



Foundation Document Bandelier National Monument

New Mexico

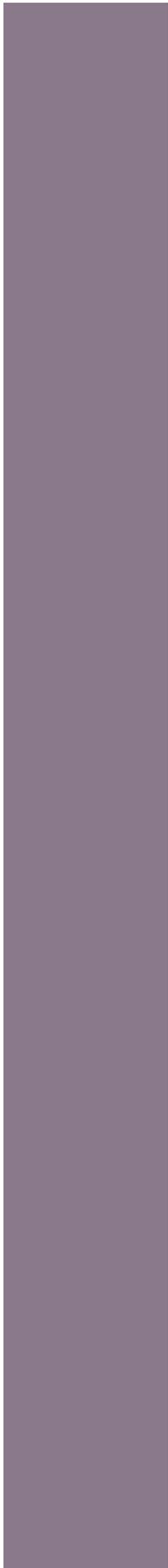
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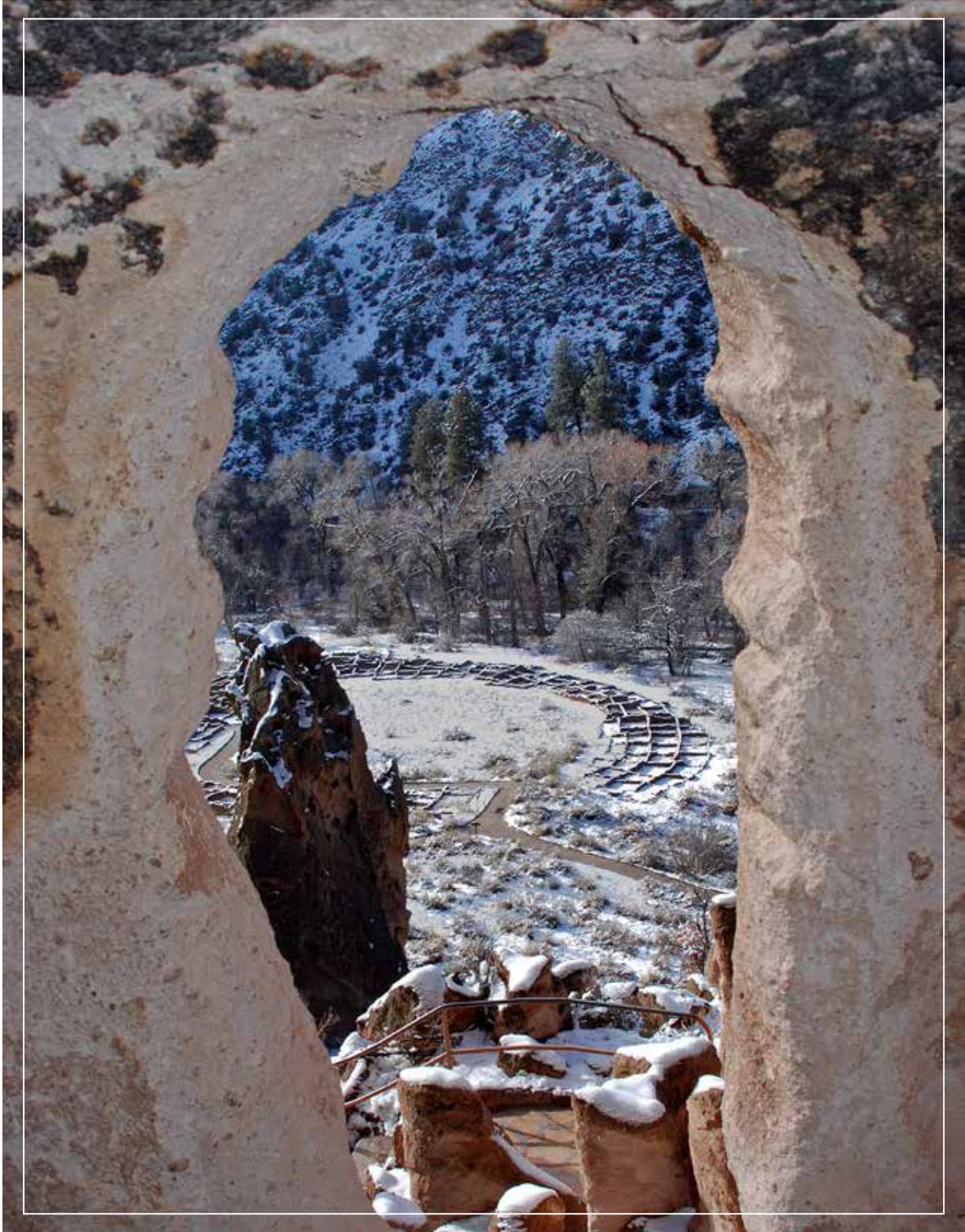




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Mission of the National Park Service

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.



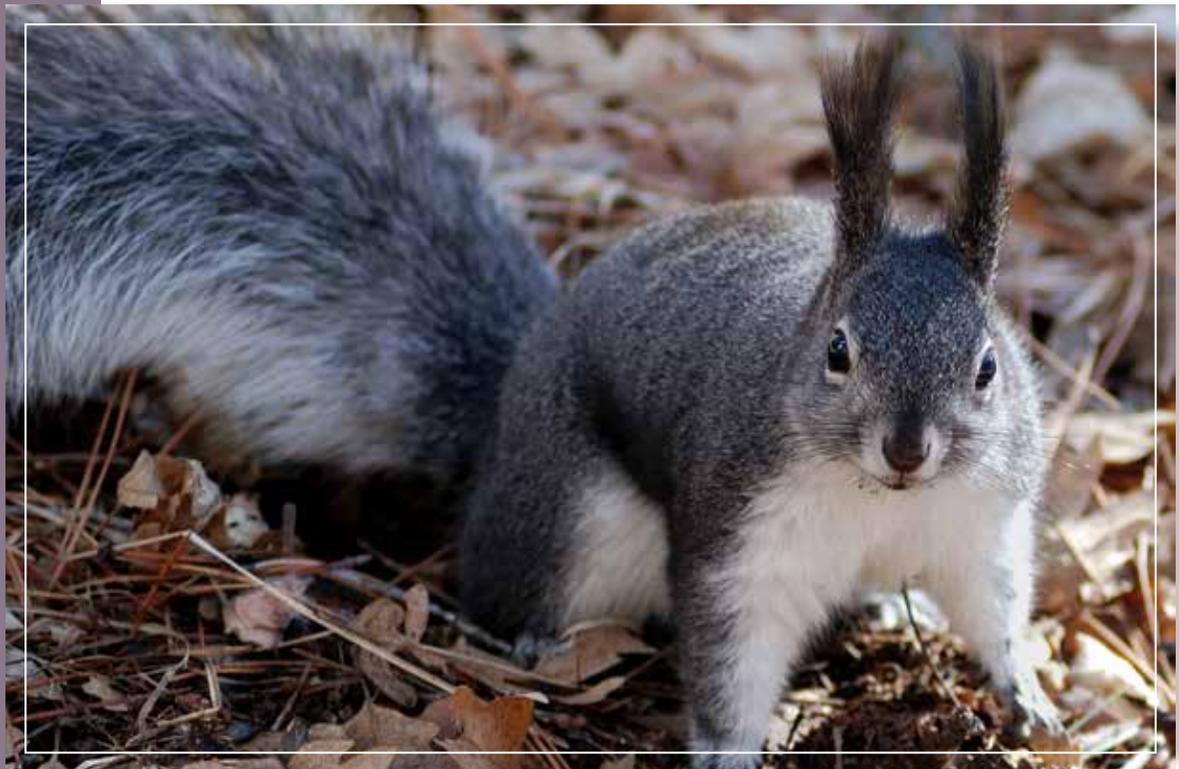
The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological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

Located in Los Alamos County, New Mexico, Bandelier National Monument contains one of the largest concentrations of pre-Hispanic archeological sites in the American Southwest. Within the monument are more than 3,000 sites, most dating from AD 1100 to 1550 and associated with the Ancestral Pueblo period. These sites consist of large villages containing up to 400 rooms, hundreds of small farming hamlets, cliff houses, and scatters of artifacts. Major sites include Frijolito, Yapashi, Tyuonyi, Long House, San Miguel, Painted Cave, and Tsankawi. The monument and the surrounding area also contain a high concentration of a unique architectural form called *cavates* (cliff houses that have been carved out of the soft volcanic tuff bedrock).

Adolph F. Bandelier, a pioneer in the study of Southwest history and ethnology, visited Frijoles Canyon in October 1880 and was the first person to record the existence of many of the major archeological sites in the area. He was guided by inhabitants of Cochiti Pueblo, who have direct ancestral ties to the sites in Frijoles Canyon. Bandelier's scientific and popular writings brought the area to public attention. In the late 1890s the archeological remains in the region were first proposed for protected status under the names of "Pajarito National Park or Cliff Cities National Park." This park proposal, spearheaded by Edgar L. Hewett, included a much larger tract than the current monument boundaries. To further his proposal, Hewett assisted in the development of the Antiquities Act, which became law in 1906, permitting the president to create national monuments "to preserve historic and prehistoric structures and objects of historic or scientific interest" (Antiquities Act, section 2). Bandelier National Monument was established by presidential proclamation on February 11, 1916, named after Adolph Bandelier, who died in 1914.

Bandelier's original 22,352 acres were administered by the US Forest Service from 1916 until the National Park Service assumed responsibility in 1932. Over time, lands have been added to and removed from the monument. The monument's current boundaries include approximately 32,831 acres. In 1976, Congress designated 23,267 acres of the monument as wilderness. (For more details on the wilderness area, see appendix D.)

In May 1987, the Bandelier Civilian Conservation Corps Historic District of 32 stone buildings was designated as a national historic landmark. This historic district harmonizes with its natural and cultural setting and helps define the mood of the headquarters and main visitor center area in Frijoles Canyon.



Bandelier National Monument is within the Pajarito Plateau. This large geographic feature is composed of volcanic ash ejected from the Valles Caldera in a series of eruptions, the last occurring approximately one million years ago. After the ash and flows of the last eruption had cooled and coalesced, the forces of erosion carved the plateau into a series of deep canyons that reach from the edge of the Valles Caldera to the Rio Grande. Of these, the Capulin, Alamo, Frijoles, and other smaller canyons are within the monument boundaries. The Rio Grande, a major southwestern river, marks the monument's southeastern boundary. The monument extends from the Rio Grande at 5,300 feet to the summit of Cerro Grande at 10,200 feet on the caldera rim. Major vegetation types vary with increasing elevation, including juniper savannas, piñon-juniper woodlands, canyon-wall shrublands, ponderosa pine forests, riparian forests, mixed conifer forests, and montane grasslands.

The 799-acre Tsankawi unit of Bandelier National Monument is 12 miles from the main park. It includes more than 150 archeological sites, including cavates, petroglyphs, and the Ancestral Pueblo village of Tsankawi on Pajarito Mesa. The Tsankawi unit is of critical importance to the cultural heritage, beliefs, customs, practices, and history of nearby San Ildefonso Pueblo—the direct descendants of the people who inhabited the Tsankawi unit.

In 2010, prior to the Las Conchas Fire, more than 230,000 people visited Bandelier National Monument, primarily from March through September. Popular activities include hiking, picnicking, photography, bird-watching, backpacking, and camping. Most visitors are day users and spend their time visiting archeological sites in Frijoles Canyon. Popular trails and destinations include the Main Loop Trail to Tyuonyi and the cliff dwellings, Alcove House, and the Falls Trail. Fewer people venture into Bandelier's rugged wilderness to hike and backpack.

Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. President Woodrow Wilson established Bandelier National Monument by presidential proclamation on February 11, 1916 (see appendix B for enabling presidential proclamation). The purpose statement lays the foundation for understanding what is most important about the monument.

The purpose of BANDELIER NATIONAL MONUMENT is to protect, preserve, and interpret an outstanding portion of the Pajarito Plateau, including one of the largest concentrations of Ancestral Pueblo archeological sites in the American Southwest. The monument provides opportunities for people to connect with and enjoy a diversity of cultural and natural resources, striking scenery, wildlife habitats, remnants of a volcanic landscape, and wilderness.



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 Bandelier 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 Bandelier National Monument. (Please note that the sequence of the statements does not reflect the level of significance.)

- **Archeological Resources.** Bandelier National Monument preserves a high density and variety of archeological resources from the Ancestral Pueblo period, including cavates carved into cliffs of volcanic tuff. Bandelier is one of the few places in the world where these types of resources are found.
- **Cultural Connections.** Archeological sites and natural features of Bandelier National Monument remain an integral component of pueblo culture and provide a context for continuing traditional practices. The monument plays an important role for the traditionally associated pueblos, providing a direct cultural connection to resources, stories, and oral histories.
- **Study and Preservation of Culture.** Early scientific research of Ancestral Pueblo sites at Bandelier National Monument was fundamental to the development of American archeology, anthropology, and ethnography, and contributed to cultural resource preservation in the American Southwest. Ongoing research continues to expand our knowledge in these fields.
- **Diverse Natural Systems.** The dynamic natural systems associated with 5,000 feet of elevation change and dissected volcanic landforms, including mesas and canyons, support diverse vegetation, wildlife, and biotic communities. This area, stretching from the Valles Caldera rim to the Rio Grande, is relatively intact compared to the surrounding landscape.
- **Wilderness.** The Bandelier Wilderness and backcountry provide exceptional opportunities for visitors to access, recreate in, and experience expansive views, clean air, dark night skies, quiet, and solitude, all within an environment rich in archeological sites, which is unique among NPS cultural parks.
- **Civilian Conservation Corps National Historic Landmark District.** The Civilian Conservation Corps (CCC) National Historic Landmark District at Bandelier is the largest collection of CCC structures and furnishings in the national park system. The district is an outstanding example of design and workmanship from the New Deal era, the greatest campaign of public works in our nation's history.



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 Bandelier National Monument:

- **Archeological Resources.** Bandelier's human history extends back for more than 10,000 years. One of the primary reasons the monument was established was to protect and preserve more than 3,000 archeological sites, including Archaic and Ancestral Pueblo sites—one of the largest such concentrations in the American Southwest. These sites are still highly valued and are important for the modern pueblo people, as well as for researchers and visitors.
- **Continuing Cultural Connections.** Affiliated pueblo Indian groups still have strong traditional associations and ties to Bandelier National Monument's landscape. Their cultures, lifestyles, religious beliefs, and traditions continue to be shaped by their ties to the natural and cultural resources of the monument.
- **Science and Research.** The presidential proclamation establishing Bandelier National Monument noted it to be of unusual ethnologic and scientific interest. Since before it was established as a monument, Bandelier's special cultural and natural resources have provided—and continue to provide—many opportunities for scientific research. The early work of researchers here gave rise to modern American archeology.
- **Natural Landscape.** Although this area has been occupied by people for centuries, the canyons and mesas of Bandelier are still relatively natural, supporting diverse vegetative communities, a variety of wildlife species, several watersheds, and volcanic tuff—all of which have enabled people to find shelter, food, and water.
- **Wilderness.** Some 70% of Bandelier National Monument is designated wilderness. Wilderness forms the backdrop for the monument, protecting much of the monument's natural and cultural resources, including the area's dark night skies, Class I air quality, and scenic views and vistas. It provides outstanding opportunities for visitors to pursue appropriate recreational activities. Wilderness also affects how much of the monument is managed and provides opportunities for scientific research.
- **Museum Collection and Archives.** With more than 600,000 objects, including archeological, ethnographic, archival, and plant and animal specimens, the museum collections are of special importance to researchers, historians, pueblo Indian groups, educators, and the public. Because of recent donations and additions of artwork, pottery, and other pieces from contemporary pueblo people, this is a "living" collection that goes beyond the addition of typical archival material.

Other Important Resources and Values

Bandelier 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 Bandelier National Monument:

- **Recreational Values / Visitor Experiences.** Bandelier offers many recreational opportunities and experiences for people to enjoy this area, from scenic driving to backpacking to snowshoeing. Visitors have the opportunity to see a variety of landforms, to experience natural quiet and dark night skies and wilderness, and to experience ancestral pueblo life in the original context.
- **New Deal Era Legacy / Civilian Conservation Corps National Historic Landmark District.** Bandelier National Monument contains the largest intact group of CCC structures in the national park system. The structures and associated furniture and tinwork are prime examples of CCC work in the Southwest, exemplary expressions of the Pueblo Revival and Architecture styles.
- **Other Cultural Resources.** The monument includes several other resources significant at both state and local levels, such as early native arts revival efforts, homesteading, and historic roadways and trails. There are features of the landscape also associated with the Manhattan Project, the Los Alamos community, and US Forest Service and permit holders’ occupation of the landscape. (This OIRV includes resources significant at the state level [such as Duchess Castle], at the local level [homesteading by Freys, Abbots, and a whole series of settlements within park lands], and cultural landscapes [identified ones are Frijoles Canyon, Bandelier CCC, Ancestral Pueblo {has not been inventoried}, and Tsankawi].)



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 Bandelier National Monument:

- **Pueblo Timeline.** The long, rich, and continuing human history of the pueblo people in the Bandelier area provides opportunities to explore how cultures and individuals shape and are shaped by the land.
- **Ecosystems.** The unusually intact and diverse ecosystem of the Bandelier area offers outstanding opportunities to explore natural processes and the value of restoring and maintaining healthy, functioning systems.
- **Civilian Conservation Corps.** The high concentration and integrity of CCC structures and furnishings at Bandelier National Monument foster appreciation for both the hard work and talent of those involved and the importance of the 1930s American public works programs as a response to national environmental and economic crisis.
- **Recreational Opportunities.** The Bandelier landscape provides unique opportunities to enjoy its cultural, natural, aesthetic, and wilderness values in its wilderness, backcountry, and frontcountry with a range of recreational opportunities such as solitude, animal and plant viewing, photography, hiking, camping, backpacking, horseback riding, snow-shoeing, cross-country skiing, biking, climbing, trail running, exploration, and bird-watching.

Subthemes

The Bandelier Wilderness, rich with evidence of long human habitation yet a seemingly timeless natural landscape, offers rare opportunities for exploration, inspiration, solitude, and reflection on how “wildness” relates to human use of land.

- The early and ongoing work of both natural and cultural resource scientists at what is now Bandelier National Monument has reinforced the importance of conducting long-term, landscape-wide research and enables an in-depth exploration of how people learn about and learn from the past.
- The early work of preeminent researchers at what is now Bandelier National Monument gave rise to modern American archeology, especially the interdisciplinary approach to studying archeological resources.
- The geologic resources of the Jemez Volcanic Field—including the Pajarito Fault Zone, Pajarito Plateau, Bandelier tuff, and the Valles Caldera—constitute a landscape of superlative beauty and offer a laboratory and classroom for investigating some of the most powerful forces that shape our world.

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 Bandelier National Monument.

Special Mandates

- National Wilderness Preservation (1976)

In 1976, Public Law 94-567 designated 23,267 acres of the monument as wilderness. This portion of the monument is subject to the requirements of the Wilderness Act (Public Law 88-577). The National Park Service is required to manage Bandelier Wilderness “for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness” and to protect the area and its wilderness character (section 2(a)). The act mandates what uses can occur and are prohibited, including recreational uses, commercial uses, and developments.

- Clean Air Act: Class 1 Area Determination

The Bandelier Wilderness is designated as a Class I area under the Clean Air Act. In the Clean Air Act, Congress set a national goal “to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic or historic value” (42 United States Code [USC] 7470[2]). The Clean Air Act bestows an “affirmative responsibility” on federal land managers to protect Class I areas from the adverse effects of air pollution. In section 169A, “Congress hereby declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas in which impairment results from manmade air pollution.”

Administrative Commitments

The National Park Service and Bandelier National Monument have entered into several commitments that include obligations from prior existing properties and rights; agreements to facilitate the operation of the park, protect resources, and enhance visitor services; and contracts, authorizations, and permits for commercial visitor services and special park uses in the monument. These commitments have a significant influence on monument management and the terms and conditions of the authorizations are legally binding. They are summarized in the following list and explained in detail in appendix C.

- agreements with affiliated pueblos
- agreements for fire management, public safety, and potable water with Los Alamos County and other entities
- cooperating agreement with the University of New Mexico, New Mexico Natural Heritage Program
- agreement for shuttle services with Atomic City Transit
- concession contracts with the Bandelier Trading Post for sale of food, beverages, and other retail items
- commercial use authorizations for commercial activities including, but not limited to: interpretive services, guided hiking, shuttles, painting, and photography



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. Please see appendix A for the analysis of fundamental and other important resources and values for Bandelier National Monument.



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 which 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 Bandelier National Monument and the associated planning and data needs to address them:

Climate Change.

The Southwest, including Bandelier National Monument, is one of the areas being most affected by climate change. The monument has experienced drought, fires, floods, and soil erosion, all of which is affecting monument FRVs (archeological resources, natural landscapes) and other cultural resources. Drought in the 1950s caused extensive mortality of ponderosa pine at Bandelier and shifted piñon-juniper woodland upslope into ponderosa pine forest. Drought and bark beetle infestations in the early 2000s caused extensive dieback of piñon pine at Bandelier. These and numerous other cases of tree dieback around the world are consistent with climate change. No regeneration of vegetation is resulting in more exposed soil, more erosion, and more impacts on archeological sites. The average annual temperature for the region that includes Bandelier is projected to increase 3°F to 5°F by 2050 and 5°F to 9°F by 2100. Under continued warming, forest drought stress could continue to cause substantial tree dieback and possible conversion of some forest to grassland. Under some modeled climate change scenarios, fire frequencies could increase up to 25% by 2100. Past warming has reduced snowpack widely, which may continue to reduce summer streamflow and water supplies. Additional climate-related impacts on natural and cultural resources, and park operations (e.g., potable water supply) are likely to occur in the future, along with changes in park visitation and associated needs.

Data Needs:

- updated vegetation maps and inventory/resampling of vegetation
- additional remote sensing data for the entire monument (e.g., LIDAR)
- monitoring impacts of climate change on cultural resources
- modeling watershed behavior (flooding)
- completion of inventory of the monument's cultural resources (needed for a baseline)
- continued analysis of continuous weather data to help document changes in climate over time

Planning Needs:

- climate change vulnerability assessment, scenario planning
- resource stewardship strategy

Visitor/Employee Safety.

Fires and floods are now occurring regularly in the monument, which pose health and safety risks to both visitors and employees. NPS staff need to be able to respond quickly when these events arise to ensure the safety of all people in the monument. Vehicles and pedestrians in the Frijoles Canyon parking area also pose a safety issue. The spread of contaminant wastes from the national laboratory into the monument is another possible issue.

Data Needs:

- continue to work with Los Alamos National Laboratory to monitor contaminant wastes in the monument

Planning Needs:

- emergency response plan, which can address emergencies both in the front and backcountry

Management of Cochiti Lake.

Cochiti Lake, on the boundary of the monument, is managed by the US Army Corps of Engineers. If Cochiti Lake is managed to hold more water, raising water levels can adversely affect monument resources along the Rio Grande canyon, eroding cultural resources, altering vegetation and wildlife, causing landslides, and dumping trash in the monument. Higher water levels can also bring more boaters into the monument, which is a different user group than the typical monument visitors, increasing use in this part of the monument.

Management of Invasive Species.

Invasive species, such as smooth brome and cheat grass, are spreading into the monument from adjacent US Forest Service lands on the western boundary (Alamo watershed). Most of the native riparian vegetation along the Rio Grande in the monument has been replaced by nonnative vegetation. These invasive species threaten the existing native vegetation and wildlife. They also increase the potential for the spread of wildfire as they spread through the monument.

Data Needs:

- monitor the rapid expansion of cheat grass and the formation of monoculture patches of cheat grass within the monument, primary in the piñon-juniper portion of the monument on pumice soils
- monitor the spread of smooth brome (*Bromus inermis*), a rhizomatous perennial that has the potential to rapidly monopolize large areas within burned areas, and is becoming a major problem on the adjacent burned national forest
- study nitrogen pollution dose-response relationships in sensitive ecosystems, such as shrublands and grasslands (nitrogen deposition can exacerbate the proclivity of invasive species such as cheatgrass)
- complete Alamo Watershed Ecosystem Study (called for in watershed legislation)

Visitor Impacts on Monument Resources.

Visitors have affected monument resources, creating social trails, poaching resources, and creating graffiti in interior spaces. Visitor impacts have affected some archeological sites, such as Alcove House, and may be adversely affecting other archeological sites' significance and integrity. Trampling from heavy visitor traffic has resulted in streambanks devoid of vegetation. Visitors may be spreading nonnative plant seeds in the monument.

Data Needs:

- monitoring of visitor use impacts on archeological resources and the natural landscape
- visitor use study (documenting changing recreational use patterns, activities, use of the wilderness area)

Planning Needs:

- visitor use management plan for Frijoles Canyon and the wilderness area (including user capacities)

Infrastructure Maintenance.

Bandelier has a lot of infrastructure to maintain. There is a sizable deferred maintenance backlog and infrastructure is deteriorating. Trails, for example, have degraded due to flooding and fires—approximately 90% of the trails in the monument have suffered degradation. The popular Lower Falls Trail, used by visitors and staff to access the Rio Grande, was washed out below the falls. In the last fire, a backcountry cabin, which was the base of operations for management of the wilderness, was lost.

Data Needs:

- update GIS database for trails, trailheads, camping zones, water availability, etc.
- update GIS and FMSS databases for all cultural landscape elements
- identify all utility infrastructure within the Civilian Conservation Corps National Historic Landmark District

Planning Needs:

- trails management plan
- accessibility self-evaluation plan
- a maintenance plan for trails and buildings

Use of Facilities in Frijoles Canyon.

The CCC structures in the canyon are primarily now used for administration purposes by NPS staff. The structures could be reopened as a concession-operated lodge and restaurant, which would be more in keeping with how many of these buildings were originally intended to be used. However, if this were to occur, NPS staff would need to be relocated, which would be a major challenge. Parking in the canyon is also an issue as there are not enough parking spaces to accommodate visitors. Finally, employee housing in the canyon continues to be an issue.

Data Needs:

- lodging commercial feasibility analysis

Planning Needs:

- Frijoles Canyon cultural landscape report revision/update (encompassing the canyon area from Alcove House to the Rio Grande)
- development concept plan for Frijoles Canyon and Frijoles Mesa (replacing the outdated 1995 version)
- housing management 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 or OIRV?	Planning Needs	Priority (H, M, L)	Notes
N	Accessibility self-evaluation plan	H	This plan is required under §504 of the Rehabilitation Act of 1973, and is called for in the Civilian Conservation Corps National Historic Landmark District cultural landscape report.
Y	Climate change vulnerability assessment for select resources and a climate change scenario plan	H	Climate change is a key issue affecting the future of the monument—affecting FRVs, visitors, and management. Adaptation strategies would be included as part of the scenario planning. This planning need feeds into the resource stewardship strategy.
N	Update the existing comprehensive interpretive plan	H	The current comprehensive interpretive plan is out of date. This is a required plan and is needed to advance the monument's interpretive program.
Y	Resource stewardship strategy	H	This analytical frame work would assist NPS staff in conducting effective management. It would position the monument to compete for project funds.
Y	Wilderness/backcountry stewardship plan (including user capacity	H	NPS Management Policies 2006 requires all park units with wilderness to have a wilderness management plan. Bandelier has never had one. Wilderness is one of the monument's FRVs. Some 70% of the monument is wilderness. The area is highly cherished. Protecting wilderness character also helps to protect the monument's archeological sites and other FRVs. Because most of the trails in the monument are in the wilderness area, the wilderness/backcountry plan should be done concurrently with the trails management plan. It is critical to seek pueblo perspectives early in the planning process.
N	Trails management plan	H	Because most of the trails in the monument are in the wilderness area, the wilderness/backcountry stewardship plan should be done concurrently with this plan.
Y	Update the preservation plan (including preservation practices/ methods for the monument; stabilization procedures for cavates; historic properties, etc.)	H	The existing plan is out of date, has gaps, and does not consider recent research. For example, a recent paint analysis was not covered in the current plan. There is a need for constant stabilization.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV or OIRV?	Planning Needs	Priority (H, M, L)	Notes
Y	Frijoles Canyon development concept plan for Frijoles Canyon and Frijoles Mesa, including parking/transportation, visitor use management, user capacity, and administrative operations and programs; also includes a commercial feasibility study and concessions study	H	This plan is needed to replace an outdated 1995 plan. Frijoles Canyon is a primary visitor attraction, as well as the monument’s major administrative hub, with housing and office space. All of this space is now being used. There are issues with utilities. The facilities have a 20th century footprint within a regulatory floodplain footprint. The canyon has transportation/ parking issues: visitors have to be turned away due to a lack of parking spaces. Although a shuttle system was recently started, more needs to be done to figure out how to handle visitors and their vehicles. The administrative uses of the buildings conflict with the objective to make these buildings available for visitor uses. A commercial feasibility analysis also needs to be done prior to this plan to determine if lodging should be provided in the canyon.
Y	Complete minimum infrastructure analysis for existing research or monitoring projects	M	Needed to determine what material needs to be removed and what infrastructure is a priority for continued use and monitoring.
Y	Complete cultural landscape report for the entire monument, including Frijoles Canyon, the backcountry, and Tsankawi	M	The report should include treatment recommendations for Tsankawi. The planning process would arrive at decisions about the monument’s landscape, e.g., how to manage the agricultural history remnants in this landscape. A cultural landscape report was in progress and nearing completion as of February 2015.
Y	Preservation and treatment plan for CCC furnishings and objects not associated with tinware	M	
Y	Comprehensive, long-term fisheries management plan for the fisheries and aquatic resources within the monument	M	Among other topics, this plan should address the conservation and management of native Rio Grande cutthroat trout (including the reintroduction of the species), and the introduction of Rio Grande chub, longnose dace, and possibly Rio Grande suckers.
Y	Fire management plan (for entire monument, but part focused on wilderness)	M	This plan is already funded and in progress. The monument has experienced a series of destructive fires and will continue to experience fires in the future. The area’s vegetation and fire regimes are changing. A new fire plan is needed to address this.
N	Expand emergency response plan	M	This plan is needed to help ensure visitor and staff health and safety. Future emergencies are likely. Bandelier faces many potential threats, including accidents at the Los Alamos nuclear facility, as well as fires and floods. There is only one way out of Frijoles Canyon for a mass evacuation.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV or OIRV?	Planning Needs	Priority (H, M, L)	Notes
N	Regional transportation plan	M	A regional transportation plan would help provide a better experience for monument visitors and visitors in the region. Working with other agencies, the plan would look at such topics as providing opportunities for visitors to tie in transportation routes with Espanola and other locations, to use alternative transportation modes to reach Bandelier, to connect with the Jemez Mountains National Scenic Byway, and would explore long-distance hiking opportunities from Los Alamos to Jemez. The plan would tier in with the forthcoming Bandelier transportation environmental assessment.
Y	Cavate conservation plan	M	This plan should methodically analyze results from stabilization treatments such as tuff consolidation and infilling, plaster stabilization, graffiti mitigation, and others to establish or rule out effectiveness before continuing to expend resources on these treatments.
Y	Security needs and assessment for storing on-site Bandelier's museum collections	L	
Y	Plan for management of the Canada de Cochiti area	L	This plan would only be needed if Congress were to take action to put this area under the administration of Bandelier.
N	Completion of housing management plan	L	
Y	Maintenance management plan for trails and buildings	L	
Y	Update the 1988 historic structures report	L	This would include a current condition assessment and preservation plan for buildings and landscape.
Y	Record-keeping and archival plan for maintenance management	L	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or OIRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Identification of all cultural landscape elements within GIS and FMSS	H	
Y	Complete the parkwide archeological inventory	H	This is one of the monument’s FRVs and is essential information for management. It also is a National Historic Preservation Act section 110 requirement. Having a complete knowledge base will feed into the comprehensive interpretive plan, resource stewardship strategy, and other plans. Only a small part of the monument still needs to be inventoried but this is some of the most inaccessible land in the monument.
Y	Collect aerial photography and remote sensing landscape data (e.g., high resolution baseline LIDAR) for entire park; conduct at regular intervals (track erosion, vegetation, and location of archeological sites)	H	Collecting these data is needed to tell what and how the monument is changing. These data feed into the resource stewardship strategy and the preservation plan. LIDAR data can show how plant communities have been changing for fire management. Remote sensing data also have interpretive value for future imagery exhibits.
Y	Additional high-tech documentation of archeological resources (such as more laser scanning of cavates)	H	This provides more information on the monument’s FRV. Technology can help in monitoring changes of the resource over time. It also can expand interpretive presentations and exhibits.
Y	Update and correct archeological data sets	H	There is a need to consolidate the archeology dataset, including editing for consistency and accuracy. Also need to convert the paper-based record system to a comprehensive electronic database. This will provide accurate knowledge for interpretation, academia, and for management.
Y	Wilderness character assessment	H	Need to select wilderness character measures to monitor.
Y	Visitor use in the wilderness area, including day use levels	H	These data feed into the wilderness/backcountry stewardship plan.
Y	Documentation of ethnographic resources	H	
Y	Identification of all utility infrastructure in the Civilian Conservation Corps National Historic Landmark District	H	
Y	Continue to analyze continuous credible weather data to help document changes in climate over time	H	At a minimum, collect and analyze temperature and precipitation data.
Y	Continue to work with Los Alamos National Laboratory to monitor contaminant wastes in the monument	H	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or OIRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Visitor use study of the monument; document changing user patterns	M	With the recent fires and floods, visitation has changed in the monument. It is important for managers to have a better understanding of who is visiting the monument, why they are coming, what their expectations are, and the quality of experience they are getting. This study will help to determine if the National Park Service is meeting visitor needs, if managers need to change their focus of attention, what improvements are needed to help support visitors, and how the monument can continue to be relevant to visitors. The study would help NPS staff to be proactive rather than reactive. Basic knowledge of visitors also is needed to help design.
N	Commercial feasibility analysis for lodging	M	One of the possible uses of the Frijoles Canyon buildings is for overnight lodging, which occurred in the past. A study needs to be completed to determine if this is a compatible use and if it would be feasible for a concessioner. (This study would support the Frijoles Canyon development concept plan.)
Y	Updated vegetation map, resampling of vegetation	M	Vegetation in the area has substantially changed as a result of drought, floods, insects, and fires. These data would feed into the fire management plan and resource stewardship strategy.
Y	Monitor changes in wildlife populations and behaviors in the monument	M	
Y	Update and Improve GIS data for trails, trailheads, camping zones, water availability, etc.	M	
Y	Complete a cultural landscape inventory for the Ancestral Pueblo Cultural Landscape	M	This cultural landscape inventory should be in tandem with wilderness management—specifically with trails and wilderness planning.
Y	Partner with state historic preservation office to improve Bandelier data in that office's ARMS database	M	
Y	Establish GIS data layer that identifies the boundaries of each archeological site (not just a point location of the site)	M	
Y	Scan and georectify historic maps for GIS database and park atlas	M	
Y	Visual/scenic resource inventory	M	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or OIRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Historic furnishings study for appropriate areas in the historic district	M	
Y	Modeling watershed behavior	M	These data are important for visitor and staff safety and infrastructure protection.
Y	Document changes in soil erosion	L	
Y	Alamo Watershed ecosystem study	L	This study is a legislated requirement for the National Park Service and US Forest Service to jointly address three Bandelier watersheds (Alamo, Capulin, and Sanchez) with extensive headwaters on adjoining US Forest Service land. The study is intended to provide a unified vision and determine best ecosystem management practices for the watersheds. It also is the first step in a potential land transfer from the national forest to the monument.
Y	Monitoring of visitor use impacts and up-to-date condition assessment of resources	L	
Y	Studies of impacts of fire, floods, and post-fire stabilization on archeological sites	L	
Y	Analyze and publish emergency data recovery from fires	L	
Y	Reanalyze significance layers in the Frijoles Canyon cultural landscape inventory	L	
Y	Continued or enhanced monitoring of other historic cultural resources	L	Such monitoring would provide information on the level/rate of deterioration of these other resources.
Y	Study the US Forest Service aspect of the monument's history	L	This study would provide a better understanding of this part of the monument's history.
Y	Research the Spanish Colonial/ Mexican period	L	This would provide a better understanding of the history of this part of the monument.
Y	Ongoing data collection of vegetation communities to generally document changes, and in untreated areas and areas treated as part of ecological restoration or fire management activities	L	
Y	Monitoring of park air quality parameters and air quality resource values, including parameters not now being monitored	L	Ozone is an example of an air quality parameter not now being monitored.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or OIRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Special studies to examine pollution dose-response relationships in sensitive park ecosystems, including the potential impact of mercury and other toxics on biota in the park	L	
Y	Continued night sky quality monitoring	L	
Y	Monitor soil quality and evaluate current condition through soil quality assessment procedures	L	
Y	Monitor the rapid expansion of cheatgrass and the formation of monoculture patches of cheatgrass	L	Need to stay in touch with the exotic plant management team as they monitor scientific developments in managing invasive species.
Y	Monitor the spread of smooth brome	L	
Y	Color imagery of the monument in the 1970s and 1980s	L	Gap in the Bandelier archive collections.
Y	Research the second CCC camp in Water Canyon	L	



Part 3: Contributors

Bandelier National Monument

Tom Betts, Chief Ranger
Claudia Brookshire, Interpreter
Dale Coker, Trails Program/Wilderness Coordinator
Rory Gauthier, Archaeologist
Joseph Grule, Chief of Preservation/Facilities
Brian Jacobs, Vegetation Specialist
Barbara Judy, Chief of Resources
Gary Kemp, Fire Management Officer
Jason Lott, Superintendent
J. T. Stark, Preservationist
Christine Wilson, Chief of Administration

NPS Intermountain Region

Michele D'Arcy, Planner
Lauren Meyer, Vanishing Treasures Program Manager
Sami Powers, Planner
Sam Tamburro, Cultural Resource Manager

Denver Service Center – Planning

Ken Bingenheimer, Contract Editor and QA/QC
Becky Corning, Contract Librarian
Steve DeGrush, Natural Resource Specialist
Tom Gibney, Landscape Architect/Planner
Greg Jarvis, Project Manager
Angie Marie Wing, Visual Information Specialist
Wanda Gray Lafferty, Contract Editor
Melanie Myers, GIS Specialist
Michael Rees, Natural Resource Specialist

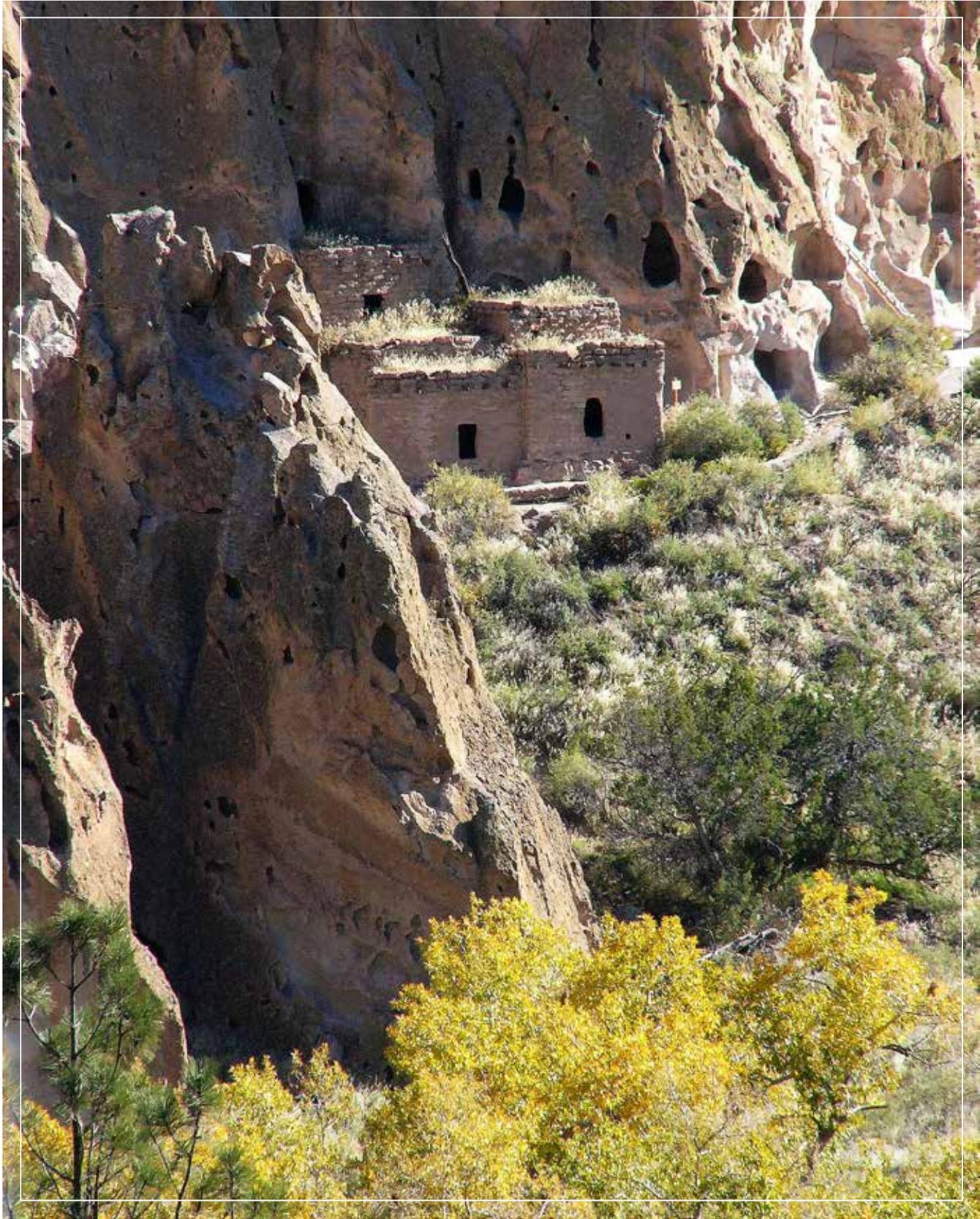
Appendixes

Appendix A: Analysis of Fundamental Resources and Values

Fundamental Resource or Value	Archeological Resources
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Archeological Resources • Cultural Connections • Study and Preservation of Culture
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • More than 75% of the known pre-Hispanic sites occur within piñon-juniper communities. Most of the known pre-Hispanic sites have experienced adverse effects related to soil erosion and lack of post-fire vegetation recovery. • Condition assessments have revealed that the sites with the highest visitation in the monument (Tyuonyi, Long House, and the numerous cavate villages) are steadily deteriorating from environmental factors and human impacts. • Condition assessments have revealed that cultural resources within the Tsankawi unit are steadily deteriorating from both environmental factors and human impacts. • Pueblo people want to see the sites protected, treated respectfully, and left undisturbed. • Tyuonyi Village requires cyclic maintenance and preservation. <p>Trends</p> <ul style="list-style-type: none"> • Unmitigated soil erosion and visitor impacts on many sites may adversely affect archeological site significance and integrity; however, vegetation treatment has ameliorated this issue. • Cavate villages, particularly in Frijoles Canyon and Tsankawi, are deteriorating. Preservation needs are continual and ongoing. • Erosion of weak tuff geology and visitor impacts are affecting Alcove House. • Climate change creates tremendous uncertainty regarding the future conditions of archeological sites, particularly as the landscape experiences changes in vegetation communities, and fire regimes. • Climate change appears to be making sites more vulnerable to human impacts. At Tsankawi, vegetation loss and human activity (for instance, visitors venturing off trail [social trails] and trampling areas) is changing drainage patterns and having direct impacts on the resources. Deterioration of the cultural resources at Tsankawi appears to be accelerating. • The cumulative effect of long-term visitation and/or exposure to natural processes at many of the archeological display sites and along primary visitor routes is apparent. • Cavates not directly adjacent to Alcove House Trail but visible from the trail are being subjected to graffiti and other visitor impacts. Visitors are not observing trail-only requirements.

Fundamental Resource or Value	Archeological Resources
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • There are documented human impacts on cultural resources including theft of artifacts, graffiti, trampling, wear-and-tear, abrasion, and impact damage. • Threats posed by climate change (see “trends” above). For instance, the monument is experiencing more frequent severe fires and floods. There is high potential for changes in the fire regime. Vegetation communities are transitioning, which will likely result in future impacts that are not fully understood at present. • There is a potential for impacts on archeological resources from visitors due to limited monitoring for these impacts. In many areas there are minimal trail patrols (e.g., Tsankawi, backcountry areas). Sites do not exhibit strong, consistent messaging about the potential for visitor impacts and the importance of respectful behavior at archeological sites. • Management of visitor use may, on occasion, unintentionally impact resources. Trails must be carefully planned and designed. Visitor management decisions must be science-based. • Natural erosion processes also threaten archeological sites. Wasting and associated rockfall at cliffs in the vicinity of the cavates has been observed and noted as a concern. <p>Opportunities</p> <ul style="list-style-type: none"> • The tremendous historic records and database on archeological resources at Bandelier makes the monument a good candidate for continued academic study. Outcomes of such work could inform interpretation and help the National Park Service tell more and better stories. • Continue and expand pueblo and other youth programs focused on the preservation of archeological sites. (However, the monument should look to programs that have their own funding.) • In general, for academic study and/or preservation work, seek increased/enhanced partnerships with academic institutions, reservation organizations, affiliated pueblos, and other partners. • Opportunity to engage the public and scientific community on the potential of climate change to impact cultural resources. • Implement preventive and remedial conservation measures (including documentation, redirection of water flow, and masonry stabilization) and routine maintenance on frontcountry sites, including Tyuonyi Pueblo, Long House Pueblo, the cavate villages, Big Kiva, and Alcove House. Methodically analyze results from other stabilization treatments (tuff consolidation and infilling, plaster stabilization, graffiti mitigation, and others) to establish or rule out effectiveness before continuing to expend resources on these treatments. • Implement additional preservation projects on eroding sites in the piñon-juniper areas. • Implement ecological restoration and fire management actions in the piñon-juniper woodland. • Develop partnerships with the US Department of Energy (DOE), US Forest Service (USFS), Valles Caldera National Preserve, the pueblos, and Los Alamos County to share information on archeological sites and assist in site protection and preservation across Pajarito Plateau. • Improve signage and messaging to visitors that clearly define acceptable behavior (on/off trail, what causes impacts, etc.); use minimal signage as required. • As appropriate, install security and monitoring equipment, such as cameras, motion detectors, audible alerts, and lighting alerts, to monitor sites and areas that are most susceptible to noncompliant visitor impacts. • As appropriate, install barriers such as railings, vegetation barriers (cactus), and infra-red alarms to protect sites and areas that are most susceptible to noncompliant visitor impacts. • Increase patrols, including NPS staff and volunteers, in areas and sites susceptible to noncompliant visitor impacts. • Use trail design and construction that clearly identify the pathway and use of the trail. Avoid trail designs that encourage “short cuts,” being too close to fragile resources, or social trails to other destinations.

Fundamental Resource or Value	Archeological Resources
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • The most comprehensive database on archeological sites consists of a paper-based record system organized by archeological site and maintained by the park archeologist. • Vanishing Treasures Program also maintains a comprehensive database (although the database needs to be reconstructed and revisited). • The park staff is in the process of digitizing its sizeable collection of historic and modern images. Work is ongoing using the services of a park volunteer cadre. • Annual stabilization reports, Vanishing Treasures Program (needs to be updated to 2014). • The National Register Nomination Form for the Bandelier National Monument Archaeological and Historic District, updated in August 2014. • <i>The Grandest Thing I Ever Saw: A Historic Resource Study of Bandelier National Monument</i>. Aspen CRM Solutions. 2012. Bandelier National Monument, Los Alamos, New Mexico. • The Archaeological Records Management Section (ARMS) database, maintained by the New Mexico state historic preservation office. • <i>The Magic of Bandelier</i>, David E Stuart, 1990. (This is a good overview of archeology at Bandelier for the general public.) • Frijoles Canyon 2006 cultural landscape inventory. • Tsankawi 2005 cultural landscape inventory. • The Historic Period at Bandelier National Monument. Smith, M. L. 2002. Intermountain Cultural Resources Management, Professional Paper No. 63. National Park Service. • <i>Archeology of Bandelier National Monument</i> (2004), by Timothy Kohler. • The Bandelier Archeological Survey. Powers, R. P. and J. D. Orcutt (ed.) 1999. Intermountain Cultural Resources Management Professional Paper No. 57. National Park Service, Santa Fe, NM. • "Sources for the History of Bandelier National Monument" (1995), by J. P. Sanchez and B. A. Erickson. • <i>An Analysis of Variability and Condition of Cavate Structures in Bandelier National Monument</i> (1995), Toll, H.W., P. McKenna, and J. Crowder.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Seven percent of the monument remains to be inventoried for archeological sites (the remaining gaps, however, are often the areas hardest to access). • Consolidate the park archeology dataset, including editing for consistency and accuracy, correcting errors and misclassifications. Convert the paper-based record system to a comprehensive electronic database. • Continue expanding remote sensing data, including parkwide LIDAR (currently only Frijoles Canyon is covered); these data could help identify new sites, monitor conditions and erosion trends, etc. • Conduct more "high tech" documentation (such as more laser scanning of the cavates). • Complete a cultural landscape inventory for the Ancestral Pueblo Cultural Landscape (this cultural landscape inventory should be in tandem with wilderness management—specifically with trails and wilderness planning). • Partner with the state historic preservation office to improve Bandelier data in their ARMS database. • Establish GIS data layer that identifies the boundaries of each archaeological site (not just a point location of the site). • Scan and georectify historic maps for GIS database and park atlas • Studies of impacts of fires, floods, and post-fire stabilization on archeological sites. • Analyze and publish emergency data recovery from fires.



Fundamental Resource or Value	Continuing Cultural Connections
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Archeological Resources • Cultural Connections
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • A number of pueblos and American Indian tribes are associated with Bandelier (see appendix D). The traditionally associated pueblos have ancestral, traditional use, and religious ties to the landscape—it is their ancestral homeland. The pueblo culture, lifestyle, religious beliefs, and traditions continue to be shaped by their ties to the natural and cultural resources of the monument. • All traditionally associated pueblo members have free access to Bandelier. • Pueblo people continue to practice traditional ceremonies and make pilgrimages to sacred sites within the monument. These are important to the continuation of pueblo Indian traditional practices in contemporary pueblo communities. • The gathering of herbs and plants also continues to be of importance in pueblo Indian traditional practices. Pueblo governors (or designees) submit a traditional use permit (for gathering traditional plants/plant parts) for superintendent approval. • More than 3,000 sites have been surveyed and recorded by the monument archeology program within Bandelier. Regardless of the archeological status or condition of the sites, each site should be treated with respect. • The pueblos want to be regularly engaged in management decisions that will affect natural and cultural resources of significance to them. They want continued access to the monument for traditional uses, especially for plant gathering. They have expressed a desire that no excavations occur in the monument. • Given budget, staff, and time constraints, NPS staff consult with the pueblos on an as-needed basis, usually once a year. <p>Trends</p> <ul style="list-style-type: none"> • Although the relationships between NPS staff and the traditionally associated pueblos are generally strong, the relationships have not been maintained to the degree they should be at all levels (programmatic, political, community) with each pueblo. • Habitat changes, unwanted wildfires, overuse, and other environmental factors affecting plants, plant parts, or the availability of other resources (e.g., minerals, pine boughs) used in traditional ceremonies or practices is of some concern to the pueblos. • Continual deterioration of sacred sites as a result of natural environmental conditions is a concern. • The interest individual pueblos have in visiting the monument fluctuates. • The NPS Intermountain Region has recently finalized a sacred sites policy, which may have implications on future management.
<p>Threats</p>	<p>Threats</p> <ul style="list-style-type: none"> • Certain management actions may risk alienating or offending the pueblos. As one example, if the National Park Service is too aggressive about acquiring the Canada de Cochiti land grant, the park staff’s relationship with the pueblos could be strained. • Bandelier staff has access to information that should be protected and not presented to the public (e.g., sacred sites, ceremonies). Failure to protect this information puts these resources, and the trust of the pueblos, at risk. • Possible visitor impacts, vandalism, theft, and graffiti appear to be continuing minor threats to sites. Visitor impacts on display archeological sites are viewed negatively by the pueblos. The pueblos are very concerned that the sites are not being treated with respect. This also includes interference with American Indian religions—for instance, New Age religions co-opting sacred sites such as the Stone Lions. • Visitor or NPS actions that disturb pueblo Indian privacy while conducting traditional uses. • Site stabilization by NPS managers is not received enthusiastically by some tribal partners.

Fundamental Resource or Value	Continuing Cultural Connections
<p>Opportunities</p>	<p>Opportunities</p> <ul style="list-style-type: none"> • Continue and expand tribal consultation on projects that are not included on the annual list. • Continue cultural demonstration programs. These programs are a “win-win” that benefit pueblo communities and park visitors. • Expanding cultural demonstration practices (which currently occur at the visitor center) to the Tsankawi unit. • Involve pueblos in monument management and interpretation. • Stories of the early Spanish settlement of New Mexico would enhance interpretation at Bandelier. • Expand pueblo outreach programs into schools and communities, which would strengthen connections to the monument. • Establish partnerships that will support field trips of pueblo elders and youth to Bandelier from affiliated pueblos. • Pueblo staff or members could provide monument tours to the public, which would provide a different perspective and experience. • Hiring pueblo members as NPS staff could help strengthen connections between the park and pueblo communities. Pueblo students could be recruited for the monument staff. • Partner to establish a pueblo youth preservation corps to work with the preservation program. • Translate the monument film into the pueblo languages so that this can be broadcast to the pueblos. • Update the memorandum of understanding regarding consultation among the NPS and tribes having traditional associations with the monument, including adding provisions on inadvertent discoveries. • Complete a focus group research project that identifies barriers to pueblo inclusion in the monument and suggests strategies to overcome those barriers (Centennial Challenge Project). • Seek a mutually beneficial resolution of ownership to the Canada de Cochiti land grant issue—in part by recognizing that three pueblos have cultural connections to that property. Perhaps consider opportunities for co-management of the property. Strive for a resolution that would allow all appropriate entities to have a stake in the property. • Consider additional strategies to make consultations more inclusive, meaningful, and relevant to the pueblos. • Continue offering cultural sensitivity training at seasonal training and encourage monument staff to visit a cultural activity at one of the traditionally associated pueblos as part of Bandelier’s cultural awareness program. • Continue and expand training opportunities for the pueblos, such as fire management, chainsaw and other special tool training, and masonry and preservation techniques. • Develop appropriate cooperative agreements that encourage partnerships with pueblos and expand employment opportunities. • Remove the Main Loop Trail pathway from center of Tyouni Pueblo and Tsankawi Pueblo, and re-route path along outside (meets request from affiliated pueblos). • Ensure the term “Anasazi” has been removed from all signage, media, graphics, and exhibits. • When possible, assign the Bandelier Pueblo liaison collateral duty to a staff member who is also a member of a pueblo.

Fundamental Resource or Value	Continuing Cultural Connections
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • Memorandum of Understanding Regarding Consultation among Bandelier National Monument and Tribes Having Cultural Affiliation within the Monument (2003). • “Bandelier National Monument Ethnographic Literature Search and Consultation.” Merlan, T., and F. Levine. 1997. Prepared for Bandelier National Monument. • “Bandelier National Monument Study of Traditionally Associated Native American Communities Ethnographic Overview and Assessment.” Merlan, T., and F. Levine. 2000. Prepared for Bandelier National Monument. • “Bandelier National Monument, A Study of Natural Resource Use among Culturally Affiliated Pueblo Communities.” Stoffle, R. W., R. Toupal, N. O’Meara, M. Buttram, and J. Dumbauld. 2007. Bureau of Applied Research in Anthropology, University of Arizona, Tucson.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • None identified.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • None identified.
<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"> • Native American Graves Protection and Repatriation Act (1990) • National Historic Preservation Act of 1966, as amended • Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments” • American Indian Freedom Religious Act of 1978 • Religious Freedom Restoration Act of 1993 • Executive Order 13007, “Indian Sacred Sites” • Secretarial Order 3206, “American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act” <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> (sections 1.11, 5.3.5.3, 5.3.5.3.1, 8.5) • Director’s Order 75A: <i>Civic Engagement and Public Involvement</i> • Department of the Interior Policy on Consultation with Indian Tribes (2011)



Fundamental Resource or Value	Science and Research
Related Significance Statements	<ul style="list-style-type: none"> • Archeological Resources • Study and Preservation of Culture
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • Less research is now occurring at the monument. • About 7% of the monument remains to be inventoried for cultural resources. Inventories are occasionally carried out. • Scientists still have permits to do research. • Some dissertations are in progress. • There is a lack of knowledge among scientists regarding what is needed to conduct research in the monument and the impacts of research activities. • The ongoing Village Eco-Dynamics Project is trying to reconstruct past settlement and migration patterns. • Significant amount of data from older projects needs to be migrated into useable formats. • The public is generally unaware of much of the ongoing and completed research conducted at the park. • Access to completed research reports is difficult for the general public. <p>Trends</p> <ul style="list-style-type: none"> • Research is continuing at a low level in the monument. • Display archeological sites, such as Tyouni Pueblo, are exposed to weathering and other impacts.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • The potential for inadvertent damage to relations with affiliated pueblos through failure to communicate and gain concurrence on investigations that directly impact on areas of concern to these tribes • Older data formats and materials are degrading (magnetic tapes are becoming frail, old photographs fading, etc.). <p>Opportunities</p> <ul style="list-style-type: none"> • Conduct new spatial modeling for archeology. • Provide additional information on database spatial location, age, date, occupation for every site, which can be used by researchers. • Evaluate partial back-filling projects to better protect display archeological sites. • Document climate change impacts on people and resources through time. • Study Tsankawi Unit village settlement using Tewa informants. • Bring together natural and cultural science to strengthen the landscape in the face of climate change. • Pursue additional chances to consult and collaborate with the pueblos on lifeways. • Share research results with the pueblos and public. • Partner with university anthropology/archeology programs to use archeology field schools to support projects in the park (e.g., rerouting of Main Loop Trail). • Partner with Cochiti Pueblo and the New Mexico State Land Office on a strategy to protect resources on the Canada de Cochiti. • Partner with the Valles Caldera National Preserve for a science center. • Seek opportunities with universities and other partners for research projects at Bandelier. • Provide a clearinghouse website for completed research and other information on the Bandelier website.

Fundamental Resource or Value	Science and Research
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • “The Pajarito Plateau: A Bibliography.” F. J. Mathien, C. Steen, C. Allen. 1993. • Village Eco-Dynamics Project (ongoing). • <i>Archaeology of Bandelier National Monument: Village Formation on the Pajarito Plateau, New Mexico.</i> Timothy A. Kohler (ed). 2004. • <i>The Bandelier Archeological Survey.</i> Powers, R. P. and J. D. Orcutt (ed.) 1999. Intermountain Cultural Resources Management Professional Paper No. 57. National Park Service, Santa Fe, NM. • <i>The Peopling of Bandelier: New Insights from the Archaeology of the Pajarito Plateau.</i> Powers R. P., (ed.) • Traditional use study.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Archeological data set needs updating and corrections. • Inventory of archeological sites needs to be completed. • Study of impacts of fire and floods, post-fire stabilization on archeological sites. • Emergency data recovery from the fires needs to be analyzed and published. • Laser scanning of more of the monument’s cavates and archeological sites. • Documentation of ethnographic resources.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • None identified.
<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"> • National Historic Preservation Act of 1966, as amended (16 USC 470) • Antiquities Act of 1906 • Archeological and Historic Preservation Act of 1974 • Archaeological Resources Protection Act of 1979 • American Indian Religious Freedom Act of 1978 • Religious Freedom Restoration Act of 1993 • Historic Sites, Buildings, and Antiquities Act of 1935 • Museum Act of 1955, as amended • Native American Graves Protection and Repatriation Act of 1990 • Wilderness Act of 1964 • Executive Order 11593, “Protection and Enhancement of the Cultural Environment” • Executive Order 13007, “American Indian Sacred Sites” • Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments: • “Curation of Federally-Owned and Administered Archaeological Collections” (36 CFR 79) • Advisory Council on Historic Preservation’s implementing regulations regarding the “Protection of Historic Properties” (36 CFR 800) <p>NPS Policy-Level Guidance (NPS Management Policies 2006 and Director’s Orders)</p> <ul style="list-style-type: none"> • Department of the Interior Policy on Consultation with Indian Tribes • NPS <i>Management Policies 2006</i> (sections 1.4, 1.6, 5.1, 8.10) • Director’s Order 24: <i>NPS Museum Collections Management</i> • Director’s Order 28: <i>Cultural Resource Management</i> • Director’s Order 28A: <i>Archeology, 4A(3) Native American Graves Protection and Repatriation Act</i> • “NPS-28: <i>Cultural Resource Management Guideline</i>” • Director’s Order 41: <i>Wilderness Stewardship</i> • NPS <i>Reference Manual 41: Wilderness Stewardship</i>

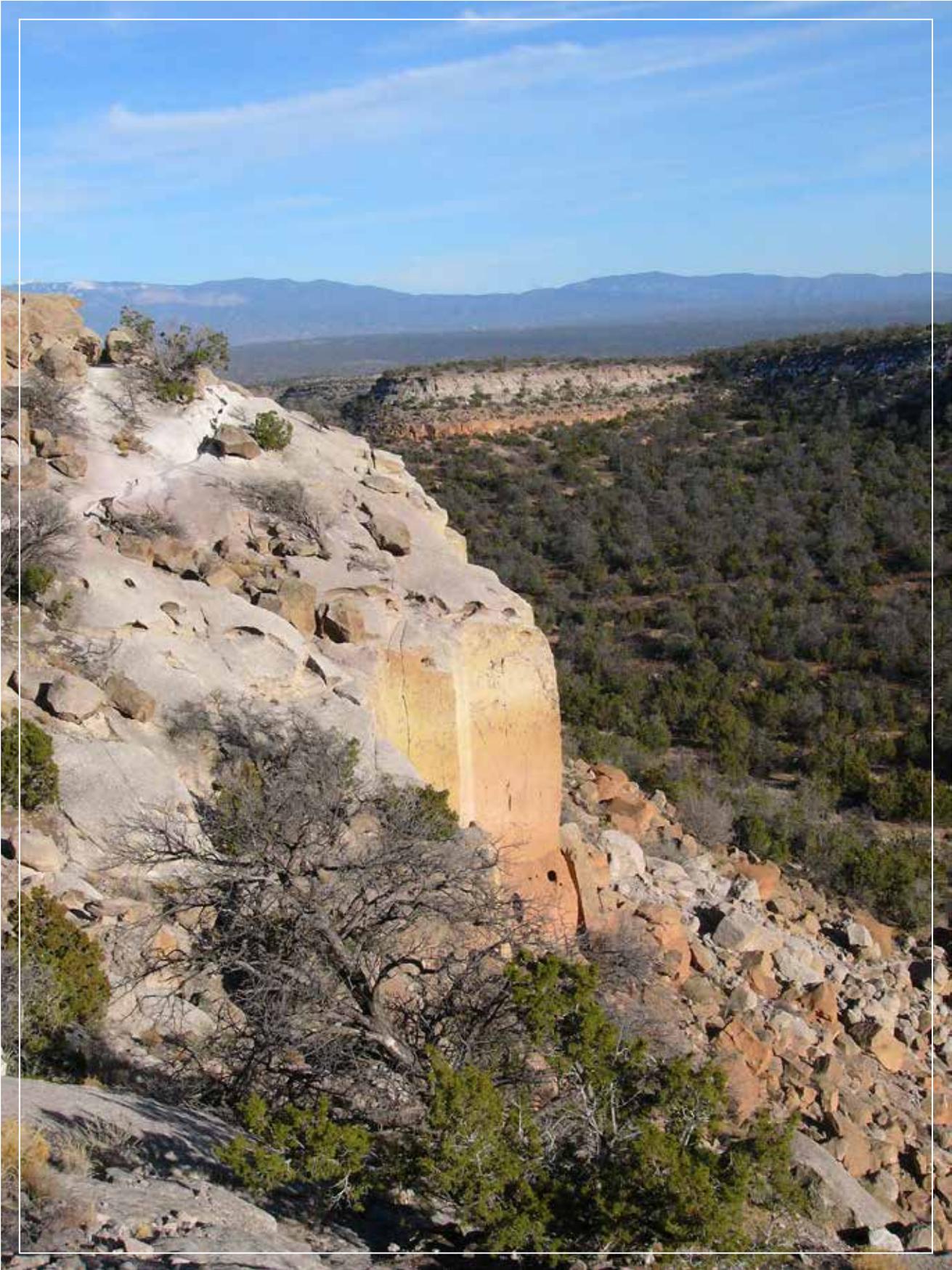


Fundamental Resource or Value	Natural Landscape
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Study and Preservation of Culture • Diverse Natural Systems
<p>Current Conditions</p>	<p>Conditions</p> <ul style="list-style-type: none"> • As a result of continuing droughts, fires, floods, and insect infestation, 95% of the piñon trees have died; much of the monument is now essentially a juniper woodland. There has also been a substantial loss of ponderosa pines in upper elevations and canyons due to the Las Conchas Fire. • Although there are a lot of dead ponderosa and alligator junipers, there are still forest remnants with ponderosa and mixed pine cover. • Open areas in the monument with shrubs and grasses have increased. • Nonnative cheatgrass is well established in areas throughout the park. • Erosion has increased. • Hydrologic patterns have changed with drought, loss of forest, and changing climate. • Flash flooding is prevalent during monsoon seasons since the Las Conchas Fire. • Canyons continue to be impacted by flash floods and changing vegetation. • Wildlife foraging (e.g., elk, bears) continues to be modified with the changes in vegetation. • Canyons with flowing water are popular destinations for visitors and are the primary locations to resupply drinking water in the backcountry and wilderness. • Capulin and Frijoles Creeks are listed as “impaired” based on the 2004 303(d) list for impaired water bodies in New Mexico. The listed impairment for Capulin Creek is “sedimentation/siltation,” and that for Frijoles Creek is pesticides (DDT). Additional Frijoles Creek impairments listed by the US Environmental Protection Agency included “water temperature, total and fecal coliform, and turbidity.” • Bacteria contamination of Frijoles Creek rises during the warm summer months when visitation is high. A typical trend is relatively low bacteria upstream of the visitor center, with higher values downstream. Potential bacteria sources include sewage system failures, horse corrals, pit toilets, and a turkey vulture roost above the creek. • Some riparian areas have sustained direct and indirect impacts associated with alteration of stream channels, banks, and floodplains. • Perennial streams in the monument are devoid of fish, including nonnative fish in Frijoles Creek and Rio Grande cutthroat trout in Capulin Creek, due to changes in watershed quality following the Las Conchas Fire. Fishing is closed in Bandelier due to the scouring of the creeks from flash flood events. • Much of the native riparian vegetation along the Rio Grande is nonnative and weeding pioneer species. • Cottonwoods were lost along the Rio Grande corridor due to previous holding of high water in the downstream Cochiti Reservoir. • Prior to the Las Conchas Fire, trampling along the Frijoles Creek stream bank from heavy visitor traffic in the Cottonwood Picnic Area resulted in vegetation loss and over-widening of the stream channel in some areas. Flash flooding associated with the Las Conchas Fire has further stripped the stream banks of vegetation and soils. • Several contaminants have been detected in the alluvial and perched groundwater systems (tritium, plutonium-239 and -240, americium-241, and strontium-90) as have some organic compounds and nitrates. • Frijoles and Capulin Creeks contain relatively high amounts of fine substrate and subsequent embeddedness, leading to a reduction of high-quality benthic macroinvertebrate habitat. • Bighorn sheep were reintroduced to the area in August 2014.

Fundamental Resource or Value	Natural Landscape
<p>Trends</p>	<p>Trends</p> <ul style="list-style-type: none"> • The average annual temperature for the region that includes Bandelier is projected to increase 3°F to 5°F by 2050 and 5°F to 9°F by 2100 (2014 climate change summary report prepared for Bandelier National Monument by Dr. Patrick Gonzalez). • Decadal trends (2003–2012) in visibility and wet deposition of nitrogen and sulfur are relatively unchanged. • Fire frequencies continue to be altered due to previous large fire event impacts and climate change. • Forest cover is continuing to decline due to drought, insect infestation, and fires. • As large dead trees (burned in the Las Conchas Fire) continue to fall and migrate into the canyon streams, large log jams form and impact the creek water flow and channel. • Climate change and overgrowth have created the opportunity for juniper crown fires. • Erosion is continuing. Elevated rates of watershed erosion are delivering excess sediment to Bandelier’s streams, decreasing habitat diversity and covering spawning areas. • The monument vegetation cover is switching in places from a forest to a grassland/ shrub cover.
<p>Threats</p>	<p>Threats</p> <ul style="list-style-type: none"> • Continuing drought, erosion, and devastating wildfires and floods are affecting the ability of the ecosystems to recover. • Spread of invasive nonnative plants (e.g., cheat grass). • Increased potential for grass fires and juniper crown fires. • Reduction in snowpack, affecting summer streamflows. • Holding more water in the Cochiti Reservoir could introduce more people into fragile canyons and cause mass wasting of landforms in Rio Grande Canyon. • Air pollution can degrade scenic views, and affect air quality-related values such as native plant communities, surface waters, and wildlife. In particular, certain vegetation communities in the park, including shrublands and montane grasslands, may be vulnerable to excess nitrogen deposition, which can shift species dynamics and reduce biodiversity. • Increased night lighting from local communities, resulting in degradation of night skies.

Fundamental Resource or Value	Natural Landscape
<p>Opportunities</p>	<ul style="list-style-type: none"> • Science and research to document changes occurring to the natural landscape. • Restore degraded streams and stream corridors within the monument. • Restore native fish in the monument. • Nominate outstanding national resource waters within the monument, which would provide maximum protection of these waters under the Clean Water Act. • Reestablish and maintain a sustainable fire regime that will assist in the preservation of natural resources. • Stabilize soils where erosion is occurring. • Expand use of exotic plant management teams. • Increase backcountry patrols to ensure compliance for resource protection. • Partner with Valles Caldera National Preserve to develop efficiencies for science and monitoring programs and projects. • Partner with local communities to establish ordinances around the monument to protect soundscapes (no Jake brakes, muffler decibel limits, etc.). • Ongoing opportunities through the regional haze and other air quality programs to work with state and federal air regulatory agencies and other stakeholders to address air quality impacts in parks from sources of air pollution. • Formally classify Bandelier as an International Dark Sky Park. • Partner with local communities to improve night sky ordinances and enforcement. • Continue to support US Geological Survey Jemez Mountain Field Station with long-term studies within Bandelier. • Use volunteer groups to collect native seeds to use in disturbed areas.
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • Ecosystem restoration plan (Record of Decision) (2007). • Water resources foundation (2007). • Hazard tree mitigation plan (2006). • Vegetation management plan (2006). • Fire management plan (2005). • Water resources management plan (1999). • Baseline water quality data, inventory and analysis report (1997). • "The Pajarito Plateau: A Bibliography." F. J. Mathien, C. Steen, C. Allen. 1993.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Baseline LIDAR and other remote sensing data for the entire monument. • Updated aerial photography. • Updated vegetation map. • Changes in wildlife populations and behavior in the monument. • Monitoring of air quality and air quality resource values, including parameters not being monitored (e.g., ozone). • Special studies to examine pollution dose-response relationships in sensitive monument ecosystems (e.g., shrublands, grasslands), including nitrogen, mercury, and other toxics, and studies that assess the impacts of wildfire on mercury on the monument's biota. • Visual/scenic resource inventory. • Continue night sky quality monitoring. • Monitor soil quality and evaluate current condition through soil quality assessment procedures.

Fundamental Resource or Value	Natural Landscape
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Resource stewardship strategy. • Resource vulnerability assessment. • Climate scenario planning. • Ongoing monitoring of vegetative communities to document changes. • A comprehensive, long-term management plan for the fisheries and aquatic resources within the monument, including the conservation and management of the Rio Grande cutthroat trout populations.
<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"> • Wilderness Act, 1964 • Endangered Species Act of 1973, as amended • National Invasive Species Act • Lacey Act, as amended • Federal Noxious Weed Act of 1974, as amended • Clean Water Act • Clean Air Act (42 USC 7401 et seq.) • Executive Order 13112, “Invasive Species” • Executive Order 11988, “Floodplain Management” • Executive Order 11990, “Protection of Wetlands” • 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> (sections 1.6, 4.1, 4.1.4, 4.4.1, 4.7.2) provides general direction for managing park units from an ecosystem perspective • Director’s Order 18: <i>Wildland Fire Management</i> • NPS <i>Natural Resource Management Reference Manual 77</i> • NPS <i>Reference Manual 18: Wildland Fire Management</i> • Memorandum of Understanding between the NPS and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds (4-12-2010) • NPS Climate Change Response Strategy (2010) • NPS Climate Change Action Plan 2012–2014



Fundamental Resource or Value	Wilderness
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Diverse Natural Systems • Wilderness
<p>Current Conditions</p>	<ul style="list-style-type: none"> • Bandelier Wilderness continues to support all of the wilderness character qualities, including an untrammelled landscape, solitude, self-discovery, and primitive, unconfined recreation. • The wilderness designation is maintaining the remoteness of many of the monument’s cultural sites, including some of the premiere sites. • Bandelier Wilderness continues to be accessible, yet retains a remote feeling and quality. • Bandelier Wilderness is providing opportunities for recreation, such as backpacking, hiking, and camping, in a rugged environment. • Visitors continue to have the opportunity to discover and observe cultural sites in a natural environment and untrammelled context where the sites are not managed for display purposes. • Visitors continue to find opportunities to experience undeveloped views, dark night skies, and exceptional natural quiet. • An estimated 3,000 archeological sites are believed to be in the Bandelier Wilderness area, primarily consisting of undisturbed Ancestral Puebloan sites. The majority of these sites have not been evaluated. • More than 75% of the known pre-Hispanic sites occur within piñon-juniper vegetation communities, and nearly 90% of these have experienced adverse effects related to erosion. • Bighorn sheep were reintroduced to the area in August 2014. • Developments near the monument and external activities, such as aircraft overflights, have adversely affected some wilderness character qualities, the dark night sky, natural quiet, and the feeling of remoteness. • The 2011 Las Conchas Fire, which began just west of the monument, burned 60% of the Bandelier Wilderness (13,929 acres). Most of the area burned with high severity. As a result, the wilderness area is subjected to flash flooding, high rates of erosion, and other impacts. • Fishing is closed in the Bandelier Wilderness due to the scouring of the creeks from flash flood events. • The 2011 Las Conchas Fire and subsequent floods have adversely impacted more than 80% of the wilderness trail system. Most trailheads providing access to the wilderness are unknown and difficult to find due to a lack of road signage and publicly accessible information. Access to the Lower Falls remains closed to visitor access due to safety concerns. All horse trails have been closed due to poor trail conditions. Horseback riding is a suspended use of the wilderness, but will be re-established once trails are returned to appropriate standards. • Many of the Bandelier boundary signs were destroyed during the Las Conchas Fire, resulting in confusion for the visitor as to their location and what activities are appropriate (e.g., it is unclear to visitors where hunting can occur—hunting is allowed in the Santa Fe National Forest but not in Bandelier). • Camping zones in canyons are now annually closed during the monsoon season because of the high flash flooding potential. • Campfires are not allowed in Bandelier Wilderness or backcountry. • The monument’s air quality is in attainment for EPA standards for particulate matter and ozone, but the monument’s air quality does not meet the NPS Air Resources Division recommended benchmarks for visibility, ozone, and nitrogen deposition. Given pollutant exposure, an assessment of air quality indicators, and resources sensitive to air pollution, air quality conditions warrant moderate concern.

Fundamental Resource or Value	Wilderness
<p>Trends</p>	<ul style="list-style-type: none"> • Visitor use in the Bandelier Wilderness area is believed to be increasing again after a major drop in use following the recent fires. • Drought in the 1950s and 2000s caused extensive tree mortality and shifted piñon-juniper woodland upslope in the monument. Past warming has reduced snowpack widely, which may continue to influence streamflow. • Effects of climate change are continuing in the wilderness area, affecting resources and visitors. • Most wilderness character qualities (e.g., opportunities for solitude, primitive, unconfined recreation, undeveloped) are stable. • Increased potential for trammeling due to vegetation restoration activities. • Erosion is accelerating in the piñon-juniper communities. • The presence of nonnative plants, in particular cheat grass, is spreading at an aggressive rate through the Bandelier Wilderness. • Due to impacts from the Las Conchas Fire, the trail system is continuing to degrade (repeated flood events, erosion, tree falls, etc.).
<p>Threats</p>	<ul style="list-style-type: none"> • Climate change and the associated influences on water resources, fire behavior, native flora/fauna, and invasive species. • Erosion is threatening the integrity of thousands of archeological sites, as well as trails and plant communities. • Overflights and use of unmanned aerial vehicles (drones). • Poaching of elk and deer. • Archeological resources are more susceptible to theft and damage due to the loss of vegetation and soils as a result of the Las Conchas Fire. • Feral cattle and horses in the area. • Water level of Cochiti Reservoir if it is increased. • Invasive plants (e.g., cheat grass, tamarisk). • Future restoration actions will affect untrammelled quality, but without action the National Park Service will not be able to maintain healthy, sustainable vegetation within the piñon-juniper communities, and address soil erosion that threatens cultural resources. • Although it currently does not host burros, a wild burro territory is identified for the Dome area of the Santa Fe National Forest, which is adjacent to the Bandelier Wilderness. In the future there is the possibility that wild burros could enter the wilderness. • There is a possibility that wild horses could enter the wilderness area from an active wild horse territory in the Caja de Rio area of the Santa Fe National Forest, which is located across the Rio Grande from the Bandelier Wilderness. • Off-road vehicles coming from the FS289 road have entered the wilderness. • Increase in light sources from local communities, resulting in degradation of night skies. • Regional emission sources, including urban centers, wood smoke/wildfires, coal-fired power plants, fugitive dust, and oil/gas development, pose a threat to the area's air quality.

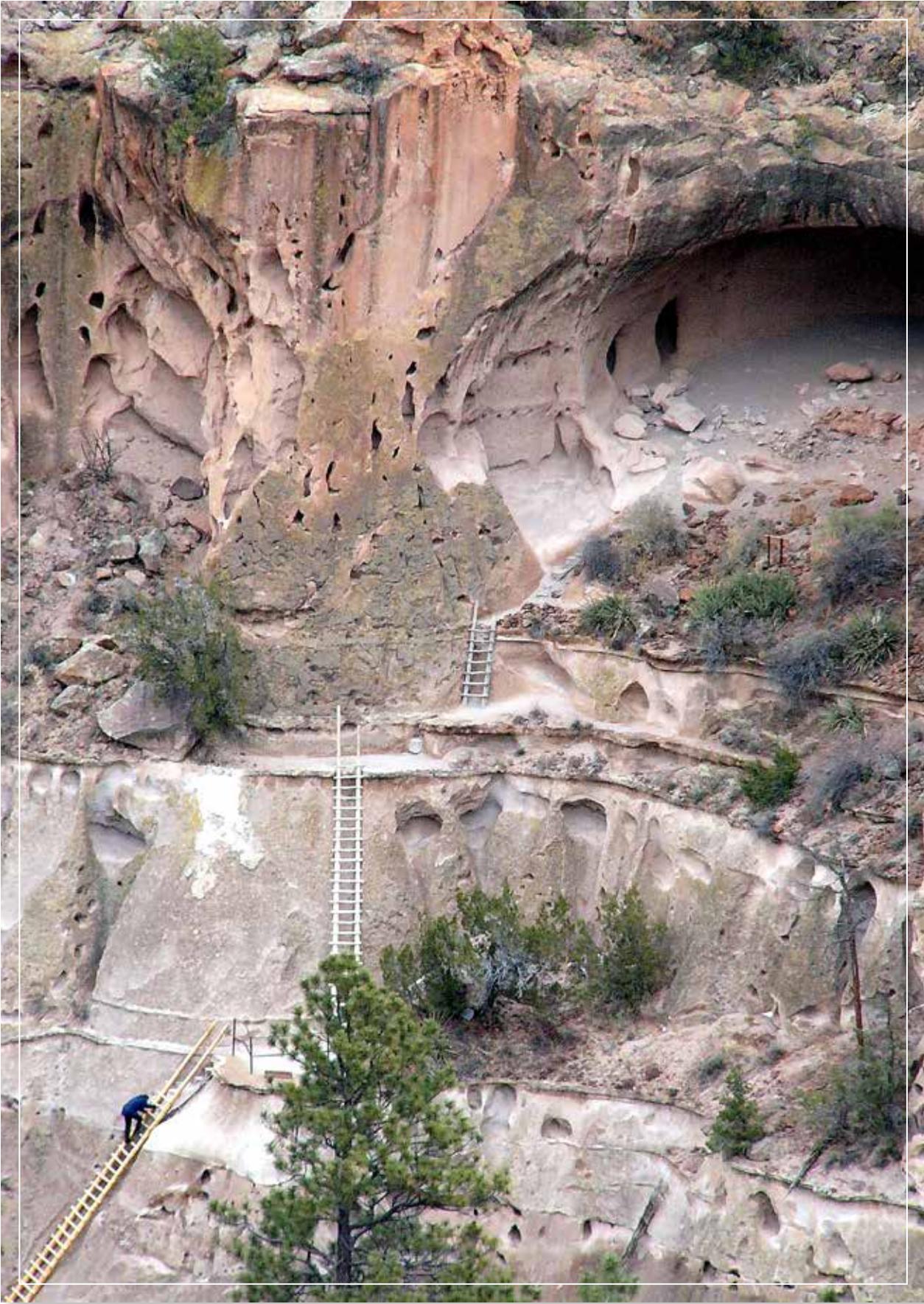
Fundamental Resource or Value	Wilderness
<p>Opportunities</p>	<ul style="list-style-type: none"> • Reestablish and maintain a sustainable fire regime that will assist in the preservation of cultural and natural resources (as described in the fire management plan). • Implement ecological restoration strategies that provide for sustainable, native, perennial, plant communities within degraded portions of the piñon-juniper woodland, which in turn, reduce soil erosion, water runoff, and loss of cultural resource integrity. • Scientific research and monitoring opportunities. • Improve communication to visitors, including improving road signage for trailheads into the wilderness and improving trail kiosks to provide information on appropriate wilderness activities, use, and ethics (Leave No Trace). • Partner with local communities to establish ordinances along the Jemez Mountains National Scenic Byway to protect soundscapes (e.g., no Jake brakes, muffler decibel limits). • Partner with local communities to improve night sky ordinances and enforcement. • Complete projects to re-establish dedicated horse trails for the Bandelier Wilderness. This would re-establish appropriate wilderness activity as well as making the wilderness accessible to certain Americans with Disabilities Act / Architectural Barriers Act (ADA/ ABA) limitations. • Reintroduce and establish native fish communities in Capulin and Frijoles Creeks. Re-open the wilderness to fishing. • Establish ADA/ABA compliant overlook trails at locations that have exceptional opportunities to observe and “look into” the Bandelier Wilderness. • Expand concession opportunities for wilderness equipment rentals (snow shoes, cross-country skis, camping equipment, etc.) and guided programs to improve access and appropriate visitor use of the wilderness areas. • Develop “Bandelier App” that works with mobile GPS devices and equipment to identify trail locations, camping zones, emergency procedures and protocols, wilderness ethics and considerations, etc. • Partner with neighboring landowners to re-mark boundaries. • Partner with neighboring landowners to remove feral cattle before the cattle enter the Bandelier Wilderness. • Re-establish the hiking trail along the Rio Grande corridor. • Work with Santa Fe National Forest to have the burro protection area removed from the area near Bandelier Wilderness.
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • Ecosystem restoration plan (Record of Decision 2007). • Fire management plan (2005). • “Would Ecological Landscape Restoration Make the Bandelier Wilderness More or Less of a Wilderness?” Sydoriak, C. A., C. D. Allen, and B. F. Jacobs. 2001. Wild Earth. Winter 2000/2001. • Completed minimum infrastructure and minimum requirement analyses.

Fundamental Resource or Value	Wilderness
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Collect information on day-use levels in wilderness. • Update and Improve GIS data for trails, trailheads, camping zones, water availability, etc. • Wilderness character assessment.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Wilderness/backcountry stewardship plan (including user capacity, management of trails). • Complete minimum infrastructure analysis for existing research or monitoring projects to determine what material needs to be removed and what infrastructure is a priority for continued use and monitoring. • Fire management plan.
<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"> • Wilderness Act of 1964 • Public Law 94-567 (designated wilderness in Bandelier National Monument) • Clean Air Act, 1970 • Executive Order 13175 “Consultation and Coordination with Indian Tribal Governments” • Secretarial Order 3289, “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources ”(2009) <p>NPS Policy-Level Guidance (NPS <i>Management Policies 2006</i> and Director’s Orders)</p> <ul style="list-style-type: none"> • NPS <i>Management Policies 2006</i> (chapter 6) • Director’s Order 41: <i>Wilderness Stewardship</i> • NPS <i>Reference Manual 41: Wilderness Stewardship</i> • <i>Keeping it Wild in the National Park Service. A User Guide to Integrating Wilderness Character into Park Planning, Management, and Monitoring</i> (2014) • Department of the Interior Policy on Consultation with Indian Tribes



Fundamental Resource or Value	Museum Collection and Archives
Related Significance Statements	<ul style="list-style-type: none"> • Cultural Connections • Study and Preservation of Culture
Current Conditions and Trends	<p>Conditions</p> <ul style="list-style-type: none"> • The Bandelier museum collection contains more than 600,000 objects from the Archaic period (5,500 years ago) to the modern era. The collection also includes a herbarium and other biological specimens. • Museum collections for cultural resources other than archeological resources are less comprehensive and generally of less interest for research than the archeology that is the primary focus of the collections. These museum collections cover topics that are significant at the local and state level, and are well represented at other regional museums. Consequently, they are less of a focus than the collections associated with the American Indian occupancy of the monument. • There are some security issues with the museum collection. • Conservation work is needed on the Works Progress Administration (WPA) artwork. WPA artwork in general is too fragile to put on display. • Much of the museum collection is stored outside the monument at the NPS Western Archaeological Conservation Center (WACC). While this location causes logistical challenges for monument staff, the WACC site provides a safe, secure, and professionally managed location for museum collections that is not available within the monument. Collections at the WACC facility are readily accessible to researchers, in contrast to the monument, where there are no dedicated museum staff members to support research requests. • The monument’s herbarium collection is housed in the Botany Department of the University of Wyoming (a digital version is posted online), and animal, insect, and arthropod specimens are housed in the Museum of Southwestern Biology at the University of New Mexico. <p>Trends</p> <ul style="list-style-type: none"> • NPS staff is continuing to implement the Intermountain Region’s museum management plan, which encourages transferring most collections to the NPS Western Archaeological Conservation Center. • Digitizing museum images is well underway, which will enable researchers and the public virtual access to the items. • Contemporary pueblo art continues to be added to the collection, reflecting both continuity and changes in pueblo culture.
Threats	<ul style="list-style-type: none"> • Visitors can accidentally harm fragile pieces of the collection, especially if put on display without proper consideration. • The portion of the museum collection that is housed in the monument is potentially subject to wildfire and flooding.

Fundamental Resource or Value	Museum Collection and Archives
<p>Opportunities</p>	<ul style="list-style-type: none"> • Place furnishings, furniture, and additional materials on public display, perhaps on rotation. (Main room of the visitor center is one place where historic furnishings or replicas could be installed, expanding interpretation of CCC history.) • If making available CCC-era furnishings for public display and use is a goal, then there is an opportunity to continue fabricating replica pieces to serve this purpose, thereby helping preserve the actual historic furnishings. • Reestablishing the lodge or lodge functions could enable additional materials to be placed on public display. • Develop alternative means of making WPA artwork available to the public. • Identify and develop an interpretive collection separate from the museum collection. This would include pieces that are appropriate for handling by the public. • Potentially establish a local repository where materials can be stored closer to the monument. • Increase opportunities for scholarly and research access to the collections. • Continue to photo document all objects and digitally scan all archives to provide the public and researchers with virtual access to the collections. • Consult with the traditionally associated pueblos relating to the display and interpretation of Ancestral Pueblo and contemporary pueblo objects and images.
<p>Existing Data and Plans Related to the FRV</p>	<ul style="list-style-type: none"> • “Bandelier National Monument Standard Field Procedures for Artifact Collection, 2013.” Prepared for Bandelier National Monument. • “Bandelier National Monument Scope of Collections Statement, 2010.” Prepared for Bandelier National Monument. • “Collections Housekeeping Procedures” (2007). • “Phase III Final Report on the Bandelier Tinware Project.” Raphael, B. 2006. Bandelier National Monument files. Los Alamos, New Mexico. • Interior Collection Management System.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Historic furnishings study for appropriate areas in the district. • Color imagery of the 1970s and 1980s is lacking and is needed to ensure that the Bandelier archival collections are complete.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Security needs and assessment plan for storing Bandelier museum collections on-site. • Preservation and treatment plan for CCC furnishings and objects not associated with tinware.
<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"> • Museum Properties Management Act • National Historic Preservation Act of 1966, as amended • Native American Graves Protection and Repatriation Act of 1990 • “Curation of Federally-Owned and Administered Archaeological Collections” (36 CFR Part 79) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</p> <ul style="list-style-type: none"> • Department of the Interior Policy on Consultation with Indian Tribes • NPS Management Policies 2006 (sections 1.9.2, 5.3.5.5.6) • Director’s Order 24: NPS Museum Collections Management • Director’s Order 28: Cultural Resource Management • NPS Museum Handbook • “Museum’s Collection Facilities Strategy: Intermountain Region” (2005)



Analysis of Other Important Resources and Values

Other Important Resource or Value	Recreational Values / Visitor Experiences
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Diverse Natural Systems • Wilderness
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • In 2010, prior to the Las Conchas Fire, more than 230,000 recreational visitors came to Bandelier. • Most visitors come to the monument between March and September, and most come to Frijoles Canyon for their park experience; lesser numbers use the backcountry or visit Tsankawi. • Local and regional residents account for a high percentage of visitors. • The vast majority of visitors are day users. • Many of the park's boundary markers were destroyed during the Las Conchas Fire. • Horse trails are currently closed due to poor trail conditions. <p>Trends</p> <ul style="list-style-type: none"> • Monument visitation has been declining since its peak in 1994, when 430,000 recreational visitors were recorded. From 2011 through 2013, visitation has been below 200,000 recreational visitors.
<p>Threats</p>	<ul style="list-style-type: none"> • Continued potential for flooding and extreme weather events. • Camping zones in canyons are now annually closed during the monsoon season because of the high potential for flash flooding. • More than 80% of the wilderness trail system suffered adverse impacts due to the Las Conchas Fire and subsequent floods. Fishing is closed in the Bandelier Wilderness. Access to the Lower Falls remains closed to visitor access due to safety concerns. Horseback riding is suspended in the wilderness due to trail closures. • Most trailheads providing access to the Bandelier Wilderness are unknown and difficult to find due to a lack of road signage and publically accessible information. • During peak periods traffic congestion occurs at the park entrance station, with long lines of traffic frustrating visitors. • Parking demand exceeds capacity in Frijoles Canyon during peak periods. The Las Conchas Fire reduced parking capacity in Frijoles Canyon, making traffic and parking issues more challenging. • Potential for visitor use conflicts (e.g., between equestrians and hikers).

Other Important Resource or Value	Recreational Values / Visitor Experiences
<p>Opportunities</p>	<ul style="list-style-type: none"> • Improving road signage for trailheads. Improving trail kiosks, and messaging to visitors would improve the visitor experience and decrease visitor impacts. • Establish public programming specific to understanding and enjoying the natural landscape. • Develop “Bandelier App” that works with mobile GPS devices and equipment to identify trail locations, camping zones, emergency procedures and protocols, wilderness ethics and considerations, the park brochure, etc. • Make the park brochure digitally available from the park web site. • Provide visitor-oriented viewing lists in visitor center and web-site (birds, butterflies, wildflowers, small mammals, etc.). • Partner with local communities to establish ordinances along the Jemez Mountains National Scenic Byway to protect soundscapes (no Jake brakes, muffler decibel limits, etc.). • Partner with local communities to improve night sky ordinances and enforcement. • Reintroduce and establish native fish communities in Capulin and Frijoles Creeks; re-open Bandelier to fishing. • Complete projects to re-establish dedicated horse trails for the Bandelier Wilderness. Re-establish appropriate wilderness activity as well as making the Bandelier Wilderness accessible to certain ADA/ABA limitations. • Establish ADA/ABA-compliant overlook trails at locations that have exceptional opportunities to observe and “look into” the Bandelier Wilderness. • Expand concession opportunities for wilderness equipment rentals (snow shoes, cross-country skis, camping equipment, etc.) and guided programs to improve access and appropriate visitor use of the wilderness area. • Establish a trail in Frijoles Canyon with overlooks designed specifically for animal viewing (bighorn sheep, falcons, etc.). • Extend dead-end trails into loop trails. • Partner with neighboring agencies to establish a hardened hike/bike trail connecting Bandelier to Los Alamos, White Rock, Tsankawi, Manhattan Project National Historical Park, and the Valles Caldera National Preserve. • Restore the original lodging and lodge restaurant functions in the Civilian Conservation Corps National Historic Landmark District. • Evaluate appropriate areas for the potential for climbing (basalt areas, etc.). • Partner with the US Army Corps of Engineers at Cochiti Reservoir to enhance and promote use of Rio Grande to access Bandelier. • Expand facilities at Juniper Campground to include showers. • Provide electrical hook-ups in one of the three loops in Juniper Campground and deauthorize the use of generators throughout the campground. • Provide concession or shuttle service that drops visitors off at trail heads and allows one-way hiking back to the park visitor center. • Re-mark boundary with permanent signs. • Formally classify Bandelier as an International Dark Sky Park.
<p>Existing Data and Plans Related to the OIRV</p>	<ul style="list-style-type: none"> • Ongoing transportation plan and the Tsankawi unit plan.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Update and improve GIS data for trails, trailheads, camping zones, water availability, etc. • Visitor experience survey, providing data on visitor uses and activities, visitor experiences needs and wants, etc.

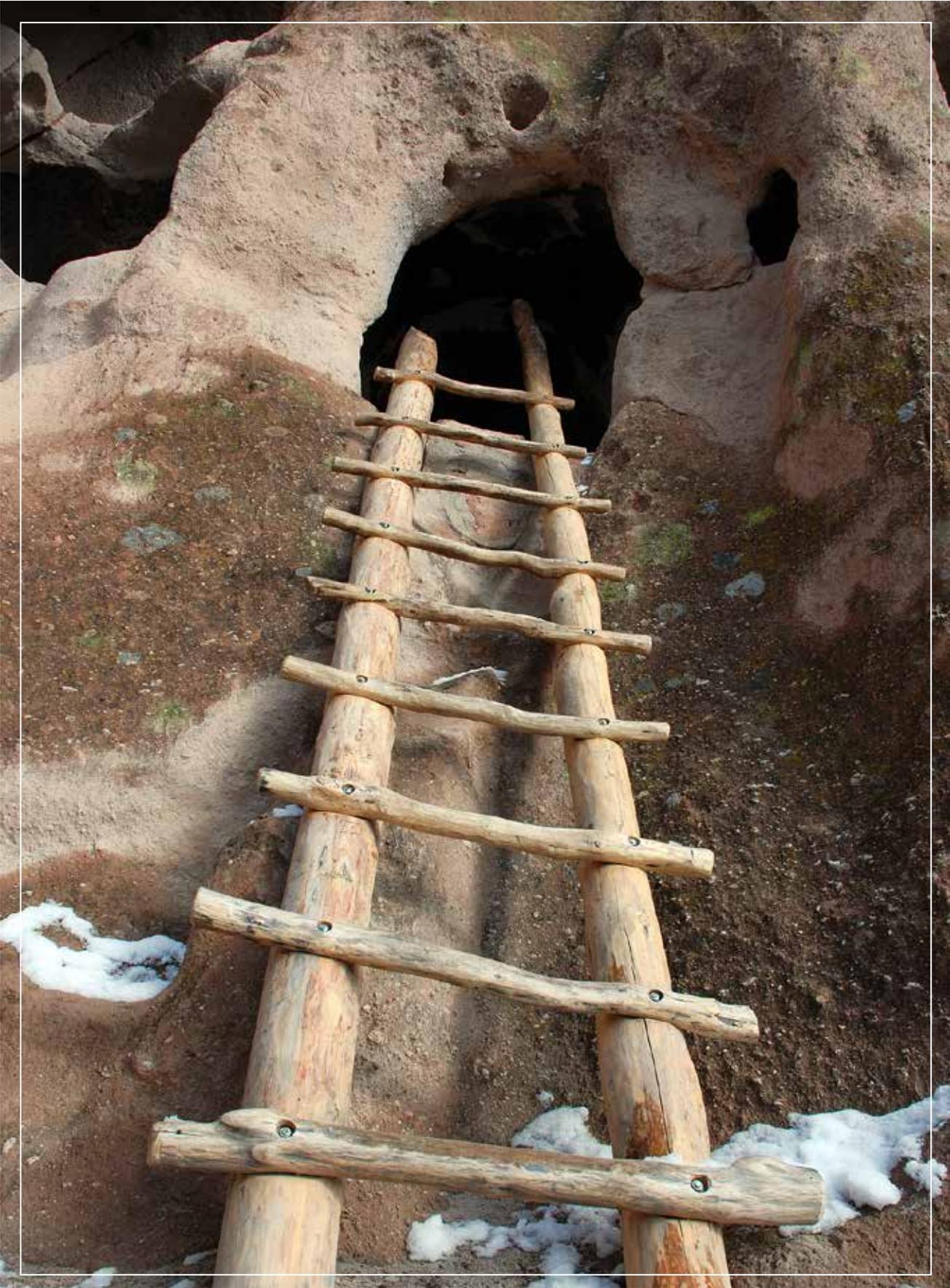
Other Important Resource or Value	Recreational Values / Visitor Experiences
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Wilderness stewardship plan. • Trails management plan. • Update the comprehensive interpretive plan. • Regional transportation plan. • Accessibility self-evaluation plan.
<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"> • NPS Concessions Management Improvement Act of 1998 • Americans with Disabilities Act of 1990 (28 CFR 36) • Architectural Barriers Act of 1968 • Architectural Barriers Act Accessibility Guidelines; Outdoor Developed Areas • Rehabilitation Act of 1973 • Wilderness Act of 1964 • Federal Lands Recreation Enhancement Act • National Park Service Concessions Management Improvement Act of 1998 • Noise Control Act • Outdoor Recreation Act • Superintendent’s Compendium • “Resource Protection, Public Use and Recreation: Fishing” (36 CFR 2.3) • “Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities” (28 CFR 36) • “Resource Protection, Public Use, and Recreation” (36 CFR 2) • “Vehicles and Traffic Safety” (36 CFR 4) • “Commercial and Private Operations” (36 CFR 5) • “Concession Contracts” (36 CFR 51) • “Nondiscrimination in Federally Assisted Programs of the Department of the Interior,” (43 CFR 17) Subpart B: “Nondiscrimination on the Basis of Handicap” • 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 8 • NPS <i>Transportation Planning Guidebook</i> • Director’s Order 6: <i>Interpretation and Education</i> • Director’s Order 17: <i>National Park Service Tourism</i> • Director’s Order 41: <i>Wilderness Stewardship</i> • Director’s Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i>



Other Important Resource or Value	New Deal Era Legacy / Civilian Conservation Corps National Historic Landmark District
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Study and Preservation of Culture • Civilian Conservation Corps Historic District
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • All structures and landscape areas are still in use. Public buildings, such as the visitor center and current gift shop and snack bar, are exposed to usage by 230,000-plus visitors per year, although they were designed when annual visitation was about 15,000. • Overall, the Bandelier Civilian Conservation Corps National Historic Landmark District is in good condition. The cultural landscape of the district, including buildings and landscaped areas, requires ongoing maintenance. In particular, the exposed viga ends, flat roofs, masonry, and the original windows and doors require ongoing maintenance. • With the exception of public restrooms at the visitor center, bathroom doors and turn-around radius are not ADA compliant. • Plumbing and wiring needs to be upgraded and replaced. • Gas, water, and electrical lines are beyond life cycles and are failing. • Former guest cabins that were originally used only in summer are now in use year-round either as seasonal housing or offices. The fire tower and entrance station are used according to their original design and function. • There are ongoing projects to bring paint colors on window frames, doors, and interior and exterior walls back to their original appearance. • The CCC trails are deteriorating in places. • Site drainage is inadequate. • Roofs are leaking in places, resulting in interior damage. • The aesthetics of the visitor center have been degraded due to flood protection (sand bagging). • Insects (carpenter ants) and pest control have affected the structures. <p>Trends</p> <ul style="list-style-type: none"> • Generally, with the establishment of a preservation program and its focus on the buildings, the historic district is improving. • Accessibility is improving but is still a concern. • Maintenance of the buildings is improving through planning. • Museum objects (especially the Naumer and Velarde artworks) need ongoing conservation. • Historic paint colors have been identified and painted features are being returned to their original colors from the period of significance. • Nonhistoric features are being identified and removed from the landmark district (e.g., wires from building exteriors, nonhistoric sheds). • Many landscape vegetative features have become overgrown and/or are dying. These features are being replaced with new plantings. • Failing utilities' infrastructure is being systematically replaced (primary electrical, primary gas, secondary gas, etc.). • Historic integrity of the historic district landscape is gradually diminishing over time as a result of the addition of new buildings and exterior structural elements, flood damage to the riparian area, addition of incompatible site furnishings, and changes to the trail system. Recent restoration of selected patio areas has enhanced historic integrity.

Other Important Resource or Value	New Deal Era Legacy / Civilian Conservation Corps National Historic Landmark District
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Flooding, extreme weather events, and drainage affect the integrity and character of the district. Improper drainage into and around buildings can cause flooding and adversely affect building stones and interior and exterior architecture. • General aging deterioration, especially the masonry. • Potential for landslides affecting the site. • Intense rain events along canyon falls above the landmark district. • Insects and pest control can affect the structures. • Underground moisture and mold can affect the structures. • Changes to historic transportation patterns could impact character-defining features of the district. • Uses of the structures that are different from their original historic intended use. • Changes in codes for utilities may result in necessary changes to the structures (e.g., gas lines may no longer go under the buildings). • The district is so large it is hard to keep up maintenance. • Adaptive use of CCC structures for office space and visitor activities can cumulatively affect the historic fabric and integrity of the cultural landscape. <p>Opportunities</p> <ul style="list-style-type: none"> • Education/outreach would enable visitors to learn more about the CCC era. • Restoring the original lodging and lodge restaurant functions. • Restore the original lodge restaurant and lodge dormitory to their original historic footprint. Remove roofing that connected the two buildings to improve natural air flow, visitor circulation patterns, etc. • Conduct research on climate change and its effects on the district. • Bring back the original furnishings out of curatorial storage. • Recreate the historic scene inside one of the CCC rooms for interpretation. • Use of french drains is not a visible intrusion to the landscape and should keep moisture away from underground building walls (less chance of seepage and mold). • Re-open the historic Bandelier Lodge.
<p>Existing Data and Plans Related to the OIRV</p>	<ul style="list-style-type: none"> • National historic landmark nomination for CCC district. • “Bandelier National Monument: An Administrative History.” Rothman, H. R. 1988. Southwest Cultural Resources Center, Professional Papers No. 14, National Park Service. • “The Historic Period at Bandelier National Monument.” Smith, M. L. 2002. Intermountain Cultural Resources Management, Professional Paper No. 63. National Park Service. • “Historic Structure Report: CCC Buildings, Bandelier National Monument, New Mexico.” Harrison, L. S., R. Copeland, and R. Buck. 1988. US Department of the Interior, National Park Service. • The Grandest Thing I Ever Saw: A Historic Resource Study of Bandelier National Monument. Aspen CRM Solutions. 2012. Bandelier National Monument, Los Alamos, New Mexico.
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Identification of all utility infrastructure. • Identification of all cultural landscape elements within GIS and FMSS.

Other Important Resource or Value	New Deal Era Legacy / Civilian Conservation Corps National Historic Landmark District
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Concept plan/commercial feasibility study for Frijoles Canyon and Frijoles Mesa that would address possible lodging and other program decisions. This would replace the outdated 1995 version. • Complete the cultural landscape report for the monument. • Maintenance management plan. • Updated 1988 historic structures report, including a current condition assessment and preservation plan for buildings and landscapes. • Record-keeping and archival plan for maintenance management.
<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"> • Architectural Barriers Act of 1968 • National Historic Preservation Act of 1996, as amended • Historic Sites, Buildings, and Antiquities Act of 1935 • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Advisory Council on Historic Preservation's implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800) <p>NPS Policy-level Guidance (NPS <i>Management Policies 2006</i> and Director's Orders)</p> <ul style="list-style-type: none"> • Director's Order 28: <i>Cultural Resource Management</i> • NPS <i>Management Policies 2006</i> (chapter 5: "Cultural Resource Management") • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> • <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties</i> Programmatic agreement among the NPS, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)



Other Important Resource or Value	Other Cultural Resources
<p>Related Significance Statements</p>	<ul style="list-style-type: none"> • Cultural Connections • Study and Preservation of Culture
<p>Current Conditions and Trends</p>	<p>Conditions</p> <ul style="list-style-type: none"> • The historic orchard in Frijoles Canyon has deteriorated and no longer is a viable asset for interpretation. • A portion of Bandelier was part of the Ramon Vigil Grant. Existing features on the Bandelier landscape are associated with this land grant. • During the early NPS management of Bandelier, Frijoles Canyon hosted a CCC camp. In addition to the landmark district, there are existing features on the Bandelier landscape associated with this CCC camp (e.g., swimming areas, trash middens). • There are also existing features on the Bandelier landscape associated with another CCC camp that was located near Water Canyon (intersection of New Mexico State Roads 4 and 501). • Existing features on the Bandelier landscape are associated with various US Forest Service permit holders, who occupied Frijoles Canyon prior to Bandelier’s transition to the National Park Service. • During the later years of World War II, the monument was closed and occupied by federal workers associated with the Manhattan Project. There are existing features and uses of the landscape associated with the Manhattan Project. • The Los Alamos community has always been associated with Bandelier. The community (Ranch School) used the landscape for camping, exploring, horseback riding, etc. There are existing features and use of the landscape associated with this neighboring community. • Many relevant and interesting state level resources are not presented or readily accessible to visitors (e.g., the Doll House, landscape elements associated with the Frey and Abbott lodges, US Forest Service occupation of the landscape). • To accommodate visitor use and park operations, new development and changes made to buildings, features, and the surrounding area within Frijoles Canyon have affected the cultural landscape and important elements within it. • The Frijoles Canyon Cultural Landscape Inventory rates the landscape as “fair.” <p>Trends</p> <ul style="list-style-type: none"> • Monument landscapes are increasingly subject to changes associated with drought, weathering processes, and climate change. • Recent drought conditions have caused a decline in piñon and ponderosa trees at Tsankawi, in Bandelier’s backcountry, and Frijoles Canyon. Recent increases in some nonnative invasive plants are also occurring within identified cultural landscapes.

Other Important Resource or Value	Other Cultural Resources
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Wildfire is a threat. Wooden features, such as fence posts, burned recently and are at increased risk from future fires. • Weathering of structures due to natural processes. • Feral cattle trample and graze on top of the resources and alter vegetation, which contributes to a changing fire regime. • Because not as much emphasis is placed on maintenance of these resources, they are unintentionally subject to benign neglect. • A proposal to hold more water in Cochiti Reservoir could potentially introduce more people into the monument’s canyons due to increased recreational boating activity throughout White Rock Canyon, which in turn would introduce more visitors to areas of the monument that are especially remote from ranger oversight. Holding more water in the reservoir could also contribute to mass wasting of landforms in Rio Grande Canyon. <p>Opportunities</p> <ul style="list-style-type: none"> • Opportunity to interpret these cultural resources through guided hikes and walks—for instance, guided wilderness hikes. • Establish trail(s) that interpret the state-level resources. • These resources constitute an opportunity for the National Park Service to understand 19th century landscape practices (like grazing, introduction of burros) whose effects are still being felt today. • Restore the historic orchard. • Establish publicly accessible database (photographs, drawings, maps, etc.).
<p>Existing Data and Plans Related to the OIRV</p>	<ul style="list-style-type: none"> • M. L. Smith. 2002. “The Historic Period at Bandelier National Monument.” Intermountain Cultural Resources Management Professional Paper No. 63. Santa Fe, NM. • Cultural landscape inventories for Tsankawi and Frijoles Canyon. • Draft Development Concept Plan for Frijoles Canyon and Tsankawi (1995). • Historic Structure Report (1998, 2013). • Resource Management Plan (1995).
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • Continued or enhanced monitoring of these other cultural resources in order to get a sense for the level/rate of deterioration. • Better understanding of the US Forest Service chapter of monument history. • Research the Spanish Colonial/Mexican period to enhance understanding of this period of history relating to the monument. • Reanalyze significance layers in the Frijoles Canyon cultural landscape inventory. • Research the second CCC camp in Water Canyon.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Cultural landscape report for the monument’s backcountry, including Frijoles Canyon, including treatment recommendations on how to manage the agricultural history remnants in this landscape. • Cultural landscape report, including treatment recommendations, for Tsankawi. • Cultural landscape report, as needed, for the backcountry. • Plan for management of the Canada de Cochiti area (if the area were to come under NPS management).

Other Important Resource or Value	Other Cultural Resources
<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"> • National Historic Preservation Act of 1996, as amended • Archeological and Historic Preservation Act (1974) • Historic Sites, Buildings, and Antiquities Act of 1935 • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Advisory Council on Historic Preservation's implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800) <p>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</p> <ul style="list-style-type: none"> • Director's Order 28: <i>Cultural Resource Management</i> • <i>NPS Management Policies 2006</i> (sections 5.3.5 and 5.3.5.2) • <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> • <i>The Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> • <i>The Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties</i> • Programmatic agreement among the NPS, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)



Appendix B: Presidential Proclamation and Legislative Acts for Bandelier National Monument

Bandelier National Monument

Establishment: Proclamation (No. 1322) of February 11, 1916..... 121

Enlarging the area: Proclamation (No. 1991) of February 2, 1932..... 123

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 1322-Feb. 11, 1916-39 Stat. 1764)

WHEREAS, certain prehistoric aboriginal ruins situated upon public lands of the United States, within the Santa Fe National Forest, in the State of New Mexico, are of unusual, ethnologic, scientific, and educational interest, and it appears that the public interests would be promoted by reserving these relics of a vanished people, with as much land as may be necessary for the proper protection thereof, as a National Monument; Now, THEREFORE, I, Woodrow Wilson, President of the United States of America, by virtue of the power in me vested by section two of the Act of Congress approved June 8, 1906, entitled "An Act for the Preservation of American Antiquities," do proclaim that there are hereby reserved from appropriation and use of all kinds under all of the public land laws, subject to all prior valid adverse claims, and set apart as a National Monument, all the tracts of land, in the State of New Mexico, shown as the Bandelier National Monument on the diagram forming a part hereof. The reservation made by this proclamation is not intended to prevent the use of the lands for forest purposes under the proclamation establishing the Santa Fe National Forest. The two reservations shall both be effective on the land withdrawn, but the National Monument hereby established shall be the dominant reservation, and any use of the land which interferes with its preservation or protection as a National Monument is hereby forbidden. Warning is hereby given to all unauthorized persons not to appropriate, injure, remove, or destroy any feature of this National Monument, or to locate or settle on any of the lands reserved by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed. Done at the City of Washington this eleventh day of February in the year of our Lord one thousand nine hundred and sixteen. And of the Independence of the-United States the one hundred and fortieth.

Woodrow Wilson

By the President:

Robert Lansing,

Secretary of State.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 1991-Feb. 25, 1932-47 Stat. 2503]

WHEREAS it appears desirable, in the public interest, to add to the Bandelier National Monument as established by proclamation of February 11, 1916 (39 Stat. 1764), certain lands of the United States within the Santa Fe National Forest, in the State of New Mexico, and to exclude said national monument as enlarged from the Santa Fe National Forest; Now, THEREFORE, I, Herbert Hoover, President of the United States of America, by virtue of the power in me vested by section 2, act of June 8, 1906 (34 Stat. 225; U. S. Code, title 16, sec. 431), and the act of June 4, 1897 (30 Stat. 11, 34; U. S. Code, title 16, sec. 473), do proclaim that the boundaries of the Bandelier National Monument be, and they are hereby, changed so as to include certain additional lands in T. 19 N., R. 7 E., New Mexico principal meridian, subject to all valid existing rights, and that the reservation as so enlarged is hereby excluded from the Santa Fe National Forest, the lands within the reservation as enlarged being described as follows:

NEW MEXICO PRINCIPAL MERIDIAN T. 19 N., R. 7 E., south half of secs. 7, 8, and 9; secs. 16 to 21 inclusive; fractional secs. 28, 29, and 30; All lands in unsurveyed Tps. 17 and 18 N., R. 6 E., lying north of the Canada de Cochiti Grant, south of the Ramon Vigil Grant, and west of the Rio Grande River.

Warning is hereby given to all unauthorized persons not to appropriate, injure, remove, or destroy any feature of this national monument, nor to locate or settle on any of the lands reserved by this proclamation. Nothing herein contained shall modify or abridge the right of the public to travel over any or all public roads now existing within or upon the lands herein described or roads subsequently constructed to take the place of such existing roads, nor shall public travel over said roads be subject to any restriction or condition other than those generally applicable to the use of public roads in the State of New Mexico. The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this monument as provided in the act of Congress entitled "An act to establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat. 535-536), and acts additional thereto or amendatory thereof.

IN WITNESS WHEREOF I have hereunto set my hand and caused the seal of the United States to be affixed. Done at the City of Washington this 25th day of February, in the year of our Lord nineteen hundred and thirty-two, and of the Independence of the United States of America the one hundred and fifty-sixth.

By the President:

Herbert Hoover

HENRY L. Stimson,

Secretary of State.

PUBLIC LAW 94-567-OCT. 20, 1976

Public Law 94-567

94th Congress

An Act

Oct. 20, 1976 To designate certain lands within units of the National Park System as wilderness; to revise the boundaries of certain of those units; and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in accordance with section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132 (c)), the following lands are hereby designated as wilderness, and shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act: (a) Bandelier National Monument, New Mexico, wilderness comprising twenty-three thousand two hundred and sixty-seven acres, depicted on a map entitled "Wilderness Plan, Bandelier National Monument, New Mexico," numbered 315-20,014-B and dated May 1976, to be known as the Bandelier Wilderness. . . .

SEC. 6. The areas designated by this Act as wilderness shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and, where appropriate, any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

Public Law 105-376 [112 STAT. 3388]

105th Congress

An Act

To modify the boundaries of the Bandelier National Monument to include the lands within the headwaters of the Upper Alamo Watershed which drain into the Monument and which are not currently within the jurisdiction of a Federal land management agency, to authorize purchase or donation of those lands, and for other purposes.

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

SECTION 1. SHORT TITLE.

This Act may be cited as the “Bandelier National Monument Administrative Improvement and Watershed Protection Act of 1998.”

SEC. 2. FINDINGS AND PURPOSES.

(a) FINDINGS.-Congress finds that:

(1) Bandelier National Monument (hereinafter, the Monument) was established by Presidential proclamation on February 11, 1916, to preserve the archeological resources of a “vanished people, with as much land as may be necessary for the proper protection thereof...” (No. 1322; 39 Stat. 1746).

(2) At various times since its establishment, the Congress and the President have adjusted the Monument’s boundaries and purpose to further preservation of archeological and natural resources within the Monument.

(A) On February 25, 1932, the Otowi Section of the Santa Fe National Forest (some 4,699 acres of land) was transferred to the Monument from the Santa Fe National Forest (Presidential Proclamation No. 1191; 17 Stat. 2503).

(B) In December of 1959, 3,600 acres of Frijoles Mesa were transferred to the National Park Service from the Atomic Energy Committee (hereinafter, AEC) and subsequently added to the Monument on January 9, 1991, because of “pueblo-type archeological ruins germane to those in the monument” (Presidential Proclamation No. 3388).

(C) On May 27, 1963, Upper Canyon, 2,882 acres of land previously administered by the AEC, was added to the Monument to preserve “their unusual scenic character together with geologic and topographic features, the preservation of which would implement the purposes” of the Monument (Presidential Proclamation No. 3539).

(D) In 1976, concerned about upstream land management activities that could result in flooding and erosion in the Monument, Congress included the headwaters of the Rito de los Frijoles and the Cafiada de Cochiti Grant (a total of 7,310 acres) within the Monument’s boundaries (Public Law 94-578; 90 Stat. 2732).

(E) In 1976, Congress created the Bandelier Wilderness, a 23,267 acres area that covers over 70 percent of the Monument.

(3) The Monument still has potential threats from flooding, erosion, and water quality deterioration because of the mixed ownership of the upper watersheds, along its western border, particularly in Alamo Canyon.

(b) PURPOSE.-The purpose of this Act is to modify the boundary of the Monument to allow for acquisition and enhanced protection of the lands within the Monument’s upper watershed.

SEC. 3. BOUNDARY MODIFICATION.

Effective on the date of enactment of this Act, the boundaries of the Monument shall be modified to include approximately 935 acres of land comprised of the Elk Meadows subdivision, the Gardner parcel, the Clark parcel, and the Baca Land & Cattle Co. lands within the Upper Alamo watershed as depicted on the National Park Service map entitled "Proposed Boundary Expansion Map Bandelier National Monument" dated July, 1997. Such map shall be on file and available for public inspection in the offices of the Director of the National Park Service, Department of the Interior.

SEC. 4. LAND ACQUISITION.

(a) IN GENERAL.-Except as provided in subsections (b) and (c), the Secretary of the Interior is authorized to acquire lands and interests therein within the boundaries of the area added to the Monument by this Act by donation, purchase with donated or appropriated funds, transfer with another Federal agency, or exchange: Provided, That no lands or interests therein may be acquired except with the consent of the owner thereof. (b) STATE AND LOCAL LANDS.-Lands or interests therein owned by the State of New Mexico or a political subdivision thereof may only be acquired by donation or exchange.

(c) ACQUISITION OF LESS THAN FEE INTERESTS IN LAND.-The Secretary may acquire less than fee interests in land only if the Secretary determines that such less than fee acquisition will adequately protect the Monument from flooding, erosion, and degradation of its drainage waters.

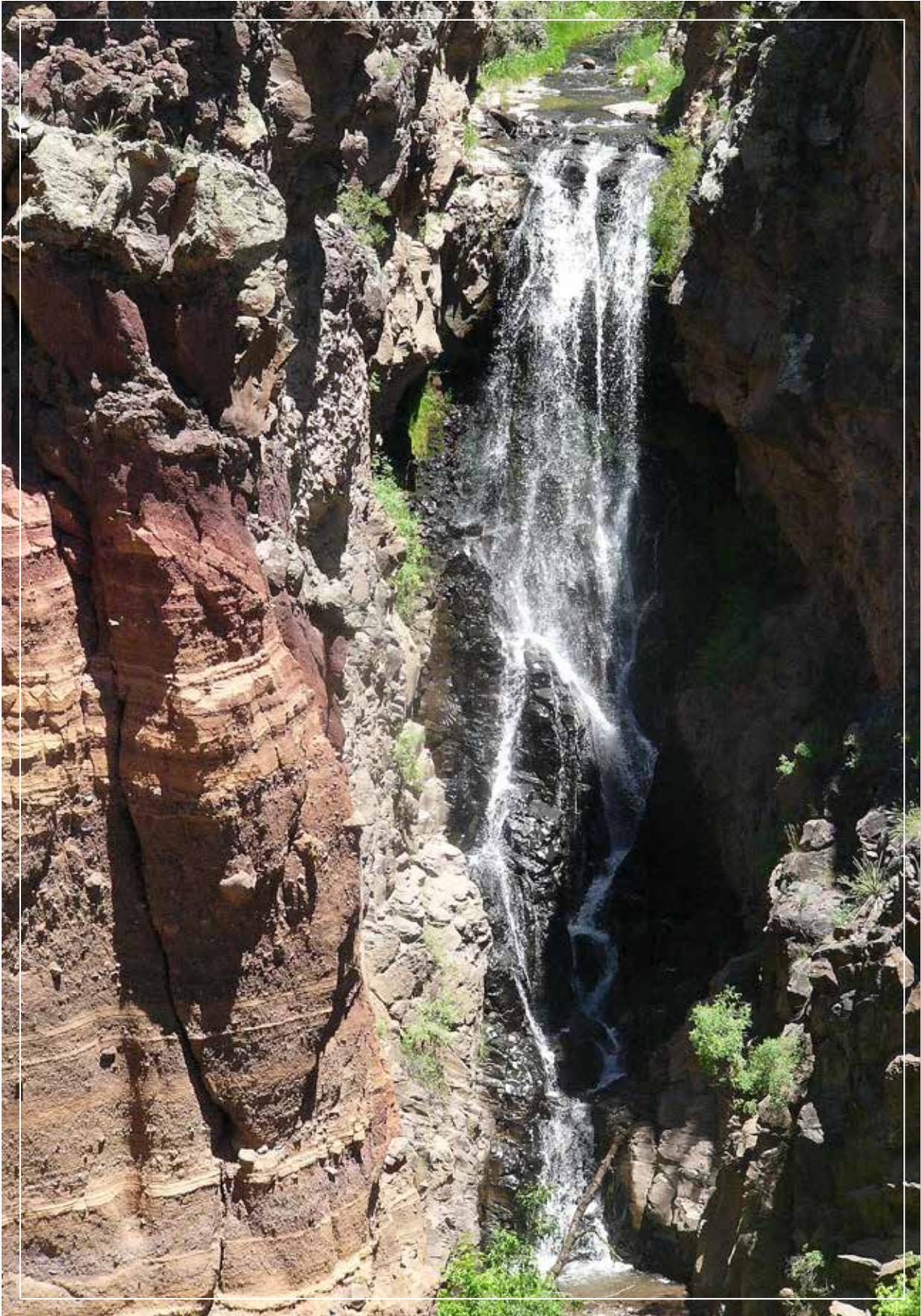
SEC. 5. ADMINISTRATION.

The Secretary of the Interior, acting through the Director of the National Park Service, shall manage the national Monument, including lands added to the Monument by this Act, in accordance with this Act and the provisions of law generally applicable to units of National Park System, including the Act of August 25, 1916, an Act to establish a National Park Service (39 Stat. 535; 16 U.S.C. 1 et seq.), and such specific legislation as heretofore has been enacted regarding the Monument.

SEC. 6. AUTHORIZATION OF APPROPRIATIONS.

There is authorized to be appropriated such sums as may be necessary to carry out the purpose of this Act.

Approved November 12, 1998.



Appendix C: Inventory of Special Mandates and Administrative Commitments

Title / Agency / Organization	Purpose / Description	Expiration Date	Responsible Party
Memorandums of Understanding			
Agreement with Los Alamos County for mutual law enforcement assistance	Mutual support for law enforcement assistance	January 2020	Chief Ranger
Agreement with Los Alamos County for mutual firefighting assistance	Mutual support for firefighting assistance	January 2020	Chief Ranger
Volunteer recruiting	Volunteer recruiting with Los Alamos Volunteer Association	06 June 2019	VIP Coordinator
Memorandums of Agreement			
Agreement with Los Alamos County - Atomic City Transit (shuttle)	Provides shuttle service between White Rock and Frijoles Canyon	30 November 2015	Chief Ranger
Agreement for medical advisor	Medical oversight for emergency medical services at Bandelier	10 July 2019	Chief Ranger
Agreement with Los Alamos Commerce Development Corp for NPS pass sales	Authorizes LACDC to sell NPS/Bandelier passes	31 December 2018	Chief of Interpretation
Interagency Agreements			
Agreement for interagency fire center	Documents cooperation Between Bandelier, Santa Fe National Forest and Los Alamos National Laboratory for firefighting and fuels projects	15 August 2018	Fire Management Officer
Department of Energy land use permit – TA-49	30-year land use for interagency fire center	31 May 2035	Fire Management Officer
Agreement for USGS Jemez Mountains field station	Authorizes USGS field station at Bandelier	30 September 2019	Chief of Resources
Agreement for NPS law enforcement patrols of DOE lands	Authorizes NPS law enforcement patrols of DOE lands	30 September 2015	Chief Ranger
Agreement with Valles Caldera for joint fire program	Authorizes funding for Bandelier fire staff to work on Valles Caldera fire projects	30 April 2019	Fire Management Officer
Agreement with Department of Energy for Los Alamos National Laboratory VISIBLE team	Produce virtual/augmented reality exhibits	30 September 2019	Chief of Interpretation
Cooperative Agreements			

Title / Agency / Organization	Purpose / Description	Expiration Date	Responsible Party
Agreement with Friends of Bandelier	Legal and policy agreement for friends group	10 January 2013	Superintendent
Santa Fe National Forest Tesque Peak radio agreement	Authorizes Bandelier radio antenna on USFS land at Tesuque Peak	01 June 2018	Chief Ranger
General Agreements			
Agreements with affiliated pueblos	5-year agreements for consultation	2008	Chief of Resources
NPF transportation scholar	3-year NPF scholar at Bandelier	December 2015	Chief Ranger
Santa Fe National Forest fence agreement	Maintenance of fence line between Bandelier and the Jemez District of the US Forest Service	No expiration	Chief Ranger
Special Park Uses			
Collection permits for affiliated pueblos	Two-year permits authorizing individual pueblos to collect native plants	2013	Chief of Resources
Cultural demonstrator permits	Annual permits for cultural demonstrators	Annually	Chief of Interpretation
Right-of-way for primary electrical (begins in 2016)	Right-of-way for new primary underground electrical line	2026	Chief of Preservation and Facilities
Commercial Services			
Concession contract – Bandelier Trading Post	Contract for concession activities at Bandelier	15 January 2013	Chief of Administration
Tour operator permits	Annual permits to conduct tours at Bandelier	Annually	Chief of Interpretation

Appendix D: Basics for Wilderness Stewardship

Wilderness Background Information

As required under the Wilderness Act, in 1970 the National Park Service reviewed the monument and recommended that no wilderness be established because of concerns regarding research and management of archeological concerns and because it wanted to keep management options open in the southern part of the monument.¹ However, many environmental groups opposed this position, accusing the agency of not fulfilling its Wilderness Act obligations. In response to public pressure, in 1972, the National Park Service recommended that 21,110 acres of the monument be designated by Congress as wilderness. The proposed wilderness consisted of the major portion of Frijoles Canyon and most of the canyon and mesa area to the south and southwest.

In 1975, Congress held hearings to designate wilderness in Bandelier National Monument, along with nine other areas, as part of an omnibus bill (H.R. 13160). In a House report accompanying the bill, the committee noted it included as wilderness the Shrine of the Stone Lions enclave, which the National Park Service had not included in its proposal. The Committee recognized “. . .existing facilities deemed essential for management of the area as wilderness and for continued or intensified archaeological work could be retained, and that the National Park Service would continue the necessary management activities as required to study and protect the significant archeological features of this area” (HR Report 94-1427). Specific language was to be included in the bill to authorize such minimum activities as necessary to investigate and stabilize sites of archeological interest within the wilderness. The committee also recognized that action may be needed along the banks of Cochiti Reservoir to minimize any adverse intrusion on the wilderness.

On October 20, 1976, Congress passed Public Law 94-567, designating 23,267 acres as the Bandelier Wilderness, some 70% of the monument—equal to some 50 square miles. The US Forest Service’s Dome Wilderness borders the wilderness area on the west side. The Bandelier Wilderness area covers most of the monument’s challenging, steep-walled canyons and mesas, and many of its archeological sites. Most of the monument’s 70-plus miles of trails are in the wilderness area. Popular destinations in the wilderness include the deep gorge of Alamo Canyon, the Ancestral Pueblo of Yapashi, Painted Cave in Capulin Canyon, and the Shrine of the Stone Lions.

Recorded visitation at Bandelier National Monument has ranged in recent years from 234,896 (in 2010) to 126,682 (in 2013). During 2010, approximately 750 people were issued backcountry camping permits. During 2013, approximately 265 people were issued backcountry camping permits. Camping trips in Bandelier Wilderness generally average one to two nights. Wilderness day use is estimated to be higher than overnight camping use, but since permits are not required for day users the exact number of visitors is unknown. Since the 2011 Las Conchas Fire, changes in visitor use in the wilderness have occurred. For example, the southwest corner of the monument is less accessible to hikers due to fire and flood damage, resulting in reduced visitation to Capulin Canyon and Painted Cave. The wilderness portion of Frijoles Canyon, always a popular destination for both day hikers and campers, has received much less use in the past three years due to damage from the fire and subsequent flooding.

1. This text is based on “Bandelier National Monument. An Administrative History” by Hal Rothman. Southwest Cultural Resources Center Professional Paper No. 14 (1988).

Wilderness Character Narrative

A wilderness character narrative is intended to be a qualitative description and positive affirmation of the unique attributes of a wilderness area. Representatives from each of the four wilderness managing agencies developed a national framework to monitor wilderness character using five qualities: natural, untrammeled, undeveloped, opportunities for solitude or primitive and unconfined recreation, and other features. These qualities are defined in brief as follows²:

- *Natural*: Wilderness maintains ecological systems that are substantially free from the effects of modern civilization.
- *Undeveloped*: Wilderness retains its primeval character and influence, and is essentially without permanent improvements or modern human occupation.
- *Untrammeled*: Wilderness is essentially unhindered and free from modern human control or manipulation.
- *Solitude or Primitive and Unconfined Recreation*: Wilderness provides outstanding opportunities for solitude or a primitive and unconfined type of recreation.
- *Other Features of Value*: Features that are not covered by the other four qualities, including cultural resources; paleontological resources; and other scientific, educational, scenic, or historical value to wilderness character.

The following wilderness character narrative is intended to familiarize readers with the tangible and intangible resources and values that combine to create the Bandelier Wilderness. The document was created through collaboration by NPS staff and is a record of the shared understanding of wilderness character exemplified by Bandelier National Monument. Other more analytical tools, such as wilderness character monitoring measures and documents, such as wilderness stewardship plans, may be derived from the qualitative description of and threats to wilderness character identified in this wilderness character narrative.

Natural Quality of Wilderness Character

The Bandelier Wilderness consists of 23,267 acres ranging in elevation from approximately 5,300 feet at the mouth of Alamo Canyon to approximately 8,700 feet at the upper end of Apache Mesa. Bandelier's varied topography leads to a diversity of species in habitats ranging from riparian (river and streambank) to desert to piñon-juniper to mixed conifer/aspen woodlands. Due to the variety of elevations and life zones as well as perennial water sources, more than 700 native plant species are found within the wilderness. Plant taxa of conservation and management concern include the large yellow ladyslipper, rattlesnake fern, wood lily, cerro hawthorn and gramma grass cactus.

The diverse plant communities within the monument support a variety of wildlife species. Bandelier National Monument is home to 217 species of butterflies, 63 mammal species, 170 bird species, 8 species of amphibians and 27 species of reptiles, many of which occur in the Bandelier Wilderness. Common wildlife include elk, mule deer, mountain lions, black bears, bobcats, coyotes, foxes, raccoons, squirrels, and western diamondback rattlesnakes. Threatened and endangered species such as Mexican spotted owls and Jemez Mountain salamanders find a home in the Bandelier Wilderness as do delisted and monitored animal species such as the peregrine falcon and bald eagle.

2. For more details on wilderness character see "Keeping it Wild in the National Park Service. A User Guide to Integrating Wilderness Character into Park Planning, Management, and Monitoring" (NPS 2013) and "Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System" (Landres 2008; available online at: <http://leopold.wilderness.net/pubs/654.pdf>)

Resource management actions have been, and continue to be, undertaken in the wilderness area to restore more natural conditions in areas altered directly and indirectly by people. These activities include control of nonnative invasive plant species and prescribed fires/wildland fuel reductions.

Threats to the natural quality primarily occur when natural processes or biodiversity are altered. The quality is adversely affected when populations of native species are reduced or extirpated. Degradation has been and/or will likely be caused by climate change, drought, severe erosion, catastrophic fire and flood events, and the spread of nonnative or invasive species. Removal of vegetation by programs such as eco-restoration and wildland fire fuels reduction negatively affect the natural quality in the short term but also allow the positive impact of a return to a more biologically vibrant ecosystem.

Undeveloped Quality of Wilderness Character

The Bandelier Wilderness is undeveloped for the most part. A 1949 patrol cabin with several associated sheds was burned down in the Las Conchas Fire of 2011. The remaining concrete foundation and stone chimney mark the site of this defunct structure.

Scientific investigation locations within Bandelier Wilderness are typically marked by small nonreflective metal tags or rebar. Scientific equipment that is larger than location marker posts is limited in quantity and associated with investigations that have matured and are in the process of being dismantled. Investigation locations have been consistently selected to be out of view of established trails. A single burro enclosure structure exists within designated wilderness; this enclosure pre-dates establishment of wilderness and vegetation assessment at the enclosure continues to yield data useful for management.

The primary continuing threat to the undeveloped quality of wilderness character in Bandelier Wilderness comes from short-term operational incursions of NPS aviation activities and chainsaw use. Examples include helicopter use for search and rescue or project support and chainsaw use during wildland fires. Evidence of chainsaw use to create the slash mulch treatment within 4,000 acres of ecological restoration continues to be visible in wilderness. This work was completed in 2010, but because woody debris degrades slowly in this environment it will continue to be visible for the mid-term. Additional past, present, and likely future actions that degrade the undeveloped quality include the presence of equipment placed in wilderness by researchers such as rebar, tags, metal stakes marking archeological sites and vegetation study plots, burro and elk enclosures, and flood monitoring equipment.

Untrammelled Quality of Wilderness Character

Although much of Bandelier Wilderness today is affected primarily by the forces of nature, the wilderness area is managed, manipulated and trammelled in places. The Bandelier Wilderness is composed of ecosystems that have been greatly affected by modern human use since the late 1800s. Large areas of the present wilderness were grazed (and over-grazed) by herds of sheep and cattle until the mid-1900s. This, along with fire suppression, has resulted in severe accelerated erosion of soils over much of the landscape. Efforts by park staff to reverse these effects, such as eco-restoration projects, have degraded the untrammelled quality in Bandelier Wilderness.

In Bandelier Wilderness areas, reoccupation of prehispanic sites such as cavates by shepherders in the late 1800s and early 1900s resulted in historic trash deposits, firewood cutting, and other signs of trammeling that are still evident today. Old wooden livestock corrals existed in parts of the wilderness, although most have burned in wildfires in recent years.

Park staff have targeted selected nonnative species for control, such as tamarisk, Russian olive, Tree of Heaven, Siberian elm, Russian knapweed, perennial peppergrass, leafy spurge, hoary cress, butter and eggs, and have judged that this trammeling is justified in an effort to improve the natural quality and allow the return of naturally occurring ecosystems.

Wildfire suppression, wildfire fuel reduction, and the ignition of prescribed fires are manipulative actions. All of these have occurred and continue to occur within Bandelier Wilderness and all have resulted in degradation of the untrammelled quality.

Opportunity for Solitude or Primitive and Unconfined Recreation

The Bandelier Wilderness is easily accessed and opportunities for self-reliant recreation abound. Opportunities for solitude or a primitive and unconfined type of recreation can be found just a short hike from the roadways and developed areas of the monument. The monument contains over 70 miles of trails and most of these are within the Bandelier Wilderness. Some are maintained but most are more primitive in nature. Signs are confined to trail junctions for the most part. Off-trail hiking and exploration is possible in all areas of the wilderness.

Permits are required for overnight use but not for day hikes. Some areas of the wilderness are closed to camping to protect cultural resources or sensitive species. There are no designated campsites, but certain restrictions apply such as no camping within 100 feet of a trail or water source, or on any recognizable archeological site. Regulations in Bandelier Wilderness that prohibit campfires, limit group size, prohibit rock climbing, and place restrictions on stock use can degrade the unconfined aspect of this quality but can also protect resources and allow a greater sense of solitude.

Other continuing threats to the solitude or a primitive recreational experience include a lack of understanding of wilderness values by visitors who recognize Bandelier as part of the national park system but may not understand the goals of a wilderness experience, including a desire to keep group size small.

Wilderness visitors are consistently focused on visiting known charismatic archeological sites, including Stone Lions Shrine and Painted Cave. The concentration of visitors at these popular areas within the wilderness can degrade the opportunity for solitude through the creation of social trails, enlargement of campsites, or deposition of human waste as well as trash. These issues have previously been documented in the Bandelier Wilderness at popular destinations such as Stone Lions Shrine / Yapashi Pueblo and Painted Cave. Recreation group kayaking along the Rio Grande has increased recently, with boaters undertaking hiking excursions from canyon mouths to destinations such as Painted Cave and Lower Frijoles Falls—both areas that have become more accessible from the river than from within monument trailheads due to flood damage following the Las Conchas Fire. Additionally, impacts from illegal (nonpermitted) camping associated with this boating activity are occurring along the river corridor. While this activity provides expanded recreational opportunities in wilderness, it also has the potential to continue the trend of visitor-caused impacts at select destinations.

Development outside the wilderness boundary can also degrade opportunities for a sense of solitude. These developments include agency-built fences and signs along the monument boundary; roadways and structures outside the wilderness that are visible from the wilderness; noise caused by aircraft overflights; as well as nighttime light pollution from surrounding communities including Los Alamos National Laboratory, Santa Fe, and Albuquerque. The Rio Grande corridor, which is one boundary of the Bandelier Wilderness, is often used as a route for military training flights. These can be quite disruptive to a hiker's sense of solitude. During the course of acoustic monitoring in the winter and summer of 2012, all unnatural sound sources were audible ~43% of the time in summer and ~31% of the time in winter at a monitoring site within Bandelier Wilderness. The primary sources of unnatural sounds were military and general aviation airplanes. However, total sound levels within the wilderness were remarkably low (Bandelier National Monument Acoustic Monitoring Report ARTA 2014/844).

Other Features of Value

In addition to the four necessary qualities of wilderness character, a wilderness area “may also contain significant ecological, geological, or other features of scientific, educational, scenic, or historical value” (the Wilderness Act, section 2c). Within Bandelier National Monument, cultural resources are of paramount significance. All areas of Bandelier Wilderness contain significant archeological sites of obvious scientific, educational, scenic, and historical value. The monument also has important scientific value.

Cultural Resources.

The natural environment has influenced, shaped, and impacted the numerous people who have lived within the present Bandelier Wilderness for thousands of years; these people left their mark on the land as well. Preserved is evidence of cultures from prehispanic to modern times, including American Indian cultures, early Hispanic and Anglo homesteading, sheep and cattle herders, early NPS history and early 20th century tourism. The Bandelier Wilderness contains nearly 3,000 archeological sites, primarily consisting of undisturbed Ancestral Puebloan sites such as structures, agricultural features, petroglyphs, and pictographs. The direct descendants of these peoples still live in the area in the present-day pueblos along the Rio Grande and maintain a strong connection to their ancestral lands.

This quality is degraded when cultural sites are intentionally or unintentionally damaged or allowed to degrade. Visitor-caused impacts, wildfires, surface water flows, and erosion have degraded many cultural sites in the wilderness area. Slow vegetation recovery during the persistent drought that has followed the 2011 Las Conchas Fire has left archeological sites vulnerable to erosion throughout the monument, including in Bandelier Wilderness. The future effects of climate change may further worsen this threat.

Scientific Research.

Scientific research by both cooperating scientists and researchers and park staff has been an important aspect of wilderness activities in Bandelier. Much of this research has been centered on archeology and cultural resources, but studies have also been done on a variety of other topics including plants, wildlife, geology, fire history, climate change, and ecology.

Issues for Wilderness Planning

In addition to key issues raised earlier in this document (e.g., climate change, management of invasive species, management of Cochiti Lake), several other key issues face management of Bandelier Wilderness.

Administrative Base Camps

An important issue for monument staff is to determine how to effectively mobilize field operations in the wilderness area. Archeological and other research efforts, trail work, and backcountry patrols, as well as ecosystem restoration activities, are likely to continue to be needed in the wilderness area. The staff needs to be able to determine when a base camp is needed and how it can be resupplied while minimizing adverse effects on wilderness character qualities. There will continue to be a need, for example, to determine how to resupply water for staff working in the wilderness areas on these tasks.

Intervention to Protect Cultural Resources

As a result of past fires and other effects of climate change, there have been a number of changes to vegetation in the wilderness area. For example, the existing forest is converting to shrubland/ grasslands below 7,000 feet. The fire regime also has changed. These changes are in turn increasing the potential for erosion, which is affecting cultural resources in the wilderness area. Park staff need to determine when intervention should take place to protect these cultural resources versus not intervening. Taking action, or not taking action, will affect the area's wilderness character qualities, as well as the purpose of Bandelier National Monument.

Rehabilitation and Maintenance of the Lower Falls Trail

The trail to the Rio Grande was one of the most popular trails through the wilderness area. However, this is a geologically active canyon. Floods and rockfalls have completely destroyed the trail between the Lower Falls and the Rio Grande, resulting in that area being closed to access beyond the Upper Falls Overlook due to extremely hazardous conditions and ongoing geological instability. Those same conditions are the greatest deterrent to re-establishing a trail in that area. Although it is still possible to walk to the area via a different trail, it is a much more challenging and longer route.

Providing Trails for Equestrian Users

Equestrians would like to ride horses in the wilderness area, which up until recently they were permitted to do. The entire Bandelier Wilderness pedestrian and stock trail system was failing due to the abandonment of the formal trail program in 2007. Horse trails were restored and scheduled to be reopened in 2011, but the flooding after the Las Conchas Fire destroyed these newly renovated trails. Current plans are to reopen the Bandelier Wilderness for horse and stock use (both visitor and staff use). There are ongoing discussions for partnerships with the Valles Caldera National Preserve and Santa Fe National Forest for a stock program (for law enforcement patrols, restocking backcountry camps, trail maintenance, etc.).

Appendix E: List of American Indian Tribes and Pueblos Traditionally Associated with Bandelier National Monument

Traditional associated tribes and pueblos refer to those groups that have had a significant connection to a place that has endured for two generations or more. The following list was derived from several databases including the Intermountain Region’s tribal contact database, the Native American Consultation Database, the Tribal Directory Assessment Tool, and the Land Cessions database.

Pueblos with Which Bandelier National Monument Has Been Actively Engaged

- Cochiti
- Kewa (formerly Santo Domingo)
- San Felipe
- San Ildefonso
- Santa Clara
- Zuni

Other Traditionally Associated Pueblos and Tribes

Pueblos

- Acoma
- Hopi
- Jemez
- Isleta
- Laguna
- Nambe
- Ohkay Owingeh
- Picuris
- Pojoaque
- Sandia
- Santa Ana
- Taos
- Tesuque
- Ysleta Del Sur
- Zia

American Indian Tribes

- Comanche
- Fort Sill Apache
- Navajo

Intermountain Region Foundation Document Recommendation

Bandelier National Monument

May 2015

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.

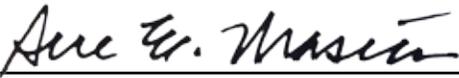


5/12/15

RECOMMENDED

Jason Lott, Bandelier National Monument

Date



6/8/15

APPROVED

Sue E. Masica, 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.

BAND 315/128327

June 2015

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