



**Bandelier National Monument
Sandoval and Santa Fe Counties, New Mexico**

FINDING OF NO SIGNIFICANT IMPACT

**TSANKAWI UNIT MANAGEMENT PLAN AND ENVIRONMENTAL
ASSESSMENT**

The National Park Service (NPS) developed the Tsankawi Unit Management Plan to provide a framework to improve resource protection, address safety concerns, and enhance visitor opportunities in the Tsankawi unit (hereafter referred to as “Tsankawi” or “the unit”). Tsankawi is an 826-acre noncontiguous parcel of Bandelier National Monument, situated approximately 12 miles from the main unit. Located in Santa Fe County, New Mexico, the main visitor arrival area for Tsankawi is just northeast of the intersection of State Road 4 and East Jemez Road.

Tsankawi is home to more than 150 archeological sites dating from Ancestral Pueblo occupancy of the Pajarito Plateau (approximately AD 1150 to 1550). These resources are showing signs of wear that reflect visitor use and natural erosion processes. Tsankawi, the main unit of Bandelier National Monument, and its surrounding areas have a long and rich history of human occupation. Ongoing consultation with federally recognized pueblo groups concluded that there are six pueblos affiliated with the monument—the Cochiti, San Felipe, San Ildefonso, Santa Clara, Santo Domingo, and Zuni. While all of these groups hold some affiliation to the monument, the unit is of critical importance to the cultural heritage, beliefs, customs, practices, and history of the nearby San Ildefonso Pueblo, who are descendants of the people who inhabited the area now referred to as Tsankawi, and whose culture is represented there.

Existing interpretive information and programming, primarily located at the visitor contact station, does not support a full understanding of the history and sensitivity of the cultural and natural resources contained in Tsankawi. Neither parking nor visitor facilities comply with the Architectural Barriers Act (ABA), which details accessibility regulations for persons with limited mobility. Moreover, heavy traffic volumes, poor visibility of oncoming traffic as a result of the roadway’s slope and curvature, and the existing roadside parking configuration make access to Tsankawi challenging for visitors. The Tsankawi Mesa Trail, which begins at the visitor contact station and takes visitors to the mesa top where they can view the exposed features of Tsankawi Pueblo, crosses the center of the pueblo. Visitation is eroding the trails used by Ancestral Pueblo residents and incising into the tuff geology. This is also true for cavates (hollowed out spaces within rocks) and other sensitive resources. These impacts also are exacerbated by natural erosion processes. Additionally, no designated trails or parking areas provide access to the rock formations containing cavates, petroglyphs, and other features present at North Mesa and an early 20th century cultural site called Duchess Castle, both of which are located north of Tsankawi. Informal visitation to these destinations presents both

visitor safety and resource protection issues because it is difficult for monument staff to know when visitors are accessing this section of Tsankawi.

The purpose of the proposed action is to provide resource protection, a high quality visitor experience, and efficient unit operation at Tsankawi. The selected alternative will guide management decisions for the next 10 years and provide a framework to help achieve desired resource conditions, a diverse range of visitor opportunities and experiences, and appropriate levels of interpretive messaging to facilitate a better understanding of the sensitivity of cultural and natural resources and ensure their protection and preservation for current and future generations.

The environmental assessment (EA) was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and implementing regulations, 40 Code of Federal Regulations (CFR) 1500–1508, the NPS Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*, and the Director’s Order 12 Handbook.

SELECTED ALTERNATIVE (ALTERNATIVE 1)

Based on the analysis presented in the environmental assessment, the National Park Service selected alternative 1 for implementation. This alternative is both the environmentally preferable and the NPS preferred alternative. The selected alternative best meets the objectives of the plan and the purpose of and need for action through a series of measures designed to improve resource protection, address safety concerns, and enhance visitor opportunities. It includes the implementation of a resource monitoring program and adaptive management strategy (including a consideration of climate change), site access and intersection improvements, phased trail improvements, an interpretive program, a kiosk accessible for persons with limited mobility, a fee collection program, reintroduction of a site steward, and staffing and personal services. These elements are summarized below; additional details can be found in the environmental assessment in “Chapter 2: Alternatives.”

Resource Monitoring Program. The National Park Service will continue efforts through the Vanishing Treasures program to document baseline resource conditions, assess current conditions, determine causes of deteriorating resources, and establish a resource monitoring program at Tsankawi.

Adaptive Management Strategy. The selected alternative will move beyond monitoring resource conditions and use a number of adaptive management strategies to improve the condition of sites and resources. This approach addresses the locations, monitoring activities, desired outcomes/conditions, indicators, metrics, and range of incremental management strategies for protecting archeological resources, and segregates weathering/climate change effects from the effects of visitation.

Climate Change. Monument staff are developing a series of management strategies to proactively identify and manage the potential effects of climate change, consistent with the NPS Climate Change Response Strategy.

Site Access and Intersection Improvements. Vehicular access to Tsankawi will be relocated from the existing roadside parking area along State Road 4. The tee intersection of State Road

4 and East Jemez Road will be modified to become a four-way intersection allowing for site access via a signalized intersection. Intersection improvements in this area will facilitate controlled left-hand turning movements in and out of Tsankawi with a designated lane and eliminate the use of the existing roadside parking area. A designated right-hand turn lane will also be introduced. Cameras will be used to help maintain or improve traffic volumes and facilitate safe entry to Tsankawi. Other improvements will include the installation of new signal poles and supporting features, utility relocation, embankment work, and new lane configurations and pavement markings. Although funding for these improvements is outside the scope of the selected alternative and is not under the jurisdiction of the National Park Service, NPS staff will work with appropriate partners to secure funding for these improvements.

An automated gate will be installed along the entry roadway closer to the four-way intersection, and the fence and “No Trespassing” sign in the vicinity of Duchess Castle will be removed. Signage will inform visitors of the designated entry location, and brush and boulders will be dragged across the trail to indicate route closures. NPS staff will work with the state and county to determine if relocating the commuter parking lot is feasible.

Parking. The exact location of the onsite parking area has yet to be defined; however, the analysis conducted as part of the environmental assessment used a larger area to ensure all potential impacts on resource areas were properly evaluated. The general configuration will be located adjacent to the existing visitor contact station. The parking area will be curvilinear and designed to accommodate a transit/car drop-off area, 20 car parking stalls (including two ABA van stalls), and two oversized vehicle stalls for buses or recreational vehicles (RVs). Visitors and staff will access the onsite parking area via the aforementioned four-way intersection at State Road 4 and East Jemez Road and travel down a two-directional entry roadway running parallel to State Road 4 until reaching the onsite parking area. Approximately 29,400 square feet will be necessary to support the onsite parking area and entry roadway. Siting the onsite parking area in this location will allow the trail leading from the existing roadside parking area to the visitor contact station to be removed and reclaimed. The Tsankawi Mesa Trail, ABA Walk, and Duchess Castle Trail will be accessible from the new onsite parking area. The existing service road will be removed and reclaimed.

Phased Trail Improvements. Trail improvements will occur in three phases, as described below. Once implemented, the Tsankawi Mesa Trail, ABA Walk, and Duchess Castle Trail will converge at the existing visitor contact station and main trailhead.

Phase 1: Reroute Tsankawi Mesa Trail around Tsankawi Pueblo — The Tsankawi Mesa Trail will be rerouted to protect sacred ground and pueblo features. The first part of the trail will follow an alignment similar to existing conditions. Closer to the mesa top, the trail will be routed away from and south of the center of Tsankawi Pueblo. The current trail through the center of Tsankawi Pueblo will be reclaimed and restored to natural conditions. The new route will be wide enough to accommodate multiple visitors and will include one larger area with an interpretive display where groups can gather. Route design will consider a range of configurations.

Phase 1: Tsankawi Mesa Trail Extension to Easternmost Point of Tsankawi Mesa — The new trail segment will bring visitors to a vista point overlooking the immediate area and a distant view of

the Sangre de Cristo Mountains. The new trail segment will form a loop at the end of Tsankawi Mesa, allowing visitors to use an existing social trail that leads to spectacular views and is isolated from State Road 4. This trail extension will provide the National Park Service with an opportunity to interpret cavate villages visible at portions of Tsankawi Mesa, and will give visitors a chance to encounter an array of archeological site features. For this and all mesa top trail segments, new small-scale landscape features will be introduced to define the edges of trails and reinforce site messaging.

Phase 1: Guided-only Trail Segment — When funding to support a trail guide program is available, the existing segment that forms the return segment of Tsankawi Mesa Trail will be converted to a guided-only trail segment. Localized, small scale landscape structures will be added at both ends of the guided-only trail segment to ensure that unsupervised visitation does not occur. The existing ladder 3 will be removed for safety and to better manage access to the cavate village.

Phase 2: Trail for Persons with Limited Mobility — A new, approximately 1,779-foot ABA-compliant Type D trail will be constructed on level terrain to a vista point that encompasses views of cavate villages at Tsankawi Mesa and a vista east/south of the surrounding landscape. Type D trails generally include sidewalks, boardwalks, and gravel trails that interconnect developed areas or serve as short scenic walks and interpretive trails. Site furnishings such as a binocular stand will allow for viewing of archeological and landscape features in greater detail.

Phase 2: Duchess Castle Trail — A new, approximately 5,524-foot trail will be constructed on level terrain, leading from the site of the existing visitor contact station and main trailhead. The trail will create a small loop near Duchess Castle; visitors will return to the trailhead and onsite parking area on the same trail. This will be a Type C trail, except for limited locations where the gradient exceeds 5%. Type C trails are marked but are generally unimproved except for clearing and some work on dangerous areas.

Phase 2: Reclaim Current Duchess Castle Social Trail — The existing social trail from State Road 4 to Duchess Castle will be reclaimed. Signs at the site boundary will advise visitors to use the designated entry, and brush and boulders will be dragged across the trail to indicate its closure.

Phase 3: Future Potential Connector Route from Tsankawi Mesa to Duchess Castle — Monument staff will continue to monitor resources to determine if the implementation of the connector route is feasible based on the change in impacts on resources. If feasible, visitor surveys will be used to gather information about visitor satisfaction with the revised trail system and to assess demand for a connector route. This route will exit Tsankawi Mesa to the canyon bottom below and travel north and west to meet the Duchess Castle Trail as part of the monument's adaptive management strategy.

Interpretive Program. A new interpretive messaging program will be designed to inform visitors of the sensitivity and historical context of the area. Opportunities for visitors to interact with NPS staff, site stewards, or other NPS-trained local community volunteers and/or commercial guides at Tsankawi and along the guided-only trail segment will be provided. Interpretive features will include understated site signage, furnishings, pamphlets, brochures,

digital displays, and electronic downloads for handheld devices. All interpretive materials will be designed to foster a sense of place and value of the landscape. Visitor education will begin at the site arrival area. Messaging at the arrival area will be larger and more complex than that used on the trails and likely include a cast metal scale model or planimetric view of Tsankawi Pueblo. Messaging along the trail will be smaller in scale and reinforce concepts established at the arrival area.

The National Park Service will implement a tiered management approach as part of its adaptive management strategy to identify the number of interpretive features necessary to protect sensitive resources found at Tsankawi. The approach, in part, will be based on findings from visitor surveys that measure visitor understanding of the significance of the site and new management policies. Interpretive features will be added until monument staff is satisfied that they are reasonably effective. The implementation of new interpretive features will depend on funding availability. The design and siting of desired materials may be labor intensive and require assistance from contractors or agency specialists beyond current monument staff.

Kiosk Accessible for Persons with Limited Mobility. An approximately 150-square foot kiosk designed to address some of the deficiencies of the existing visitor contact station will be added. The kiosk will be located adjacent to the existing visitor contact station, restrooms, and trailhead allowing visitors to find all services in one general location. The kiosk will serve as an ABA-accessible open air shade shelter and include a fee collection station, safety and interpretive guidance, a drinking fountain, data link for digital downloads, first aid, and an emergency phone. This location will also be the site of the ABA Walk trailhead and will serve as a collection point for tours.

Fee Collection Program. The fee collection station will be upgraded to accept credit cards, moved to the kiosk or other visible location, and provide instructions for payment. This will allow NPS staff to obtain both daily visitor counts and the hourly and seasonal distribution of people accessing the unit.

Site Steward Area. The site steward program will be reintroduced to Tsankawi. The site steward area will be relocated to provide for privacy and improved to include a small shaded platform, possibly an RV cover and concrete pad, phone/internet hook-ups, and water/electricity/sewer hook-ups.

Staffing and Personal Services. The guided-only trail segment will be led by NPS staff or other NPS-trained local community volunteers and/or commercial guides, potentially including representatives from San Ildefonso Pueblo. The number of staff needed has yet to be determined but will largely depend on the number of guided trips and people permitted per trip per day. The potential to build partnerships for interpretation and site supervision will be pursued by monument staff, particularly given reduced spending budgets. Visitor numbers, compliance, and funding availability may determine if a fulltime NPS staff presence will be introduced at Tsankawi.

OTHER ALTERNATIVES CONSIDERED

In addition to the selected alternative, the environmental assessment analyzed the no-action alternative and one additional action alternative, both of which are described below.

No-Action Alternative

The no-action alternative is defined as the continuation of current policies and management actions regarding site access, visitor use, safety, and interpretive features at Tsankawi. Trails would continue to traverse Tsankawi Pueblo and lead visitors through the highly erodible cavate village. Access to Duchess Castle and North Mesa would continue to be self-guided. The roadside parking area would remain on lands controlled by the Department of Energy, and site access would remain a safety concern. Interpretive features would not be enhanced and staffing levels would not be increased. The site steward program would be reintroduced, but it would not be relocated or improved. The visitor contact station and fee collection station would remain in their current locations without improvements, and there would be minimal access for persons with limited mobility. The resource monitoring program described under the selected alternative would be implemented.

Alternative 2: Looped Entry Roadway

Alternative 2 would include all project elements described under the selected alternative; however, the siting and/or configuration of new facilities, the onsite parking area, and certain trails would be different, as summarized below.

Parking. The site entrance would include a two-way circulation pattern, changing to a one-way circulation loop not long after entering the unit, and onsite parking would be set back farther from State Road 4 and elongated with parking on either end. The exit road would be located closer to the existing visitor contact station and would run east of and parallel to State Road 4 before leaving NPS lands at the four-way intersection. Approximately 42,792 square feet would be necessary to support the onsite parking area and entry roadway.

Facilities. The existing visitor contact station would remain at its current location. Restroom facilities would be relocated adjacent to the kiosk and ABA Walk trailhead. Should there be sufficient demand, a new restroom facility would be installed in the future.

Trails. The ABA Walk trailhead would be located next to the ABA-accessible kiosk and relocated restrooms, in the onsite parking area closer to the new four-way intersection. The ABA Walk would be approximately 600 feet shorter than under the selected alternative. The Duchess Castle Trail trailhead would be located close to the existing visitor contact station and main trailhead and would be approximately 150 feet shorter than under the selected alternative. With the onsite parking area implemented, the trail from the existing roadside parking area to the trailhead would be removed and reclaimed.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The National Park Service is required to identify the environmentally preferable alternative in its NEPA documents for public review and comment. The National Park Service, in accordance with the Department of the Interior's NEPA Regulations (43 CFR Part 46) and the Council on Environmental Quality's (CEQ) Forty Questions, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in the National Environmental Policy Act of 1969 (Section 101[b]) (516 DM 4.10). CEQ's Forty Questions (Q6a) further clarifies the identification of the environmentally preferable alternative as "the alternative that causes the least damage to the

biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.”

Alternative 1 (selected alternative) is the environmentally preferred alternative for several reasons. The rerouting of Tsankawi Mesa Trail would help protect, preserve, and enhance historic, cultural, and natural resources in a way that would not be feasible under the no-action alternative. Although alternative 1 would require a certain amount of ground disturbance, previous archeological surveying near the proposed onsite parking area and visitor facilities, concluded that minimal adverse effects would occur. Alternative 2 would result in the most ground disturbance because of the relocation of the restrooms and the area required to support the entry roadway. Also, careful consideration during the siting of the Duchess Castle Trail would ensure that sensitive resources are avoided. Finally, the adaptive management strategy included in alternative 1 would allow for maximum flexibility during implementation.

By contrast, alternative 2 would require more ground disturbance than either the no action or alternative 1, and would not allow as much flexibility in implementation as alternative 1, so it was not identified as environmentally preferable. Additionally, the no-action alternative was not selected as the environmentally preferable alternative because, while there would be less ground disturbance than under the action alternatives, there would also be fewer opportunities to help protect the fragile cultural and natural resources found in Tsankawi, and there would be no adaptive management strategy to allow for flexibility and improvement in implementation.

MITIGATION MEASURES OF THE SELECTED ALTERNATIVE

To minimize or avoid potential impacts of the selected alternative, particularly during construction activities, monument staff identified a series of mitigation measures, described below.

Development of Design

- Submittals will be required during the design phase to ensure that potential effects on cultural resources are identified, and the design is modified to avoid impacts.
- The NPS project manager will continue to consult with the monument’s cultural resources staff during design and construction phases to receive advice and guidance to avoid adverse effects on cultural resources.
- The NPS project manager will consult with the monument’s chief of resources to develop approved treatments for potential impacts on cultural resources in addition to those described in the environmental assessment.
- Cultural resource team members will review and comment on design phase submittals to assure that all appropriate cultural resource mitigation measures are implemented.
- If there is a planned adverse effect on cultural resources, consultation with New Mexico State Historic Preservation Office (SHPO) staff will be resumed to achieve a design with no adverse effect.

Protection of Archeological Resources

- Prior to undertaking ground-disturbing activities, boundaries of sensitive resource areas will be marked by pin flags, lath and flagging tape, or T-posts and wire or equivalent to avoid inadvertent trespassing.
- Ground-disturbing activities will be monitored under the direction of the monument's archeologist during the entire duration of ground-disturbing activity.
- If previously undiscovered archeological resources are uncovered during construction, all work in the immediate vicinity of the discovery will be halted until the resources are identified and documented, and an appropriate mitigation strategy developed in consultation with New Mexico SHPO staff.
- In the event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 United States Code 3001) of 1990 will be followed.

Protection of Ethnographic Resources

- Ethnographic resources, including those that are already known and any identified through the ongoing tribal consultation process, will be flagged for avoidance during construction activities.
- Traditional plant collection areas will be flagged for avoidance to minimize adverse impacts on plants.

Protection of the Cultural Landscape

- New site furnishings will be selected to be compatible with the Tsankawi setting and to respond to and blend with the scale, color, texture, nonreflectivity, and natural materials established by the native trees and geology that are character-defining features of the landscape.
- The addition of interpretive signage on the site will be minimized. Signage placement along interpretive trails will be effectively placed outside of key viewsheds, using design and materials that are well integrated to the setting. In-depth interpretation will be provided in web-based and published media.
- Locally collected natural materials will be used wherever possible to mitigate the visual effects of social trailing and associated trampling of off-trail areas. Examples of minimal mitigation measures include: limited regrading for less than 6 inches change in level, applications of soil and litter, along with small diameter slash (no more than 12-inch diameter material) to impacted areas, or other understated means.
- New trail-defining features will use designs that are compatible with the Tsankawi setting. Designs will use local stone that blends with the existing surroundings and is compatible with the color, texture, and materials of the existing landscape. Stone will come from the surrounding area, but will not be retrieved from within Tsankawi, or will come from the site itself under the direction of an archeologist to avoid moving stone that could be associated with the site. Wood, where needed to create required features, will be uncoated and natural to the extent feasible. Introduction of nonlocal, engineered concrete materials and painted wood surfaces will be avoided to the extent feasible.

- The increased visibility of new areas of paved and graded parking area and trails will be mitigated by implementing measures to improve compatibility with the Tsankawi setting. Surfacing materials will be selected to blend into the landscape as much as possible, with a color chosen to avoid contrast with the adjacent soil and vegetation and with a nonreflective surface. Final design will maintain sufficient existing vegetation to break up the views of new features; new parking spaces will be designed around existing trees.
- Introduction of a structure that is taller than the 15-foot height of surrounding juniper vegetation will be avoided. New forms will be understated; introduction of novel shapes will be avoided. Introduction of new reflective materials will be avoided for all structures throughout the project site. Mimicry of the Pueblo Revival aesthetic of the Bandelier Civilian Conservation Corps historic district and of Ancestral Pueblo-era styles will be avoided.

Protection of Biological Resources

- Construction vehicles and workers will use existing pullouts, side roads, and other approved locations for parking and walking to minimize disturbance to vegetation.
- Vegetative clearing during construction activities will be minimized to protect soil cover and minimize erosion risks.
- Disturbed areas will be restored to natural contours to the extent possible to reduce the potential for erosion.
- Revegetation with native species will use genetic stocks originating in the monument or from plants previously removed from the construction area whenever possible. Revegetation efforts will be designed to reconstruct the natural spacing, abundance, and diversity of native plant species. Compacted soil to be revegetated will be ripped to a depth of at least 12 inches.
- The introduction and enhancement of nonnative plant populations will be limited by procuring clean fill, using cached salvaged fill from gravel yard, and washing equipment and vehicles used in construction projects. Gravel and fill for construction or maintenance will be obtained from certified noxious weed-free sources; gravel pits and fill sources will be inspected to identify weed-free sources.
- There will be no quarrying of construction materials from inside the monument.
- Driving equipment through undisturbed areas, including off of established road shoulders will be avoided.
- Existing plant materials will be salvaged and new plant materials will not be introduced.
- Subsequent to project completion, monument staff will monitor and require removal of any invasive species observed.

Protection of Migratory Birds

- In accordance with the Migratory Bird Treaty Act (1918) and Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," any and all removal of vegetation will occur outside of the migratory bird breeding season. For pinyon-juniper nesting birds, breeding can start in mid-April and continue into mid-July. The removal of vegetation for new facilities, including trails, walkways, or parking areas, will not occur from April 15 through July 15 each year.

Contamination Prevention and Control

- No application of emulsions or tack coat will be performed within one day of a predicted significant storm event (i.e., when runoff is likely).
- The contractor must have contingency plans to protect drainages in the case of unpredicted snow or rainstorms.
- All construction activities will be conducted in accordance with the monument's established safety protocols and the stormwater pollution prevention permit.
- All fuels will be stored and maintained in a designated equipment staging area to reduce the potential for soil contamination. Fuel will be stored in fuel trucks or in aboveground storage tanks in accordance with state regulations.
- Fueling and maintenance areas will maintain secondary containment or other measures to prevent soil contamination and runoff. At a minimum, petroleum product storage areas will be lined with plastic or a similar material. Tanks will be located off the ground and lids will be securely fastened.
- To minimize the possibility that construction vehicles could leak fluids into the soil, introduce noise pollution, and emit pollutants to the atmosphere, equipment will be checked frequently to identify and repair any leaks, mufflers will be checked for proper operation, and only equipment with proper operating specifications will be used.
- Spill contingency materials, such as absorbent booms, will be immediately available throughout the construction area should any fuel, petroleum oils, or hydraulic materials spill outside containment structures. All spills will be reported immediately to the construction supervisor and monument staff.
- Fuel and oil services for construction machinery will be provided in a designated area away from channels or drainages, including secondary containment for all fuel storage tanks and onsite availability of a specialized spill kit to contain fuel spills.
- Milled or pulverized asphalt may be stored temporarily only at the staging area. Excess asphalt, masonry, and other associated construction debris will not be disposed of on monument lands.
- Grading of pulverized asphalt (if performed) will be done in a manner to prevent overflow of asphalt outside the existing shoulder. Parking area stone curbing and sidewalks will be protected from paving emulsion overspray.
- Construction areas will be identified by and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction.
- All protection measures will be clearly stated in the construction specifications, and workers will be instructed to avoid construction activities beyond the construction zone.
- Construction materials will be stored in previously disturbed areas.

Erosion Prevention and Control

- Erosion control measures will be put in place to prevent asphalt, emulsions, fuels, or oil materials from accidentally entering drainages. Standard erosion control precautions, as outlined under section 204 of *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects*, will be stipulated in the contract specifications.

- All storm drain inlets in the project area will be protected so that asphalt oils or emulsions and sediment-laden water do not enter the drainage system.
- Disposal of removed materials will be the responsibility of the contractor in consultation with the construction supervisor and/or monument staff.
- Erosion and sediment control measures such as silt fences, weed-free straw bales, soil moistening, and other temporary measures will be placed along portions of the site perimeter to control erosion during construction activities. These temporary erosion prevention measurements will be maintained in place until the site vegetation is firmly established and soil has stabilized.
- Sediment runoff from the site will be captured and prevented from entering any nearby groundwater.
- The footprint of disturbance will be limited. For example, to the extent possible, heavy construction equipment will be kept on the road surface when placing slope protection or performing excavation adjacent to the roadway.
- Regular inspections of the erosion and sediment control measures will be performed after any storm event.
- Standard protocols to mitigate existing runoff-sediment problems, including closing areas to foot traffic and applying coarse woody debris (chips, slash, and logs) or erosion fabric (i.e., 1/4 mesh geo-jute) in high value areas, will be used.
- Existing natural drainages will be retained. Rerouting drainages into a single route per loop will be avoided because this would create unsustainable conditions and increase removal of vegetation. Existing drainages will be armored in place without realignment using local stone.

Protection of Physical Resources

- Use is limited to the existing footprint of the staging area.
- There will be no burning, power washes, or disposal in or around the project area.
- A water-based paint will be used for all pavement markings.
- Any area with vegetative clearing or construction activities will be designated a safety closure area and will require the use of hard hats.
- Topsoil will be removed and stockpiled for reapplication to disturbed areas when construction is complete.
- Implementation of reasonable measures to minimize fugitive dust emissions, such as applying water to exposed surfaces or stockpiles of dirt, will occur when windy and/or dry conditions promote problematic fugitive dust emissions.

Human Safety and Convenience Measures

- Sanitary facilities will be provided for construction workers.
- A traffic management plan will be developed to prevent traffic congestion in the area. Traffic delays will be kept below 30 minutes except for preapproved work after normal business hours.
- Areas where construction is ongoing will be closed while project activities are conducted to avoid direct visitor safety concerns as long as signage is clear.
- Generally accepted methods to protect public health and safety while simultaneously providing for visitor use and experience will be implemented, including notifying

travelers about the benefits of the selected alternative to maximize public support and understanding.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As documented in the environmental assessment, the National Park Service has determined that the selected alternative (also the environmentally preferable alternative) can be implemented without significant adverse effects. As defined in 40 CFR 1508.27, significance is determined by examining the following criteria:

Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts that require analysis in an environmental impact statement.

Implementing the selected alternative will result in some adverse impacts on park resources and values; however, the selected alternative will provide overall benefits because it will protect, preserve, and enhance historic, cultural, and natural resources of the monument.

Beneficial impacts are summarized as follows. Long-term, minor to moderate, beneficial impacts will occur on archeological resources, cultural landscapes, ethnographic resources, soils, vegetation, and visitor use and experience as a result of the modification of existing trails and implementation of new trails and access gates. These actions will reduce visitor-induced impacts in this highly sensitive area by keeping visitors on trails and providing new interpretive messaging, which will promote an ethic of cultural and natural resource preservation. Also, the addition of a site steward, monument staff, or other NPS-trained local community volunteers and/or commercial guides leading tours along the guided-only trail segments will result in a long-term, moderate, beneficial impact. Long-term, minor to moderate, beneficial impacts on visitor use will result from improving the intersection and onsite parking area; reconfiguring onsite parking and kiosk siting to improve visitor access to information; upgrading the fee collection station; and providing electronic downloads, safety guidance, first aid, an emergency phone, and messaging at the visitor arrival area. Introducing new interpretive messaging, first aid, a water fountain, emergency phone, the ABA Walk, and the Duchess Castle Trail; reconfiguring the State Road 4 and East Jemez Road intersection; and relocating the existing roadside parking area onto NPS lands will result in long-term, moderate, beneficial impacts on public health and safety. The integration of an adaptive management strategy into the resource monitoring program will allow monument staff to implement and/or adjust management strategies to better achieve desired resource conditions, as necessary, to help meet resource and visitor use management goals. The implementation of any one or combination of potential management strategies to help preserve and protect archeological resources will increase the long-term, beneficial impacts on the resources discussed previously.

Adverse impacts would occur mainly from ground and noise disturbance during the construction and implementation of site improvements, although none of these impacts rise to the level of significance, and many would be minimized by mitigation measures (see “Mitigation Measures of the Selected Alternative,” above). The expected adverse impacts are summarized as follows. During construction activities, the soil layer structure will be disturbed and modified, and soils will be exposed, increasing the potential for erosion. Existing vegetation will be removed and replaced with an impermeable surface, which will accelerate

storm runoff and increase the potential for erosion and further damages to vegetation at the edge of the disturbance. In addition, noise disturbance and destruction of habitat associated with construction activities could adversely affect wildlife. Localized short-term, minor, adverse impacts on visitor use and experience will result from increased noise and air particulates. Ground-disturbing activities associated with the construction of new facilities will result in permanent, minor, adverse impacts on archeological resources, if found. Construction and the introduction of new facilities into the setting will result in a minor, adverse impact on the setting of the cultural landscape, and construction noise will result in a short-term, localized, minor, adverse impact on ethnographic resources. Construction will result in an increase in impermeable surfaces, resulting in both short- and long-term, minor, adverse impacts on soils and vegetation that are localized, primarily in the vicinity of the entry roadway and onsite parking area. Because a portion of the affected area has been previously disturbed and impacted from years of use, there may be opportunities to minimize impacts or avoid undisturbed soils and allow native ground cover to reestablish. Additional long-term, negligible to minor, adverse impacts on park operations and management will occur as a result of increased staffing needs and associated costs from implementation and oversight.

Degree of effect on human health or safety.

The selected alternative will not adversely affect human health or safety, and will provide substantial benefits, which include the following. Improvements to the State Road 4 and East Jemez Road intersection and onsite parking area and changes to trailhead locations will allow for safer access, and use of the existing roadside parking area will cease. As a result, many of the safety risks associated with accessing the existing roadside parking area will be eliminated. Introducing new interpretive safety messaging, first aid, a water fountain, and emergency phone will provide additional public health and safety measures. The ABA Walk and Duchess Castle Trail will improve safety conditions for persons with limited mobility and provide easier trail conditions for others. The site steward and other staff and volunteers will provide safety information and oversight. Under the adaptive management strategy, it is anticipated that specific management strategies related to visitor use management that may be implemented will also benefit public health and safety because they will be designed, in part, to encourage visitors to stay on designated trails that will be maintained by monument staff. In addition, minor trail revisions may be necessary in areas of concentrated visitation due to accelerated erosion and rock fall to ensure visitor and monument staff safety. If implemented, this will encourage visitors to stay on designated trails and away from rock fall areas.

No short-term, adverse impacts on public health and safety as a result of construction activities are expected. Prior to the onset of construction activities, a construction action plan will be prepared that identifies safety measures and protocols to be followed by workers to ensure their and visitor safety when construction activities are ongoing (see “Mitigation Measures of the Selected Alternative”).

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, wetlands, prime farmlands, wild and scenic rivers, or ecologically critical areas.

No park lands (other than those in Tsankawi), wetlands, prime farmlands, wild and scenic rivers, or ecologically critical areas will be subject to effects resulting from implementation of the selected alternative.

The entire area contains important historic and cultural resources. As noted in the enabling legislation, certain prehistoric ruins in Tsankawi are of unusual ethnologic, scientific, and educational interest, and the monument contains one of the highest densities of archeological sites from the Ancestral Pueblo period. The selected alternative will have mostly beneficial effects on these resources as discussed previously and later in this document under the criterion that addresses the degree to which the action may adversely affect resources listed on the National Register of Historic Places (national register).

Degree to which effects on the quality of the human environment are likely to be highly controversial.

No highly controversial effects on the human environment as a result of the selected alternative were identified during the preparation of the environment assessment. No controversy was raised during ongoing consultation with the six affiliated pueblos (see “Tribal Consultation” section), or by the public during the public comment period (see “Public Involvement” section).

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.

No highly uncertain, unique, or unknown risks were identified during the preparation of the environment assessment, ongoing consultation with the six affiliated pueblos, or by the public during the public comment period. The improvements and changes proposed for site access, trails, roads, parking, and the interpretive program are explained in a straightforward manner and do not pose uncertainties or unanticipated risks that are not already addressed in the mitigation measures.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The selected alternative neither establishes a National Park Service precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Cumulative effects were analyzed in the environmental assessment, and no significant cumulative impacts were identified.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

Under the implementing regulations of section 106, analysis of effects to historic properties is conducted within the area of potential effects. An area of potential effects is defined as:

... the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR 800.16[d]).

To analyze the potential for these effects, the area of potential effects on the archeological, cultural landscape, and ethnographic resources of Tsankawi includes all areas within the 826 acres that comprise Tsankawi.

A total of 157 archeological sites have been recorded in the area of potential effects, including pueblos, cavate structures, lithic scatters, bedrock grinding areas, hearth features, historic structures, storage rooms, trash scatters, rock alignments, rock art, archeological features, trails, animal corrals, campsites, and road segments. Consultation with the New Mexico state historic preservation office has determined that all of these sites are eligible for listing in the national register. The selected alternative has been designed, in part, to help preserve and protect archeological resources present in Tsankawi. The realignment of the Tsankawi Mesa Trail just south of the pueblo and the introduction of the kiosk, interpretive messaging, site steward, and monument staff or other NPS-trained local community volunteers and/or commercial guides leading tours will result in long-term, moderate, beneficial impacts on archeological resources. The new entry roadway from the State Road 4 and East Jemez Road intersection and onsite parking area will be designed to avoid known archeological resources.

Additional surveys will be conducted in advance of construction to ensure that significant archeological resources are avoided. Ground-disturbing activities associated with the construction of new facilities will result in permanent, minor, adverse impacts on archeological resources, if found, and no adverse effect on historic properties because the character-defining features of the national register-eligible resource will not be affected. Under the adaptive management strategy, the implementation of any one or combination of potential management strategies to help preserve and protect archeological resources will increase the long-term, beneficial impact on archeological resources, and will result in no adverse effect on historic properties.

As a cultural landscape, Tsankawi tells the story of more than eight centuries of relationship between people and place. Tsankawi, in its entirety, is a nationally significant cultural landscape that has been determined by the National Park Service as eligible for the national register as a historic district, and the New Mexico state historic preservation office concurs. Integrated cultural and natural resource systems make up the landscape, with evidence of human use throughout. The selected alternative has been designed, in part, to help preserve and protect archeological resources, to minimize the physical destruction of or damage to the cultural landscape, and to preserve the features that contribute to the historic integrity of the national register-eligible cultural landscape. Under the selected alternative, changes to the trail system will result in long-term, moderate, beneficial impacts on the cultural landscape. New interpretive messaging, which will promote an ethic of cultural and natural resource preservation, and the addition of a site steward, monument staff or other NPS-trained local community volunteers, and/or commercial guides leading tours along the guided-only trail segment will result in a long-term, moderate, beneficial impact. Under the adaptive management strategy, the implementation of any one or combination of potential management strategies is anticipated to help further the objectives of the selected alternative, resulting in a

long-term, beneficial impact. No adverse effect on historic properties will result. The construction and introduction of new facilities into the setting will result in a minor, adverse impact on the setting of the cultural landscape. Overall, the selected alternative will result in a long-term, moderate, beneficial impact on the cultural landscape.

NPS staff has conducted ethnographic resource-related studies for the monument and consultation with the six affiliated pueblos is ongoing. The studies were undertaken to document traditional uses of cultural and natural resources; research the ethnographic literature and consult with pueblos potentially affiliated with the monument to document traditional uses; and identify plant, animal, and mineral use of the monument by affiliated pueblos. Under the selected alternative, changes to the trail system will help reduce impacts on sensitive resources and result in a long-term, moderate, beneficial impact on ethnographic resources. New interpretive messaging, which will promote an ethic of preservation, and the addition of a site steward, monument staff or NPS-trained local community volunteers, and/or commercial guides leading tours along the guided-only trail segment will result in a long-term, moderate, beneficial impact. Introduction of new facilities and subsequent visual features into the setting will result in a long-term, minor, adverse impact on ethnographic resources. Under the adaptive management strategy, potential management strategies that may be implemented will be designed to reduce the impacts caused by visitors on sensitive ethnographic resources through wear and damage, minimize the contribution of visitors to natural erosion and impacts on native vegetation, and preserve ethnographic resources, while minimizing visual intrusion into the natural setting. Construction noise will result in a short-term, localized, minor adverse impact on ethnographic resources; however, the new automated access gate will have a long-term, moderate, beneficial impact. Overall, the selected alternative will result in a long-term, minor to moderate, beneficial impact on ethnographic resources.

The New Mexico state historic preservation office was informed of the proposed action through outreach beginning with the June 13, 2012, annual consultation between Bandelier National Monument and the New Mexico state historic preservation office. During that meeting, monument staff presented their intention to engage in a planning process that weighed the need to protect resource values, reduce visitation impacts on cultural and natural resources, improve visitor understanding of site resources, and improve visitor safety. The public scoping newsletter developed for this project was provided to New Mexico SHPO staff as background regarding the proposed action. The planning effort was discussed again at the next annual consultation meeting, held on July 29, 2013. During that meeting, monument staff presented progress made in the last year toward alternatives development, and distributed and reviewed concept plans for alternative 1 (the preferred alternative). Monument staff emphasized the continued focus of the planning process on the protection of cultural and natural resources and the need for new development features at the unit to ensure visitor safety and accessibility. Actions described in the plan/environmental assessment are subject to section 106 of the National Historic Preservation Act, as amended in 1992 (16 United States Code, section 470 et seq.).

On March 10, 2015, the New Mexico SHPO sent a letter to the National Park Service stating support for the preferred alternative (alternative 1). The letter further stated that it could not, “concur with a No Adverse Effect determination at this time because the EA and consultation letter state that the Monument will complete Section 106 Consultation separately from the NEPA EA.” Although adverse effects could occur if cultural resources are present during ground-disturbing activities, section 106 consultation would be completed prior to

implementation of these activities; therefore, no significant impacts would occur. Consultation with New Mexico SHPO staff will be ongoing during project planning and implementation, and the National Park Service will fulfill its obligations under section 106 on a case by case basis. The New Mexico SHPO verbally concurred with this approach on July 7, 2015.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat.

The environmental assessment (appendix E) lists threatened and endangered species found in Santa Fe County, the likelihood of their occurrence in Tsankawi, and the expected effect on the species from the selected alternative. The species were identified from a 2010 US Fish and Wildlife Service listing of New Mexico listed and sensitive species available online at: <http://www.fws.gov/southwest/es/NewMexico/SBC.cfm>, accessed May 31, 2013, and from the New Mexico Department of Game and Fish, Conservation Services Division, Threatened and Endangered Species of New Mexico, 2012 Biennial Review of October 1, 2012. The species included the following, listed along with their expected effect and reason for that determination. Additional information on habitat and range can be found in appendix E of the environmental assessment.

Common Name	Scientific Name	Federal Status	State Status	Determination of Effect	Reason(s) for Determination of Effect
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered	No effect	Habitat for this species does not exist within Tsankawi.
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Threatened	Threatened	No effect	Habitat for this species does not exist within Tsankawi.
Jemez mountains salamander	<i>Plethodon neomexicanus</i>	Proposed	Endangered	No effect	Generally this species can only be found in the Jemez Mountains above 7,000 feet elevation.
Bald eagle	<i>Haliaeetus leucocephalus</i>	Delisted	Endangered	Negligible Not a federally listed species so the determination is not related to the Endangered Species Act of 1973, as amended.	This species likely occasionally to rarely uses Tsankawi; however, no breeding habitat exists within the unit.
Peregrine falcon	<i>Falco peregrinus</i>	Delisted	Endangered	Negligible Not a federally listed species so the determination is not related to the Endangered Species Act of 1973, as amended.	This species rarely uses Tsankawi, and typically only as a flyover bird. No breeding habitat exists within the unit.
Spotted bat	<i>Euderma maculatum</i>	—	Threatened	Negligible Not a federally listed species so the determination is not related to the	This species likely occasionally to rarely uses Tsankawi, and is scarce throughout its range.

Tsankawi Unit Management Plan and Environmental Assessment, Bandelier National Monument
Finding of No Significant Impact

Common Name	Scientific Name	Federal Status	State Status	Determination of Effect	Reason(s) for Determination of Effect
				Endangered Species Act of 1973, as amended.	
Gray vireo	<i>Vireo vicinior</i>	—	Threatened	Negligible Not a federally listed species so the determination is not related to the Endangered Species Act of 1973, as amended.	There have been no reliable reports of this species within Tsankawi or the main unit of the monument. A recovery plan was prepared by the New Mexico Department of Game and Fish in 2007. No gray vireos have been recorded since its publication.
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Candidate	Candidate	No effect	Habitat for this species does not exist within Tsankawi.
Whooping crane	<i>Grus americana</i>	Endangered	Experimental, Non-essential Population	No effect	Habitat for this species does not exist within Tsankawi.
New Mexican meadow jumping mouse	<i>Zapus hudsonius luteus</i>	Candidate	Endangered	No effect	Habitat for this species does not exist within Tsankawi.
Black-footed ferret	<i>Mustela nigripes</i>	Endangered	Endangered	No effect	Habitat for this species does not exist within Tsankawi.
Rio Grande cutthroat trout	<i>Oncorhynchus clarki virginalis</i>	Candidate	Candidate	No effect	Habitat for this species does not exist within Tsankawi.
Rio Grande silvery minnow	<i>Hybognathus amarus</i>	Endangered	Endangered	No effect	Habitat for this species does not exist within Tsankawi.

As noted in the appendix, an assessment of effects was completed based on comments by monument staff and knowledge of habitat, including breeding habitat, within Tsankawi. There is no effect expected on any federally listed species, thus no further consultation or concurrence from the US Fish and Wildlife Service is required (see table below). A copy of the environmental assessment was sent to the US Fish and Wildlife Service, and no comments were received. Impacts on state-listed species range from no effect to negligible effects. A copy of the environmental assessment was sent to the New Mexico Department of Game and Fish, and no comments were received.

Whether the action threatens a violation of federal, state, or local environmental protection law.

The selected alternative violates no federal, state, or local environmental protection laws.

TRIBAL CONSULTATION

Consultation with the six affiliated pueblos was initiated at the onset of the decision-making process. A current memorandum of understanding regarding consultation between the National Park Service and the six affiliated pueblos requires the National Park Service to regularly and actively consult with these pueblos regarding monument management, fire

planning, and operational decisions that affect sacred materials or places, or other ethnographic resources with which they are historically associated.

On November 30, 2011, a meeting between monument staff and pueblo representatives discussed various management actions proposed at the monument, including the management plan/environmental assessment. During the public scoping period in May 2012, the National Park Service held a meeting with the pueblos to specifically discuss their concerns and ideas for appropriate management of Tsankawi. Monument staff met with representatives from Cochiti Pueblo on June 28, 2012, and San Ildefonso Pueblo on January 9, 2013, to discuss project alternatives for the management plan/environmental assessment in their current state of development. San Ildefonso Pueblo requested additional meetings with the tribal leadership and the people of the pueblo.

Overall, the ideas and concerns expressed by the pueblos focused on protection of cultural resources and maintaining respect for the site, and for Tsankawi Pueblo in particular. The pueblos were concerned that infrastructure enhancements at Tsankawi would result in increased visitation and impacts on cultural resources. The pueblos indicated that new structures, interpretive messaging, and other infrastructure should use natural materials, to the extent possible, to fit harmoniously into the visual landscape and support continuing traditional uses of the area. They requested that the existing Tsankawi Mesa Trail be moved away from the center of the pueblo to protect it from further degradation and suggested a series of measures specific to vegetation that could be effective for keeping visitors in designated areas. The pueblos emphasized that reinforcing the significance of the area through education is paramount to the success of management actions to preserve and protect cultural resources.

They also reiterated the importance of monitoring activities to determine the success of management actions to preserve and protect cultural resources and adjusting these measures if they do not achieve desired results. San Ildefonso Pueblo expressed a desire to close the area to visitation and return the unit to pueblo ownership.

The most recent meeting with San Ildefonso Pueblo was held on May 8, 2013. During the meeting, the pueblo stated they would like some type of messaging to be installed indicating that it is illegal to walk and dig on pueblo lands. This messaging could be placed near the parking area, along Tsankawi Mesa Trail, or the boundary that the unit shares with San Ildefonso. Pueblo representatives expressed a desire to participate in future meetings where interpretive messaging for Tsankawi is developed.

Access to the dance platform—an area along Tsankawi Mesa Trail—needs to be available for tribal elderly, children, and others who cannot use the ladder. Additionally, at this meeting it was recommended that monument staff consider activities that would include traditional dances on the dance platform that would provide monetary compensation to participants, and extend the monument's cultural demonstration program that takes place at Frijoles Canyon to Tsankawi. Other possible employment opportunities at Tsankawi for members of San Ildefonso were discussed.

PUBLIC INVOLVEMENT

The environmental assessment was made available for public review and comment from December 1, 2014, through March 16, 2015. It was available on the National Park Service's Planning, Environment, and Public Comment website and its availability was announced through a press release. During the public comment period, the National Park Service received five pieces of correspondence from the public and one from the state historic preservation officer. Public comments stated support for the preferred alternative and noted the benefits that would occur to visitor use and experience from the project implementation. Support was also noted for individual project components, including using site stewards and increasing volunteer staff, extending the hiking trail to the point of Tsankawi Mesa, and creating an accessible walkway to provide less mobile visitors with an opportunity to view the site and the Duchess Castle Trail.

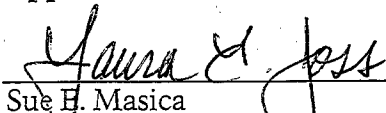
Specific substantive comments received and the NPS responses to those comments are listed at the end of this document.

CONCLUSION


The National Park Service has selected alternative 1 for implementation. Using the impacts evaluated in the environmental assessment and with guidance from NPS *Management Policies* 2006, cultural and natural resource information, professional judgment, and in consideration of agency and public comments and consultation with the six affiliated pueblos, the impacts that will result from the selected alternative will not impair any monument resources and values (see attached "Non-Impairment Determination"). The selected alternative does not constitute an action that will require the preparation of an environmental impact statement. The selected alternative will not have a significant effect on the human environment. Adverse environmental impacts on cultural and natural resources that could occur will be short-term and negligible to minor. All resource topics carried forward for further analysis will experience long-term, beneficial impacts from the implementation of the selected alternative with the exception of park operations and management, which will experience negligible to minor, adverse impacts. There are no significant impacts on any of the resource topics carried forward for further analysis in the environmental assessment. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the selected alternative will not violate any federal, state, or local environmental protection law.

Based on the foregoing, an environmental impact statement is not required for this action and will not be prepared. This is a finding of no significant impact.

Approved:


Sue H. Masica

for Regional Director, Intermountain Region, National Park Service


Date

RESPONSE TO COMMENTS

The following table summarizes the substantive comments received, along with the NPS response to the comment. If the comment resulted in a change to the environmental assessment, it is so noted after the response, and the change is included in the errata text changes.

COMMENT	RESPONSE
Commenters raised concerns regarding fee collection at the monument, including requesting that fees not be raised and that existing fees are too high.	The environmental assessment includes adding an automated fee collection system, but does not propose an increase in fees. At this time, the National Park Service believes the existing fees are adequate and changes (increases or decreases) to the fee structure are not proposed.
One commenter noted that the San Ildefonso Pueblo should be involved in interpretation.	As stated on page 144 of the environmental assessment, "NPS staff would rely on continued communication and consultation with the six affiliated pueblos regarding the selected alternative, seeking their advice and recommendations to ensure that any potential impacts on the integrity of or access to ethnographic resources would be avoided, minimized, or mitigated. The National Park Service is committed to working with tribal communities regarding the protection of these places to help preserve a traditional way of life." Issues related to implementing interpretative elements under the preferred alternative would be included in these communications.
One commenter requested that visitors not be required to take a bus to access Tsankawi.	Issues related to potential future shuttle stops at Tsankawi are included as part of the ongoing transportation plan/environmental assessment and are outside the scope of this planning process. For more information on the transportation plan, please visit the website at: http://parkplanning.nps.gov/documentsList.cfm?projectID=43749 .
One commenter noted that a management plan was already completed in August 2000, with many of those items either not implemented or not maintained. The commenter questioned the need for this new planning effort.	This planning effort builds on and considers the multiple planning efforts that have occurred to date. As stated on page 28 of the environmental assessment, "The current plan builds on and relates to four previous planning efforts within the monument and encompassing Tsankawi: the 1995 <i>Development Concept Plans for Frijoles Canyon and Tsankawi</i> , the 2000 <i>Environmental Assessment Regarding the Management of the Tsankawi Unit</i> , the 2005 <i>Bandelier National Monument Fire Management Plan/Environmental Assessment</i> , and the monument's 2007 <i>Ecological Restoration Plan/Environmental Impact Statement</i> ." Due to changing site conditions, elements of previous planning efforts have been reconsidered and those that were considered applicable and feasible to current site conditions were carried forward.
One commenter stated support for changes to the parking area, noting that the parking area should be as small as feasible to minimize vegetation impacts. The commenter also suggested that the lot be dirt or gravel and that pavement and striping should not be used due to visual and soil erosion impacts.	As stated in the environmental assessment, it has not yet been determined if the onsite parking area would be paved or gravel. However, the environmental assessment assumes that the entry roadway and onsite parking area in their entirety would be paved to evaluate the highest level of development in the area. Using these assumptions, no significant impacts are expected from the parking area.
One commenter stated a concern with the proposed alternatives' approach to the implementation of trails. Concerns included	While the monument staff appreciate concerns related to a loss in visitor experience, the proposed route realignment would not remove the current viewing opportunities—pueblo masonry features would

Tsankawi Unit Management Plan and Environmental Assessment, Bandelier National Monument
Finding of No Significant Impact

COMMENT	RESPONSE
<p>rerouting the trail on top and on the side of Tsankawi Mesa, which would result in visitors not being able to view the Pueblo, which the commenter noted is an expected part of the visitor experience. The commenter noted that in the absence of a formal trail, social trails would likely result. As an alternative, the commenter suggested an offshoot from the proposed trail to allow viewing of the Pueblo that included an elevated vantage point (as proposed in the 2000 management plan), which would be less visually intrusive than originally proposed. The commenter also expressed concern about closing the trail on the south side of the mesa, noting that it has been used by locals and visitors for generations and closing it would not allow visitors to see caves. Actions to minimize impacts such as additional signage, staff/volunteer contacts, and low impact barriers were suggested as measures that could keep this trail open.</p>	<p>remain in view for the entire length of the proposed reroute alignment. Monument staff recognize the potential for visitors to create social trails, and as stated on page 53 of the environmental assessment, "Reinforcing the resource protection message would require skillful design of the rerouted trail segment. Absent a design that reinforces the message, visitors are likely to wander across the landscape through the site, potentially trampling vegetation and impacting resource integrity." This same approach would apply to all proposed trail changes under this plan.</p> <p>The errata sheet includes a text change that recognizes the suggested alternative and provides the reason why that option was dismissed.</p>
<p>One commenter suggested expanding the interpretative themes at Tsankawi to include the geology of the Pajarito Plateau as well as the Rio Grande Valley and Sangre de Cristo.</p>	<p>As stated on page 57 of the environmental assessment, "All interpretive materials would be designed to foster a sense of place and value of the landscape, so that visitors approach Tsankawi with a sense of care and understanding of the fragility of the site and of the role their personal responsibility plays in protecting the site and every feature contained therein." While the environmental assessment does highlight cultural resources, this would not preclude monument staff from implementing other interpretive messages that provide visitors with a greater understanding of the landscape.</p>

ERRATA SHEET

Tsankawi Unit Management Plan Bandelier National Monument

According to NPS policy, substantive comments are those that 1) question the accuracy of the information in the environmental assessment, 2) question the adequacy of the environmental analysis, 3) present reasonable alternatives that were not presented in the environmental assessment, or 4) cause changes or revisions in the proposal.

Some substantive comments may result in changes to the text of the environmental assessment, in which case, they are addressed in the *Text Changes* section of the Errata Sheets. Other substantive comments may require a more thorough explanatory response and are addressed in the *Response to Comments* section. The National Park Service responds to all substantive comments in either or both of these sections.

Of the seven substantive comments that were received during public review of the environmental assessment, one of them suggests an alternative that requires a minor change to the text of the document.

TEXT CHANGES

Page 67, Alternatives or Actions Considered but Dismissed from Further Evaluation—an additional entry will be included as follows:

PROVIDE AN OFFSHOOT FROM THE PROPOSED TSANKAWI MESA TRAIL

One commenter was concerned that rerouting the trail on top and on the side of Tsankawi Mesa would result in visitors not being able to view the Pueblo, which the commenter noted is an expected part of the visitor experience. The commenter suggested an alternative to provide an offshoot from the proposed trail to allow viewing of the Pueblo that included an elevated vantage point (as proposed in the 2000 management plan). This option was dismissed from further consideration because the proposed route realignment would not remove the current viewing opportunities—pueblo masonry features would remain in view for the entire length of the proposed reroute alignment.

NON-IMPAIRMENT FINDING

The National Park Service has determined that implementation of the selected alternative will not result in impairment of monument resources and values. Pursuant to the NPS Guidance for Non-Impairment Determinations and the NPS NEPA Process (October 31, 2011), a non-impairment determination for the selected alternative is included here as an appendix to the finding of no significant impact.

The prohibition against impairment originates in the NPS Organic Act of 1916, which directs that the National Park Service shall:

promote and regulate the use of the...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

According to *NPS Management Policies 2006*, an action constitutes an impairment when its impact “would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (section 1.4.5). To determine impairment, the National Park Service must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (section 1.4.5).

As stated in the *NPS Management Policies 2006* (section 1.4.5), an impact on any park resource or value may constitute an impairment, but an impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park’s general management plan or other relevant NPS planning documents as being of significance

The resource impact topics carried forward and analyzed for the NPS selected alternative in the environmental assessment, and for which an impairment determination is contained in this appendix, are archeological resources, cultural landscapes, ethnographic resources, soils, vegetation, and wildlife and wildlife habitat. The following describes each resource or value for which impairment is assessed and the reasons why impairment will not occur.

ARCHEOLOGICAL RESOURCES

The 157 archeological sites that have been recorded in the 826 acres that comprise Tsankawi and the entire Tsankawi cultural landscape are all eligible for listing in the national register. The prehistoric ruins and archeological sites are specifically mentioned in the enabling legislation for the monument. They are necessary to fulfill the purposes of the monument and are key to the

cultural integrity of the park. Their protection has been the focus of many other park planning efforts.

As previously noted, the selected alternative will provide many benefits to these resources and will be designed and implemented to avoid adverse impacts. The selected alternative will restore abandoned trails to a natural state, and new trails will be designed to avoid disturbance to archeological resources. Final trail alignments will avoid direct impacts on archeological resources by siting alignments on native rock rather than soils that may contain cultural deposits. Additionally, trails will be designed to be offset from cavates, masonry pueblo walls, kivas, and petroglyphs to ensure that visitation will not indirectly create conditions of deterioration. The selected alternative will also introduce interpretive messaging at Tsankawi that will stress the sensitivity of resources, the need for protection, and the historical context and traditional importance of the resources to present-day pueblo communities, with the intention of making all visitors stewards of the landscape. Because new interpretive messaging will be designed to educate visitors and reinforce the message of a sensitive and living landscape, introduction of these features will result in a long-term, moderate, beneficial impact on archeological resources. A small increase in monument staff or other NPS-trained local community volunteers and/or commercial guides at Tsankawi would result in a long-term, minor, beneficial impact on archeological resources.

A new entry roadway and onsite parking area will be implemented with the general configuration designed to avoid known archeological resources. Additional surveys will be conducted in advance of construction to ensure that significant archeological resources are avoided. Ground-disturbing activities associated with the construction of new facilities will result in permanent, minor, adverse impacts on archeological resources, if found, and no adverse effect on historic properties because the character-defining features of the national register-eligible resource will not be affected. Consultation with the New Mexico State Historic Preservation Office, the National Park Service, and/or the NPS regional archeologist will be coordinated to ensure that the protection of resources is addressed.

Because the selected alternative will result in numerous benefits and provide for survey and protection of unknown archeological resources, there will be no impairment to archeological resources.

CULTURAL LANDSCAPES

Tsankawi, in its entirety, is a nationally significant cultural landscape that has been determined by the National Park Service as eligible for listing in the national register as a historic district, a determination that has been concurred by the New Mexico State Historic Preservation Office. The cultural landscape is necessary to fulfill the purposes of the monument and is key to the cultural integrity of the park, as noted in its importance in other park plans.

The construction and introduction of new facilities into the setting will result in a minor, adverse impact on the setting of the cultural landscape, but the changes to the trail system will result in long-term, moderate, beneficial impacts on the cultural landscape. New interpretive messaging, which will promote an ethic of cultural and natural resource preservation, and the addition of a monument staff or other NPS-trained local community volunteers, and/or commercial guides leading tours along the guided-only trail segment will result in a long-term, moderate, beneficial impact. The selected alternative would designate a site steward to provide

historical context to visitors and a limited degree of oversight. This will result in long-term, minor, beneficial impacts on the cultural landscape because it would reduce visitor-induced impacts through visitor education and increased awareness of the sensitivity and significance of cultural and natural resources. The site steward would also monitor the condition of the landscape, report to monument staff when impacts are observed, and help ensure that visitors do not impact the character-defining (national register-contributing) landscape features or patterns and diminish the integrity of the resource.

Because the selected alternative will not inhibit opportunities for the public to experience, understand, and appreciate the park unit in a manner appropriate to the preservation of its cultural landscapes and would have mainly beneficial impacts, there will be no impairment to cultural landscapes.

ETHNOGRAPHIC RESOURCES

The ethnographic resources of the monument are key to its cultural integrity. Its prehistoric aboriginal ruins mentioned in the enabling legislation are an integral part of the pueblo culture in New Mexico.

The selected alternative includes new interpretive messaging, which will promote an ethic of preservation, and the addition of a site steward, monument staff or NPS-trained local community volunteers, and/or commercial guides leading tours along the guided-only trail segment, which will result in a long-term, moderate, beneficial impact. Introduction of new facilities and visual features into the setting will result in a long-term, minor, adverse impact on ethnographic resources, but this change will not be sufficient to cause major, adverse effects on the landscape or decrease its value. Construction noise will result in a short-term, localized, minor, adverse impact on ethnographic resources; however, the new automated access gate will have a long-term, moderate, beneficial impact.

Because the selected alternative will result in only minor adverse effects and overall will result in a long-term, minor to moderate, beneficial impact on ethnographic resources, there will be no impairment to the resource.

SOILS

Tsankawi is well known for its characteristic terrain and prehispanic pattern of human settlement, including manmade features (cavates) carved into the soft tuff material by the Ancestral Pueblo people. Part of the purpose of Bandelier National Monument and Tsankawi is to conserve the scenery and the natural and historic objects therein to provide for the enjoyment of future generations. The preservation and protection of all natural and national register-eligible cultural resources in the park unit includes stabilization of soils that support natural vegetation and reduce the potential for erosion, which can affect these cultural resources and are key to the natural and cultural integrity of the park.

While the realignment of existing trails and implementation of new trails associated with the selected alternative will involve short-term disturbances to soils, the selected alternative will permanently stabilize soils in areas of Tsankawi that have experienced erosion. Although the selected alternative will include vegetation clearing and expose soils, the impacts will be limited to the project areas, and soil productivity and characteristics will not change outside of the limit

of disturbance. Adverse impacts on soils would be both short- and long-term, minor, and adverse and would be associated with the construction and operation of the proposed entry roadway, onsite parking area, kiosk, and ABA Walk. Ground disturbances such as grading, leveling, and filling to support the proposed entry roadway and onsite parking area will also disturb soils. The majority of this disturbance will be associated with the proposed entry roadway and onsite parking area. The use of sediment and erosion control measures will ensure the alternative will not increase sedimentation or lead to additional erosion at Tsankawi. Under the selected alternative, the reclamation of trails that currently traverse the center of the pueblo will minimize impacts on sensitive soils by containing disturbances to designated corridors that can be maintained through regular maintenance. As a result, there will be perceptible declines in the rates of soil erosion and compaction, and the ability of the soil to support native vegetation will improve.

Overall, the selected alternative will have only minor adverse effects that are associated with required construction, and will result in long-term, moderate, beneficial impacts on soils that will enhance the park unit's ability to protect natural scenery and preserve cultural resources. For these reasons, there will be no impairment to soils.

VEGETATION

Natural vegetation is an essential element of the monument's cultural landscape. Vegetation is key to the natural and cultural integrity of the monument, in that the preservation and protection of all natural and national register-eligible cultural resources in the park unit includes stabilization of natural vegetation to reduce the potential for erosion, which can affect sensitive cultural resources.

During implementation of the selected alternative, existing vegetation will be removed and replaced with an impermeable surface, resulting in both short- and long-term, minor, adverse impacts on vegetation. These effects will result from the construction and operation of the proposed entry roadway, onsite parking area, kiosk, and ABA Walk. While effects on vegetation will be detectable in these areas, the affected areas have been previously disturbed and impacted from years of use. Mitigation measures implemented to protect vegetation will include the employment of best management practices, such as adherence to an approved erosion and sediment control plan, which would be developed as the selected alternative is further refined. Furthermore, disturbed areas next to proposed construction activities will be actively reseeded to stabilize soils and allow native ground cover to reestablish. Although the realignment of the trail will introduce a new designated corridor, which may require the removal of some vegetation, it will reduce overall impacts currently experienced along the portion of the Tsankawi Mesa Trail traversing the pueblo and social trails. As a result, implementation of the selected alternative will result in long-term, minor to moderate, beneficial impacts on vegetation.

Although vegetation will be removed and/or disturbed during the construction and implementation of the selected alternative, these adverse impacts will be minor, limited to construction areas, and will be mitigated. Benefits will be derived from the change to trails; therefore, there will be no impairment to vegetation.

WILDLIFE AND WILDLIFE HABITAT

One goal of Bandelier National Monument is to preserve scenery and protect all natural and national register-eligible cultural resources in the park. Wildlife is a natural resource necessary to fulfill the purposes of the monument, is a part of the cultural history and landscape, and is key to the monument's natural integrity.

General wildlife impacts occurring as a result of construction elements associated with the selected alternative will arise from disturbances to habitat. Mammals, reptiles, and amphibians occurring in the area of anticipated disturbance will be forced to relocate. However, adverse impacts will be both short- and long-term, localized, and negligible to minor because of the relatively small area being affected and the ability of adjacent areas to provide adequate habitat. Mitigation measures implemented as a component of the selected alternative will protect migratory bird species, including limiting the removal of vegetation to time periods outside of the breeding seasons for migratory bird species. For pinyon-juniper nesting birds, breeding can start in mid-April and continue through mid-July. Therefore, mitigation measures will prohibit the removal of vegetation necessary to support the implementation of the proposed actions from April 15 through July 15 of each year. With the implementation of these mitigation measures, impacts on migratory bird species are not anticipated. Listed species are either not likely to occur or only rarely to occasionally occur in Tsankawi, and no effects are anticipated on federally listed species. Additionally, new interpretive messaging and the reintroduction of a site steward at Tsankawi will provide a limited degree of oversight, potentially resulting in indirect, long-term, negligible to minor, beneficial impacts.

Because the selected alternative will have mainly long-term, beneficial impacts on wildlife and wildlife habitat, with only negligible to minor, localized adverse effects mainly during construction, and have no adverse effects on listed species, there will be no impairment to wildlife or wildlife habitat.

SUMMARY

The National Park Service has determined that the implementation of the NPS selected alternative will not constitute an impairment of the resources or values of the Tsankawi unit of Bandelier National Monument. As described above, anticipated adverse impacts from the implementation of the selected alternative will be short-term, negligible to minor, and localized. Once in operation, the selected alternative will result in beneficial impacts on park resources and values that will help support the purpose and significance of Bandelier National Monument. As a result, the selected alternative will not result in impairment. This conclusion is based on consideration of the park unit's purpose and significance, a thorough analysis of the environmental impacts described in the environmental assessment, the comments provided by the public and others, and the professional judgment of the decision maker guided by the direction of the *NPS Management Policies 2006*.