

**National Park Service**  
**U.S. Department of the Interior**



**Joshua Tree National Park**  
**California**

## **Black Rock Campground Rehabilitation**

### **FINDING OF NO SIGNIFICANT IMPACT**

**March 2013**

Joshua Tree National Park (Joshua Tree or park) is planning to rehabilitate the Black Rock campground in the northwestern portion of the park. The selected alternative will add drainage improvements, reconfigure campground roads and campsites, and protect park facilities and natural resources from further deterioration. Black Rock campground is in an area that periodically receives stormwater runoff from the large upslope watershed. High-intensity short- duration rainfall events generate surface runoff that is currently conveyed through the campground in an unpredictable manner, resulting in localized erosion and flooding, property damage, and a safety risk to park visitors and staff. Campground roads are currently aligned so that stormwater runs directly down the roads, which has contributed to localized flooding and damage to campground facilities, natural resources, and adjacent private property. Degraded roads and camping areas also have contributed to increased stormwater runoff, erosion, and sedimentation. Campground rehabilitation will improve the effectiveness and efficiency of park operations in this portion of the park while improving the quality of the visitor experience and safety at the campground, and protecting park scenic and natural resources.

This finding of no significant impact (FONSI) and the environmental assessment (EA) constitute the record of the environmental impact analysis and decision- making process for the rehabilitation of Black Rock campground. The National Park Service (NPS) will implement the selected alternative, which includes the drainage improvements, road realignment, campsite reconfiguration, and other infrastructure improvements needed to address the identified flooding concerns and deficiencies in the current campground configuration. The selected alternative includes measures to protect park resources, improve safety for park visitors and staff from flood events, improve the quality of the visitor experience, reduce maintenance requirements, and provide long- term conditions necessary to sustain campground facilities. The selected alternative was chosen after careful review of resource and visitor impacts and public comment.

This document records (1) a FONSI as required by the National Environmental Policy Act of 1969 (NEPA), (2) a Statement of Findings for Floodplains, and (3) a determination of no impairment as required by the NPS Organic Act of 1916 (see Appendix).

## SELECTION OF THE PREFERRED ALTERNATIVE

Two alternatives were evaluated in the EA - a no action alternative and one action alternative. Under the no action alternative, the campground would not be rehabilitated. The action alternative, identified as the preferred alternative in the EA, is selected for undertaking the rehabilitation of Black Rock campground. No changes are incorporated into the selected alternative (no changes to the preferred alternative as described in the EA) as a result of public comment. This alternative was selected because it fulfills the expressed purpose and need for federal action, as well as project objectives to: 1) provide for visitor safety and enjoyment, 2) improve the efficiency of park operations, and 3) protect park and private property resources.

The selected alternative is comprised of drainage improvements to divert stormflow from the campground into Black Rock Canyon, and campground rehabilitation. Roads will be realigned from the current upslope- downslope direction to an alignment across the slope to improve drainage and traffic circulation. Campsites will be reconfigured for better access and definition, with provisions for group and walk- in campsites. Rehabilitation includes improvements to the existing horse camp, new comfort stations, inter- campground trails, and other infrastructure. This redesign and rehabilitation project enhances protection of property, health, and safety, both within the campground and in downstream residential areas, from erosion and local flooding. Project work will be conducted in phases subject to available funding, with the first phases focused on drainage improvements in the upper portion of the campground area.

## RESOURCE PROTECTION MEASURES

To prevent and minimize potential adverse impacts associated with the selected alternative, the following best management practices (BMPs) and resource protection measures will be implemented during construction and post- construction phases of the project.

### Mitigation Matrix

General Measures	Responsible Party
<ul style="list-style-type: none"> <li>• Construction zones will be identified with construction fence, silt fence, or similar material prior to construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications, and workers will be instructed to avoid conducting activities beyond the construction zone. No machinery or equipment will access areas outside the construction limits.</li> <li>• Construction equipment staging will occur within existing disturbed areas such as parking lots. Off-site equipment and vehicle parking will be limited to designated staging areas.</li> <li>• Contractors will be required to properly maintain construction equipment (i.e., mufflers and brakes) to minimize noise. Construction vehicle engines will not be allowed to idle for extended periods.</li> <li>• Material and equipment hauling will comply with all legal load restrictions. Load restrictions on park roads are identical to state load restrictions with such additional regulations as may be imposed by the park superintendent.</li> <li>• Water sprinkling will be used, as needed, to reduce fugitive dust in work zones. Pooling of water will be avoided in order to protect wildlife.</li> <li>• All tools, equipment, barricades, signs, surplus materials, and rubbish will be removed from the project work limits upon project completion.</li> </ul>	<p>NPS Project Manager</p>

<b>Air Quality</b>	
<ul style="list-style-type: none"> <li>• All work shall conform to Southern Coast Air Quality Management District Rule 403 for control of fugitive dust.</li> <li>• Water shall be sprayed over exposed soil, during dry conditions to minimize fugitive dust. A dust suppressant shall be applied as needed.</li> <li>• Water will be used during grading operations, excavations or removals to control fugitive dust.</li> <li>• Onsite particulate (dust) monitoring shall be arranged on windy days.</li> <li>• Construction activity will not be conducted on days where wind speed exceeds 25 mph.</li> <li>• Dust monitor shall provide weekly reports on dust abatement effectiveness</li> <li>• Vegetation will be chipped or mulched on-site rather than disposing of it off-site or burning it.</li> <li>• Trucks transporting soil or aggregate material to or from the project area will be covered to reduce or eliminate particle release during transport.</li> <li>• Contractors will be encouraged to travel in groups to and from the project site to the extent possible (rather than in multiple separate vehicles).</li> <li>• Local labor sources and large-volume material delivery will be used where possible to minimize trip generation during construction activity.</li> <li>• Construction vehicle and equipment idling will be restricted to no longer than 15 minutes when not in use.</li> <li>• Construction vehicle speeds will not exceed construction zone posted speed limits to reduce dust and possible wildlife/vehicular incidents.</li> <li>• A biodiesel fuel mix will be used rather than traditional diesel fuel.</li> </ul>	NPS Project Manager and Joshua Tree Physical Resource Specialist
<b>Noise</b>	
<ul style="list-style-type: none"> <li>• All motor vehicles and equipment will have mufflers conforming to original manufacturer specifications that are in good working order and are in constant operation to prevent excessive or unusual noise.</li> <li>• Sound attenuation devices (such as rubber strips or sheeting) will be installed and maintained on all equipment. This includes truck tail and other gate dampeners (both opening and closing) for all dump trucks on the project.</li> <li>• Use of unmuffled compression brakes will be prohibited within park boundaries.</li> <li>• The use of air horns within the park will not be allowed except for safety.</li> <li>• The contractor must use muffled pumping equipment for water withdrawals and water diversion (i.e., pump and generator to reduce noise to levels similar to that of the average ambient noise levels).</li> <li>• An 8-foot tall noise attenuation barrier will be installed adjacent to work zones to reduce dispersal of construction noise to adjacent wilderness and private property. NPS will direct the placement of the noise attenuation barrier for each phase of construction.</li> <li>• Construction activity shall be limited to daytime activity only. Between dusk and dawn no detectable increase in sound shall occur above the current ambient level.</li> <li>• Soundscape baseline shall be established prior to construction.</li> </ul>	NPS Project Manager and Joshua Tree Physical Resource Specialist
<b>Lightscape</b>	
<ul style="list-style-type: none"> <li>• Construction will be limited to daylight hours.</li> <li>• Any new or replacement outdoor lighting will use full cut off luminaries to minimize light pollution and impacts to the night sky. As a result of this project no detectable increase in light pollution (above current ambient level) shall occur.</li> <li>• Light pollution baseline shall be established prior to construction.</li> <li>• Any white night lighting of staging areas for equipment security will use 3,500 degree Kelvin color temperature lights.</li> </ul>	NPS Project Manager and Joshua Tree Physical Resource Specialist

<b>Water Resources and Floodplain</b>	
<ul style="list-style-type: none"> <li>• A stormwater pollution prevention plan will be developed and approved by the park and submitted to the California State Water Resources Control Board prior to commencing construction.</li> <li>• Prior to the start of construction, a hazardous spill plan will be required from the contractor stating what actions will be taken in the case of a spill and preventive measures to be implemented. Hazardous spill clean-up materials will be on-site at all times. This measure is designed to avoid/minimize the introduction of chemical contaminants associated with machinery (e.g., fuel, oil, and hydraulic fluid) used in project implementation.</li> <li>• Erosion-control best management practices (BMPs) for drainage and sediment control, as identified and used by the NPS, will be implemented during construction to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. These practices may include, but are not limited to, silt fencing, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas to minimize sedimentation and turbidity impacts from construction activities. BMPs will be inspected daily during project work and weekly after project completion, until removed. Accumulated sediments will be removed as needed to maintain the effectiveness of the BMPs. Silt removal will be accomplished in such a way as to avoid introduction into any flowing water bodies.</li> <li>• Regular site inspections will be conducted during construction to ensure that erosion-control measures are properly installed and functioning effectively. The operation of ground-disturbing equipment will be temporarily suspended during large precipitation events to reduce the production of sediment.</li> <li>• All equipment will be maintained in a clean and well-functioning state to avoid or minimize contamination from fluids and fuels. Prior to starting work each day, all machinery will be inspected for leaks (e.g., fuel, oil, and hydraulic fluid), and all necessary repairs will be made before the commencement of work.</li> </ul>	NPS Project Manager and Joshua Tree Physical Resource Specialist
<b>Soils and Geologic Resources</b>	
<ul style="list-style-type: none"> <li>• Erosion and sediment control will be required. Topsoil will be removed from areas of construction and stored for later reclamation use.</li> <li>• Rock outcrops will be avoided to the greatest extent possible. Temporary barriers will be placed near large outcrops to protect them.</li> </ul>	NPS Project Manager and Joshua Tree Physical Resource Specialist
<b>Vegetation</b>	
<ul style="list-style-type: none"> <li>• Temporary barriers will be provided to protect existing vegetation. Trees or other plants will not be removed, injured, or destroyed without prior approval.</li> <li>• Disturbed areas will be revegetated using native seed sources according to park standard operating procedures. A variety of native plants will be removed, stored in temporary nurseries, and relocated to reclaimed areas.</li> <li>• Joshua trees, California juniper, and other trees identified for transplanting will be marked or barricaded to prevent accidental removal or damage.</li> <li>• All temporarily disturbed areas will be revegetated using native plants, seeds, or transplants originating from the park, and all efforts will strive to establish the natural spacing, abundance, and diversity of native plants. Until the soil is stable and vegetation is established, erosion-control measures will be implemented to minimize erosion and prevent sediment from reaching streams.</li> <li>• Reclaimed / revegetated areas will be monitored after construction to determine if efforts are successful or if additional remedial actions are necessary.</li> <li>• To prevent the introduction of, and minimize the spread of, nonnative vegetation and noxious weeds, the following measures will be implemented during construction: <ul style="list-style-type: none"> <li>○ Soil disturbance will be minimized.</li> <li>○ All construction equipment will be pressure washed and/or steam cleaned before entering the park to ensure that all equipment, machinery, rocks, gravel, and other materials are clean and weed free.</li> <li>○ All haul trucks bringing fill materials from outside the park will be covered to</li> </ul> </li> </ul>	NPS Project Manager and Joshua Tree Vegetation Ecologist

<ul style="list-style-type: none"> <li>○ prevent seed transport.</li> <li>○ Vehicle and equipment parking will be limited to within construction limits or approved staging areas.</li> <li>○ Staging areas outside the park will be surveyed for noxious weeds and treated appropriately prior to use.</li> <li>○ All fill, rock, and additional topsoil will be obtained from stockpiles from previous projects or excess material from this project, if possible; and if not possible, then weed-free fill, rock, or additional topsoil will be obtained from sources outside the park. NPS personnel will certify that the source is weed free.</li> <li>○ Monitoring and follow-up treatment of exotic vegetation will occur after project activities are completed.</li> </ul>	
<b>Wildlife</b>	
<ul style="list-style-type: none"> <li>• The construction contractor will be required to keep all garbage and food waste contained and removed daily from the work site to avoid attracting wildlife (such as ravens and coyotes) into the construction zone. Construction workers will be instructed to remove food scraps and not feed or approach wildlife.</li> </ul>	NPS Project Manager and Joshua Tree Wildlife Ecologist
<b>Special Status Species</b>	
<p>The following conservation measures from the USFWS Biological Opinion (December 31, 2012) will be implemented as part of the preferred alternative to avoid, minimize, and offset potential adverse effects to the desert tortoise. These measures were developed in coordination with the USFWS and NPS.</p> <p><b>1. Field contact Representative (FCR):</b> The Park will designate a FCR who will be responsible for overseeing project compliance with protective stipulations for the desert tortoise and for coordination on compliance with the Park. The FCR must be on site during all project activities. The FCR will have the authority to halt all project activities that are in violation of the biological opinion or that may endanger a desert tortoise. The FCR will have a copy of all stipulations when work is being conducted on the site. The FCR may be a crew chief or field supervisor, a project manager, the Authorized Biologist, an employee of the Park, or a contracted biologist.</p> <p><b>2. Authorized Biologist and Biological Monitoring:</b> The Park will submit, no fewer than 30 days prior to the beginning of any ground disturbing activities, an Authorized Biologist application (<a href="http://www.fws.gov/ventura/species%20information/protocols%20guidelines/docs/dt/DT%20authorized%20biologist%20request%20form.pdf">http://www.fws.gov/ventura/species information/protocols guidelines/docs/dt/DT%20authorized%20biologist%20request%20form.pdf</a>) and resumes to the Palm Springs Fish and Wildlife Office (PSFWO) for approval. The Park will approve any other Biological Monitor(s) necessary for the project.</p> <p>The Authorized Biologist will have the knowledge and experience to conduct any or all of the following:</p> <ol style="list-style-type: none"> <li>a. Locate, identify, and report all forms of desert tortoise sign in accordance with approved protocols;</li> <li>b. Handle and temporarily hold desert tortoises;</li> <li>c. Move desert tortoises from harm's way when they enter project site;</li> <li>d. Relocate desert tortoises prior or during implementation of project;</li> <li>e. Excavate burrows to locate desert tortoises;</li> <li>f. Approve individual Biological Monitors and their activities;</li> <li>g. Directly supervise Biological Monitor(s);</li> <li>h. Understand and implement all project requirements, including the biological opinion (copy in hand);</li> <li>1. Ensure proper implementation of protective measures;</li> <li>J. Record and report incidents of noncompliance in accordance with a biological opinion; and</li> <li>k. Halt project activities per provisions of the biological opinion. Only the Authorized Biologist will handle a desert tortoise, and only in compliance with the biological opinion.</li> </ol>	NPS Project Manager and Joshua Tree Wildlife Ecologist

***Desert Tortoise Authorized Biologist Duties and Qualifications***

The applicant will ensure that the Authorized Biologist performs the activities described below during all project activities. No ground disturbance will commence until an approved Authorized Biologist is on site. The Authorized Biologist may be assisted by an approved Biological Monitor(s) but remains the contact for the FCR and the Park. Only individuals approved by the Park and PSFWO will handle desert tortoises and only in compliance with all requirements of the biological opinion.

The Authorized Biologist's duties will include the following:

- a. Supervise, conduct, and coordinate monitoring and biological resources compliance requirements;
- b. Monitor installation of desert tortoise exclusion fence around the staging area, and conduct preconstruction desert tortoise clearance surveys within that area;
- c. Conduct or supervise surveys by a Biological Monitor(s) of a project area prior to initiation of project areas;
- d. Clearly mark sensitive biological resource areas and verify personally or use a Biological Monitor(s) to check for compliance with all impact avoidance and minimization measures, including checking all exclusion zones to ensure that signs, stakes, and fencing are intact and that project-related activities are restricted in protected zones;
- e. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity for animals in harm's way;
- f. Remain on site daily and monitor road resurfacing, vegetation salvage, grubbing, grading and any other ground-disturbance activities to ensure conservation measures are properly implemented;
- g. Notify the Park of any non-compliance with any of the conservation measures set forth in this biological opinion; and
- h. At the end of each phase of the project, submit a compliance report to the Park and PSFWO.

***Desert Tortoise Authorized Biologist Qualifications***

- Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
- At least 3 years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;
- At least 1 year of direct field experience with biological resources found in or near the project area, including desert tortoise;
- Meet the current Service Authorized Biologist qualifications criteria ([http://fws.gov/ventura/species/information/protocols\\_guidelines/index.html](http://fws.gov/ventura/species/information/protocols_guidelines/index.html)), demonstrate competence in protocols and guidelines for the desert tortoise, and be approved by the PSFWO; and
- In lieu of any of the above requirements, the resume will demonstrate to the satisfaction of the Park and PSFWO that the proposed Authorized Biologist has the appropriate training and background to effectively implement the conservation measures.

***Desert Tortoise Biological Monitor Duties***

Any Biological Monitor(s) deemed necessary will assist the Authorized Biologist in conducting surveys and monitoring project activities. The Authorized Biologist will remain the primary contact for the Park. Only the Authorized Biologist will handle a tortoise, if necessary.

***Desert Tortoise Authorized Biologist and Biological Monitor Authority***

The FCR will act on the advice of the Authorized Biologist and Biological Monitor(s) to ensure conformance with the conservation measures set forth in the biological opinion. The Authorized Biologist will have the authority to immediately stop any activity that is not in compliance with

these conditions and/or order any reasonable measure to avoid take of an individual of a listed species. If the Authorized Biologist is unavailable for direct consultation, the Biological Monitor(s) will act on behalf of the Authorized Biologist. If required by the Authorized Biologist or Biological Monitor(s), the FCR will halt all project activities in areas specified by the Authorized Biologist. The Authorized Biologist will:

- Notify PSFWO at least 14 calendar days before initiation of ground-disturbing activities;
- Immediately notify the Park and PSFWO in writing of any non-compliance with any condition of the biological opinion;
- Require a halt to all activities in any area where there will be an unauthorized adverse impact to biological resources if the activities continued;
- Inform the FCR when to resume activities; and
- Notify the Park if there is a halt of any activities and advise them of any corrective actions that have been taken or will be instituted to rectify the situation. If the work stoppage relates to desert tortoises or any other federally listed species, PSFWO will also be notified.

**3. Worker Education Awareness Program (WEAP):** All employees who work on-site will participate in a tortoise education program prior to initiation of field activities. The Park will be responsible for ensuring that the WEAP is developed and presented prior to conducting activities. New employees will receive formal, approved training prior to working on site. The program may consist of a class presented by a qualified biologist (Park or contracted) or a video. Wallet-sized cards or a one-page handout with important information for workers to carry are recommended. The program will cover the following topics at a minimum:

- a. Distribution of the desert tortoise;
- b. General behavior and ecology of the tortoise;
- c. Sensitivity to human activities;
- d. Legal protection;
- e. Penalties for violations of State or Federal laws;
- f. Reporting requirements; and
- g. Project protective mitigation measures.

**4. Tortoise Presence:** If a desert tortoise is observed, the Authorized Biologist or FCR will be contacted immediately and the tortoise will be left to move on its own. If the tortoise does not move within 15 minutes, an Authorized Biologist or Biological Monitor(s) under Authorized Biologist's direct supervision may remove and relocate the animal to a safe location if temperatures are within the range described in the Desert Tortoise Field Manual (Service 2009a). Any handling should follow procedures in that document. Any tortoise relocated will be moved to a place within 1,640 feet of the project boundary.

**5. Burrows:** All tortoise burrows within 50 feet of the project site will be examined for occupancy prior to the initiation of project activities. If unoccupied, the burrow will be enclosed with temporary desert tortoise exclusion fencing. Any fenced burrows will be monitored at least daily to ensure tortoises are not present but undetected during initial examination. If occupied during tortoise inactive season, no project activities will occur within 50 feet of the burrow. If occupied during tortoise active season, a Biological Monitor(s) or Authorized Biologist will monitor the burrow until the tortoise emerges of its own accord. At that point, the tortoise will continue to be monitored until it moves off the project site, or will be relocated to another burrow outside of the project site but within 1,640 feet of the project boundary, per the discretion of the Authorized Biologist. Work crews will be instructed on how to minimize disturbance to any burrow.

If a burrow is within the area to be graded or paved, the Authorized Biologist will excavate the burrow by hand, following the procedures described in the Desert Tortoise Field Manual (Service 2009a). Excavation will occur only in the period when tortoises are observed to be active in the campground and its vicinity, and within the temperature range characteristic of when tortoises are active. All burrows will be avoided during the inactive period.

**6. Inspect Hazards:** Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than 8 inches aboveground for one or more nights, will be inspected for tortoises before the material is moved, buried, or capped. As an alternative, all such

structures may be capped before being stored outside the fenced area, or placed on pipe racks. At the end of each work day, the Authorized Biologist will ensure that all potential wildlife pitfalls (i.e., trenches, bores, temporary detention basins, and other excavations) have been backfilled. If backfilling is not feasible, all trenches, bores, temporary detention basins, and other excavations will be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with desert tortoise exclusion fencing.

**7. Minimization of Disturbance Area:** The area of disturbance will be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Prior to the start of project activities, work area boundaries will be delineated with flagging or other marking to minimize surface disturbance, and all vehicles, equipment, and disturbance confined to fenced or flagged areas. Marking will remain in place for the duration of each phase of the project. Disturbance associated with work areas will be minimized to the maximum extent practicable. Special habitat features, such as desert tortoise burrows, will be identified by the Authorized Biologist, marked, and avoided to the extent possible. To the extent possible, previously disturbed areas within the project site will be utilized for the stockpiling of excavated materials, storage of equipment, parking of vehicles, and similar activities.

**8. Staging Area:** Temporary desert tortoise exclusion fencing will be installed around all staging areas. The Authorized Biologist or Biological Monitor(s) will conduct desert tortoise clearance surveys prior to installation of the fence, and be present to direct fence placement and installation. Fencing will be inspected at least weekly and following any rain event to ensure its integrity, and corrective action taken within 24 hours if not intact. The fence will include a gate to allow vehicle access. The gate will remain closed at all times, except when vehicles are entering or leaving. If deemed necessary to leave the gate open for extended periods (e.g., during high traffic), the gate may be left open provided a Biological Monitor(s) is present. If a tortoise approaches the gate, the Authorized Biologist will be contacted to determine if remedial action is needed. Fencing will be removed following project completion.

**9. Vehicles:** If it is necessary for a worker to park outside of an area fenced with desert tortoise exclusion fencing, the worker will inspect for tortoises under the vehicle prior to moving it. If a tortoise is present, the worker will wait for the tortoise to move out from under the vehicle prior to moving it. If the tortoise does not move of its own accord within 15 minutes, the Authorized Biologist will be contacted to relocate the tortoise outside of the project site. Vehicular traffic will be confined to existing designated routes of travel to and from the project site, and cross-country vehicle and equipment use outside designated work areas will be prohibited. Except on county-maintained roads, vehicle speeds will not exceed 15 miles per hour through desert tortoise habitat.

**10. Trash:** All trash and food items will be promptly contained within the closed, raven-proof containers. These will be regularly removed from the project site to reduce the attractiveness of the area to ravens and other tortoise predators. Any road kill observed on the road into the campground or within the project area will be removed immediately to minimize the attractiveness of the area to ravens or other tortoise predators.

**11. Dust Control:** Water applied to dirt roads and construction areas for dust abatement will use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. Water will be trucked in from off site, and stored in trucks or spillproof, leak-proof, completely enclosed containers. If ponding is observed, actions will be taken immediately to prevent the cause from recurring, and fill the area if appropriate.

**12. Project Feature Design:** All drainage features will be designed to allow for tortoise entrance and egress and to avoid the possibility of tortoise entrapment. Sides will have at least a 1:3 slope. Curbing in new parking areas will be designed to allow tortoise movement on and around the curb, comparable to curbs elsewhere in the Park. The concrete curbs will have a heavy broom (rough) finish. In addition, curb cuts to allow tortoises to exit the paved road will be constructed every 100 feet in parking and roadway areas.

**13. Revegetation:** Any areas impacted during construction but not part of the final campground footprint will be revegetated in accordance with the EA. Areas of former disturbance not included in the redesigned footprint will also be revegetated with native vegetation.

**14. Reporting:** The Park will submit to PSFWO, within 90 days of the conclusion of each phase of the project, a report detailing the actions completed, number of and location of acres newly disturbed as part of project activities, and the number and location of any tortoises found,

<p>monitored, relocated, killed, or injured during project activities. The report will detail the circumstances of any such incidents.</p> <p><b>15. Transmitter Placement:</b> The Authorized Biologist will attach a transmitter for monitoring purposes to any tortoise handled or relocated as part of project activities. Because the project is phased and likely will occur over multiple years, transmitters will aid in the detection of tortoises in the action area and minimize relocation of the same individual across multiple phases of project activities.</p> <p><b>Action Area</b></p> <p>According to 50 CFR § 402.02, the "action area" means all areas to be affected directly or indirectly by the Federal action; the direct and indirect effects of the action include associated physical, chemical, and/or biological effects of considerable likelihood (Service and NMFS 1998). The action area for the project includes the 48-acre existing campground, the existing paved entrance road to the campground, the trailheads for California and High View Trails, and a 500-foot buffer zone downstream of the campground. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon this action area.</p> <p><b>Sensitive Plants</b></p> <p>Sensitive plant surveys will be conducted prior to disturbance of any suitable habitat. If sensitive species are found, the area will be avoided (if practicable), mitigation measures will be implemented to minimize impacts, or affected plants will be transplanted.</p>	
<p><b>Visitor Experience, Public Health, Safety, and Park Operations</b></p>	
<ul style="list-style-type: none"> <li>• Visitors will be informed in advance of construction activities, the status of available campsites, and any temporary closures via a number of outlets including the park website, newspaper, and other visitor centers.</li> <li>• Accommodations will be made during construction to provide for visitor contact, although services may be limited.</li> </ul>	<p>NPS Project Manager, Joshua Tree Interpreter, and Public Affairs Specialist</p>
<p><b>Cultural Resources</b></p>	
<ul style="list-style-type: none"> <li>• If, during construction, archeological resources are discovered, all work within 100 feet of the discovery will be halted until the resources are identified by an archeologist. If it is determined that the archeological resources are significant, they will be documented and an appropriate mitigation strategy developed, if necessary, in consultation with the California State Historic Preservation Officer (SHPO), the tribes, and/or Tribal Historic Preservation Officers (THPOs).</li> <li>• Should human remains, funerary objects, sacred objects, or objects of cultural patrimony be discovered during construction, park staff will follow provisions outlined in the Native American Graves Protection and Repatriation Act of 1990.</li> <li>• Archeological specimens found within the construction area will be removed only by NPS archeologists who meet the Secretary of Interior's Standards, or their designated representatives.</li> </ul>	<p>NPS Project Manager, Joshua Tree Cultural Resource Specialist, and FHWA Project Manager</p>
<p><b>Visual Resources</b></p>	
<ul style="list-style-type: none"> <li>• The drainage system and campground layout will be designed to blend in with the landscape with minimal visual intrusion.</li> <li>• The noise attenuation barrier will be constructed with material and colors to blend with the natural environment as feasible.</li> </ul>	<p>NPS Project Manager and Joshua Tree Physical Resource Specialist</p>
<p><b>Socioeconomic and Gateway Communities</b></p>	
<ul style="list-style-type: none"> <li>• Residents near the campground will be kept informed of construction plans and the schedule for each phase of campground rehabilitation.</li> </ul>	<p>NPS Project Manager, Joshua Tree Interpreter, and Public Affairs Specialist</p>

## **OTHER ALTERNATIVES CONSIDERED**

A no action alternative also was evaluated in the EA. Under the no action alternative, the campground would not be rehabilitated and the existing drainage and flooding problems would not be addressed. The park would continue operation of the campground in its current configuration without substantial modifications or improvements. Park staff would continue to maintain campground facilities and repair damage from stormwater events to the extent possible. Drainage problems would persist, which would continue to impact buildings, roads, and infrastructure. Runoff from the campground would continue to flow along Black Rock Canyon Road through an adjacent Yucca Valley residential neighborhood. No funds would be expended for construction of a reconfigured campground and drainage system; however, the costs to clean up and repair damage caused by flooding would continue.

The NPS also considered, but rejected from analysis in the EA, several alternative campground designs. Three campground design concepts were developed during project planning. Concept A minimizes campground redesign and overall construction impacts by using existing road alignments. The disadvantages of this concept include confusing traffic circulation, limited space for group camping, and increased peak runoff to an existing residential area wash, with only limited reduction in runoff directed to Black Rock Canyon Road. Concept B also limits campground redesign, but reorients campground roads along the contour and adds more drainage- control features. This alternative would increase runoff to the wash running through a residential area. Concept C, which is the alternative selected for implementation, was identified as the most advantageous alternative following a value analysis and completion of a drainage study in 2012. Concept C provides the greatest runoff control both within the campground and downstream, the most significant improvement in traffic flow, better diversity and segregation of camping experiences, enhanced safety, and the maximum efficiencies in organization and maintenance. Because Concept C best met the project objectives, concepts A and B were eliminated from further evaluation in the EA.

## **ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

According to the Council on Environmental Quality (CEQ) regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative “that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long- term environmental impacts against short- term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative.”

The preferred alternative for rehabilitation of Black Rock campground is the environmentally preferable alternative for several reasons: 1) it will best preserve the natural resources in the campground because it implements structural improvements with new roads and a campsite layout that will provide long- term protection of environmental resources; 2) drainage improvements will reduce the potential for flooding, erosion, and impacts on water quality; and 3) revegetation of disturbed and degraded areas from erosion and dispersed campsite use will improve vegetation cover and site stability. For these reasons, the preferred alternative causes

the least damage to the biological and physical environment and best protects, preserves, and enhances natural resources, thereby making it the environmentally preferable alternative.

By contrast, the no action alternative is not the environmentally preferable alternative because although no construction or ground- disturbing activities would damage previously undisturbed elements of the biological and physical environment 1) it would not protect park natural resources, as the campground and roads would continue to deteriorate without rehabilitation; 2) inadequate drainage could lead to erosion, loss of vegetation, and impacts on water quality and natural resources; and 3) continued high maintenance requirements would not be energy efficient.

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

As defined in 40 CFR § 1508.27, significance is determined by examining the following criteria.

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

Implementation of the selected alternative will result in some adverse impacts; however, the overall benefit of the project outweighs the negative effects. Campground rehabilitation and drainage improvements will substantially reduce the potential for flood damage and personal risk within the campground and private property north of the park. Drainage improvements will have no adverse effect on the Black Rock Canyon floodplain, and the risk to downstream property for a 100- year flood event will not change. The selected alternative will have local long- term beneficial effects on public health, safety, and park operations by decreasing the potential for flooding.

Campground rehabilitation, including realigned roads with better traffic circulation; improved campsite layout with designated group, walk- in, and horse campsites; additional comfort stations; trailhead parking; and other amenities will substantially improve the quality of visitor use and experience. These improvements will have a parkwide long- term beneficial effect on the quality of the visitor use and experience, although short- term moderate adverse effects on visitor use and experience will occur with implementation of each phase of rehabilitation due to reduced campsite availability and construction disturbance. The regional economy will benefit from campground rehabilitation that draws visitors and tourism- related spending to the area. The Sky Harbor neighborhood residents near the campground also will experience a long- term beneficial effect on the quality of their access and use of the park, as well as a substantial reduction in flooding risk along Black Rock Canyon Road.

Campground rehabilitation and drainage improvements will result in short- term impacts on soils, geologic resources, vegetation, wildlife, visual quality, water resources from earthwork and construction disturbances. Drainage improvements will restore more natural drainage patterns and reduce the potential for accelerated erosion. Drainage improvements, road reconfiguration, and campsite layout improvements that reduce erosion and soil loss will have a long- term beneficial effect. Construction activities may affect, but are unlikely to adversely affect, the federally listed desert tortoise, which is known to occur in the area. Campground improvements will have local long- term beneficial effects on vegetation, soils, visual quality, and desert tortoise habitat from drainage improvements that reduce stormwater flooding and erosion and better campsite and road layout, including restoration of disturbed areas that will improve soil stability

and aid in the establishment of native vegetation. Resource protection measures, as listed in the Mitigation Matrix above, will reduce adverse effects. A summary of resource effects is found in Table 4 of the EA.

***Degree of effect on public health or safety***

Drainage and campground rehabilitation work will address public health and safety concerns associated with periodic stormflow that floods the campground and down gradient private property along Black Rock Canyon Road. The selected alternative will result in local long- term beneficial effects on public health and safety from drainage improvements that convey stormflow from the campground to Black Rock Canyon and substantially reduces the potential for flooding in the campground and adjacent private property.

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

Throughout the environmental process, the proposal to rehabilitate the campground was not highly controversial, nor are the effects expected to generate future controversy. None of the identified environmental effects from implementation of the project were highly controversial and there is no indication of controversy over the nature of the effects. Given the substance of public comments, there is no evidence that the effects on the quality of the human environment will be highly controversial.

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

Campground rehabilitation meets project objectives through implementation of drainage improvements that convey stormwater into the natural drainage and addresses safety concerns from flooding. Rehabilitation of the campground will improve park operations and the quality of the visitor experience, and will reduce maintenance costs. The reconfigured campsites will improve campsite definition and vehicle circulation. The anticipated effects on the human environment, as analyzed in the EA, are not highly uncertain or unique, nor were any unknown risks identified.

***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***

Rehabilitation of Black Rock campground will not result in significant adverse effects on the natural environment, cultural resources, or visitor experience because the project was designed to minimize resource and visitor impacts, and resource protection measures were incorporated into the project to further reduce identified adverse effects. In addition, the selected alternative will provide for the long- term protection of resources and will not set a precedent for future actions that could have significant effects.

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

The EA concluded that past, present, and future activities, when coupled with the rehabilitation of Black Rock campground will have long- term minor adverse cumulative effects on water resources, vegetation, and special status species; and moderate adverse impacts on soils and geology. Campground rehabilitation will have long- term beneficial cumulative effects on floodplains, public health and safety, visitor use and experience, socioeconomics and gateway

communities, and visual quality. Overall, the selected alternative will have no significant cumulative effects.

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

The project area contains no sites, structures, or features that are listed on the National Register of Historic Places. Thus, the NPS concludes that implementation of the selected alternative will have no adverse effect on archeological sites, cultural landscapes, ethnographic resources, or museum collections.

The park initiated coordination of this project with the California State Historic Preservation Office (SHPO) on June 9, 2011 at the start of the public scoping period. Once additional project details were known, the park provided the California SHPO with an Assessment of Effect on March 30, 2012 requesting concurrence with the park's finding that no historic properties would be affected by the preferred alternative. In a September 5, 2012 letter, the SHPO suggested that according to 36 CFR 800.5(c) a no adverse effect, rather than no effect, would be more appropriate for the possible increase of foot traffic on existing trail that runs through CA- SBR-1435/H due to improved facilities at the campground. The NPS concurred that there will be no adverse effect from Black Rock Campground rehabilitation in a October 12, 2012 letter to the SHPO.

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

In accordance with the Endangered Species Act (ESA), the NPS contacted the U.S. Fish and Wildlife Service (USFWS) by letter on October 7, 2011 to solicit input on threatened, endangered, and species of concern for the proposed project. In June/July 2011, NPS surveys found evidence of desert tortoise activity in the Black Rock campground and the decision was made to prepare a biological assessment. On November 30, 2011, the park wildlife ecologist met with the USFWS at Black Rock campground to review the project area. Additional discussions were held with the USFWS on April 16, 2012 to discuss the appropriate conservation measures for the desert tortoise. The park prepared a biological assessment, as part of Section 7 consultation under the ESA, and submitted it to the USFWS on June 29, 2012. Through conversations with the USFWS in July of 2012, it was concluded that formal consultation with the USFWS was required. In review of the project materials including the EA and BA for the creation of a Biological Opinion (BO), the USFWS generated a number of questions that required response. The park sent a list of responses to the USFWS on September 24, 2012. Then, on October 19, 2012, the USFWS initiated formal Section 7 consultation with Joshua Tree. The USFWS created and sent the park a BO on December 31, 2012 that described the required conservation measures for the protection of the desert tortoise. With the implementation of the conservation measures, described in the BO (see Mitigation Matrix above), including the relocation of tortoises out of harms' way and project monitoring by an Authorized Biologist, the USFWS determined that they did not anticipate the project to result in any take, in the form of mortality or injury, of adult or sub- adult tortoises.

***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 described in the EA, campground rehabilitation will have no adverse effects on historic or cultural resources, prime farmland, wetlands, wild and scenic rivers, or ecologically critical areas.

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

The selected alternative does not violate any federal, state, or local environmental protection laws.

**NATIVE AMERICAN CONSULTATION**

The parks contacted American Indian tribes and organizations, including the Agua Caliente Band of Cahuilla Indians, Augustine Band of Mission Indians, Cabazon Band of Cahuilla Mission Indians, Cahuilla Band of Mission Indians, Colorado River Indian Tribe, Fort Mojave Indian Tribe, Los Coyotes Band of Mission Indians, Morongo Band of Cahuilla Indians, San Manuel Band of Mission Indians, Soboba Band of Luiseno Indians, Torres- Martinez Band of Desert Cahuilla Indians, and Twentynine Palms Band of Mission Indians on June 8, 2011 informing them of the proposed project and to determine if any historic properties or other resources were in the project area and to inquire whether the tribes wanted to be involved in the environmental compliance process. Information from the tribes also was requested to determine if any ethnographic resources are in the project area and if the tribes wanted to be involved in the environmental compliance process.

The park provided an update on the status of the project and their determination of no adverse effect to archeological sites or historic properties from Black Rock Campground rehabilitation in a letter to the 14 affiliated tribes and their cultural resource staff and other interested parties on October 12, 2012. As of the date of this document, the park has not received any additional response from Native American Tribes, except as noted below from the Soboba Band of Luiseno Indians in response to the EA.

**PUBLIC INVOLVEMENT**

On June 7, 2011, the NPS initiated public scoping with a press release to provide the public and interested parties an opportunity to comment on the proposed project. The scoping notice was sent to approximately 145 entities and individuals on the park's mailing list including government officials, environmental groups, businesses, and individuals. A scoping letter was sent to the California SHPO, the Advisory Council on Historic Preservation (ACHP), USFWS, and Native American tribes traditionally associated with the park. In addition, the park held a public scoping meeting at the Black Rock campground nature center on June 28, 2011 to explain the proposed project and solicit input. The park requested comments on the proposed project by July 28, 2011. Oral comments from the scoping meeting and one written comment expressed general support for the project. Comments raised included what measures will be used to reduce the amount of stormwater flowing down Black Rock Canyon Road and whether the campground will remain open during rehabilitation. The public also requested information on plans for repairing Black Rock Canyon Road.

The EA was made available for public review and comment during a 30- day period ending September 7, 2012. Copies of the EA were distributed to about 200 individuals, agencies, organizations, and Native American tribes. To inform the public of the availability of the EA, the NPS published and distributed a letter to the park's general mailing list; area American Indian tribes; and federal, state, and local agencies. The park received comments from four entities during the EA public review period — the Native American Heritage Commission (NAHC), the Soboba Band of Luiseno Indians Cultural Resource Department, the Town of Yucca Valley, and a private citizen. Comments were generally supportive of the proposed action. None of the comments provided additional, new, or substantive information that will change the determination of effects in the EA.

The Soboba Band of Luiseno Indians indicated the project area falls within the bounds of their Tribal Traditional Use Area, but they have no specific concerns regarding the project. The tribe requests notification of any inadvertent discoveries over the course of the project.

The NAHC letter stated that no Native American cultural resources were identified in the project area based on their NAHC Sacred Lands File search (August 16, 2012). Enclosed with the NAHC letter was a list of Native American contacts. The park's mailing list was updated to reflect any differences between the lists.

The Town of Yucca Valley (Town) supports the rehabilitation of the campground and stormwater improvements. The Town also requests that the project and EA be expanded to include reconstruction of Black Rock Canyon Road. Once the road is brought up to Town standards, the Town would include it in its Maintained Road System. The NPS does not own Black Rock Canyon Road and thus it is not part of the scope of this project.

## **CONCLUSION**

Based on the conservation planning and environmental impact analysis documented in the EA, with due consideration of the nature of the public comments and consultations with other agencies, and given the capability of the mitigation measures to avoid, reduce, or eliminate impacts, the NPS has determined that the selected actions do not constitute a federal action that normally requires preparation of an environmental impact statement (EIS). Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized to widespread, short- to long- term, and negligible to moderate. The selected actions will not have a significant effect on the quality of the human environment or the park's cultural resources or natural resources, and with implementation of conservation measures, the selected project is not anticipated to result in any take, in the form of mortality or injury, of adult or sub- adult desert tortoises.

There are no unmitigated adverse impacts on public safety, sites, or districts listed in, or eligible for listing in, the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the selected alternative will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS will not be prepared and the selected actions may be implemented as soon as practicable.

Recommended: Mark Butler  
Mark Butler  
Superintendent, Joshua Tree National Park

3/1/13  
Date

Approved: Christine S. Lehnertz  
*acting* Christine S. Lehnertz  
Regional Director, Pacific West Region

4/23/13  
Date

# **Rehabilitation of Black Rock Campground Joshua Tree National Park**

## **Appendix – Determination of No Impairment**

The National Park Service (NPS) *Management Policies 2006* require analysis of potential effects to determine whether actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts to park resources and values.

However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within the park, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of these resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment, but an impact would be more likely to constitute an impairment when there is a major or severe adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife; and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS's threshold for considering whether there could be an impairment is based on whether an action would have major (or significant) effects.

Impairment findings are not necessary for visitor use and experience, socioeconomics, public health and safety, environmental justice, land use, and park operations because impairment findings relate back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissing the above topics, the topics remaining to be evaluated for impairment include water resources and floodplains.

### **Soils and Geology**

The campground is on a broad alluvial fan that supports poorly developed soils derived from depositional material carried from drainages running off of mountain slopes. The granitic soils in the project area consist primarily of unconsolidated gravel and coarse sand. Wind deposition, erosion, previous ground disturbance, flooding, and other past actions have all contributed to the varied soil conditions in the project area. High levels of campground use has reduced vegetation cover and led to soil compaction and erosion. Geologic material includes alluvial deposits of very coarse sand

with fine sand and gravel layers as well as areas of granitic rock outcrops.

Construction activities associated with the campground rehabilitation and drainage work will require excavation, grading, and associated soil disturbance, but no substantial change in topography. Drainage improvements will capture and divert runoff to Black Rock Canyon, greatly reducing the potential for continued accelerated surface erosion, gullies, and channel incisement. Most of these activities will occur within previously disturbed areas, but work will also occur in areas of undisturbed soils. Removal of some of the existing roads, parking areas, and infrastructure will result in soil being reclaimed and vegetation cover restored. Exposed soil material during construction will be subject to erosion until stabilized or revegetated. The selected alternative will result in a local short-term moderate adverse impact on soils and geologic resources from earthwork and construction disturbances. Planned drainage improvements will restore more natural drainage patterns. Drainage improvements, road reconfiguration, and campsite layout improvements that reduce erosion and soil loss will have a long-term beneficial effect.

The selected alternative will not result in an impairment of soils and geologic resources because any construction-related adverse effects will be local, short-term, minor, and mitigated with BMPs. Drainage improvements and improvements in the layout of campground roads and campsites will promote soil stability and reduced erosion by diverting water through defined drainage structures.

### **Water Resources**

Four subwatersheds with small ephemeral washes or undefined swales meander through Black Rock campground. Two of these watersheds exit the campground through a wash on the north end of the campground and down Black Rock Canyon Road. The two watersheds on the east side of the campground drain toward Black Rock Canyon. Currently, runoff from storm events flows in an uncontrolled manner across the surface, along roads, and washes. Stormwater runoff typically conveys large amounts of sediment from sheet erosion of unvegetated slopes and washes in the campground.

Excavation, grading, ground clearing, and additional exposure of soil material will temporarily increase the potential for erosion until the drainage system, detention basin, road paving, and revegetation work is completed. Structural soil- and erosion-control measures will be implemented to contain sediment and minimize erosion. Drainage improvements will collect stormwater runoff in the campground and route it to Black Rock Canyon. Drainage improvements will reduce the potential for erosion, sediment transport and deposition in the campground and downstream. The net change in the impervious surface area will be an increase of less than 1 acre.

This will slightly increase stormwater runoff, but with improved drainage and revegetation efforts, will not adversely affect water resources.

The selected alternative will have local short-term minor adverse effects on water quality and hydrology during construction due to surface disturbances that generate erosion and increase sediment in runoff. Long-term effects on water resources will be beneficial with campground drainage improvements. Thus, the selected alternative will not result in an impairment of water resources because any construction-related adverse effects will be local, short-term, minor, and mitigated with BMPs; and drainage improvements will improve water quality by providing long-term treatment of surface discharges from the site.

### **Floodplains**

The project site is designated by the Federal Emergency Management Agency as an area in which flood hazards are undetermined, but possible. Based on an analysis by Cardno ENTRIX, there is currently no risk to Black Rock campground from large floods originating from nearby Black Rock Canyon. Black Rock Canyon is subject to periodic floods downstream of the park, but there are no long-term data on the frequency of flooding. Although the campground is not located in a designated floodplain, it is subject to local flooding in the form of surface flow primarily down roads that are oriented up and down the slope. Sheetflow across slopes and in washes also occur during storm events. Flows from the campground currently exit the campground either through a wash on the north end of the campground, down Black Rock Canyon Road, or the east side of the campground drain toward Black Rock Canyon.

Rehabilitation of the campground and drainage improvements will include new rock-lined drainage channels, new culverts, low-water crossings, and a detention basin. The new drainage system will direct storm runoff from the campground and nearby areas into Black Rock Canyon and reduce campground flooding. The drainage improvements will not significantly change flood flow conditions downstream from the campground and will not result in increased flood risk to downstream residences for flood events up to the 100-year flood. Rehabilitation and drainage improvements in the campground will have no adverse impact on floodplain functions and values within Black Rock Canyon. Flood damage and personal risk within the campground will be greatly reduced. Uncontrolled storm runoff from the park to downstream private property will no longer occur.

The selected alternative will not result in an impairment of floodplain functions because rehabilitation and drainage improvements in the campground will restore more natural drainage patterns and reduce the potential for campground and down gradient

flooding along Black Rock Canyon Road without adversely changing 100-year flood flows in Black Rock Canyon.

### **Vegetation**

Black Rock campground, at an elevation of about 4,000 feet, is located in the Mohave Desert. Common plants, including the Joshua tree, include California juniper, shadescale, saltbrush, and creosote bush. Previous disturbance and the poor layout of existing campsites, as well as high levels of visitor use have compacted soils and degraded native vegetation communities in much of the campground.

Rehabilitation of the campground and drainage improvements will result in both the removal of native vegetation and revegetation of currently disturbed areas. Vegetation will be removed for construction of new roads, new parking lots, campsite upgrades, trails, drainage system, new comfort stations, and new visitor center. Campground rehabilitation was designed so that most of the rehabilitation work will be conducted within the footprint of existing areas of disturbance. Removal of some of the existing roads, dump station, and parking areas will allow revegetation of currently paved surfaces. Construction activities will be confined to the smallest area necessary to complete the work, and areas of temporarily disturbed vegetation will be restored with native vegetation following construction. Implementation of weed-control BMPs will minimize the potential for weed establishment and long-term impacts.

The selected alternative will have local short-term moderate adverse effects on vegetation from construction disturbances during campground rehabilitation. Campground improvements will result in a local long-term beneficial effect from installing drainage channels that reduce erosion, reconfiguring the campsite layout to define visitor use areas, and revegetating currently disturbed areas and temporary construction disturbances with native vegetation. The selected alternative will not result in an impairment of vegetation resources because construction-related adverse effects will be mostly short-term and measures will be taken to ensure restoration of disturbed areas, including transplanting and protecting Joshua trees and other vegetation.

### **Wildlife**

The diverse vegetation communities within Joshua Tree support a variety of wildlife species. Wildlife habitat in the project area has been disturbed by past vegetation clearing and high visitor use. Joshua trees, California juniper, creosote bush, cholla, and saltbrush provide habitat for a few species of birds, small mammals, and reptiles in and around the campground. Large mammal use of the campground is limited because of human activity and degraded

vegetation; however, bobcat, bighorn sheep, mountain lion, and mule deer are present in the area.

Construction activities will result in disturbance to vegetation that provides habitat for birds, small mammals, and reptiles. Individual small animals and their habitat will be impacted by construction of new roads, new parking lots, campsite upgrades, trails, drainage system, new comfort stations, and new visitor center. Human presence and construction noise will temporarily disturb and may displace resident wildlife. Construction activities will be confined to the smallest area necessary to complete the work, and areas of temporarily disturbed land will be restored with native vegetation following construction to minimize impacts. Existing Joshua trees and select other native vegetation will be transplanted and incorporated into the landscaping of the reconfigured campground.

The selected alternative will have local short-term moderate adverse effects on wildlife habitat from construction disturbances and activities that impact habitat or displace species. The selected alternative will not result in an impairment of wildlife resources because construction-related adverse effects will be local, mostly short-term, and moderate and improvements will result in local long-term beneficial effects due to a reduction of erosion from drainage improvements, better campsite layout, and restoration of disturbed areas, which will improve soil stability and native vegetation establishment.

### **Special Status Species**

Desert tortoise is the only federally listed species with known occurrence in the campground. Evidence of tortoise activity was observed during the 2011 surveys and numerous sightings of the tortoise have been confirmed in the campground in previous years. Two federally listed plant species potential occur in the region near the campground, but are not known to occur in the project area. Several state of California sensitive plant and bird species potentially occur in the vicinity of Black Rock campground.

The selected alternative will have no impact on the federally listed endangered triple-ribbed milkvetch or the threatened Parish's daisy because of the lack of suitable habitat within the project area. Impacts on two state bird species of concern - Bendire's thrasher and Le Conte's thrasher is possible from vegetation disturbances and displacement during construction activities, but the selected alternative will not result in impacts to any known breeding sites, although these birds may avoid foraging near the campground during construction. The vegetation communities in the vicinity of the campground provide potential habitat for 19 state plant species of concern. The park has not conducted recent surveys for these species, but because much of the campground area has been previously

disturbed, it is unlikely to support these species. Plant surveys will be conducted prior to construction to determine if special status plant species are present and the potential for transplanting or other mitigation.

The selected alternative may affect individual desert tortoises, but will not likely adversely affect desert tortoise populations. Because of the existing level of disturbance, poor quality habitat, and high human activity at the campground, the preferred alternative will not likely result in a significant decline in population or affect the overall sustainability of the desert tortoise in the region. Direct impacts on the desert tortoise will likely occur from habitat loss due to construction-related activities such as ground clearing and grading, incidental death from crushing of tortoises hidden in undetected-occupied burrows, and entrapment in trenches or pits. Indirect effects will include behavioral changes due to noise, vibration, excess fugitive dust, and exhaust. Additional indirect effects include potential tortoise attraction to the construction area by water used for dust abatement and shade provided by parked construction equipment. The NPS will conduct desert tortoise surveys immediately prior to each phase of ground-breaking activity associated with the project and will consult with the USFWS prior to each construction phase. In addition, the NPS will implement conservation measures as outlined in the FONSI Mitigation Matrix and included in the 2012 USFWS Biological Opinion. The selected alternative is therefore not anticipated to result in the take, in the form of mortality or injury, of adult or sub-adult desert tortoises or result in an impairment of special status species.

### **Visual Resources**

Black Rock campground is in the northwest corner of the park on a road that dead ends at the campground. The campground provides panoramic views of surrounding low-rolling mountains. The campsites are on a hillside at the mouth of Black Rock Canyon. Original construction of the campground and ongoing campground use disturbed much of the native vegetation within the campground perimeter. Inadequate drainage with localized flooding and erosion have contributed to reduced vegetation cover and visual quality and increased sediment deposition within the campground.

The visual quality of Black Rock campground will be temporarily impacted during construction from earthwork, vegetation removal, equipment, dust, and road and drainage system construction. Installation of a sound attenuation fence adjacent to construction zones will help reduce noise impacts, but will introduce a contrasting visual feature. The reconfigured campground will be designed to be compatible with the existing landscape. Native vegetation will be used for landscaping to screen roads and campsites to aid in blending into the landscape. This will include transplanting Joshua trees and California junipers affected by

rehabilitation work. Visual evidence of erosion and sedimentation will diminish with drainage improvements and revegetation. No existing vistas or viewsheds will be adversely affected by new facilities and reconfiguring campground roads across the slope will be less visibly intrusive than the current alignment up and down the slope. Once completed, campground rehabilitation will have a local long-term beneficial effect on visual quality and will not result in an impairment of visual quality.

## **SUMMARY**

As described above, adverse effects and environmental impacts anticipated as a result of implementing the selected alternative on a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or identified as significant in the park's general management plan or other relevant NPS planning documents, will not rise to levels that will constitute impairment of park values and resources.