



National Park Service  
U.S. Department of the Interior  
Petrified Forest National Park  
Arizona

# Construct a Campground at Chinde Point

Environmental Assessment  
August 1, 2016



# PURPOSE AND NEED

## Introduction

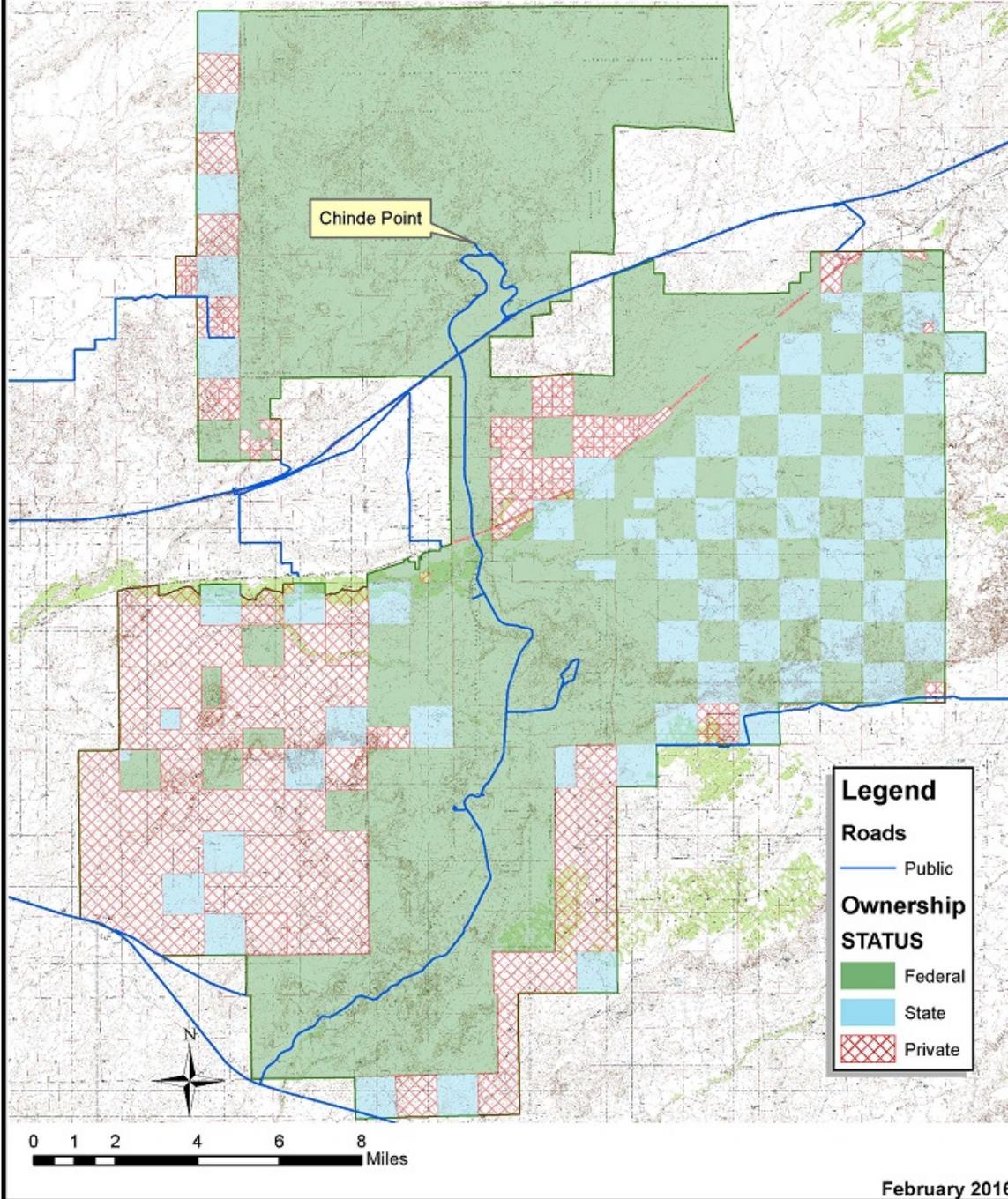
Petrified Forest National Park proposes to replace the existing picnic area at Chinde Point with a 20-space campground and picnic area.

Managed by the National Park Service (NPS), Petrified Forest National Monument was originally established by President Theodore Roosevelt under the Antiquities Act in 1906. The Monument was reduced in size in 1911, then enlarged by more than double in the 1930's. Congress created Petrified Forest National Park in 1962 and more than doubled the size of the park again in 2004 to its current authorized 225,000 acres.

The Chinde Point site was first used as a quarry for road-building material between 1958, when acquired by the National Park Service, and 1960. In 1963, during the Mission 66 building program undertaken nationwide by the National Park Service, picnic areas at Chinde Point and Rainbow Forest were constructed. At Chinde Point, a comfort station and 5 picnic sites with large pads, shade shelters, and room for multiple tables were built. The sites were all connected to the comfort station with sidewalks. The access road was paved but the loop through the picnic area was left graded gravel. No landscaping was called out on the construction drawings for the project and none is evident at the site. The construction drawings for the Chinde Point picnic area indicate the site was considered a "future campground".



# Petrified Forest National Park



## **Purpose and Need**

The proposed action would create a small campground on the site of an old quarry, where the Chinde Point Picnic Area is now. As Petrified Forest expands and adds new lands under park management, it also creates new opportunities for visitors to experience the park in ways they have not been able to experience it before. The park has recently created day-hiking destinations accessible from the main park road. Guided tours are a permitted use of the expansion lands, pending the gathering of additional information on those lands and future planning efforts to determine how they will be managed. A small campground at Chinde Point would offer visitors who want more than the traditional drive-through experience an opportunity to stay overnight and immerse themselves a little longer in the park experience. Petrified Forest is a good place to see dark night skies, which is a part of the park experience now only available to wilderness campers.

Regular inquiries from visitors indicate that demand exists for a campground in the park. The nearest campgrounds are in Holbrook, Arizona, which is 25 miles west along Interstate 40. Chinde Point has a beautiful view into the Painted Desert, which no other local campground can offer.

### **Summary of Project Objectives**

- Provide an opportunity for small numbers of visitors to extend their park experience overnight.
- Provide access to the park's dark night skies to visitors without asking them to hike to a wilderness campsite.

## **Impact Topics Retained For Further Analysis**

The following impact topics are carried forward for further analysis in this EA:

- Soils and Vegetation
- Historic District
- Visitor Use and Experience

## **Impact Topics Dismissed From Further Analysis**

Table 1 indicates which impact topics were dismissed from further analysis with a brief explanation why.

**Table 1 – Impact Topics Dismissed From Further Analysis**

Topic	Affected Environment / Reason Dismissed
Wildlife	<p>Several bird species, reptiles, and mammals such as coyotes, rabbits, and deer inhabit or are transient to the project area. Construction related activities and noise may noticeably, temporarily disturb wildlife to a minimal degree. In the long-term, wildlife habitat would be slightly reduced from the construction of the campground.</p>
Special Status Species - Federal	<p>There are six <b>US Fish and Wildlife Service listed threatened or endangered species</b> that may occur in the project area based on an April 22, 2016 list developed by the USFWS (Consultaion Code: 02AAZ00-2016-E-00556). These species are: California condor (<i>Gymnogyps californianus</i>), Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>), Roundtail chub (<i>Gila robusta</i>), Zuni Bluehead Sucker (<i>Catostomus discobolus yarrowi</i>), Gray wolf (<i>Canis lupus</i>), and Northern Mexican gartersnake (<i>Thamnophis eques megalops</i>). The park's biologist has surveyed the project site on multiple occasions, most recently on May 9, 2016 including a 50-85 meter buffer around the site and did not find evidence of any of these species. The park sent a letter to the USFWS on May 5, 2016 indicating none of the listed species was in the project area and that the project would not impact any listed species. The USFWS replied by letter dated May 26, 2016 concurring with the park's assessment that no listed species would be impacted by the project.</p>
Special Status Species - State	<p>There are two <b>State of Arizona Special Status Species</b> documented within three miles of the project vicinity. They are Gladiator Milkvetch (<i>Astragalus xiphoides</i>) and Arizona Giant Sand Treader Cricket (<i>Daihinibaenetes arizonensis</i>). Appropriate habitat for the cricket (sandy dunes and sandy washes) does not occur within the project site. Any Milkvetch plant within the construction footprint will either be protected in place or transplanted to similar nearby suitable habitat before construction begins.</p> <p>There are nineteen <b>State of Arizona Species of Greatest Conservation Need</b> predicted within the project vicinity based on predicted range models. They are American Pronghorn (<i>Antilocapra americana americana</i>), Pai Striped Whiptail (<i>Aspidoscelis pai</i>), Western Burrowing Owl (<i>Athene cunicularia hypugaea</i>), Ferruginous Hawk (<i>Buteo regalis</i>), Common Nighthawk (<i>Chordeiles minor</i>), Pale Townsend's Big-eared Bat (<i>Corynorhinus townsendii pallascens</i>), Gunnison's Prairie Dog (<i>Cynomys gunnisoni</i>), Banner-tailed Kangaroo Rat (<i>Dipodomys spectabilis</i>), Spotted Bat (<i>Euderma maculatum</i>), Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>), Lincoln's Sparrow (<i>Melospiza lincolni</i>), Black-footed Ferret (<i>Mustela nigripes</i>), Arizona Myotis (<i>Myotis occultus</i>), Yuma Myotis (<i>Myotis yumanensis</i>), Stephen's Woodrat (<i>Neotoma stephensi</i>), Springerville Pocket Mouse (<i>Perognathus flavus goodpasteri</i>), Northern Rock Mouse (<i>Peromyscus nasutus</i>), Brazilian Free-tailed Bat (<i>Tadarida brasiliensis</i>), and Kit Fox (<i>Vulpes macrotis</i>).</p> <p>Four of these species, Pai Striped Whiptail (<i>Aspidoscelis pai</i>), Western Burrowing Owl (<i>Athene cunicularia hypugaea</i>), Gunnison's Prairie Dog (<i>Cynomys gunnisoni</i>), Black-footed Ferret (<i>Mustela nigripes</i>) are not found within the project area. The remaining fourteen species are transient through the site with some having the potential to breed in or near the project site. Construction activities will be timed for the fall, after young migratory birds have fledged and nests, if any, abandoned. The site will be surveyed for occupancy prior to construction to ensure there will be no impacts to these</p>

Topic	Affected Environment / Reason Dismissed
	<p>transient species.</p> <p>There are two <b>State of Arizona Species of Economic and Recreation Importance</b> predicted within the project vicinity. They are America Pronghorn (<i>Antilocapra americana Americana</i>) and Mourning Dove (<i>Zenaida macroura</i>). Both species may transit the site, and Mourning Doves have the potential to establish nests in the area. If nests are found, they will be moved a minimum distance outside the construction activity zone using appropriate measures to reduce the chance of nest failure. As Pronghorn are also a state species of greatest conservation need, the site will be surveyed for occupancy prior to and during construction, and individuals flushed from the construction area.</p> <p>There will be minimum long-term impacts to any of these species because the amount of habitat affected by the construction compared to the available habitat is almost negligible. Also, the planting of additional native vegetation as called out in the landscape plan will increase vegetative cover and forage potential.</p>
Air Quality	<p>Petrified Forest National Park is designated as a Class I air quality area under the Clean Air Act. Construction related activities could result in localized, noticeable, temporary increases of vehicle exhaust, emissions, and fugitive dust. There would be no long term impacts to air quality.</p>
Soundscapes	<p>Sounds in the project area are a mix of natural and man-made including those generated from wildlife, humans, vehicular traffic, and wind. Human-caused sounds would temporarily and noticeably increase during construction as a result of equipment, vehicular traffic, and construction crews. Long term changes to the soundscape would be minor, resulting from humans using the new campground.</p>
Lightscapes	<p>There is no existing lighting in the project area. The new campground would not include outdoor lighting, although light from the comfort station would be visible through the windows of the building and vehicle headlights may be visible from the Petrified Forest Wilderness. There would be a slight increase in the amount of light produced at the site although design will minimize the amount of light shining directly into the wilderness through various shields (for instance, berms to prevent headlights from shining into wilderness areas) to permit enjoyment of dark night skies.</p>
Paleontological Resources	<p>There are no known paleontological resources in the immediate project area. The nearest paleontological resources are at the bottom of the 200-foot bluff below the site and not easily accessible.</p>
Archeological Resources	<p>Historic artifacts from the quarrying efforts have been found on the periphery of the site through a survey done in fall, 2015, and a site inventory and recording done in spring, 2016. These artifacts would be documented and collected if small and valuable, left in place if large and heavy (heavy equipment parts) or less valuable (tin cans). SHPO was briefed verbally on the findings on October 21, 2015, and in writing on July 21, 2016, providing written concurrence on July 22, 2016.</p>
Cultural Landscapes	<p>There are no identified cultural landscapes in the project area.</p>
Ethnographic	<p>The Hopi Tribe was consulted in a meeting November 19, 2015 and no ethnographic resources were identified in the project area. The Navajo Tribe</p>

Topic	Affected Environment / Reason Dismissed
Resources	was not responsive to consultation requests. Based on this information, the park has determined there are no ethnographic resources in the project area or affected by the project.
Socioeconomics	The 20-space maximum size of the campground is not expected to have a significant effect on existing campgrounds in Holbrook. Park visitation has grown 36% in three years since new visitor opportunities were first made available and new lands and new opportunities are expected in the coming years which will continue to grow the size of the visitor base. Having an overnight option in the park is expected to contribute to higher visitation. Should the park concessioner opt to operate the campground, 5 vintage trailers would provide lodging for overnight visitors. Such a small number of lodging “rooms” would not affect lodging options in nearby communities.
Environmental Justice	There will be no disproportionate health or environmental effects on minorities or low income populations because implementation of the alternatives would not result in any identifiable adverse human health effects and this environmental assessment demonstrates there would be no significant environmental impact at all. The new campground and picnic area would be available for use by all people regardless of race or income, and the construction workforces would not be hired based on race or income,
Indian Trust Resources	There are no Indian Trust Resources in the project area.
Indian Sacred Sites	Through consultation efforts (see ethnographic resources), the park has not been made aware of any Indian Sacred sites at or near the project site.
Climate Change	Although the southwest is expected to become warmer and drier, it would be speculative to predict localized changes in temperature, precipitation, or other weather changes, in part because there are many variables that are not fully understood and there may be variables not currently defined; therefore, the effects of future climate changes are not discussed further.

## ALTERNATIVES

### Alternatives Carried Forward

#### Alternative A – No Action (Chinde Point remains only a Picnic Area)

Under the no action alternative, the Chinde Point Picnic Area would remain unchanged. The nearest campground to the park would remain 25 miles away in Holbrook.

The comfort station and 5 large picnic sites at Chinde Point would continue to serve visitors looking for a place to have a picnic. The comfort station would continue to have no electric power and the on-site wastewater disposal system would remain. The septic tank would continue to be pumped annually to reduce the risk of failure of the leach field. The picnic area would continue to lack landscaping.



Aerial view of Chinde Point Picnic Area and Alternative A

## **Alternative B – Chinde Point Campground (NPS Proposed Action and Preferred Alternative)**

The Chinde Point Picnic Area would be converted to a small campground of approximately 20 sites, with a new picnic area. The 5 existing picnic sites would become full hookup campsites; the additional 15 campsites would extend west from the existing picnic area, staying within the confines of the quarry site. These additional sites would include some with water and electricity and some sites without hookups – the exact tally for each to be determined in design. The existing comfort station would be expanded to include men’s and women’s showers.

Utility lines for water, sewer, and power would be run to the site, generally along the side of existing roadways. Water already serves the site but would need to be replaced with a larger pipe along the existing alignment from the existing main line, approximately 150 feet south of the park road, to provide water spigots convenient to all campsites, service connections to some sites, and fire protection. The alignment is approximately 1500 feet long and is expected to be 8-feet wide, including an 18-inch wide ditch and the trample zone for the excavation equipment. Sewer and power lines would be run to the site from Painted Desert Inn, approximately 2200 feet in a common trench. The impacted width is expected to be similar to that of the water trench. Installation of an electric transformer and a sewer lift station near the existing comfort station would also be required. Photovoltaic power panels would be installed flat on the rooftops of the existing shade shelters and would generate a portion of the power used by the campground. Staging and stockpiling would be done in the middle of the existing loop road, where the picnic area would be established as a later portion of the work. The existing septic tank and leach field would be abandoned – the septic tank would be removed and the resulting hole filled with compacted earth. A dump station connection to the new wastewater system would be provided for campers to use.

The campground project would also include new landscaping with native plants on the full 10-acre site. The picnic area and campground would both have landscaping with native vegetation installed between the sites. Rocky soils would be supplemented with additional topsoil, making the area more receptive to native plants in the areas between the campsites and picnic sites. Seed would be collected from the area for this purpose, supplemented by nursery plants. Reseeding and re-contouring of disturbed areas would take place following construction, and would be designed to minimize the visual intrusions.

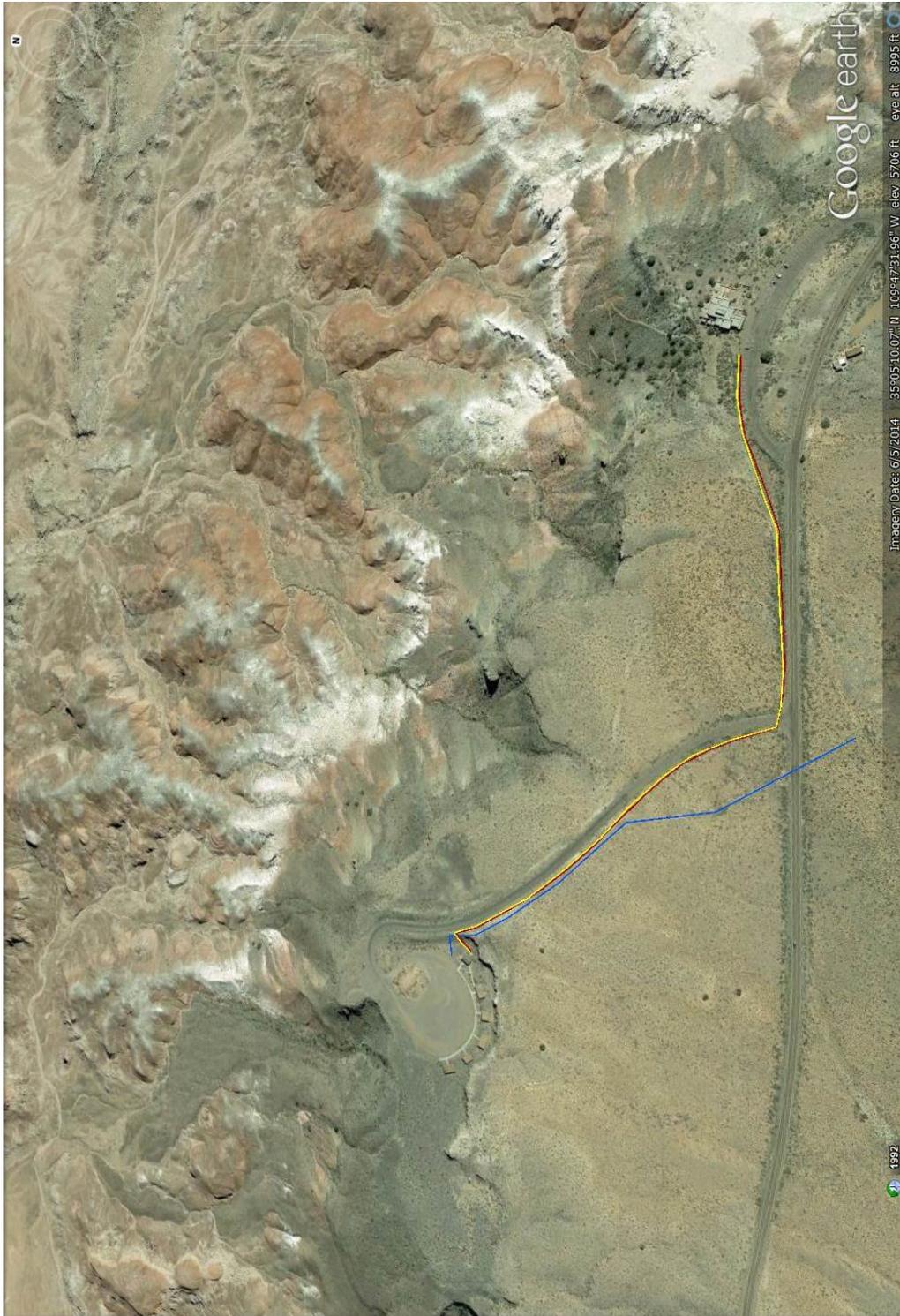
Rehabilitation of the Chinde Point comfort station and shade structure modifications would be done in accordance with the Secretary’s Guidelines for Historic Preservation. Showers at each end of the structure would require that the ridge be extended in both directions. The walls of the additions would be distinct from yet compatible with the original block. Photovoltaic panels on the shade structures would lay flat on each roof to retain their low profile and minimize the change in the visual appearance of the shelters. Elements of scale, color, texture, and other design components of the shower additions would be sensitive to the original structure. Further consultation with the SHPO would be done on the conceptual design.

The existing picnic sites are designed to meet federal accessibility guidelines for people with disabilities. This accessibility would be maintained for these sites when converted to full hookup campsites and a sixth site would be designed for accessibility without hookups.

Four to six picnic sites would be developed with shade structures inside the existing loop drive. One or two of these sites would be fully accessible from the parking area and to the comfort station.

Construction is expected to begin in late 2017 and last about six months. Construction would include the use of a backhoe for excavation, dump trucks for hauling gravel and topsoil, concrete trucks, front end loaders for moving material, and hand tools. Night work would not be permitted to avoid collisions with wildlife.

Campground management -The campground would be managed by the National Park Service as a first-come-first served site unless the park's new concessioner opts to manage it and include fixed "vintage" trailers in the 5 full hook-up sites. This service is authorized in the contract which began in January of 2016. Vintage trailers would be pre-1963 when Route 66 was displaced by Interstate 40 at Petrified Forest, and would enhance a visitor's connection to that interpretive theme.



Proposed utility lines – blue for water, red and yellow for power and wastewater.



## Best Management Practices

The following best management practices would be implemented under Alternative B to minimize the degree and/or severity of adverse effects:

### Wildlife

- Construction personnel would be orientated on appropriate behavior in the presence of wildlife and on proper storage and handling of food, garbage and other attractants.
- The construction site and staging areas would be monitored by park natural resource staff throughout the duration of the project for potential adverse impacts to special status species. Should any adverse impact be imminent from construction or other project-related activities, they will stop and not resume until necessary protective steps are taken as to avoid such impacts to special status species.

### Vegetation

- Disturbance to vegetation would be avoided as much as possible and contained to as small a footprint as possible while meeting project objectives.
- Non-native invasive plant infestations near the disturbed areas would continue to be treated on a yearly basis, with emphasis on these areas for a minimum of three years following project completion. These treatments, including only hand-pulling of invasive plants, have been done in developed areas using the appropriate categorical exclusion (#16 Landscaping and landscape maintenance in previously disturbed or developed areas).
- Construction equipment would be cleaned before entering the park to minimize the transportation of exotic seeds to the site. All equipment entering the park would be inspected and may be required to be pressure washed to remove foreign soil, vegetation, and other materials that may contain non-native seeds or vegetation.
- Because disturbed soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as the use of silt fences would be used to minimize any potential soil erosion.

### Soils

- Disturbance to soils would be avoided as much as possible and contained to as small a footprint as possible while meeting project objectives.
- Erosion control measures that provide for soil stability and prevent movement of soils would be implemented, such as installing erosion control wattles along the edge of construction.
- Any topsoil temporarily disturbed during construction would be aerated and reseeded with native vegetation.
- Any disturbed top soil would be salvaged, stored, and used to restore the area.
- The staging area would be the center of the existing loop drive, which would be landscaped at the end of the project work, eliminating any additional soil disturbance.

### Historic Structures

- In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.
- The National Park Service would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging paleontological materials, archeological sites, or historic properties. Contractors and subcontractors would also be instructed on procedures to follow in case previously unknown paleontological or archeological resources are uncovered during construction.

### **Visitor Use and Experience**

- Signs would be posted and press releases done to inform visitors about construction.
- Construction zones would be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.

### **Air Quality and Soundscapes**

- Fugitive dust generated by construction would be controlled by spraying water on the construction site and if needed.
- All motor vehicles and equipment would have mufflers conforming to original manufacturer specifications that are in good working order and are in constant operation to prevent excessive or unusual noise, fumes, or smoke.
- Equipment would not be allowed to idle longer than 2 minutes when not in use.
- All haul loads would be tarped.
- No engine brakes would be used in or near developed areas and campgrounds.

### **Park Operations**

- The NPS would develop emergency response protocols for implementation of the project. Construction activities would be conducted in accordance with established safety protocols.
- Employees and construction crews would be required to park their vehicles in established staging areas.
- Construction workers and supervisors would be informed about the special sensitivity of the park's values, regulations, and appropriate housekeeping.

## **Alternatives Considered and Dismissed**

The following alternatives were considered for project implementation, but were ultimately dismissed from further analysis, as described below.

### **Campground Location Options**

One other site was considered for a small campground. A site along the original Route 66 was considered, near the site of the Lion Farm, a roadside business in the 1950's that is now gone and was added to the park in 1958. The site had the advantage of being on the original Route 66 and has a similar view into the Painted Desert as the preferred site. However, it is not

protected from the wind, is more visible to visitors on the main park road, and the cost of infrastructure would have been significantly higher. This site was rejected for those reasons.

# AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the affected environment (existing setting or baseline conditions) and analyzes the potential environmental consequences (impacts or effects) that would occur as a result of implementing the alternatives. Direct, indirect, and cumulative effects are analyzed for each resource topic carried forward. Impacts are analyzed based on considerations of impact type, context, duration, and intensity.

## Cumulative Impact Scenario

The CEQ regulations which implement NEPA require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no action and preferred alternatives.

Cumulative impacts were determined by combining the impacts of each alternative with other past, present, and reasonably foreseeable future actions. Therefore, it is necessary to identify other past, ongoing or reasonably foreseeable future projects that may impact each resource topic. Given this, the following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

- Rehabilitation of the Painted Desert Inn (2006)
- Begin "Off the Beaten Path" series of hiking routes (2012)
- Realign Crystal Forest Trail to Improve Accessibility (2014)
- Initiate Field Institute series of classes (2015)
- Rehabilitation of Painted Desert Community Complex (planned)
- Rehabilitation of the main park road (planned)

## Soils and Vegetation

### Soils

The badlands exposed in the park belong to the Upper Triassic Chinle Formation and represent the deposits of a vast 225 million year old river system. Around 4-8 million years ago, during the Miocene and Pliocene, fluvial and lacustrine sediments were deposited over the Chinle Formation; volcanic ash and lava were also deposited during this time. More recent Quaternary deposits (1.8 million years ago to the present) of windblown sand and alluvial material cover much of the park.

The 10-acre Chinde Point site was a gravel quarry before being developed into the current picnic area in 1963. The floor of the site is basalt gravel with some finer windblown sand and alluvial material in the portion not utilized by the picnic area. The Natural Resource Conservation Service (NRCS), soil survey for Apache County, Arizona, Central Part, indicates that the campground is within a map unit designated "stony rock land" after the taxonomic

classification of the dominant soils within the unit. Within this unit, the landform includes escarpments, and lava flows, with a depth of 5 to 16 inches to lithic bedrock.

## **Vegetation**

Biotic communities at Petrified Forest belong to the Colorado Plateau Semi-Desert Province and include primarily arid grasslands, xeric shrublands, and sparsely vegetated badlands. Riparian species, such as cottonwoods and willows, grow along some of the permanent streams.

The Chinde Point site has sparse grasses and shrubs in both the developed picnic area and in the undeveloped portion of the former rock quarry, where plants have begun to recolonize the windblown soils in the area. The vegetation classification at the project site is listed as Bigelow's Sagebrush-Torrey's Jointfir Shrubland, Colorado Plateau Mixed Bedrock and Tableland (Thomas, K. A., M. L. McTeague, A. Cully, K. Schulz, and J. M. S. Hutchinson. 2009. Vegetation classification and distribution mapping report: Petrified Forest National Park. National Resource Technical Report NPS/SCPN/NRTR— 2009/273. National Park Service, Fort Collins, Colorado.). The most abundant plants are Bigelow's Sagebrush (*Artemisia bigelovii*) and Torrey Ephedra (*Ephedra torreyana*). Otherwise, much of the area is bare ground.

## **Impacts of Alternative A – No Action**

No disturbance to soil resources or vegetation would occur because Alternative A does not include any construction related activities, excavation, or ground disturbance.

**Cumulative Effects** – There would be no direct or indirect impacts to soils and vegetation under Alternative A; therefore, this alternative would not contribute to cumulative impacts of other projects in this region.

## **Impacts of Alternative B (NPS Proposed Action and Preferred Alternative) – Chinde Point Campground**

The new campground and picnic area would disturb approximately 6 acres of soils and recovering grassland at the old quarry site. The other 4 acres of the site would either be undisturbed (around the existing picnic shelters) or is already gravel without vegetation. The utility lines would disturb an additional approximately 0.7 acres of soils and grassland for a period of one to two years until they recovered. Landscaping done as part of this project would effectively reclaim much of the 1950's quarry by returning soils and vegetation to the site that were removed by the quarry operation. At project maturity (three years after initial landscaping), landscaping would effectively reduce the disturbance of the project from approximately 6.7 acres to approximately 4 acres in the western portion of the site and would add another acre of landscaped area that currently does not exist in the graveled eastern end of the site. Even with the disturbance of 4 acres of soils and vegetation, both the soils and vegetation are common in the region and thousands of acres of the same soil and vegetation types would remain undisturbed.

**Cumulative Effects** – Expanding hiking access to the park through “off-the-beaten-path” hikes, modifying paved trails, and creation of the Field Institute may have impacted an acre or two, cumulatively through some social trailing. The planned rehabilitation of the main park road is likely to impact a maximum of an additional 200 acres along the road shoulder. Collectively, these actions have had and would continue to have minor, adverse cumulative impacts on soils and vegetation in the park. When the 4 acres of adverse impacts under Alternative B are

combined with these other impacts, the total cumulative impact on soils and vegetation would continue to be adverse and minor. Overall, the impacts under Alternative B would contribute slightly to, but would not substantially change, these ongoing cumulative effects.

## **Historic District**

### **Affected Environment**

#### Chinde Point Picnic Area

In 2015, the NPS completed a determination of eligibility (DOE) for the Chinde Point Picnic Area and recommended the picnic area be considered eligible for listing on the National Register of Historic Places as a historic district under Criteria A (event) and Criterion C (design/construction), with a period of significance from 1945-1972.

The Chinde Point Picnic Area is considered eligible for listing for its range of contributing buildings, structures, and cultural landscape features that encompass the goals of the Park Service Modern or “Mission 66” construction program. It demonstrates the importance to the overall history and demonstrates integrated day-use area planning including the entrance road and its signage, the looped road system, and the individual parking details at each site. The day-use area reflects the new concepts of providing more privacy for the users and contributes to the integrity of the development through its landscape features and constructed components. Trail access leads to the comfort stations and viewing areas. This characteristic represents the part of the site planning for day-use areas that indicates a relationship to other park facilities.

The integrity of the Chinde Point Picnic Area, or the ability of the property to convey its significance, is high, since all features still exist and have been largely unmodified. All structures are still in their original positions on their original footprints. The wheel stops used to define parking are still in place. The setting has not been modified other than natural revegetation and the placement of a pile of dirt in the center of the loop drive. The use patterns have not changed and the site’s relationship to the rest of the park remains as it was in 1963.

Though, in a letter dated October 28, 2015, the Arizona SHPO disagreed that the site should be considered eligible as a historic district in the National Register of Historic Places, the NPS has decided to treat the site as if it were eligible in anticipation of revisiting of this decision in the future.

The Chinde Point Picnic Area includes a semi-circular gravel parking lot sitting north of and connected to the main Park Road (Park Route 1), which provides access to Interstate 40 to the south. The gravel parking area is contained by the curvature of the surrounding escarpment landform. This provides a framework for the organization of the recreation area and parking layout, which includes five picnic tables, each with associated shade structures, concrete parking barriers and the comfort station. The outer layer of the circular configuration is composed of the five shade structures and one comfort station. A curvilinear concrete pathway, added sometime later, is nested inside of the row of shade structures and connects the covered picnic areas to the comfort station. Concrete is used for the foundation of each structure. The layout of the secondary pathways off of the primary curved path creates a radial form. The third layer inward is the curved row of concrete parking barriers that face outward to the shade

structures. In the center of the gravel parking is an earth mound with native vegetation, also added later.

Specifically, the comfort station, shade structures, circular drive, curved layout of structures, sidewalk, and wheels stops were all considered contributing features to the historic district and were built as part of the nationwide Mission 66 development program, which has a period of significance generally considered to be from 1945-1972, although it was determined after the Determination of Eligibility was submitted that the sidewalks were added later.

The single story comfort station is the structure closest to Park Road which defines the eastern edge of Chinde Point. The rectangular plan of the structure is divided into three main spaces, which include the men's comfort station, women's comfort station, and the maintenance and utility storage space in the center. Both comfort station spaces are identical in square footage and symmetrical in spatial layout along the bisecting axis. The comfort station is used by the public on a seasonal basis, and during the winter months it is closed and vacant, due to the lack of freeze protection in the building. Currently, water and underground power is extended through the building, though the direct-bury power line is not operational. The waste water from the flush toilets is processed via septic tank and leach field on the site.

The comfort station is characteristic of the Mission 66 Program architectural style and possesses physical integrity to the period of significance. Specifically, Chinde Point comfort station is a successful reflection of the principles of the Modern Movement, or "Park Service Modern," style. The comfort station is a standard comfort station design used in campgrounds and other public places in parks during Mission 66, with block walls, a shallow pitched roof with ridge running parallel to the front façade, and clipped roof edges on all four corners. The comfort station's low-pitched gable roof, fenestration, frame and concrete block construction, extended eaves, ribbon window openings, and appropriate exterior wall cladding all contribute to its significance. The significance also includes the mostly low-profile, horizontal effect of the comfort station's elevations. The outdoor spaces and site work, including driveway, parking, and walkways incorporated into the planning and construction are present. The building is part of a larger Mission 66 development area. It is an essential part of an overall Mission 66 park development plan, which had extraordinary importance in the history and development of an individual park.

The shade structures sit on concrete slab foundations with two foot concrete footings. Each shelter is constructed of welded steel post-and-beam, exposed ribbed roof decking enclosed on top by a steel cap, which covers two to three bays, each for a mounted picnic table. The use of regulating lines in the post-and-beam construction maintains a clean and minimal appearance concurrent with the Mid-century Modern style. Unobstructed views are retained by the minimum of materials and configuration.

Existing vegetation within the Chinde Point Picnic Area was protected and preserved during construction as much as possible, and in areas where little vegetation existed, low-growing shrubs were planted to provide privacy and preserve long-range views. The Mission 66 program provided the funds to introduce potable water, sewer systems, and electricity to new comfort stations. Site furnishings and small-scale features, such as trash cans, signboards, and walkways are other characteristics of modern design. Large-scale features such as paved roads area included.

## Painted Desert Inn

The Painted Desert Inn is situated on a mesa overlooking the vast and colorful Painted Desert. It is rooted in a lodge that entrepreneur Herbert David Lore completed around 1920. In 1935, the National Park Service purchased the inn and its surroundings. In 1963, the inn closed and a new facility opened to house the park visitor center and concession operations.

The park scheduled the building's demolition in 1975, but a public campaign helped save the building, which the National Park Service listed in the National Register of Historic Places in 1976. The Secretary of the Interior recognized the historic significance of the inn by designating it a National Historic Landmark in 1987.

In 2006, the Painted Desert Inn reopened following its restoration. The inn now appears as it would have in 1949. Today, visitors again are able to experience the exquisite architectural details and richly colored walls of the Painted Desert Inn. Some highlights include the Trading Post Room, a magnificent architectural space with six hammered-tin, Mexican-style chandeliers, an enormous skylight, and windows overlooking the desert.

### **Impacts of Alternative A - No Action**

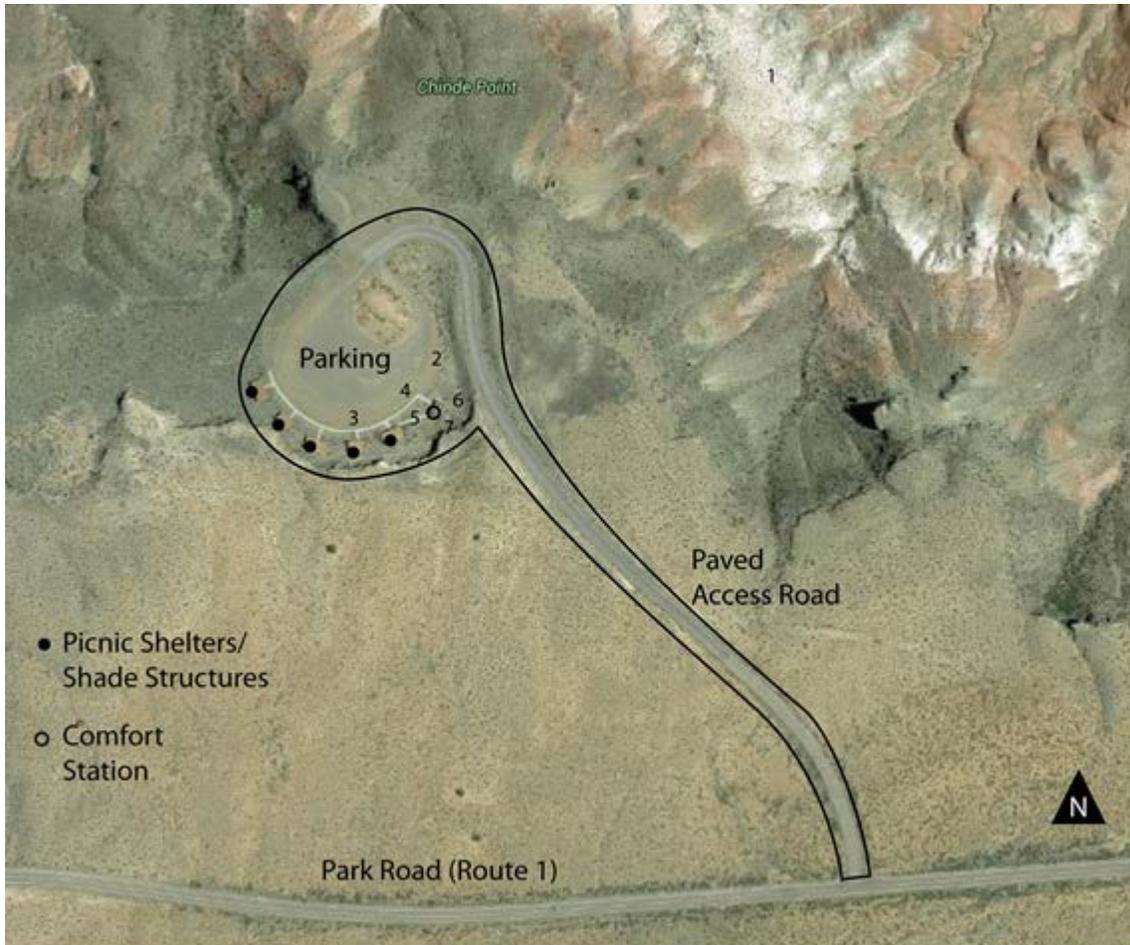
No direct or indirect effects on the historic district would occur as a result of this alternative. The district, assumed to be eligible for the National Register of Historic Places, would remain unaltered.

### **Cumulative Effects**

There would be no direct or indirect impacts to the historic district under Alternative A; therefore, this alternative would not contribute to cumulative impacts of other projects in this region.

### **Impacts of Alternative B - NPS Proposed Action and Preferred Alternative**

In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106, the "area of potential effects" (APE) is determined as the geographic area within which an undertaking may directly or indirectly cause alteration in the character or use of historic properties (36 CFR 800.16(d)). The APE for the district structures in the Chinde Point Picnic Area, is depicted below.



This alternative would add a shower room to each end of the existing comfort station building, approximately doubling its square footage. The additions would be made in such a way as the building gets longer along its roof ridge but not deeper. The roof pitch would remain the same and the distinctive clipped corners of the roof would be reinstated on the new gables. Rather than entering the ends of the building, new doors would be added to the front façade providing access to the new shower room – the existing entry doors would become interior passageways from shower rooms to comfort stations. The additions would be compatible with but distinctive from the original construction. They would be built of compatible block and retain the horizontal line between block and windows at about five feet above the floor. These additions would be consistent with the Secretary’s Guidelines and thus work toward ensuring the historic district retains its National Register eligibility.

The five shade shelters would be unmodified except for the addition of photovoltaic panels to up to three shelters. This action would be done in accordance with the Secretary’s Guidelines for Historic Preservation.

The curvilinear alignment of structures, loop drive, sidewalk, and parking would be retained. Some wheel stops that originally defined the circular drive and confined vehicles to the east side of the site would be removed to permit access to the west side of the site but otherwise, nothing original would be modified that would detract from the original design or layout of the site. The addition of a gravel road, tent pads, shade shelters and native landscaping to the west side of the site would not adversely affect the site’s eligibility for the National Register.

Overall, the modifications and additions to the site would have a negative effect on the proposed historic district by modifying the restroom building, changing the use of the site from picnicking to camping, and adding additional structures and landscaping to what was originally a largely barren site beyond the structures of the proposed district. However, the structures of the district would remain largely intact (the exception being the removal of some wheel stops) and in their original positions, utilizing their original materials, and retaining their original views from the site. The negative effects would be mitigated by retaining the original design and construction drawings and early photographs already gathered in the Determination of Eligibility, a complete record of the district, including narrative descriptions, drawings, and photographs. The individual features within the district are standard Mission 66 design features that have been consistently constructed across the western landscape. These features would remain in-place and retain their individual integrity.

This alternative would have no effect on the Painted Desert Inn because the only work associated with the project is underground adjacent to the parking lot of the Inn and would be imperceptible once the trenching scars heal within 3 years.

### **Cumulative Effects**

The construction of curvilinear sidewalks at some point after initial construction had a positive effect because they provide paved access from each picnic site to the restroom building while complimenting the curvilinear design of the picnic area. The dirt pile, left either intentionally or by neglect inside the loop drive, has naturalized (grown plants on it) and required vehicles generally to follow a one way counterclockwise traffic pattern around the loop. Beyond these additions to the site, there are no known projects which have or would contribute to cumulative impacts to the area of potential effect with Alternative 2. . Collectively, these actions have had minor beneficial cumulative impacts on the historic district. When the negative impacts under Alternative B are combined with these other impacts, there would be the potential for long-term, cumulative negative effects on the historic district, though, as noted above, these impacts would be mitigated by retaining a complete record of the district gathered as part of the Determination of Eligibility.

## **Visitor Use and Experience**

### **Affected Environment**

Petrified Forest National Park serves about 800,000 visitors annually from all over the country and internationally. Visitors come to enjoy the many features of the park, with most visitors coming between March and October. There is no recent demographic data on park visitors but a study from 2002 indicated the largest percentage of visitors, 15%, came from California, 12% from Arizona, and the rest were divided among all other destinations in single digit percentages.

Petrified Forest offers a wide variety of experiences. Most visitors drive the main park road, view the waysides, and walk the short paved trails available from pullouts and overlooks. Ranger-led activities occur mostly during the summer and reach a small percentage of visitors. Park interpretive staff and rangers strive to interact with park visitors and provide educational materials, programs, and exhibits to assist visitors in learning more about the natural and cultural resources in the park. A series of “off-the-beaten-path” hikes is offered for those who want a more unstructured experience.

The park has expanded in size by about 75% since 2007. The new lands are restricted by the 2010 GMP Amendment to visits through guided tours only. To provide those tours, the Petrified Forest Museum Association has recently created a Field Institute, which offers long-form, field-based classes led by experts in a variety of fields for a fee. The park has also authorized the concessioner, Ortega National Parks, to lead guided tours of the recently acquired Paulsell Ranch.

Visitors also can find information about the park at the Painted Desert Visitor Center, Painted Desert Inn, and Rainbow Forest Museum.

Chinde Point Picnic Area is utilized only occasionally during good weather. It has never been utilized to full capacity as far as current staff is aware. The site is occasionally used as a sanctioned overnight camping spot for youth crews or visitors attending a special night event.

A common question from visitors is whether there is camping available in the park.

### **Impacts of Alternative A – No Action**

With no construction related activities, excavation, ground disturbance, or new features introduced into the landscape, there would be no change to how visitors use and experience the picnic area or park. There would continue to be no non-wilderness camping available in the park and visitors who want to experience park activities early or late or want to experience the park's dark night skies would continue to have to travel 25 miles for lodging or backpack into the park's wilderness. Given this situation, it's estimated that as many as 12,000 visitors would not have the opportunity to stay overnight in the park, making them less likely to participate in early and late park activities, and reducing the time available to them to enjoy all the stories and experiences the park provides. This would equate to an effect on less than 2% of annual park visitors, assuming an estimated 650,000 people per year travel to the park.

**Cumulative Effects** – There would be no new direct or indirect impacts to visitor use and experience under Alternative A; therefore, this alternative would not contribute to cumulative impacts of other projects in this region.

### **Impacts of Alternative B – NPS Proposed Action and Preferred Alternative – New Chinde Point Campground**

Construction of Alternative B would result in six months of closure of the Chinde Point Picnic Area. Visitors would not be permitted to access the immediate construction zones while the campground and picnic area were under construction, which would limit visitor use activities in this area during the six month winter construction period. These visitor activities would resume following construction.

The resulting campground and picnic area would provide an amenity that currently does not exist, giving visitors an opportunity to more easily access the park for early or late activities and to experience the park's dark night skies. As many as 12,000 visitors annually may be able to take advantage of this amenity, assuming the campground's 15 sites are filled to capacity throughout the peak season of May to September. A similar sized picnic area to the current one would be incorporated in the design, which would allow opportunities for picnicking at the rim of the Painted Desert to continue.

The closure of the picnic area is expected to have only a minor impact on visitors because construction would be timed to occur over low use winter months and at most a few dozen visitors might be negatively affected. The beneficial effects for thousands of visitors would be to immerse themselves in the park experience, watching sunset and sunrise as well as stargazing overnight. They would be more likely to engage in park activities that require early and/or late presence in the park.

**Cumulative Effects** – Past, present, and reasonably foreseeable future actions that have impacted visitor use and experience include the rehabilitation of the Painted Desert Inn in 2006 and the planned rehabilitation of the Painted Desert Community Complex and the main park road in the next 5 years. These actions have restored or will restore the character defining features of historic structures within their original footprints, maintain or expand visitor opportunities to enjoy historic structures and other features along the main park road, and create additional useful life for all three facilities. In addition, access to off-road destinations have been improved through the “off-the-beaten-path” series of hiking routes, creation of a non-profit Field Institute for in-depth field tours, and rehabilitation of existing paved trails to improve accessibility for visitors with mobility impairments, which have benefited visitors by expanding opportunities for visitors to access the resources of the park. Collectively, these actions have had and would continue to have significant beneficial cumulative impacts on visitor use and experience. When the visitor impacts under Alternative B are combined with these other impacts, the total cumulative impact on visitor use and experience would continue to be beneficial and significant. Overall, the impacts under Alternative B would contribute to, but would not substantially change, these ongoing cumulative effects.

## CONSULTATION

### List of Persons and Agencies Consulted:

- James Garrison, State Historic Preservation Officer, State of Arizona, Phoenix
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- Steven L. Spangle, Field Supervisor, Arizona Ecological Services Office, US Fish and Wildlife Service, Phoenix
- Brad Traver, Superintendent, Petrified Forest National Park
- William Parker, Chief of Resource Management, Petrified Forest National Park
- Andrew Bridges, Biologist, Petrified Forest National Park
- William Reitze, Park Archeologist, Petrified Forest National Park
- Thomas Lincoln, Assistant Regional Director for Cultural Resources, NPS Intermountain Region
- Mike Wrigley, Regional Wildlife Biologist/Endangered Species Coordinator, NPS Intermountain Region