will provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found in the parks. The National Park Service *2001 Management Policies* also state that scenic views and visual resources are considered highly valued associated characteristics that the National Park Service should strive to protect (NPS 2000).

All of the proposed projects are within the headquarters and maintenance facilities and are not in visitor-use areas. There are no trails located near the headquarters facility and the area surrounding the facility is heavily developed with houses, power lines, a public library and major arterial highway. Since any construction activities in the area will not have an impact on visitor use and experience, the impacts will be negligible. Because these effects are minor or less in degree, visitor use and experience has been dismissed from further analysis in this document.

Topography, Geology, and Soils

According to the National Park Service's *2001 Management Policies*, the National Park Service will preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2000). These policies also state that the National Park Service will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

The proposed projects to construct a storage facility, to construct an equipment/material shed, to expand the maintenance shop, to construct an IT room, to replace sewer line, may disturb soils. Given that there are no significant topographic or geologic features in the project area, and that the area has been previously disturbed, the proposed actions will result in negligible to minor, temporary effects to topography, geology, and soils. Because these effects are minor or less in degree, this topic has been dismissed from further analysis in this document.

Vegetation

According to the National Park Service's *2001 Management Policies*, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural

abundance, diversity, and ecological integrity of plants (NPS 2000). There is very little vegetation in the project area, due to the sustained heavy use of the area. Since no native vegetation will be disturbed, and there will be continued, sustained use of the area (severely curtailing the potential for non-native vegetation) the impacts to vegetation will be negligible. Because these effects are minor or less in degree, vegetation has been dismissed from further analysis in this document.

Wildlife

According to the National Park Service's *2001 Management Policies*, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of animals (NPS 2000). Wildlife commonly found in the Monument includes coyotes, ground squirrels, cottontail rabbits, woodrats, mice, and over 30 species of birds. There are also numerous insect species, and 17 species of reptiles. The project area is a heavily used administrative and maintenance facility and hence is little used by any of the mentioned organisms except mice. The entire project area is previously disturbed with minimal vegetation with no natural geologic features. The presence of humans, human-related activities, and structures have removed or displaced much of the native wildlife habitat in the project area which has limited the number and variety of wildlife occurrences in the area. Some smaller wildlife such as rodent and lizard habitat will be displaced or eliminated during construction. Because the effects to wildlife and wildlife habitat from the proposed project are minor or less in degree, this topic has been dismissed from further analysis in this document.

Special Status Species

The Endangered Species Act of 1973 requires examination of impacts on all federally-listed threatened, endangered, and candidate species. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service (or designated representative) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the *2001 Management Policies* and Director's Order 77 *Natural Resources Management Guidelines* require the National Park Service to examine the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2000). Petroglyph National Monument has conducted inventories for vascular plants and all vertebrate taxa. For the purposes of this analysis, the U.S. Fish and Wildlife Service list of sensitive species for Bernalillo County (see Appendix A) was used to determine if any sensitive species occur within the Monument. None of the listed species have ever been documented as residents of the National Monument. At best, the Bald Eagle and Whooping Crane have been observed flying high overhead, but never actively using the Monument. Two of the Species of Concern are known from the Monument, the Western Burrowing Owl (*Athene cunicularia hypugaea*) and the Slate Millipede (*Comanchelus chihuensis*). Of the two species, only the Slate Millipede is known to be a resident. One of the preparers of this document is the subject matter expert on the Slate Millipede and has conducted surveys in the area of the headquarters and maintenance facilities and has not observed or otherwise documented the millipede anywhere near the project area. The project area is not suitable habitat for any of the sensitive species. Since the millipede and owl are not known to inhabit the area, there should be no effect on the two species of concern.

Further protection under the Migratory Bird Treaty Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition, this act serves to protect environmental conditions for migratory birds from pollution or other ecosystem degradations. Some migratory birds may be potential transients of the general area, but the immediate project area contains little to no suitable habitat for migratory birds. There are no known nesting sites in this area, and these lands are not vital for foraging or roosting. Construction-related noise could potentially disturb transient bird species, but these adverse impacts would be 1) temporary, lasting only as long as construction, and 2) negligible, because suitable habitat for transient birds is found throughout the region.

Because no threatened, endangered, or other species of concern are known to occur in the project area, the topic of special status species was dismissed from further analysis.

Water Resources

National Park Service policies require protection of water quality consistent with the Clean Water Act. The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters". To enact this goal, the U.S. Army Corps of Engineers has been charged with evaluating federal actions that result in potential degradation of waters of the United States and issuing permits for actions consistent with the Clean Water Act. The U.S. Environmental Protection Agency also has responsibility for oversight and review of permits and actions, which affect waters of the United States.

The proposed project area does not contain surface waters, and is dry. Water quality, water quantity, and drinking water will not be affected by the project. Because the project results in negligible effects to water resources, this topic has been dismissed from further consideration.

Wetlands

For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."

Executive Order 11990 *Protection of Wetlands* requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as stated in *2001 Management Policies* and Director's Order 77-1 *Wetlands Protection*, strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In accordance with DO 77-1 *Wetlands Protection*, proposed actions that have the potential to adversely impact wetlands must be addressed in a Statement of Findings for wetlands.

No wetlands are located in the project area; therefore, a Statement of Findings for wetlands will not be prepared, and the impact topic of wetlands has been dismissed.

Floodplains

Executive Order 11988 *Floodplain Management* requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. The National Park Service under *2001 Management Policies* and Director's Order 77-2 *Floodplain Management* will strive to preserve floodplain values and minimize hazardous floodplain conditions. According to Director's Order 77-2 *Floodplain Management*, certain construction within a 100-year floodplain requires preparation of a Statement of Findings for floodplains.

The project area is not located within a 100-year floodplain. Therefore a Statement of Findings for floodplains will not be prepared, and the topic of floodplains has been dismissed.

Archeological Resources

Section 106 of the National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq.*); the National Park Service's Director's Order 28 *Cultural Resource Management Guideline*; and National Park Service *2001 Management Policies* (NPS 2000b) require the consideration of impacts on historic properties that are listed on or eligible to be listed in the National Register of Historic Places. The National Register is the nation's inventory of historic places and the national repository of documentation

on property types and their significance. The above-mentioned policies and regulations require federal agencies to coordinate consultation with State Historic Preservation Officers regarding the potential effects to properties listed on or eligible for the National Register of Historic Places. For the purposes of the following discussion, cultural resources include archeological resources, historic structures, cultural landscapes, ethnographic resources, and museum collections.

The National Park Service, as steward of many of America's most important cultural resources, is charged to preserve historic properties for the enjoyment of present and future generations. Management decisions and activities throughout the National Park System must reflect awareness of the irreplaceable nature of these resources. The National Park Service will protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in the *2001 Management Policies* and the appropriate Director's Orders.

In addition to the National Historic Preservation Act and the National Park Service *2001 Management Policies* (NPS 2000), the National Park Service's Director's Order 28B *Archeology*, affirms a long-term commitment to the appropriate investigation, documentation, preservation, interpretation, and protection of archeological resources inside units of the National Park System. As one of the principal stewards of America's heritage, the National Park Service is charged with the preservation of the commemorative, educational, scientific, and traditional cultural values of archeological resources for the benefit and enjoyment of present and future generations. Archeological resources are nonrenewable and irreplaceable, so it is important that all management decisions and activities throughout the National Park System reflect a commitment to the conservation of archeological resources as elements of our national heritage.

The proposed project area has been extensively disturbed through grading, leveling and application of gravel and fill material. Despite the disturbance, the project area was previously surveyed, and no archeological sites were identified in the immediate project area (Brandi et al 1999). Therefore, the proposed project area is not expected to contain archeological deposits; however, appropriate steps would be taken to protect any archeological resources that are inadvertently discovered during construction. Under Section 106 of the National Historic Preservation Act this is a no effect project. Because the project will not disturb any known archeological sites, the affect of the project on archeological resources is expected to be negligible, and this topic has been dismissed from further analysis.

Historic Structures

According to the National Park Service's Director's Order 28 *Cultural Resource Management*, the term "historic structures" refers to both historic and prehistoric structures, which are defined as constructions that shelter any form of human habitation or activity. Based on surveys completed in the past (Brandi et al 1999) and a recent walk-through the area by the park archeologist, the project area does not contain any historic structures, buildings, objects, or sites that are eligible for the National Register of Historic Places. Therefore, the topic of historic structures has been dismissed from further consideration.

Ethnographic Resources

Per the National Park Service's Director's Order 28 *Cultural Resource Management*, ethnographic resources are defined as any site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it. According to DO-28 and Executive Order 13007 on sacred sites, the National Park Service should try to preserve and protect ethnographic resources.

Ethnographic resources are not known to exist in the proposed project area based on the lack of cultural materials present. In addition, Native American tribes traditionally associated the Monument were apprised of the proposed project in a letter dated July 22, 2005, and two responses were received from these tribes. These responses confirmed their cultural affiliations with the area, but indicated that no

impacts to significant ethnographic resources are expected. Therefore, this topic has been dismissed from further consideration.

Cultural Landscapes

According to the National Park Service's Director's Order 28 *Cultural Resource Management Guideline*, a cultural landscape is a reflection of human adaptation and use of natural resources, and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. A cultural landscape inventory has not been conducted for the Monument, however the existing features within the general area including the administration and maintenance buildings, major arterial highway and housing neighborhoods, make the proposed improvements an insignificant contribution to the cultural landscape. Therefore, this topic has been dismissed from further consideration.

Museum Collections

According to Director's Order 24 *Museum Collections*, the National Park Service requires the consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material), and provides further policy guidance, standards, and requirements for preserving, protecting, documenting, and providing access to, and use of, National Park Service museum collections. The Monument's Museum Collections are properly curated in another building and the proposed project is not anticipated to add items to the collection or impact the existing collection in any way. Therefore, the topic of museum collections has been dismissed from further consideration.

Air Quality

The Clean Air Act of 1963 (42 U.S.C. 7401 *et seq.*) was established to promote the public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality related values associated with National Park Service units. Section 118 of the Clean Air Act requires a park unit to meet all federal, state, and local air pollution standards. Petroglyph National Monument is designated as a Class II air quality area under the Clean Air Act. A Class II designation indicates the maximum allowable increase in concentrations of pollutants over baseline concentrations of sulfur dioxide and particulate matter as specified in Section 163 of the Clean Air Act. Further, the Clean Air Act provides that the federal land manager has an affirmative responsibility to protect air quality related values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse pollution impacts (EPA 2000).

Construction activities such as hauling materials and operating heavy equipment could result in temporary increases of vehicle exhaust, emissions, and fugitive dust in the general project area. Any exhaust, emissions, and fugitive dust generated from construction activities will be temporary and localized, and would likely dissipate rapidly because air stagnation within the Albuquerque area is rare. In an effort to be a "good neighbor," any soil disturbing activities will be accompanied by the application of water to reduce the amount of fugitive dust. Overall, the project could result in a negligible degradation of local air quality, and such effects would be temporary, lasting only as long as construction. The Class II air quality designation for Petroglyph National Monument would not be affected by the proposal. Therefore, air quality has been dismissed as an impact topic.

Soundscape Management

In accordance with 2001 *Management Policies* and Director's Order 47 *Sound Preservation and Noise Management*, an important component of the National Park Service's mission is the preservation of natural soundscapes associated with national park units (NPS 2000). Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be

transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among National Park Service units as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

The proposed location for the new administration building and all construction activity would occur in what can be considered the developed zone of Petroglyph National Monument. Existing sounds in this area are most often generated from vehicular traffic (on surface streets and the major arterial highway), people, construction activities outside of the Monument, air traffic and wind. Sound generated by the long-term occupation of the improved facilities may include climate controls such as heating or air conditioning units and people using the building. Because the area already contains man-made noises, the long-term occupation of the facilities is not expected to appreciably increase the noise levels in the general area.

During construction, human-caused sounds will likely increase due to construction activities, equipment, vehicular traffic, and construction crews. Any sounds generated from construction would be temporary, lasting only as long as the construction activity is generating the sounds, and would have a negligible to minor adverse impact on visitors and employees. Therefore, the topic of soundscape management was dismissed as an impact topic.

Lightscape Management

In accordance with *2001 Management Policies*, the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light (NPS 2000). Petroglyph National Monument strives to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements. The Monument also strives to ensure that all outdoor lighting is shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. Extensive regional pollution of the natural night sky already exists due to the city of Albuquerque.

The proposed action may incorporate minimal exterior lighting on both facilities, but the lighting will be directed toward the intended subject with appropriate shielding mechanisms, and will be placed in only those areas where lighting is needed for safety reasons. The amount and extent of exterior lighting on the administration building will have negligible effects on the existing outside lighting or night sky of the area; therefore, this topic has been dismissed.

Socioeconomics

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Implementation of the proposed action could provide a negligible beneficial impact to the economies of Albuquerque, New Mexico due to minimal increases in employment opportunities for the construction workforce and revenues for local businesses and governments generated from these additional construction activities and workers. Any increase in workforce and revenue, however, would be temporary and negligible, lasting only as long as construction. Because the impacts to the socioeconomic environment would be negligible, this topic has been dismissed.

Prime and Unique Farmlands

The Farmland Protection Policy Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that would result in the conversion of these lands to non-agricultural uses. Prime or unique farmland is classified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), and is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. According to the USDA, the project area does not contain prime or unique farmlands (Hacker, 1977). Therefore, the topic of prime and unique farmlands has been dismissed.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by the Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources at Petroglyph National Monument. The lands comprising the Monument are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, the project will not have any effects on Indian trust resources, and this topic was dismissed as an impact topic.

Environmental Justice

Executive Order 12898 *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Because the improved facilities will be available for use by all park staff regardless of race or income, and the construction workforces will not be hired based on their race or income, the proposed action would not have disproportionate health or environmental effects on minorities or low-income populations or communities. Therefore, environmental justice has been dismissed as an impact topic in this document.

ALTERNATIVES CONSIDERED

During July 2005, an interdisciplinary team of National Park Service employees met for the purpose of developing project alternatives. This meeting resulted in the definition of project objectives as described in the *Purpose and Need*, and a list of alternatives that could potentially meet these objectives. One action alternative and the No Action Alternative were identified for this project, which are carried forward for further evaluation in this Environmental Assessment. A summary table comparing alternative components is presented at the end of this chapter.

Alternatives Carried Forward

Alternative A – No Action

Under this alternative, none of the projects would be completed. A storage facility in maintenance boneyard would not be constructed; an equipment/material shed in maintenance boneyard would not be constructed; the maintenance shop would not be constructed; the boneyard would not be paved; an information technology room would not be constructed; a shade structure and concrete patio would not be replaced; a sewer line would not be replaced; a new headquarters sign would not be installed; landscaping, including a drip irrigation system surrounding headquarters would not be installed; shelves, cabinets, and workbench in the maintenance shop would not be built; a rain collection system with gutters/downspouts would not be installed; the headquarters conference room would not be rehabilitated; office space in headquarters would not be rehabilitated; a foyer to the headquarters building would not be constructed; parking bollards would not be installed; and grading dirt/stone around headquarters building would not be completed to improve drainage. The existing facilities would continue to provide administrative and maintenance functions. NPS property would continue to be exposed to the elements, safety concerns would not be addressed, IT security concerns would not be addressed and the Monument would continue to have storage problems. Should the No-Action Alternative be selected, the

National Park Service would respond to future needs and conditions of the facilities without major actions or changes in present course of action.

Alternative B – Complete Headquarters and Maintenance Improvement Projects

This alternative consists of completing the list of proposed projects below. A diagram illustrating the general area and approximate locations and sizes of the proposed projects is included as Fig. 3. The following text further describes the components of Alternative B:

- **Construction of a Storage Facility in the Maintenance Bone yard** – The storage facility would be constructed on the west-side of the boneyard and would provide storage and holding space for the division of administration and would house the Petroglyph National Monument recycling program. The facility will be approximately 40' x 60' in size and equipped with a modern climate control system, which will include heating, ventilation, and air conditioning (HVAC). A security system will be installed to protect from unauthorized entry, in addition to a fire protection system for the entire building, which will consist of smoke and heat detection alarms and sprinklers. In an effort to “green the parks”, construction of the new building will enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources, to the extent possible. Architecture and height will be similar to that of the existing buildings.
- **Construction of Equipment/Material Shed in Maintenance Bone Yard** – The shed would be constructed on the south-side of the boneyard and would be a pole-barn style building approximately 35' x 60' in size. This will allow for the storage of NPS-owned heavy equipment and vehicles and the unloading of bulk building materials.
- **Expansion of the Maintenance Shop** -- The maintenance shop would be expanded approximately 100 feet along the north side of the boneyard, connected to the existing maintenance shop. The overall size of the addition would be 45' x 100'. The architecture would be similar to the existing buildings and would not be any higher than the existing buildings.
- **Paving of the Boneyard and Installation of Parking Bollards** – Approximately 7,200 ft² of the boneyard area would be paved with asphalt to reduce maintenance and dust.
- **Construction of an Information Technology Room** – A small room approximately 10' x 15' in size would be added to the east side of the headquarters building. The room would be constructed to match or blend into the existing architecture of the building.
- **In-Kind Replacement of Shade Structure and Concrete Patio** – The concrete patio and shade structure approximately 20' x 25' in size would be rehabilitated.
- **Utilities** – Utilities will be installed to each of the new construction as appropriate and existing utilities will be replaced according to an existing replacement schedule.
- **Installation of New Headquarters Sign** – A new headquarters sign would be installed closer to the intersection of Unser Blvd. and Montano Road in the southwest corner of the headquarters facility to be more visible to the public.
- **Construction of a Foyer into Headquarters Building** – An approximately 10' x 15' foyer would be constructed at the current location of the front entrance to the building. The foyer would be constructed to match or blend into the existing architecture of the building.
- **Office and Workspace Renovation** – To meet the needs of a growing park, interior office and workspace renovation would include installation of shelving, furniture, carpeting, cabinets and possibly walls and doors.

- **Landscaping** – Areas surrounding headquarters would be landscaped appropriately with native vegetation, grading, drip irrigation, and rain collection and distribution.

This alternative is based on preliminary designs and best information available at the time of this writing. Specific distances, areas, and layouts used to describe the alternative are only estimates and could change during final site design. If changes during final site design are not consistent with the intent and effects of the selected alternative, then additional compliance would be completed, as appropriate.

Mitigation Measures

The following mitigation measures have been developed to minimize the degree and/or severity of adverse effects, and will be implemented during construction of the action alternative, as needed:

- To minimize the amount of ground disturbance, staging and stockpiling areas will be located in previously disturbed sites within the project area and will be located to minimize the impacts to employees.
- Construction zones will be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.
- Fugitive dust generated by construction will be controlled by spraying water on the construction site if necessary.
- To reduce noise and emissions, construction equipment will not be permitted to idle for long periods of time.
- To minimize possible petrochemical leaks from construction equipment, the contractor will regularly monitor and check construction equipment to identify and repair any leaks.
- Construction workers and supervisors will be informed about special status species. Contract provisions will require the cessation of construction activities if a species were discovered in the project area, until park staff re-evaluates the project. This would allow modification of the contract for any protection measures determined necessary to protect the discovery.
- Should construction unearth previously undiscovered cultural resources, work will be stopped in the area of any discovery and the Monument will consult with the state historic preservation officer and the Advisory Council on Historic Preservation, as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- The National Park Service will ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites, or historic properties. Contractors and subcontractors will also be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction.
- To minimize the potential for impacts to park staff, variations on construction timing may be considered. One option includes conducting the majority of the work in the off-season (winter) or shoulder seasons. Another option includes implementing daily construction activity curfews such as not operating construction equipment between the hours of 6 PM to 7 AM in summer (May –

September), and 6 PM to 8 AM in the winter (October – April). The National Park Service will determine this in consultation with the contractor.

- Construction workers and supervisors will be informed about the special sensitivity of Monument's values, regulations, and appropriate housekeeping.
- According to *2001 Management Policies*, the National Park Service will strive to construct facilities with sustainable designs and systems to minimize potential environmental impacts. Development will not compete with or dominate Monument's features, or interfere with natural processes, such as the seasonal migration of wildlife or hydrologic activity associated with wetlands. To the extent possible, the design and management of facilities will emphasize environmental sensitivity in construction, use of nontoxic materials, resource conservation, and recycling. The National Park Service also reduces energy costs, eliminates waste, and conserves energy resources by using energy-efficient and cost-effective technology. Energy efficiency is incorporated into the decision-making process during the design and acquisition of buildings, facilities, and transportation systems that emphasize the use of renewable energy sources.



Proposed Headquarters and Maintenance Facility Improvements

NOTE: Not Drawn to Scale. Building Locations Approximate

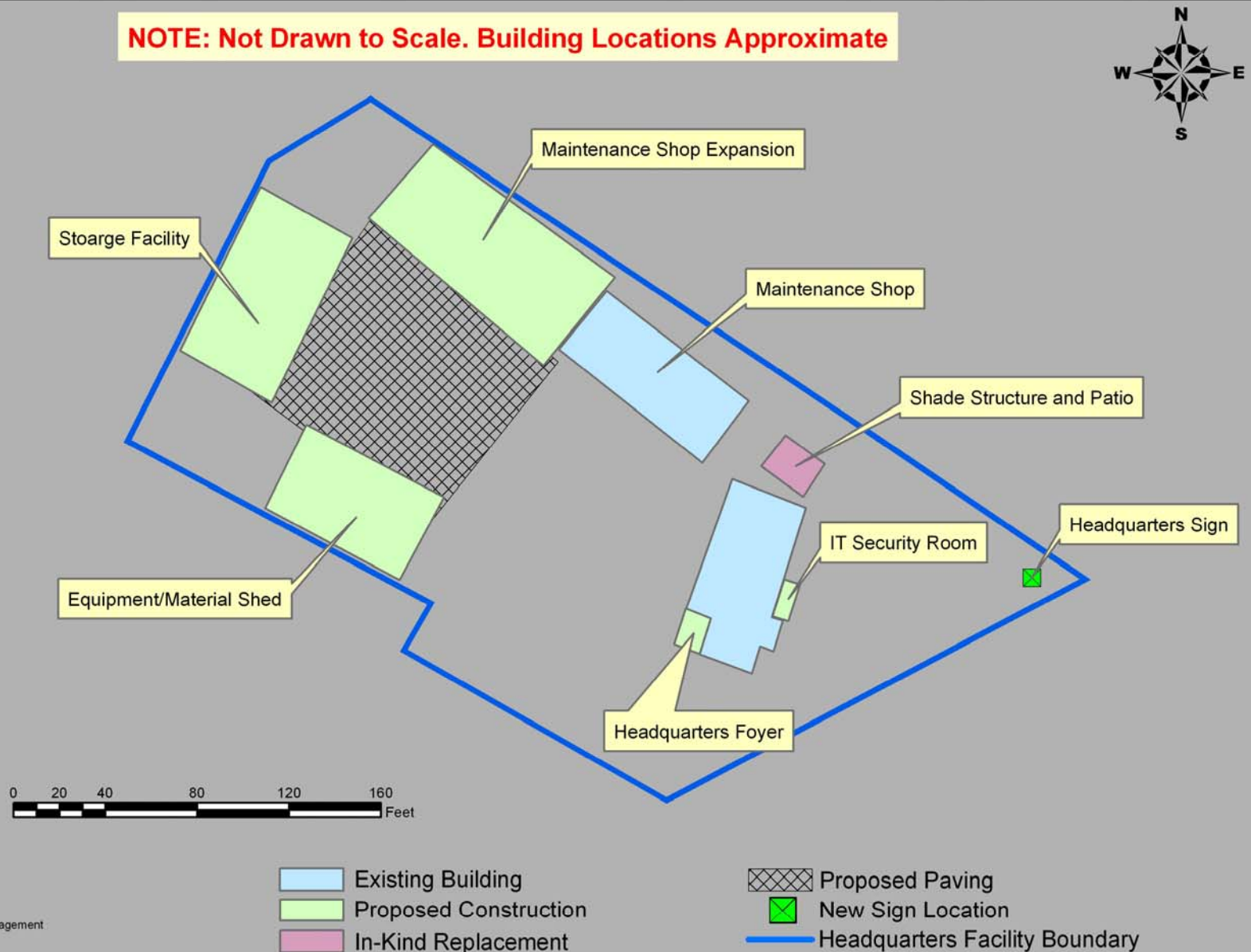


Figure 3 Diagram of Proposed Project Locations

Alternative Summaries

Table 1 summarizes the major components of Alternatives A and B, and compares the ability of these alternatives to meet the project objectives (the objectives for this project are identified in the *Purpose and Need* chapter). As shown in the following table, Alternative B meets each of the objectives identified for this project, while the No Action Alternative does not address all of the objectives.

Table 1 – Alternatives Summary and Extent to Which Each Alternative Meets Project Objectives

Alternative A – No Action	Alternative B – Proposed Improvement Projects Completed
<p>The proposed facility improvements would not be completed. A storage facility in maintenance boneyard would not be constructed; an equipment/material shed in maintenance boneyard would not be constructed; the maintenance shop would not be constructed; the boneyard would not be paved; an information technology room would not be constructed; a shade structure and concrete patio would not be replaced; a sewer line would not be replaced; a new headquarters sign would not be installed; landscaping, including a drip irrigation system surrounding headquarters would not be installed; shelves, cabinets, and workbench in the maintenance shop would not be built; a rain collection system with gutters/downspouts would not be installed; the headquarters conference room would not be rehabilitated; office space in headquarters would not be rehabilitated; a foyer to the headquarters building would not be constructed; parking bollards would not be installed; and grading dirt/stone around headquarters building would not be completed to improve drainage. The existing facilities would continue to be used for administrative and maintenance functions with no improvements to any of the facilities. Issues of employee health and safety, IT security, non-conforming signage, storage and property protection would continue unresolved.</p>	<p>The proposed facility improvements would be completed including construction of a storage facility in maintenance boneyard; construction of an equipment/material shed in maintenance boneyard; expansion of the maintenance shop; paving of the boneyard; construction of an information technology room; in-kind replacement of a shade structure and concrete patio; sewer line replacement; installation of new headquarters sign; landscaping, including a drip irrigation system surrounding headquarters; building shelves, cabinets, and workbench in the maintenance shop; rain collection system with gutters/downspouts; rehab of headquarters conference room; rehab of office space in headquarters; construction of a foyer to headquarters building; installation of parking bollards around compressed natural gas fuel pump; and grading dirt/stone from headquarters building to improve drainage. Issues of employee health and safety, NPS property protection and storage, IT security, non-conforming signage and storage and property protection would be resolved and park operations would be improved.</p>
Meets Project Objectives?	Meets Project Objectives?
<p>No. Continuing the existing conditions would not provide for an employee work area that meets current health and safety recommendations, NPS property would continue to be subjected to the elements, storage would be inadequate for park needs, IT security issues.</p>	<p>Yes. Completing the proposed projects would provide for an employee work area that meets current health and safety recommendations, protects NPS property, resolves storage deficiencies and addresses IT security. This alternative minimizes environmental impacts to the extent possible, and will not result in impairment to any park resources.</p>

Table 2 summarizes the anticipated environmental impacts for Alternatives A and B. Only those impact topics that have been carried forward for further analysis are included in this table. The *Environmental Consequences* chapter provides a more detailed explanation of these impacts.

Table 2 – Environmental Impact Summary by Alternative

Impact Topic	Alternative A – No Action	Alternative B – Preferred Alternative
Park Operations	No disturbance of park operations.	Moderate, temporary disruptions in park operations as projects are completed.

Identification of the Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the Council on Environmental Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101:

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative A, No Action, meets four of the above six evaluation factors because it retains facilities that do not meet OSHA health and safety standards in terms of employee safety and that do not take full advantage of the recycling of depletable resources. While it minimizes potential impacts to significant park resources, it does not achieve a balance between these resources and the health and safety of Monument staff. This alternative also does not meet the criteria for improving renewable resources because the infrastructure is not in place to make maximum use of renewable resources.

Alternative B is the environmentally preferred alternative because it best addresses these six evaluation factors. Alternative B, *Proposed Improvement Projects Completed*, will provide a working environment for Monument staff that meets health and safety recommendations, while minimizing environmental impacts to the extent possible. The improvements will be completed to maximize the use of recycling and to get maximum benefit from renewable resources.

No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. Because it meets the Purpose and Need for the project, the project objectives, and is the environmentally preferred alternative, Alternative B is also recommended as the National Park Service Preferred Alternative. For the remainder of the document, Alternative B will be referred to as the Preferred Alternative.

ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the potential environmental consequences, or impacts, that will occur as a result of implementing the proposed project. The only topic analyzed in this chapter is park operations. Direct, indirect, and cumulative effects, as well as impairment are analyzed for the topic carried forward. Potential impacts are described in terms of type, context, duration, and intensity. General definitions are defined as follows, while more specific impact thresholds are given for each resource at the beginning of each resource section.

- **Type** describes the classification of the impact as either beneficial or adverse, direct or indirect:
 - Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
 - Adverse: A change that moves the resource away from a desired condition or detracts from its appearance or condition.
 - Direct: An effect that is caused by an action and occurs in the same time and place.
 - Indirect: An effect that is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable.
- **Context** describes the area or location in which the impact will occur. Are the effects site-specific, local, regional, or even broader?
- **Duration** describes the length of time an effect will occur, either short-term or long-term:
 - Short-term impacts generally last only during construction, and the resources resume their pre-construction conditions following construction.
 - Long-term impacts last beyond the construction period, and the resources may not resume their pre-construction conditions for a longer period of time following construction.
- **Intensity** describes the degree, level, or strength of an impact. For this analysis, intensity has been categorized into negligible, minor, moderate, and major. Because definitions of intensity vary by resource topic, intensity definitions are provided separately for each impact topic analyzed in this Environmental Assessment.

Cumulative Effects: The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the No Action and Preferred Alternatives.

Cumulative impacts were determined by combining the impacts of the Preferred Alternative with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Petroglyph National Monument and, if applicable, the surrounding region. The geographic scope for this analysis includes elements mostly within the Monument's boundaries, while the temporal scope includes projects within a range of approximately ten years. Given this, the following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

- **Construction of New Housing Adjacent to the Monument, 2004 -- 2005:** Several housing projects are currently being constructed adjacent to the Monument within the general area of the headquarters and maintenance facilities. They are single family housing at a density of 8 -- 10 dwelling units per acre.
- **Upgrade of Utilities through Monument Easement, 2004 -- 2005:** A utility easement for water, sanitary sewer and overhead electricity immediately adjacent to the headquarters and maintenance facilities exists. Due to the recent development of lands on the west side of the Monument, the capacity of the utilities was increased. This included the replacement and upsizing of pipes for the water and sanitary sewer and replacement of electrical poles and addition of electrical conductors (wires) for increased capacity. Given the rate of new development, additional upgrades could be necessary within the next 10 years.
- **Paving of the Headquarters Parking Lot 2005:** The parking lot for the headquarters was paved as part of a larger contract to pave the parking lot at the Monument's Visitor Center. The paving did not exceed the footprint of the existing parking lot.
- **Headquarters IT Fiber Optic Replacement, 2005:** In-kind replacement of fiber-optic line from headquarters building to maintenance building. Minimal ground disturbance.
- **Development of Fire Management Plan, 2005:** The Monument's Fire Management Plan was completed in June 2005. The plan calls for the continued total suppression of wildfire due to the close proximity of the Monument to the City of Albuquerque. Site specific, mechanical fuel reduction projects may also be undertaken as part of the fire management program.
- **Construction of Unser Boulevard through the Monument, 2005:** Unser Boulevard runs north-south adjacent to the Monument until it reaches the area of the headquarters and maintenance facilities, where it turns west and crosses through the Monument. Road construction began in 2005 by the City of Albuquerque, who possessed an easement through the Monument for the road. The road is a major arterial that is expected to handle more than 50,000 vehicles per day. It is a four-lane divided highway with limited access points. Project completion is expected by the end of 2005 or early 2006.
- **Planning for Visitor Use Plan, 2005 -- 2007:** The Monument began gathering information for preparation of a Visitor Use Plan. Planning is currently in the early stages.
- **Planning for new Visitor Center, Future:** The Monument has a line-item construction project request in place for a new Visitor Center, but it is currently a low priority and no action is anticipated within the next 5 -- 10 years. Improvements to the headquarters and maintenance facilities will be incorporated into the over all planning for the Visitor Center to ensure that all functions and future Monument needs are addressed.

Impairment: National Park Service's Management Policies, 2001 require analysis of potential effects to determine whether or not actions would impair park resources (NPS 2000b). The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values.

Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

1. necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
2. key to the natural or cultural integrity of the park; or
3. Identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. A determination on impairment is made in the Conclusion section for each of the resource topics carried forward in this chapter.

Park Operations

Intensity Level Definitions

Implementation of a project can effect the operations of a park such as the number of employees needed; the type of duties that need to be conducted; when/who will conduct these duties; how activities should be conducted; and administrative procedures. The methodology used to assess potential changes to park operations are defined as follows:

- Negligible:** Park operations would not be affected or the effect would be at or below the lower levels of detection, and would not have an appreciable effect on park operations.
- Minor:** The effect would be detectable, but would be of a magnitude that would not have an appreciable adverse or beneficial effect on park operations. If mitigation were needed to offset adverse effects, it would be relatively simple and successful.
- Moderate:** The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations in a manner noticeable to staff and the public. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.
- Major:** The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations in a manner noticeable to staff and the public, and be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, could be expensive, and their success could not be guaranteed.

Impacts of Alternative A (No Action Alternative)

The No Action Alternative will not measurably change current park operations at Petroglyph National Monument. The existing facilities will continue to function as such. A storage facility in maintenance boneyard would not be constructed, therefore leaving storage issues unresolved. An equipment/material shed in maintenance boneyard would not be constructed and would result in the increased maintenance

and replacement of NPS property and vehicles. The expansion of the maintenance shop would not be constructed resulting in a lower number of workers to maintain the Monuments assets and resources. The boneyard would not be paved leaving maintenance and dust issues unresolved. An information technology room would not be constructed, which would put the Monument's computers and phone lines at risk. The shade structure and concrete patio would not be replaced resulting either in the use of a sub-standard structure or complete closing of the structure, such that employees would no longer have access to the area. The sewer line into headquarters would not be replaced possibly increasing the costs from an emergency repair. The new headquarters sign would not be installed, limiting the ability of residents, businesses and the public from locating the headquarters building for legitimate government business. Landscaping, including a drip irrigation system and rain collection system surrounding headquarters would not be installed resulting in the continued blowing of sand and possibly the death of existing landscaping. Shelves, cabinets, and workbench in the maintenance shop would not be built, which would limit the number of employees and the efficiency of the workers in that building. The headquarters conference room and offices would not be rehabilitated limiting the use and efficiency of the existing space. A foyer to the headquarters building would not be constructed resulting in impacts to the workers in the building and increasing heating and cooling costs. Parking bollards would not be installed, in particular around a compressed natural gas fueling station, which is a safety hazard; and grading dirt/stone around headquarters building would not be completed to improve drainage, possibly resulting in damage to the structure. Employees would continue to work in the facilities as before and no disruption of park operations would take place. The existing facilities contain OSHA safety violations for physical facilities and employee health and safety, which could potentially endanger employees. Without adequate storage and proper protection for NPS property, this alternative could have moderate adverse impact on park operations.

Cumulative Effects: Any project that occurs in the Monument has an effect on park operations; therefore, most of the actions listed in the cumulative scenario in the introduction of this chapter will have some degree of effect on employees and park operations. Planning projects such as the development of a Fire Management Plan, development of a Visitor Use Plan and Visitor Center Planning typically involve the majority of Monument staff to contribute their expertise and assistance. Under this alternative, park operations associated with the current and future use of the existing facilities are not expected to change; therefore, park operations would not appreciably change when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: The No Action Alternative will not measurably change current park operations because the existing facilities will continue to function as such. The impact; however, of the health and safety issues will have a moderate adverse effect on park operations and employee health and safety. Cumulatively, these effects will have a minor impact to park operations when considered with other past, present, and reasonably foreseeable future actions.

Impacts of Alternative B (Preferred Alternative)

The completion of the proposed improvement projects under the Preferred Alternative will provide a working environment for Monument employees that meet current health and safety standards. Park storage and NPS property protection issues will be resolved and an over-all improvement to park operations will result. The construction of a storage facility and equipment/material shed (including utility installation and upgrades of existing utilities) in the maintenance boneyard would be completed and would have a minor beneficial impact by resolving park storage problems and protecting NPS equipment. The expansion of the maintenance shop including building shelves, cabinets and workbenches would be completed and would have a minor beneficial impact by providing additional safe work space for employees. Paving of the boneyard would reduce the maintenance on the lot and would reduce the amount of dust resulting in a minor beneficial impact to park operations. The installation of parking bollards around the natural gas fueling station would eliminate a safety hazard, resulting in a minor beneficial impact to park operations. Grading the landscaping around the buildings and installing landscaping, drip irrigation and a rain collection system would have a minor beneficial impact to park operations by reducing maintenance on the area surrounding the buildings. The construction of an information technology room would have a minor beneficial impact by resolving security concerns for the

Monument's computer and phone systems. The foyer at the headquarters building would have a minor beneficial impact to park operations as it would reduce heating and cooling costs. The in-kind replacement of a shade structure and concrete patio would have a negligible impact to park operations since the structure already exists, it is simply being replaced. The new headquarters sign would be installed which would make the headquarters more visible to the public and would meet NPS sign standards resulting in a minor beneficial impact. The rehab of the headquarters conference room and office space would provide employees more efficient workspace, resulting in a minor beneficial impact. These impacts will cumulatively have a moderate beneficial effect on the health and safety of employees and the efficiency of park operations.

During construction, employee workspace, access and parking may need to be altered. These actions should not disrupt employee efficiency. The typical work load for employees will also be increased during implementation of these projects from the need to finalize project plans, hire contractors, and monitor construction. Once the proposed projects have been completed, normal work loads and patterns should return. Construction noise and dust may also adversely affect the Monument's employees, but these inconveniences will be temporary, lasting only as long as construction.

Cumulative Effects: As described under Alternative A, any project that occurs in the Monument has an effect on park operations; therefore, most of the actions listed in the cumulative scenario in the introduction of this chapter will have some degree of effect on employees and park operations. Planning projects such as the development of a Fire Management Plan, development of a Visitor Use Plan and Visitor Center Planning typically involve the majority of Monument staff to contribute their expertise and assistance. Park operations associated with the current and future use of the facilities will be improved to a moderate degree, which will cumulatively have a moderate beneficial impact to park operations when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: Completion of the Proposed Improvement Projects under the Preferred Alternative will have a moderate beneficial benefit on employees at the Monument because the projects will provide a safer and healthier work environment, as well as resolve general park operational issues. Adverse effects to park operations will occur during construction which will require employees to move offices and manage the construction of the project. Cumulatively, the improvements associated with this alternative will have a moderate beneficial effect on park operations when considered with other past, present, and reasonably foreseeable future actions.

CONSULTATION and COORDINATION

External Scoping

External (public) scoping was conducted to inform various agencies and the public about the proposal to complete the improvement projects at Petroglyph National Monument and to generate input on the preparation of this Environmental Assessment. This effort was initiated with the distribution of a press release to the local news organizations indicating the Monument's intention to prepare an Environmental Assessment on this topic. The public was given 30 days to comment on the proposed projects beginning 22 July 2005. No public responses, calls or requests for additional information were received during the comment period.

In addition to the aforementioned public entities, the following agencies and Native American tribes were sent scoping information or were contacted for information regarding the project:

Federal Agencies

U.S. Department of the Interior – Fish and Wildlife Service

State Agencies

New Mexico State Historic Preservation Office

Affiliated Native American Groups

Jicarilla Apache Tribe	Sandia Pueblo	Taos Pueblo	Navajo Nation
Mescalero Apache Tribe	San Felipe Pueblo	Tesuque Pueblo	Navajo Nation Council
Acoma Pueblo	San Ildefonso Pueblo	Zia Pueblo	All Indian Pueblo Council
Cochiti Pueblo	San Juan Pueblo	Laguna Pueblo	Five Sandoval Indian Pueblos
Isleta Pueblo	Santa Ana Pueblo	Pojoaque Pueblo	Eight Northern Indian Pueblos
Jemez Pueblo	Santa Clara Pueblo	Picuris Pueblo	Hopi Tribe
Nambe Pueblo	Santo Domingo Pueblo	Zuni Pueblo	

Internal Scoping

Internal scoping was conducted by an interdisciplinary team of professionals from Petroglyph National Monument. Interdisciplinary team members met on 20 July 2005 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. The team also gathered background information and discussed public outreach for the project. Over the course of the project, team members have conducted individual site visits to view and evaluate the proposed construction site. The results of the July 2005 meeting are documented in this Environmental Assessment.

Environmental Assessment Review and List of Recipients

The Environmental Assessment will be released for public review in September 2005. To inform the public of the availability of the Environmental Assessment, the National Park Service will publish and distribute a letter or press release to various agencies, tribes, and members of the public on the National Monument's mailing list, as well as place an ad in the local newspaper. Copies of the Environmental Assessment will be provided to interested individuals, upon request. Copies of the document will also be available for review at the Monument's visitor center and on the Internet at <http://parkplanning.nps.gov/>.

The Environmental Assessment is subject to a 30-day public comment period ending **October 21, 2005**. During this time, the public is encouraged to submit their written comments to the National Park Service address provided at the beginning of this document or through the above listed website. Following the close of the comment period, all public comments will be reviewed and analyzed, prior to the release of a decision document. The National Park Service will issue responses to substantive comments received during the public comment period, and will make appropriate changes to the Environmental Assessment, as needed.

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REFERENCES

- USDA 1977 Hacker et al. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico.
- NPS 1996 General Management Plan and Development Concept Plan, Petroglyph National Monument.
- NPS 1999 Brandi, J.M., E.J. Brunnemann, M.F. Medrano, M.F. Schmader. Results of the 1992 - 1994 NASI Archeological Survey for Petroglyph National Monument.
- NPS 1999 Resource Management Plan, Petroglyph National Monument.
- NPS 2000 *Management Policies*, National Park Service, U.S. Department of the Interior, December 2000.

APPENDICES

Appendix A

Listed and Sensitive Species in Bernalillo County

Total Number of Species: 17

<u>Common Name</u>	<u>Scientific Name</u>	<u>Group</u>	<u>Status</u>
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Bird	Candidate
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Bird	Endangered
Rio Grande silvery minnow	<i>Hybognathus amarus</i>	Fish	Endangered
Black-footed ferret	<i>Mustela nigripes</i>	Mammal	Endangered
Bald eagle	<i>Haliaeetus leucocephalus</i>	Bird	Threatened
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Bird	Threatened

Species of Concern

<u>Common Name</u>	<u>Scientific Name</u>	<u>Group</u>	<u>Status</u>
Millipede	<i>Comanchelus chihuanus</i>	Arthropod - Invertebrate	Species of Concern
American peregrine falcon	<i>Falco peregrinus anatum</i>	Bird	Species of Concern
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>	Bird	Species of Concern
Baird's sparrow	<i>Ammodramus bairdii</i>	Bird	Species of Concern
Black tern	<i>Chlidonias niger</i>	Bird	Species of Concern
Mountain plover	<i>Charadrius montanus</i>	Bird	Species of Concern
Northern goshawk	<i>Accipiter gentilis</i>	Bird	Species of Concern
Western burrowing owl	<i>Athene cunicularia hypugea</i>	Bird	Species of Concern
New Mexican meadow jumping mouse	<i>Zapus hudsonius luteus</i>	Mammal	Species of Concern
Pecos River muskrat	<i>Ondatra zibethicus ripensis</i>	Mammal	Species of Concern
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	Mammal	Species of Concern