

# **Scotty's Castle Flood Rehabilitation Death Valley National Park**

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## **FINDING OF NO SIGNIFICANT IMPACT March 2019**

### **INTRODUCTION**

This Finding of No Significant Impact (FONSI) documents the decision of the National Park Service (NPS) to implement the preferred alternative (Alternative B) as presented in the November 2017 Scotty's Castle Rehabilitation Environmental Assessment (EA) in accordance with the 1969 National Environmental Policy Act (NEPA), the NPS NEPA guidance Director's Order (DO) 12, and the NPS NEPA Handbook. This FONSI also summarizes the alternatives considered in the EA, documents the rationale for selecting Alternative B, and documents why the alternative will result in no significant effect on the human environment as defined by the NEPA regulations (41 Code of Federal Regulations (CFR) 1500-1508). This FONSI and the EA represent the full and complete record of the environmental impacts analysis.

### **BACKGROUND**

In October 2015, heavy rains resulted in flash flooding in Grapevine Canyon, located in the northern portion of Death Valley National Park (park). The storm damaged features of the Death Valley Scotty Historic District (Scotty's Castle or DVSHD), including parking lots, walkways, picnic area, utility systems, and historic and non-historic structures. Additionally, the October 2015 flood heavily eroded and reshaped the topography of the picnic area and leach field located near the historic entrance gates and covered sidewalks and roads with mud and debris. Flood waters deposited up to 4 feet of sediment in places. The historic Garage, Long Shed, Bunk House, Fire Cache, and Hacienda sustained heavy damage from flash flooding and mud. The historic Main House, Annex, and Chimes Tower sustained comparatively minor water damage from preexisting leaks.

The proposed project includes rehabilitating the interior and exterior of the Main House and Annex and associated features; replacing the heating, ventilation, and cooling system for the Main House and Annex; repairing and stabilizing the Garage, Long Shed, and Bunkhouse, including rehabilitating the Garage for use as a visitor center; rehabilitating the Gas House and removing a nonhistoric addition; rehabilitating the interior and exterior of the Hacienda and improving the interior for use as employee housing and offices; repairing, stabilizing, and mothballing the Fire Cache Building; remodeling the interior of the Cook House; repairing and replacing water, wastewater, electric, and propane utilities at Scotty's Castle; installing a new telecommunication line; repairing and improving parking and pedestrian walkways; constructing administrative trailer pads; designing and implementing storm water diversion features to protect buildings and grounds from future rain events; and installing flood-protection structures. Scotty's Castle and facilities are shown on Figure 1 in the EA.

## **Purpose and Need**

The purpose of the project is to rehabilitate and repair flood-damaged buildings, facilities, and landscape features at Scotty's Castle in compliance with current codes and standards, while meeting goals for preserving cultural and natural resources. The project also will address other critical deferred maintenance and other improvements throughout the DVSHD.

Scotty's Castle is currently closed to the public until flood damage can be repaired and the facilities can be made safe for visitors. The project is needed to reopen Scotty's Castle for visitor use; make the area more resilient against future flooding; and protect the public, NPS staff, and natural and cultural resources from future flooding. In addition, repairs and rehabilitation are needed to bring buildings, facilities, and the landscape into compliance with current codes and standards.

## **Selection of the Preferred Alternative**

### **Alternative B - Rehabilitate, Repair, and Replace Facilities at Scotty's Castle (Proposed Action and Preferred Alternative)**

Based on the analysis presented in the EA, the NPS will implement Alternative B as the selected alternative, as described below. Alternative B was identified as the preferred alternative in the EA and is the environmentally preferred course of action. The selected alternative contains modifications to the preferred alternative as presented in the EA. These modifications are described in the Modifications Incorporated in the Selected Alternative section, below. The incorporation of these modifications does not change the impact findings as presented in the EA.

Alternative B includes numerous actions to rehabilitate, repair, and replace facilities at Scotty's Castle, as described below and shown on Figures 2 through 13 in the EA. The alternative will reduce the risk of future flooding by minimizing placement of facilities in the Grapevine Canyon Wash floodplain and by diverting flood waters away from historic structures. No new structures will be constructed in the floodplain as a result of this action and the value of the contents of structures in the floodplain will be minimized by not returning the collections to the Stables building. Alternative B will also include nonstructural flood-risk reduction measures such as warning signs and developing evacuation plans. Work will occur within the DVSHD, including water supply and treatment facilities at Staininger Spring, and within a utility corridor from the Grapevine Developed Area to Scotty's Castle (Figure 2 in the EA).

Work areas will be protected as needed with floor coverings (plastic or canvas tarps). The protection methods outlined in the Secretary of the Interior's Standards for the Treatment of Historic Properties will apply to all materials cleaning. All project activities will be restricted to the Area of Potential Effect, as defined in the letter initiating Section 106 consultation submitted to the California State Historic Preservation Office (SHPO) on June 28, 2017.

Specific project details may be modified based on additional consultation with the SHPO; project details below describe the most likely approach. All actions involving rehabilitation, repair, or replacement of historic building materials will be completed in consultation with the SHPO and with individuals meeting the Secretary of the Interior's Professional Qualification Standards.

## **Main House, Annex, and Wishing Well**

Interior and exterior features of the Main House and Annex will be rehabilitated and repaired, including the Annex second-story outdoor deck (lanai), the pedestrian bridge connecting the Main House and Annex, and the Wishing Well located east of the Main House and Annex. The flood-damaged exterior fabric of the Annex will be repaired to prevent further water intrusion while maintaining the historic character and improving the visitor experience. Additional actions include repairing leaks to windows and doors and improving the existing heating, ventilation, and air conditioning (HVAC) system.

Currently, stormwater drains into the lanai floor through cracks in the mortar and on the edges of the mortar. Water enters the floor structure and then travels along electrical conduits, damaging the ceiling and walls of the Annex first floor. The lanai floor will be repaired to prevent leakage into the Annex, likely by installing a waterproof membrane below the terracotta floor tiles. Existing tiles will be salvaged wherever possible. Tiles will be replaced in-kind with Saltillo tiles. Appropriate mortar will be used for the repairs.

The pedestrian bridge connecting the Main House and Annex will be repaired and stabilized. Previous rehabilitation and stabilization of the bridge was not effective and is now failing. Due to structural deficiencies and movement, the bridge stucco coating has been compromised, allowing water to permeate the wood frame of the bridge and enter the Main House. The frame of the bridge has undersized steel connectors and improperly installed steel plates. Proposed work will most likely include removing the steel plates and redesigning the supplemental support system that incorporates new steel connectors and replacement wood structural elements as necessary. Improperly installed steel bracing, stucco added during the last rehabilitation, underlayment (if necessary), and connectors will be removed. The bridge will be strengthened to prevent further movement, and stucco coatings will be reapplied. Stucco finishes will be reapplied to match the original appearance and match the stucco on adjacent buildings.

Two windows that are currently leaking into the music room will be tested to identify the source of leaks and repaired. Repairs could consist of reinstalling and resealing windows or applying putty around deteriorating stucco. The windows may need to be replaced or reframed.

The roof at the Annex flag tower is currently leaking at the flagpole because the flashing has decayed, and the roof will be repaired to match the original construction. The current flagpole bracing is steel or iron and is corroding. The flagpole and structural connections will be removed and replaced with a more carefully detailed connection system. The existing flagpole will be reused or replaced, depending on further inspection and the detailing of the structural connection. In order to verify the condition of the structures, especially the base of the flagpole, the copper roof will have to be removed, flashing redesigned, and new copper flashing installed.

The poorly draining wood deck of the Main House observation tower is exposed to the weather, making it vulnerable to swelling, contraction, and water infiltration of the rooms below. One corner of the deck is improperly sloped and creates a low spot where water is ponding. These issues could be addressed by removing the observation deck flooring and installing a waterproof barrier between the deck and the ceiling of the Main House. The joists under the deck floor will be shimmed to establish a proper slope and eliminate ponding, and the wood deck will be reinstalled. Alternatively, the exposed deck could be covered with a waterproof roofing material, sloped to the existing drain.

The Wishing Well located east of the Main House and Annex will be rehabilitated and made safer or mothballed. Currently, the Wishing Well is not functional and is covered by a weathered plywood cover. A plan will be developed to rehabilitate the fountain by removing the plywood cover without creating a safety hazard from falls. If rehabilitated, the Wishing Well will be rehabilitated in a way that will reduce maintenance and safety hazards. If the Wishing Well is mothballed, the park will follow guidelines for mothballing detailed in Preservation Brief #31.

The HVAC system will be rehabilitated to replace components dating to the 1990s. The Main House and Annex will be thermally zoned to improve space utilization, museum storage, and efficiencies of the HVAC system. The existing water-cooled heat pumps, currently past their life cycles, will be replaced with a new optimized HVAC system. Existing ductwork and vents will be reused to the extent possible. After replacement of the HVAC system, the Main House and Annex will be maintained in a steady temperature-controlled environment to preserve museum collections. Repairing, weather-stripping, and rehanging exterior doors and reputtying windows will enhance the functionality and energy efficiency of the new HVAC system by preventing leakage of conditioned air to the outside.

A new cooling tower will be constructed for air conditioning for the Main House and Annex; this tower will cool water in the HVAC system and dispose of excess heat to the atmosphere. The proposed cooling tower will have a 12-foot by 12-foot base and will be about 15 feet tall. The new HVAC cooling tower will reduce water consumption by more than 50,000 gallons per day compared with the previous water cooling system. The tower electrical and water piping will be connected to the Main House area via a combination of open trenching and paths through the existing tunnel system under the Main House. All duct work will go through the existing tunnel system. The cooling tower will be located east of the Stables, near the propane tanks (Figure 3 of the EA). To reduce noise, the cooling tower model with the lowest decibels will be used and the tower will be shielded by landforms or walls compatible with the historic district. The potential cooling tower locations were selected to minimize visual and audible impacts.

### **Garage Visitor Center, Long Shed, and Bunkhouse**

The Garage Visitor Center, Long Shed, and Bunkhouse exteriors will be rehabilitated, and damaged interior and exterior walls will be repaired. Flood damage to all sections of the Garage Visitor Center, Long Shed, and Bunkhouse will be repaired, but work to make the buildings functional will focus only on the Garage interior for use as the Visitor Center. This work will rehabilitate the Garage portion of the structure for visitor and staff use. The work includes repairing flood damage to the Long Shed and Bunkhouse but does not include completing all required interior repairs to the Long Shed and Bunkhouse. The Long Shed and Bunkhouse portions of the building will be mothballed pending future resolution of planned use of these buildings. The proposed Garage Visitor Center layout is shown in Figure 4 of the EA.

About 225 square feet of exterior wall along the south side of the Long Shed and Bunkhouse will be repaired or replaced and 2,500 square feet of damaged asbestos floor tiles will be removed. Exterior wall rehabilitation will be accomplished using a stucco that matches the original in material and composition. Based on condition and building needs, doors and windows will be repaired or replaced in-kind in accordance with existing treatment plans. The two south windows will likely be replaced in-kind. Eight historic redwood doors will be preserved. Three large openings where historic garage doors once existed will have new storefront infill to seal the openings. Each infilled

opening will be covered with the original sliding track garage doors on new tracks or replica doors and tracks. The existing asphalt rolled roof will be replaced in-kind to eliminate leaks that are damaging the historic structure. The existing roof may contain asbestos, which will require mitigation measures. Specific mitigation measures for asbestos will be developed during detailed project design.

About 3,740 square feet of flood-damaged interior wall finishes will be replaced in the Garage Visitor Center, Long Shed, and Bunkhouse. It is likely that ductile plywood sheathing will be installed for seismic stabilization by removing the existing interior plaster, insulating the walls, attaching plywood, and then resurfacing with plaster. The garage roof will also be seismically stabilized, likely through the addition of ductile plywood sheathing. A new HVAC system will be installed in the Garage Visitor Center, consisting of new electric heating and cooling rooftop units similar in size and appearance to the existing rooftop units. The entire structure will receive a fire suppression system to adhere to NPS structural fire and other building code requirements. All electrical wiring will be replaced. To enhance the feel of the interior space, the nonhistoric drop ceiling will be removed to expose the historic structure above, showcasing the original tongue and groove wood decking and full dimensional wood rafters. New HVAC ducts, fire suppression lines, and electrical conduit will remain exposed inside the building.

New interpretive exhibits will be installed in the Garage Visitor Center. The professional quality interpretive exhibits will address multiple learning styles and will be in compliance with the Architectural Barriers Act Accessibility Standard (ABAAS) and Section 504 of the Rehabilitation Act of 1973 requiring accessibility of programs, services, and activities to all visitors.

The historic gas pumps located west of the Garage Visitor Center have been moved multiple times and are currently located within a noncontributing structure. The gas pumps will be removed and likely relocated to their original location in the Gas House, and the noncontributing concrete footing will be removed to improve circulation.

New ABAAS-compliant parking will be provided south of the Long Shed and the Garage Visitor Center. The Long Shed breezeway has an existing opening that leads from the existing parking lot and into a large open courtyard north of the Long Shed and east of the Garage. Both the breezeway opening and supporting south wall suffered substantial damage as a result of the October 2015 flood. The south wall was impacted by flood waters and is temporarily shored. This area will become the primary public arrival and entrance to the Garage Visitor Center and Scotty's Castle. The existing 3-foot-wide opening will be widened to about 16 feet (Figure 5 in the EA) to allow for a larger and more visible breezeway entrance and to meet ABAAS. The open breezeway will also improve stormwater drainage. ABAAS access into the Garage Visitor Center will be through a door on the east side, and egress will be through a door on the west side. New doors with ABAAS-compliant thresholds will be installed.

In a future project, the Long Shed and Bunkhouse will be rehabilitated, including foundation and seismic stabilization work. Seismic stabilization could include beams or interior sheathing. Once the exterior work and seismic stabilization of the Long Shed and Bunkhouse is complete, the interior of these structures will be usable again.

## **Gas House**

The Gas House will be rehabilitated and circulation will be improved by removing a noncontributing wood addition on the west elevation of the building. A shade structure that is compatible with the original design of the Gas House and historic district will be installed on the western portion of the building within the footprint of the nonhistoric addition. Leaks in the roof of the historic portion of the building will be repaired. The open-air nature of the building will be restored, and the building will be used as a meeting space for tour groups. The historic gas pumps currently located west of the Garage might be moved to their original location in the Gas House, and interpretive exhibits will be installed. The fire suppression and detection system will be reconfigured or changed when the wooden addition to the building is removed. The fire suppression riser currently located on the exterior northwest corner of the nonhistoric noncontributing addition will also be relocated.

## **Hacienda**

The interior and exterior of the Hacienda will be repaired to address damage from the October 2015 flood. The interiors of the first-floor apartments and basement employee offices will also be rehabilitated. Approximately 2,600 square feet of drywall, insulation, and carpet will be replaced in the basement. Prior to interior repairs, approximately 2,600 square feet of asbestos floor tile will be removed. The electrical and information technology network system will be replaced to meet current code. Six exterior doors will be repaired, rehabilitated, or replaced, four of which are historic. Nonhistoric HVAC, plumbing, appliances, and fixtures will be repaired or replaced. Exterior site work will include regrading and installing drainage structures to minimize surface runoff that could damage the structure in the future (refer to the description of Flood-Protection and Drainage Structures below).

## **Scotty's Cabin (Fire Cache)**

The severely damaged Scotty's Cabin will be repaired, stabilized, and mothballed. The roof will be repaired to prevent further degradation by moisture entering the interior of the walls and damaging the plaster. The building will be preserved and mothballed for future use by:

- Repairing the wood foundation;
- Repairing and improving existing wall and roof framing;
- Repairing and replacing deteriorated rafter tails in-kind as necessary;
- Repairing existing windows and doors to be operable and maintainable;
- Shoring the current wood and brick foundations to install a new concrete slab foundation;
- Preserving existing 2-foot by 6-foot timber floor framing and resetting the building on slab;
- Rehabilitating the brick skirting around the perimeter of the foundation; and
- Repairing the entry steps and handrail.

## **Cook House**

The interior of the Cook House will be remodeled for use as an employee break room, staff library, and changing rooms for living history interpreters. Work will likely include some minor changes to the interior Cook House (western side) to change the use to a break room with a larger sink, refrigerator, and ice machine. No changes to the exterior of the building are proposed.

## **Chimes Tower**

The flood-damaged exterior fabric of the Chimes Tower will be repaired to prevent further water intrusion while maintaining the historic character and improving the visitor experience. The Chimes Tower structure drainpipe will be repaired.

## **Water System**

The existing water collection and delivery system at Staininger Spring is shown on Figure 6 in the EA. Work on the water system will include installing a new shelter covering the 900-square-foot Spring House, rehabilitating the historic water tank, which includes repairing the tank liner and constructing a new roof over the historic water tank. New roofs are needed over these structures to protect the water supply and reduce water loss to evaporation. The Spring House is currently covered by a temporary plywood structure (installed in 2016 after the October 2015 flood) that will be rebuilt with concrete panel walls and a precast concrete roof. The structural stability of the historic water tank will be inspected for flood damage and any necessary repairs will be implemented, including replacing the tank liner. A new roof will be installed over the historic water tank (currently uncovered), most likely using a precast concrete roofing system. The precast concrete roof will require considerably less maintenance than a wood roof and will be more resistant to damage from future floods.

Project work also includes minor rehabilitation of the nonhistoric Chlorination Building by cleaning out the structure and conducting minor repairs to the exterior finish. The Chlorination Building will also be upgraded to accommodate a new telecommunication line that is being installed aboveground via existing power poles (see Telecommunication System). The existing underground outlet pipes and control valves at both water tanks and the Spring House will be replaced.

Water will be delivered to Scotty's Castle via a new water line that will be installed under Bonnie Clare Road. This is part of the Bonnie Clare Road Reconstruction Project, which was analyzed under a separate NEPA process. The aging and deteriorating internal water distribution lines within the DVSHD will be replaced within the same corridors and trenches as the existing lines and trenches being developed for other utilities. Restoration of the water system will restore important visitor and safety facilities to Scotty's Castle by restoring potable water for visitor and employee use and providing water for fire suppression to protect park visitors, staff, museum collections, and historic assets.

## **Wastewater System**

The septic system and leachfield at Scotty's Castle will be reconstructed with new materials in the same general location they were located prior to being destroyed by the October 2015 flood (Figure 7 in the EA). The existing leachfield will be excavated to a depth of up to 6 feet to remove the old materials and to place engineered fill. Existing leachfield piping and leachfield material will be removed and salvaged for potential reuse or disposal. The existing vaults, manholes, and piping will be removed. The existing septic tanks will be abandoned in place. Approximately 3,000 linear feet of infiltration piping will be installed to construct the leachfield. A new underground septic tank, two new manholes, and new sewer pipes will be installed south of the swimming pool (Figure 7 in the EA). The new leachfield will be smaller than the leachfield that currently exists and construction

will be limited to previously disturbed areas within the footprint of the existing wastewater system; following construction, these areas will be regraded and revegetated to preconstruction conditions.

## **Electrical System**

The electrical system at Scotty's Castle will be repaired and upgraded (Figure 8 in the EA). New electrical utility boxes will be installed to upgrade the electrical service. One new box may be installed, and the existing boxes will be replaced. The new utility boxes will be similar in size (potentially a few inches larger) as the existing boxes and will be upgraded for larger amperage. The system will be constructed in the same location of the existing electrical system, which originates at the south opening of the tunnel to the Main House (south of the swimming pool). A trench will also be excavated from the tunnel on the north side of the pool to the east to connect conduits with the Garage Visitor Center. The trench will be approximately 2 feet wide, 3 feet deep, and 100 feet long. After 100 feet, the trench will connect to an existing conduit within a buried concrete trench and continue to the Garage Visitor Center. New conductors will be installed along an existing underground conduit from the Hacienda to 1) the restrooms north of the Bunkhouse, 2) the Fire Cache, and 3) the Stables. Existing noncontributing overhead electric lines from Bonnie Clare Road to the Fire Cache and existing conductors from the Fire Cache to the Stables, Long Shed, and Garage Visitor Center will be removed to restore the appearance of the historic district.

## **Propane System**

Propane will be retained as a power source only for equipment located in the Stables. The NPS will reuse existing propane tanks and replace supply lines to upgrade the propane distribution system to the Stables (Figure 9 in the EA). The propane tanks will be located in the same locations as they are currently located (which is outside of the mapped 100-year flood inundation area, see Figure 9 in Appendix B of the EA). The project will replace existing lines in their current locations. Line replacement will require a combination of using existing utility tunnels and excavating an open trench approximately 2 feet wide and 3 feet deep within existing building paths.

## **Telecommunication System**

A new telecommunication system and line will be constructed that will begin at the Grapevine Developed Area and run aboveground using the existing Southern California Edison (SCE) power poles to Scotty's Castle; will be buried and run underground from Bonnie Clare Road to the Main House at Scotty's Castle in an approximately 2-foot-wide, 2-foot-deep, and roughly 500-foot-long open trench; then continue aboveground using the existing SCE power poles and end at the Chlorination Building at the Staininger Spring water supply facilities (Figure 2 in the EA). The line will be about 4 miles long and will be installed on existing poles and accessed using existing access to the poles. No new poles will be installed; only existing nonhistoric poles maintained by SCE will be used. One or two poles may be removed if no longer needed.

The new telecommunication system line will begin at the Grapevine Ranger Station; from the Ranger Station, the line will be co-located with an existing electrical service line to the Grapevine Developed Area Maintenance Building in an approximately 2-foot-wide, 2-foot-deep, and roughly 360-foot-long open trench (Figure 10 in the EA). The line will be directionally drilled for approximately 70 feet under the North Highway, then placed in a 2-foot-wide, 2-foot-deep, and approximately 250-foot-long open trench to connect to the north side of the Maintenance Building.



The line will then be installed aboveground to an existing SCE power pole line and run north east of the Grapevine Developed Area. From this point, the line will be installed aboveground on existing SCE power poles that roughly parallel the east side of Bonnie Clare Road for a distance of about 4 miles and then follow an existing underground trench to the Chlorination Building (Figure 6 in the EA).

To connect with Scotty's Castle, the proposed telecommunication line will be directionally drilled approximately 80 feet from an existing pole located on the south side of Bonnie Clare Road near the Scotty's Castle Entrance Gate, under the road to the north side of the road, then placed underground in a trench (up to 2 feet wide and 4 feet deep by up to 300 feet long) to connect with the existing telecommunication system at the south tunnel entrance to the Main House. Within the tunnels, the line will be installed in two new conduit lines hung from existing hangers along the utility tunnels below Scotty's Castle. This new conduit will run to the basement of the Gas House. The new conduit will replace an assortment of nonhistoric abandoned conduit and will also take the modern telecommunication lines off of the historical conduit hangers and other historic fabric. Historic utility conduits, lines, and other features will not be disturbed and will be left in place.

### **Parking, Accessibility, and Circulation**

The parking lot will be expanded and reconstructed to accommodate more parking, improve circulation and access, and improve drainage (Figure 11 in the EA). The existing approximately 40,000-square-foot parking area will be reconfigured and expanded to the east. The reconfigured parking area will be about 51,600 square feet. An additional existing unpaved parking area will be paved with up to about 8,000 square feet potentially available as overflow or employee parking. The east boundary of the existing visitor parking lot will be expanded up to 200 feet east into the area previously occupied by the unpaved Chicken Yard. The new area to the east will be paved and expansion will require grading to a depth of about 12 feet to facilitate installation of a level road base and provide additional space for safe access, ABAAS-compliant parking, and a restroom. The proposed design will expand the main parking area by increasing the number of paved delineated parking spaces from about 70 to up to 93 (including 4 ABAAS spaces) and 5 pull-through bus or recreational vehicle (RV) spaces. The exact number and configuration of parking spaces will be determined during final design. The Chicken Yard boundaries will be reconstructed or interpretively identified along the parking lot boundary to denote its location and historical association. The changes to parking will be completed in phases, as funding is acquired; the accessible spaces will likely be completed first, in 2019.

The reconfigured parking area could also include separate passenger unloading zones, separate bus passenger drop-off and turnaround, and a swale for flood water diversion. A new accessible restroom building will also be constructed in the parking area. In addition, improvements will be made to the detached employee/overflow lot on the side of the current parking lot entrance within the current parking lot boundaries. The overflow or employee parking area will have about 26 parking spaces. The visitor entrance to the Scotty's Castle parking area will remain the same.

Approximately 72,000 square feet of deteriorated nonhistoric asphalt used in the pedestrian plaza and for walkways in the visitor pavilion area will be replaced with a surface that is compatible with the historic district and will address current concerns with safety, accessibility, drainage, and the integrity of the cultural landscape (Figure 12 in the EA). The walkways were in poor condition before the October 2015 flood, are completely unusable after the flood damaged and removed sections of the surface, and will be repaired with asphalt. The pedestrian walkways from the Garage

Visitor Center to the Main House and Annex will be upgraded to provide an ABAAS-accessible route for visitors to enter the Visitor Center and take tours of Scotty's Castle. An access ramp will be installed in the parking lot adjacent to the Garage Visitor Center, Long Shed, and Bunkhouse. New concrete flatwork will be installed to provide access from the parking lot through the open breezeway in the Long Shed. This project also will include preparing the subsurface by excavating old remnants of landscaping (palm tree root balls) and compaction.

### **Employee RV Site**

A concrete pad that can accommodate two RV trailers will be constructed to allow for staff or volunteer use. The pad will be located near the existing propane tanks, if propane is not retained as a power source (Figure 3 in the EA). The pad will be 60 feet by 100 feet and will likely be self-contained (i.e., no hook ups for utilities will be needed). If the park determines that telephone and electric service is needed for the RV site, lines will be installed in a trench from the Stables. Pad construction will require minimal surface grading (up to 2 feet) to create a level surface. The pad color will be selected to blend in with the surrounding landscape.

### **Flood-Protection and Site Drainage Structures**

Three flood-control berms will be constructed within the main drainage at Scotty's Castle (Figure 3 in the EA). These three berms are proposed based on historical flood study observations of existing conditions. The proposed berm locations and descriptions are conceptual and are based on hydrological modeling conducted by the Federal Highway Administration (FHWA). A second hydrological study of the potential berm locations is also underway by the NPS, and the berm locations and dimensions will be refined before construction. The berms will be constructed of gabions stacked across the drainage. Constructing the berms will require excavation to about 2 to 3 feet below grade. Local and imported rock and sand materials will be used to construct and protect the berms and maintain a soil appearance consistent with the existing environment. Local materials will be removed from areas of recent alluvial deposition along the edges of the Scotty's Castle. The berm structures will have low profiles that will contour and not extend outside the existing drainage and, therefore, the berms have low potential to create a visual impact on the surrounding landscape. Conceptual descriptions of the berms follow.

#### ***Courtyard Berm***

This berm will be constructed in the drainage northeast of the Bunkhouse and Long Shed and will be up to 15 feet wide, 5 feet tall, and 125 feet long.

#### ***Existing Berm***

This berm, originally constructed in the 1980s, will be rebuilt in a similar location, south of the of the Stables and east of the longshed/bunkhouse. It will be up to 30 feet wide, 6 feet tall, and 175 feet long. This berm existed prior to the October 2015 flood, was constructed from earth, and was completely destroyed by the flood.

#### ***Water Meter Vault Berm***

This berm will be constructed east of the Stables and water meter vault and will be up to 21 feet wide, 4.5 feet tall, and 150 feet long.

### ***Additional Smaller Berms (Site Drainages)***

Additional smaller berms will be constructed at the base of six ephemeral drainages located north of Scotty's Castle to redirect water flow away from buildings and other historic features (Figure 3 in the EA). The ephemeral drainages will be contoured with swales and berms. The berms will be up to 6 feet tall and constructed of the alluvial materials removed from the north side of Scotty's Castle. Excavation will be needed to remove accumulated alluvial sediments from the bases of the drainages and from around the Main House, Annex, Cook House, Gas House, Hacienda, and Stables. The berms will have dimensions up to 12 feet long and 10 feet wide and will be designed to blend in with the landscape to the best extent possible, as described under Resource Conservation Measures. Strategies include mimicking adjacent natural landforms such as the hastate- or spearhead-shaped foothills that are formed between the washes, developing gentle rounded edges instead of geometric forms with hard edges, and planting native vegetation at the edges of the berms that match those found around each berm location.

### **Nonstructural Flood-Risk Reduction Measures**

Permanent signs will be installed warning park visitors of the potential for flash flooding to occur during precipitation events. Signs will likely be placed along Bonnie Clare Road near the California/Nevada state line and near the intersection with Ubehebe Crater Road to warn visitors that they are entering an area subject to flash flooding. A flood warning and evacuation plan will be developed for visitors and park staff. The plan will include maps and descriptions of areas vulnerable to flooding and nearby areas of safe refuge, a description of the flood risk, and an evacuation plan for quickly moving visitors and staff to safe refuge areas.

### **Staging and Construction Access**

The primary staging area for flood recovery and site restoration work at Scotty's Castle will be the existing parking area (Figure 13 in the EA). Access to this staging area will be from Bonnie Clare Road. Access to utility lines and corridors (water, wastewater, electrical, propane, and telecommunications) will be along the alignments of the components of each utility corridor and from previously disturbed or historic access points.

General staging will also occur as needed in the "boneyard" in the Grapevine Developed Area. FHWA will likely have an office in the Grapevine area during construction.

Staging for work at the Staininger Spring water system collection facilities will be in the existing disturbed area south of the Chlorination Building (Figure 14 in the EA). The facilities will be accessed via the existing access road from Bonnie Clare Road. Staging and access for reconstructing the leachfield and wastewater system will be from the south and west along Tie Canyon and will tie into an existing disturbed area just west of the leachfield (Figure 15 in the EA).

Contractor vehicle travel and parking will be designated as necessary to existing roads and pedestrian areas at Scotty's Castle. Additional work with hand and power tools will occur in the Stables carpentry shop.

Heavy equipment used will include small, medium, and large excavators; medium and small front-end loaders and backhoes; medium and small dozers; a directional boring machine; a skid steer;

trenchers; delivery trucks; and water trucks. A 20- to 30-ton crane will be used for precast concrete work at the water tank and Spring House and for the septic tanks. Dump trucks will be used for hauling sand and rock for berm work, gabion baskets, and engineered sand for the leachfield. Equipment at the directional boring sites will include a directional boring machine and supporting equipment such as mud holding tanks, water tanks, and vehicles to carry drilling equipment and high-density polyethylene pipe.

### **Wetland Compensation**

Compensation for wetland impacts will be accomplished by reestablishing wetlands as described in detail in the Floodplain and Wetland Statement of Findings prepared for the selected alternative. The wetland compensation measures have been designed to replace the functions and values of the aquatic resources lost as a result of this project. Additionally, the mitigation actions were designed to reestablish the high-value aquatic habitats that were destroyed during the October 2015 flood. A total of about 0.061 acre of vegetated wetlands and 0.003 acre of ephemeral riverine wetlands will be reestablished.

### **Modifications Incorporated in the Selected Alternative**

After the EA was made available for public review, changes were made to the vegetation and landscaping that were not described in the EA. Accessible access and vegetation will be installed in the parking lot at the breezeway opening in the Long Shed, within the courtyard, and at the southwest corner of the garage visitor center. These changes would not alter the determination of effect in the EA and are described in the Errata (Attachment A).

During consultation, the U.S. Army Corps of Engineers (Corps) stated that the Compensatory Mitigation for Losses of Aquatic Resources approved in 2008 [40 CFR Part 230, EPA-HQ-OW-2006-0020; FRL-8545-4, RIN 0710-AA55] mandates Section 404 permittees must protect the compensated wetland in perpetuity. They requested the NPS amend the proposed action to accommodate this rule. As a result, the NPS added the following additional mitigation, which would not alter the determination of effect in the EA.

#### ***Site Protection Instrument***

The mitigation site is located on federally owned land protected within the park. Lands within the park are managed for protection of resources, including wetlands. Because the mitigation site is within the park, no deed restriction is required. The park's land tract maps have been amended to show the wetland mitigation areas as protected in perpetuity. The revised maps are attached in the Errata (Attachment A, Land Tract Map, Wetland Area 3).

### **Mitigation**

The mitigation measures presented in Table 1 will be implemented to minimize the degree or severity of adverse effects of the selected alternative.

**Table 1. Mitigation measures.**

Mitigation	Responsible Party
<b>Floodplains</b>	
<ul style="list-style-type: none"> <li>• Temporary and permanent features will be installed during and after construction to minimize erosion within the floodplain.</li> <li>• Soil compaction in the floodplain will be minimized during construction, the soil surface will be restored if needed after construction, and the unnatural conveyance of water from paved areas will be reduced or eliminated by the use of appropriate drainage methods to prevent accelerated runoff within the project area.</li> <li>• Permanent signs will be installed warning park visitors of the potential for flash flooding to occur during precipitation events.</li> </ul>	NPS Project Manager (PM)
<b>Wetlands</b>	
<ul style="list-style-type: none"> <li>• Impacts on wetlands were minimized by relocating flood-control berms out of wetlands to the greatest extent possible, as described in greater detail in the Floodplain and Wetland Statement of Findings prepared for this project.</li> <li>• Compensatory mitigation will be constructed as described in detail in the Floodplain and Wetland Statement of Findings.</li> <li>• Best Management Practices (BMPs) for wetlands will be implemented as required in Appendix 2 of the NPS Procedural Manual #77-1: Wetland Protection. These BMPs are listed in the Floodplain and Wetland Statement of Findings.</li> </ul>	NPS PM and Botanist
<b>Water Quality and Soils</b>	
<ul style="list-style-type: none"> <li>• BMPs for drainage and sediment control, as identified and used by the NPS, will be implemented to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas (Appendix C of the EA).</li> </ul>	NPS PM
<b>Wildlife and Species of Concern</b>	
<ul style="list-style-type: none"> <li>• A qualified biologist will conduct surveys for least Bell's vireo and southwestern willow flycatcher. Surveys will be based on the U.S. Fish and Wildlife Service's (USFWS) most recent survey guidelines and protocols for the least Bell's vireo and southwestern willow flycatcher. If neither species is detected during surveys, no additional measures will be undertaken. If either species is detected, and surveys confirm that birds are nesting, NPS will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. No-disturbance buffers around active nests will be a minimum of 0.25 miles. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.</li> </ul>	NPS PM and Biologist
<b>Vegetation</b>	

<ul style="list-style-type: none"> <li>• Disturbed areas will be revegetated as quickly as possible. Supplemental watering may be required during the summer season to ensure survival.</li> <li>• If unable to revegetate immediately, remedial actions, such as the installation of erosion-control structures and nonnative plant control, are required</li> </ul>	<p>NPS PM and Botanist</p>
<p><b>Invasive Plant Species</b></p>	
<ul style="list-style-type: none"> <li>• Invasive non-native plant species will be treated and other undesirable species will be monitored and treated. To prevent the introduction and minimize the spread of nonnative plants and noxious weeds, the following measures will be implemented during construction: (1) minimize soil disturbance; (2) pressure wash and/or steam clean all construction equipment to ensure that all machinery, rocks, gravel, or other materials are cleaned and weed-free before entering the park; (3) brush down all construction equipment after every trip while transporting material outside the construction limits; (4) cover all haul trucks bringing fill materials from outside the park to prevent seed transport; (5) limit vehicle parking to existing roads, parking lots, or access routes; (6) limit disturbance to roadsides and culvert areas, including limiting equipment to the roadbed area—no machinery or equipment will access areas outside work area boundaries; and (7) obtain all fill, rock, or additional topsoil from the project area, if possible. If not possible, obtaining weed-free material from NPS-approved sources outside the park will be required.</li> <li>• Disturbed areas will be monitored for 5 years following construction (until the disturbance has subsided) to identify growth of noxious weeds or nonnative vegetation and treat any individuals or patches observed. Treatment of nonnative vegetation will be completed in accordance with NPS DO 13: Integrated Pest Management Guidelines.</li> <li>• In an effort to avoid introduction of nonnative/noxious plant species, no imported topsoil or hay bales will be used during revegetation. On a case-by-case basis, the following materials may be used for any erosion-control dams that may be necessary: certified weed-free rice straw, cereal grain straw that has been fumigated to kill weed seed, and wood excelsior bales.</li> <li>• Excess soil material that is infested with the invasive species saltlover (<i>Halogeton glomeratus</i>) will be buried a minimum of 18 inches deep and covered with clean soil at the designated mixing table site. This species has been identified adjacent to the construction area on Bureau of Land Management land and on a few sites in the proposed construction corridor and is a serious threat to the park.</li> </ul>	<p>NPS PM and Botanist</p>

<b>Cultural Resources</b>	
<ul style="list-style-type: none"> <li>• All stipulations/conditions agreed to during Section 106 compliance consultation (e.g., Memorandum of Agreement (MOA) will be adhered to as part of this project.</li> <li>• A qualified archeologist will be present on-site to monitor all ground-disturbing activities to ensure that activities occur within the Area of Potential Effect defined for the project and that no important information is lost.</li> <li>• Prior to construction, the archeologist will flag areas to avoid during construction, including defining the project limits at Staininger Spring, along the proposed access route and staging area for the wastewater system, and along the access road for the proposed telecommunication system.</li> <li>• A tribal monitor will be present for all ground-disturbing activities, if available, especially for areas along Bonnie Clare Road.</li> <li>• In the unlikely event that previously undocumented archeological features are encountered during project implementation, all necessary steps will be taken to protect them, and work in that location should be immediately suspended until the park compliance archeologist or another archeologist meeting the Secretary of the Interior's Standards has evaluated the find.</li> <li>• In the unlikely event that human remains are encountered during project implementation, all work will be suspended immediately until measures stipulated in the park's Native American Graves Protection and Repatriation Act (NAGPRA) Inadvertent Discovery Plan are completed and the NAGPRA is followed.</li> <li>• The exterior form of flood-control berms will mimic and blend with surrounding landscape topographic forms and will not be geometric in appearance. The edges of the berms will be rounded and blend into the surrounding grade with curves and slopes that match those in the immediate area. Berms will mimic adjacent natural landforms such as the hastate- or spearhead-shaped foothills that are formed between the washes. Native plantings will be added at the edges of the berms to match those found around each berm location.</li> </ul>	NPS PM and Cultural Resources Manager
<b>Visitor Use and Experience</b>	
<ul style="list-style-type: none"> <li>• Traffic delays from construction activities will be limited to a 30-minute maximum.</li> </ul>	NPS PM
<b>Air Quality and Soundscapes</b>	
<ul style="list-style-type: none"> <li>• Fugitive dust plumes will be reduced to the extent possible by water sprinkling the soil during earth-disturbing activities. Possible water sources for construction will be Scotty's Castle or Beatty, Nevada. Water acquired from outside sources will be treated for aquatic invasive species and pathogens if needed.</li> <li>• Unnecessary construction vehicle engine idling will be limited to reduce noxious emissions and noise.</li> </ul>	NPS PM

## Other Alternatives Considered

### Alternative A—No Action

The no action alternative describes the conditions that would continue to exist if no improvements, repairs, or changes in management were made. Under the no action alternative, the buildings would be stabilized enough to prevent further damage from water intrusion. Ongoing maintenance activities such as conducting pest control, preventing moisture from entering the buildings, and securing Scotty's Castle against vandalism would continue. No additional repairs or improvements to the facilities will be implemented beyond the initial debris and mud removal that has already occurred, and Scotty's Castle would continue to be closed to public access.

## **Alternatives Dismissed**

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

### **Mothballing Alternative**

If this alternative were implemented, the buildings and facilities at Scotty's Castle would be mothballed for the long term (10 years or longer) following the preservation and stabilization procedures for historic buildings outlined in NPS Preservation Brief #31: Mothballing Historic Buildings. Furniture and artifacts from Scotty's Castle would continue to be kept in storage. This option was dismissed from further evaluation because it would not meet the project purpose and need to repair and rehabilitate Scotty's Castle while making it safe for the public.

### **HVAC Alternatives**

The park considered air-cooled, water-cooled, and geothermal HVAC systems. Smaller air-cooled condensers were considered but were dismissed due to their inability to adequately cool the air in Death Valley's desert environment. Very few air-cooled condensing units are designed for use in the extreme high summer temperatures in the park. When used in environments like those at Death Valley, multiple oversized condensers are needed for cooling, using substantially more energy. These factors reduce the equipment's lifespan, require additional energy, and increase the likelihood of refrigerant leakage. Further, the numerous oversized condensers, located on the top of the building, were deemed too great a visual impact compared with a single more remote cooling tower.

An additional water-cooled system option was considered, in lieu of a cooling tower, which would involve finishing the Scotty's Castle swimming pool, installing piping in the swimming pool floor, capping the floor with concrete, and filling the pool. This would allow the heat of the building to be dissipated into a large surface area of water and would have similar performance as a cooling tower, but without the visual impact on the cultural landscape. Although feasible from a technical perspective, this option was dismissed because of substantial initial and long-term maintenance costs and additional staffing needs. The cost of this option also would be much higher than the cooling tower and does not align with the current interpretive vision for Scotty's Castle. Furthermore, the evaporative surface of the pool has a much larger surface area than the cooling tower and, thus, would use more water.

Geothermal systems were also considered. Geothermal systems have been troublesome to many parks and have high initial costs, issues with heat pumps, and issues with underground



maintenance. Considering the high summer ground temperatures, a geothermal system is not recommended at the park. In addition, due to the number of earthquakes in the area, this system would be at greater risk for damage.

### **Alternatives Resulting in No Adverse Effects on Historic Properties**

The NPS considered an alternative that would avoid adverse impacts on historic properties. This alternative would have most of the same components as the proposed action, but would not include: 1) installing berms to direct flood waters away from visitor use areas and sensitive historic properties; 2) installing seismic stabilization in the Garage Visitor Center to reduce damage from future seismic events; 3) providing a sufficient heating and cooling system to the Garage Visitor Center for visitor enjoyment and collections management; 4) widening the Garage breezeway entry to allow flood waters to adequately drain and provide visitors with ABAAS access into the Garage Visitor Center; and 5) expanding the parking lot and adding a new restroom to meet visitor and staff demand.

This alternative was dismissed from further evaluation because it would not meet the project purpose and need to repair and rehabilitate Scotty's Castle, provide visitors safe access, protect natural and cultural resources, provide ABAAS access where possible, and reduce future impacts from floods. Several actions critical to improving life-safety issues would not be implemented to achieve a no adverse effect determination for historic properties. Specifically, the berms, which are critical to improving the safety of staff and visitors by providing protection against future floods, would not be constructed. Without the berms, future floods would inevitably follow the same path as the October 2015 flood, creating serious safety issues as water and debris flow into visitor use areas. Widening the breezeway is another aspect of the project designed to disperse the intensity of flood flows; without this project component, visitor safety, structural integrity of the Visitor Center, and ABAAS access would all be compromised. Seismic stabilization of the Visitor Center cannot be removed from the project scope because it is required to meet Executive Order 12941, "Seismic Safety of Existing Federally Owned and Leased Buildings." This order adopted minimum technical standards for all future rehabilitation projects for federally owned buildings.

### **Rationale for Selection of the Preferred Alternative**

Alternative B was selected for implementation because it meets the purpose and need for the project while preserving existing park resources. Under the no action alternative (Alternative A), no additional repairs or improvements to the facilities would be implemented beyond the initial debris and mud removal that has already occurred, and Scotty's Castle would continue to be closed to public access. Therefore, Alternative A would not meet the purpose and need of the project.

### **Why the Selected Alternative Will Not Have a Significant Effect on the Human Environment**

NEPA regulations define significance as requiring the consideration of both the context and intensity of an action (40 CFR 1508.27):

- (a) Context includes geography, baseline conditions, affected interests, agency mandate, and duration and timing.

(b) Intensity refers to the severity of impact.

The following 10 criteria are included in the Council on Environmental Quality NEPA regulations definition of the term significantly (40 CFR 1508.27) and were used to determine if the selected alternative will result in significant effects.

***1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect may be beneficial.***

While the selected alternative will result in both adverse and beneficial impacts on park resources, most of these impacts are short-term and minor. No significant adverse or beneficial impacts were identified under the selected alternative that will require analysis in an environmental impact statement.

***2. The degree to which the selected alternative affects public health and safety.***

As described in the EA, the selected alternative will improve the safety of employees and visitors of Scotty's Castle. The selected alternative will upgrade, repair, or replace vital safety utilities, such as the electrical and fire suppression systems. Existing hazards from unsafe walking surfaces will be addressed by resurfacing walkways. Facilities will be upgraded where needed to meet ABAAS, resulting in improved safety and experience for all visitors. Seismic stabilization of the Garage Visitor Center, Long Shed, and Bunkhouse also will result in improved visitor and park staff safety in the event of an earthquake. Repairs and upgrades to the HVAC system, telephone and alarm systems, and water and wastewater systems, and construction of the flood diversion berms will improve safety and comfort for visitors and staff.

In addition, as described in the Floodplains and Wetlands section of the EA, installation of permanent signs will reduce risks to human safety and health by warning park visitors of the potential for flash flooding to occur during precipitation events. Developing a flood warning and evacuation plan for visitors and park staff and implementing an evacuation plan will also reduce health and safety risks to visitors and staff. Overall, the effect of the selected alternative on public health and safety will be beneficial.

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

As documented in the EA, the project area includes wetlands and historic and cultural resources. There are no prime farmlands, wild and scenic rivers, or ecologically critical areas in the project area.

Under the selected alternative, permanent and temporary impacts on wetlands near Scotty's Castle will occur, including wetlands that formed after the October 2015 flood. NPS DO #77-1 exempts certain types of activities from the requirements to compensate for wetland impacts. Since the selected alternative will result in impacts on the newly formed wetlands located at the site of the former Water Meter Vault Berm, construction of a new berm under the selected alternative is exempt from wetland mitigation requirements under NPS policies. Approximately 0.086 acre of vegetated wetlands and 0.042 acre of ephemeral riverine wetlands will be filled by reconstructing the berm in its pre-flood location. However, when compared to pre-flood conditions, reconstruction of the berm will result in a net permanent loss of 0.034 acre of ephemeral riverine wetlands.

Compensation for the 0.034 acre permanent impact on wetlands will be accomplished by reestablishing 0.061 acre of vegetated wetlands and 0.003 acre of ephemeral riverine wetlands on-site and adjacent to the proposed project area (see Floodplain and Wetland Statement of Findings in Attachment C of this FONSI). This will result in a mitigation ratio of about 2 to 1 for permanent wetland impacts of 0.034 acre. The wetland compensation measures are designed to replace the functions and values of the aquatic resources lost as a result of this project.

Additionally, the measures are designed to reestablish the high-value aquatic habitats that were destroyed during the October 2015 flood. The realignment of the spring-fed riverine wetlands will result in long-term beneficial effects by reestablishing these habitats in more sustainable locations. Additionally, the reestablishment of wetland, riparian, and floodplain vegetation will dissipate the energy from water runoff, capture sediments, moderate groundwater flow, and provide diverse wildlife habitats. Additional information on wetland compensation is provided in the Floodplain and Wetland Statement of Findings (Attachment C of this FONSI) and the Compensatory Mitigation and Monitoring Plan in the EA. Location maps of the proposed compensation sites are presented in Appendix C of the EA.

Temporary wetland impacts will result from construction equipment needed to reconstruct the berm and from replacement of the existing pipes and valves at the water tanks at Staininger Spring. A total of 0.098 acre of wetlands will be temporarily disturbed. Wetlands affected by temporary construction equipment consist of ephemeral riverine wetlands only; no vegetated wetlands or spring-fed riverine wetlands will be affected. Temporary impacts will be mitigated in place by restoring preconstruction contours after construction is complete. Restored wetland functions will include groundwater recharge/discharge, flood flow alteration, sediment/toxicant removal, nutrient removal, and visual quality/aesthetics.

The selected alternative will include activities within the DVSHD, Bonnie Clare Road Cultural Landscape, the proposed Grapevine Developed Area Historic District, and the Grapevine Canyon Archaeological District. Impacts on these resources from the selected alternative are discussed below under criterion 8.

***4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.***

No highly controversial effects were identified during preparation of the EA or during the public scoping and review periods.

***5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.***

No highly uncertain, unique, or unknown risks were identified during preparation of the EA or during the public scoping and review periods.

***6. The 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 does not establish a NPS precedent for future actions with significant effects or represent a decision in principle about a future consideration. No further actions are

planned that will result from implementation of the selected alternative; therefore, the selected alternative will not result in significant effects from a future action.

- 7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.***

The impacts of the selected alternative on each impact topic were identified in the EA. Cumulative impacts on each impact topic were also identified and none will have cumulatively significant effects, including related actions for the Bonnie Clare Road rehabilitation project.

- 8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP) or may cause loss or destruction of significant scientific, cultural, or historical resources.***

The selected alternative will include activities within the DVSHD, Bonnie Clare Road Cultural Landscape, the proposed Grapevine Developed Area Historic District, and the Grapevine Canyon Archaeological District. As described in the EA, improvements and activities of the selected alternative will result in adverse and unknown effects on cultural resources in the DVSHD. A summary of the impacted resources and the selected alternative impacts is in Table 4 of the EA.

To resolve adverse and unknown impacts on cultural resources, the park will enter into a MOA/s or will complete Section 106 compliance, including consultation with the California SHPO and the Timbisha Shoshone Tribe as appropriate. The ACHP was invited to participate in the MOA/s but did not respond. The NPS will ensure that repair, restoration, and mothballing work is designed and implemented in a manner that will ensure preservation of the historic character of the DVSHD and contributing buildings. Overall, the selected alternative's adverse impacts on cultural and archeological resources will be minor and will not affect the eligibility and significance of the entire historic district.

- 9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.***

As described in the EA, three federally listed species have the potential to occur in or near the project area – the least Bell's vireo (*Vireo bellii pusillus*), the southwestern willow flycatcher (*Empidonax traillii extimus*), and the desert tortoise (*Gopherus agassizii*). No designated critical habitat for any federally listed species is present in the park. As described in the EA, surveys were conducted for amphibians, reptiles, birds, mammals, lepidopterans, microbenthic invertebrates, and plants between 2005 and 2010 within the Bonnie Clare Road corridor, including the riparian habitat at Scotty's Castle, and no state or federally listed endangered, threatened, or candidate species were detected. Desert tortoises are extremely unlikely to occur in the analysis area and no desert tortoises were observed during past reptile surveys.

As described in the EA, a preconstruction survey in 2013 detected a nesting pair of least Bell's vireos in a patch of riparian vegetation near the water collection system at Staininger Spring; however, a post-flood habitat assessment determined that while the riparian vegetation at Staininger Spring was still present, the amount of habitat had been reduced from 6.90 acres pre-

flood to 3.49 acres post-flood, a reduction of 51 percent. Due to these impacts, suitable habitat for least Bell's vireo and the southwestern willow flycatcher has been substantially reduced.

The selected alternative could potentially directly or indirectly impact least Bell's vireo and southwestern willow flycatcher due to project-related construction disturbances including noise disturbance, increased dust, and disturbances from vibrations. The increase in human activity and noise associated with construction will persist for 1 year or longer and could result in individuals potentially leaving the area during construction. The adverse effects will be minimized by implementing the mitigation measures listed in Table 1 of this FONSI.

About 0.086 acre of vegetated wetlands that could provide foraging habitat for the least Bell's vireo and southwestern willow flycatcher will be removed by reconstruction of a berm destroyed by the October 2015 flood. Loss of this habitat will be mitigated by providing wetland compensation as described in the Floodplain and Wetland Statement of Findings (Attachment C of this FONSI). No potential least Bell's vireo or southwestern willow flycatcher breeding habitat will be impacted. No incidental take of these species is expected as a result of the selected alternative. On February 23, 2018, the USFWS concurred with the NPS determination that the selected alternative may affect, but is not likely to adversely affect, the least Bell's vireo or southwestern willow flycatcher and will have no effect on the desert tortoise.

***10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.***

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

## **Public Involvement**

### **Scoping**

The park initiated public scoping with a press release that was sent via email to several media sources in the Death Valley area and was published in the Inyo Register and Pahrump Valley Times. A scoping announcement was posted on Facebook on April 20, 2017 and to the NPS Planning, Environment, and Public Comment (PEPC) website and park website on April 19, 2017. In addition, a newsletter describing the project, alternatives under consideration, and opportunities for public comment was published to the PEPC website on April 19, 2017. The scoping period was defined as April 19 through May 18, 2017.

Three public scoping meetings were held: on April 24, 2017 in Beatty; on May 1, 2017 in Pahrump; and on May 4, 2017 at the Furnace Creek visitor center in the park. The park received three correspondences during the 30-day comment period. Two correspondences were posted to the PEPC website and one was received as a handwritten note during the April 24 public meeting. No other comments were received from the public by the end of the scoping period. All three written comments supported reopening Scotty's Castle, including two comments that suggested the park should seek out additional sources of funding for the project.

### **Review of the EA**

The park published a news release on November 21, 2017 indicating the availability of the EA for comment. The news release was published in the Inyo Register and Pahrump Valley Times, and provided information about the project, as well as the date and location for the three public meetings to provide comment on the EA. The news release was also posted on the PEPC website. Review copies were sent to public libraries in Ridgecrest, Bishop, Tecopa, Lone Pine, Independence, Pahrump, and Amargosa Valley.

Three public meetings were held for this project, as well as the Bonnie Clare Road Reconstruction EA, to provide information to the public on the proposed projects and solicit written comments on the EAs. The public meetings were held in Pahrump, on December 4, 2017; Beatty, on December 5, 2017; and Furnace Creek, on December 12, 2017. During each public meeting, a short PowerPoint presentation was given, and posters displaying the project alternatives and environmental resources of concern assessed in the EA were displayed for review.

The December 4 meeting was attended by eight members of the public and three park staff. The December 5 meeting was attended by two members of the public and three park staff. The December 12 meeting was attended by 17 members of the public and 2 park staff. During the meetings, members of the public were encouraged to submit written comments regarding the EA through the NPS PEPC system or by mailing a letter to the park.

Comments were accepted by the park from November 21, 2017 through January 1, 2018. During the public comment period, the NPS received six correspondences through the NPS PEPC system. Most comments supported the selected action and none of the comments provided any new information or resulted in any changes to the analysis.

## **Agency Consultation**

### ***SHPO and Tribal Consultation***

Section 106 consultation with the SHPO was initiated on June 28, 2017. In the SHPO's letter dated August 1, 2017, the SHPO recommended that due to the number of proposed improvements at Scotty's Castle, and the possibility of adverse effects, a programmatic agreement (PA) may be appropriate to clarify the process in which Section 106 compliance will be completed and consultation will proceed. On August 24, 2017, the NPS formally invited the SHPO to be a signatory for the implementation of a PA to plan for and resolve potential adverse effects on historic properties. A Draft PA was submitted to the SHPO on December 20, 2017 and a second draft on July 11, 2018.

Following an on-site walk through of the project area with the SHPO on October 30, 2018 and a conference call with SHPO on December 18, 2018, it was determined that a PA was not appropriate to address Section 106 compliance for the undertaking. Therefore, the following pathways will be used for satisfying compliance with Section 106 requirements:

1. Seek SHPO concurrence on the activities determined to have "no adverse effect" on historic properties;
2. Execute a Memorandum of Agreement (MOA)/s for undertakings resulting in "adverse effects" on historic properties; and
3. Initiate consultation on activities that do not have sufficient design as of the signing of this FONSI to seek concurrence on the level of effects on historic properties.

On February 15, 2019, the NPS submitted a request for concurrence on a finding of no adverse effect for the rehabilitation of the Hacienda to the SHPO and Timbisha Shoshone Tribe. On February 15, 2019, NPS submitted a draft MOA to resolve adverse effects for the Garage (Visitor Center) and Long Shed/Bunkhouse rehabilitation project to the SHPO and invited the Timbisha Shoshone Tribe as a concurring party. The consultation on the MOA is underway and the agreement document will be signed prior to the implementation of the undertaking.

Overall, NPS has been able to identify historic properties listed in, or eligible for inclusion in, the National Register of Historic Places within the broadly defined area of potential effects for the EA. However, some projects identified in the EA due to the general description, in-process design development, and the relative uncertainty of the nature of the federal undertaking which may stem from it, the NPS cannot yet assess the potential effects of these undertakings on historic properties. Therefore, the NPS commits in this decision document to complete Section 106 compliance for each undertaking that may stem from the EA in accordance with the Programmatic Agreement among the National Park Service, the ACHP, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act (2008) and the ACHP's regulations (36 CFR 800).

The NPS also initiated tribal consultation, via letter on June 28, 2017, with the Timbisha Shoshone Tribe, Pahrump Paiute Tribe, Lone Pine Paiute Shoshone Reservation, Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Kern River Paiute Council, Fort Independence Community of Paiute, Bishop Paiute Tribe, and Big Pine Paiute Tribe of Owens Valley. No comments were received from the tribes. The Timbisha Shoshone Tribe was consulted with and invited to be a concurring party for the PA on August 24, 2017 and on an MOA on February 22, 2019. Additional tribal consultation will take place on activities that do not have sufficient design as of the signing of this FONSI to ensure the identification of historic properties of cultural and religious significance as requires under 36 CFR 800.2(2)(B)(ii).

### ***U.S. Fish and Wildlife Service***

A scoping letter was sent to the USFWS in May 2017 to inform them of the project and solicit input on federally listed species. An email response was received from the USFWS on May 18, 2017. The email requested additional project details, which the park provided, and indicated that if work were conducted outside of the nesting season, the USFWS will have no concerns with the project. As described in the Special Status Wildlife section of the Scotty's Castle Flood Rehabilitation EA, the NPS has determined that the proposed action may affect, but is not likely to adversely affect, the least Bell's vireo or southwestern willow flycatcher, and will have no effect on the desert tortoise. The USFWS concurred with the NPS determination on February 23, 2018.

### ***U.S. Army Corps of Engineers***

The NPS and FHWA have agreed that FHWA will be the lead agency for compliance with Section 404 of the Clean Water Act. FHWA will obtain a permit from the Corps for the project.

### ***Lahontan Regional Water Quality Control Board***

The NPS and FHWA have agreed that FHWA will be the lead federal agency for compliance with Section 401 of the Clean Water Act. FHWA will obtain a Section 401 Water Quality Certification permit from the Lahontan Regional Water Quality Control Board (RWQCB) for

the project. Before the Regional Water Quality Control Board can issue the permit, compliance with the California Environmental Quality Act (CEQA) must be completed. Appendix A of the EA contains an Initial Study (IS) checklist and analysis pursuant to CEQA which concludes that the project would not have a significant effect on the environment. The RWQCB, as lead state agency, will issue a Mitigated Negative Declaration prior to issuing the Section 401 Water Quality Certification permit. This process is underway.

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## CONCLUSION


Based on the information, analysis, and mitigation measures contained in this FONSI; the Scotty's Castle Flood Rehabilitation EA; and the full consideration of scoping and EA review comments received from affected agencies and the public, the NPS has determined that the selected alternative does not constitute a major federal action that will significantly affect the quality of the human environment. Therefore, the preparation of an environmental impact statement is not required, and the requirements of NEPA have been satisfied. Death Valley National Park will implement the selected alternative as soon as practical.

## RECOMMENDED

  
Mike Reynolds, Superintendent  
Death Valley National Park  
National Park Service

3-7-19  
Date

## APPROVED

  
Stanley Austin,  
Director, Pacific West Region  
National Park Service

3-12-19  
Date

## ATTACHMENTS

Attachment A: Errata

## Attachment A: Errata

This Errata is a record of changes to the Scotty's Castle Flood Rehabilitation Environmental Assessment (EA) as a result of agency consultation. The edits correct, clarify, or modify original text based on agency comments and correct other inaccuracies in the EA. These corrections do not change the project activities or increase the degree of impact described in the EA.

### Edits to the EA

Mitigation – Wildlife and Species of Concern, p. 13. Changed the following text:

A qualified biologist will conduct surveys for least Bell's vireo and southwestern willow flycatcher. Surveys will be based on the U.S. Fish and Wildlife Service's (USFWS) most recent survey guidelines and protocols for the least Bell's vireo and southwestern willow flycatcher. If neither species is detected during surveys, no additional measures will be undertaken. If either species is detected, and surveys confirm that birds are nesting, NPS will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. No-disturbance buffers around active nests will be a minimum of 0.25 miles. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

Mitigation – Vegetation, p.13. Changed the following text:

Disturbed areas will be revegetated as quickly as possible. Supplemental watering may be required during the summer season to ensure survival.

If unable to revegetate immediately, remedial actions, such as the installation of erosion-control structures and nonnative plant control, are required

Mitigation – Invasive Plants Species, p. 15. Changed the following text:

Invasive non-native plant species will be treated and other undesirable species will be monitored and treated. To prevent the introduction and minimize the spread of nonnative plants and noxious weeds, the following measures will be implemented during construction: (1) minimize soil disturbance; (2) pressure wash and/or steam clean all construction equipment to ensure that all machinery, rocks, gravel, or other materials are cleaned and weed-free before entering the park; (3) brush down all construction equipment after every trip while transporting material outside the construction limits; (4) cover all haul trucks bringing fill materials from outside the park to prevent seed transport; (5) limit vehicle parking to existing roads, parking lots, or access routes; (6) limit disturbance to roadsides and culvert areas, including limiting equipment to the roadbed area—no machinery or equipment will access areas outside work area boundaries; and (7) obtain all fill, rock, or additional topsoil from the project area, if possible. If not possible, obtaining weed-free material from NPS-approved sources outside the park will be required.

Parking, Accessibility, and Circulation, p. 26. Add the following text:

The preferred alternative includes rehabilitation of the landscape adjacent to the Garage Visitor Center, Long Shed, and Bunkhouse. Accessible access and vegetation will be installed in the parking lot at the breezeway opening in the Long Shed, within the courtyard, and at the southwest corner of the garage visitor center. The landscaping will be compatible with the historic character of the overall site and is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes.

Impacts of Alternative B, Cultural Landscapes, p. 51-53. Add the following text:

The proposed landscape design at the Garage Visitor Center, Long Shed, and Bunkhouse is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes by using appropriate types of plantings, the types of material of the accessible access, and the overall layout of the planting beds and walkways. The landscape design would have no adverse effect to the cultural landscape.

Additional Changes:

Please reference the Compensatory Mitigation and Monitoring Plan (USACE File No. SPL-2017-0051-GLH) to show the wetland compensation areas as protected in perpetuity.