



National Park Service  
U.S. Department of the Interior  
Glen Canyon National Recreation Area  
Page, Arizona

## Lakeshore Drive / Wahweap Boulevard Rehabilitation Finding of No Significant Impact

June 2015



### INTRODUCTION

The Glen Canyon National Recreation Area, in cooperation with the Federal Highway Administration (FHWA), is planning to rehabilitate, restore, and resurface Lakeshore Drive, Wahweap Boulevard, and Wahweap Marina Drive. The purpose of the project is to make improvements to Lakeshore Drive and Wahweap Boulevard by improving roadway surfaces and signs; replacing or improving culverts where necessary to reduce erosion and improve drainage; better defining pullouts along roadsides; constructing a dedicated exit lane at the South Entrance on Lakeshore Drive to improve traffic flow; and creating wider lanes and shoulders on Lakeshore Drive and Wahweap Boulevard to better accommodate large vehicles, trailers, pedestrians, and bicyclists. Maintenance is a vital part of management in most national park system units. Consistent with current National Park Service (NPS) and Federal Highway Administration recommended road management, the proposed project will improve road conditions while protecting human safety and the environment to enhance visitor use and experience and operations in Glen Canyon National Recreation Area.

This finding of no significant impact and its associated environmental assessment constitute the record of the environmental impact analysis and decision-making process. The National Park Service will implement the Environmentally Preferable Alternative to rehabilitate Wahweap Boulevard and Lakeshore Drive, including associated drainage and safety structures. Incorporated into the project design are best management practices to protect the area's natural and cultural resources, while improving recreational access and visitor safety. The Environmentally Preferable Alternative was selected after careful review of resource and visitor impacts and tribal and public comment.

This document records (1) a finding of no significant impact as required by the National Environmental Policy Act of 1969; (2) a determination of no impairment as required by the National

Park Service Organic Act of 1916 (Attachment 1 - Non-Impairment Finding); (3) a finding of no effect to federally listed species or their habitat as required by the Endangered Species Act, Section 7; and (4) a finding of no adverse effect as required by the National Historic Preservation Act, Section 106; as described by the Director's Order #12 and Handbook (NPS 2001). This finding of no significant impact is available on the National Park Service Planning, Environmental and Public Comment website at <http://parkplanning.nps.gov/glca-wahweaproads>.

## SELECTED ALTERNATIVE

Based on the analysis presented in the environmental assessment, the National Park Service has selected Alternative 2, Rehabilitation, as the Environmentally Preferable Alternative for implementation.

### Phase I

Phase I of the rehabilitation of Lakeshore Drive and Wahweap Boulevard will improve drainage, add a dedicated exit lane at the South Entrance fee station area, clearly define appropriate pullouts and prevent or discourage use of informal pullouts, and provide safer turning radii at the 4-way intersection of Lakeshore Drive and Wahweap Boulevard. The Environmentally Preferable Alternative will include replacing curbs and gutters that are in poor condition and adjusting manhole lids to match the grade and road surface to avoid manholes becoming covered, lost, or filled with sand and water.

Under Phase I, Lakeshore Drive will be closed to the public for approximately 6 months during construction. The closure will be scheduled between late fall and spring, at times when visitation to the national recreation area is typically low. Paving will be completed in the spring and the entire Phase I portion of the project will be completed before Memorial Day weekend. Traffic will be re-routed to the North Entrance at Wahweap Boulevard while construction is occurring on Lakeshore Drive. There will be 15- to 20-minute maximum delays on open park roads during construction. Most construction vehicles will park in existing pullouts and disturbed areas as determined by GCNRA. Water for construction will be non-potable water from sources within GCNRA. The project will need a minimum of 1,000,000 gallons of water for dust abatement and surface compaction.

Drainage improvements will include grading slopes for water flow off the roadway and mitigation of downslope sand and mud flows during storms so that they are dispersed on the edge of the roadways. A primary problem is drainage on Lakeshore Drive; there is an issue with the quantity of sediment that is deposited within the existing culverts, as they are commonly clogged reducing their effectiveness. Larger culverts will be installed. Revetment mattresses and rip rap will be placed in appropriate drainages and culverts will be cleaned or in some cases replaced. Rock scaling along cliffs will occur in some stretches to prevent hazardous rock fall. Pullouts will be formalized.

The 4-way intersection of Lakeshore Drive and Wahweap Boulevard will be replaced with concrete instead of asphalt to avoid "rutting" in the heat under the stress of large vehicles. The intersection island will be smaller and the width of the lanes will be widened on the outside toward the ranger station. Typical section will consist of two 12-foot lanes with 4-foot paved shoulders on either side for a paved width of 32 feet. This design will accommodate 115-foot trailers to further prevent turning vehicles from passing into the oncoming lane. An additional exit lane will be created at the South Entrance to improve traffic flow. Speed limit and pullout location signage will be more appropriately placed. All guardrail, regulatory signs, and pavement markings will be replaced with new materials that meet current safety standards.

## Phase II

Phase II will include rehabilitation of Wahweap Boulevard stretching toward the North Entrance Station. The emphasis will be improvements to the deteriorating asphalt concrete road surface and ancillary drainage features; however, there are no major drainage structures along the route as compared to Lakeshore Drive. The existing configuration of Wahweap Boulevard is 2.4 miles long with 24-foot-wide asphalt pavement. Traffic volumes are high and the existing pavement is generally in poor condition. The route was chip sealed in 2010. The section will consist of two 12-foot lanes with 4-foot paved shoulders on either side for a paved width of 32 feet. Shoulder widening will be required but will fit within the existing roadway bench. The roadway bench is defined as the existing roadway, informal earth shoulders, foreslopes, ditches, and backslopes, an approximate width of 80 feet. An additional entrance lane will be added at the North Entrance Fee Station. An alternative alignment for Wahweap Boulevard near its intersection with Lakeshore Drive will remove existing S-curves at the approach to the intersection.

Under Phase II, Wahweap Boulevard will be closed to the public for approximately 4 months during construction. The closure will be scheduled between late fall and spring, at times when visitation to the national recreation area is typically low. Visitors will use Lakeshore Drive for access to the Wahweap area during this time.

Drainage issues, including erosion from culverts and sheet flow, along the route will be addressed. Ponding of runoff will also be corrected through ditch line improvements. Existing culverts, concrete and asphalt curb, and drop inlets will be replaced, as needed, to address drainage and runoff. Outlet protection and slope protection will be installed to reduce erosion. Formal pullouts will be rehabilitated in-kind, with informal pullouts either paved to become formal or obliterated. Types of work under Phase II will include pulverizing existing pavement, grading and earthwork, aggregate base, asphalt curb, concrete curb, utility relocations, temporary and permanent erosion control, drainage improvements, ditch grading, slope protection, culvert replacement, and seeding and mulching. Speed limit and pullout location signage will be more appropriately placed. All guardrail, regulatory signs, and pavement markings will be replaced with new materials that meet current safety standards along stretches of Wahweap Boulevard heading toward the North Entrance Station under Phase II of the project.

## **BEST MANAGEMENT PRACTICES**

Best management practices are practices or a combination of practices that are part of the project design and are determined to be an effective and practicable means of mitigating impacts. Best management practices identified for this project include areas such as construction, limitation of area affected, erosion prevention, Stormwater controls, cultural resources, special status species protection, vegetation and invasive species, visitor impacts, air quality, night sky, and soundscape. The following best management practices will be implemented.

**Construction Projects.** Contractors will be given orientation concerning proper conduct of operations. This orientation is provided in both written form and verbally at a preconstruction meeting. Orientation topics include the following:

- Wildlife should not be approached or fed.
- Collection of park resources, including plants, animals, and historic or prehistoric materials, is prohibited.
- Contractor must have a safety policy in place and follow it.
- A hazardous waste/vehicle fuel leakage and spill plan will be developed and implemented.

**Limitation of Area Affected.** The following best management practices will be implemented to minimize the area affected by construction activities:

- The staging area for the construction office, construction equipment, and materials storage will be located in previously disturbed area or within the limits of construction. All staging areas will be returned to pre-construction condition once construction is complete.
- Construction zones will be limited to the minimum area requirements and defined prior to any construction activity. All protection measures will be clearly stated in the construction specifications, and workers will be instructed to avoid conducting any operations beyond defined construction zone.
- The amount of ground disturbance for activities not directly related to construction, such as staging and stockpiling areas, will be minimized. All staging and stockpiling areas will be returned to pre-construction conditions following construction.
- Parking of construction vehicles will be limited to designated staging areas or existing roads and parking lots.

**Erosion Prevention.** To minimize soil erosion, the following best management practices will be incorporated into the action alternative:

- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods will be used to minimize any potential erosion during construction.

- Construction or maintenance earthwork will incorporate stockpile stabilization. Contouring and erosion control devices such as rip rap will be incorporated into drainage design to prevent soil erosion.
- The project area and adjacent staging areas will be restored to original site conditions (including any identified re-vegetation actions, soil and rock arrangement) upon completion of the project.

**Storm Water Controls.** To minimize potential impacts to water quality, the following best management practices will be incorporated into the action alternative:

- A storm water pollution prevention plan will be developed prior to any ground-disturbing activities. All National Pollutant Discharge Eliminations System permitting requirements will be met.
- Standard erosion control measures such as rip rap, detention basins, and pollutant separator devices or equivalent control methods will be used to minimize any potential sediment or pollutants to streams and lakes.
- In accordance with Section 401 and 404 of the Clean Water Act, all United States Army Corps of Engineers and Arizona Department of Environmental Quality permits, certifications, or waivers must be obtained prior to the start of work. In addition, all additional best management practices identified by the United States Army Corps of Engineers and Arizona Department of Environmental Quality must be implemented and followed during project implementation.

**Cultural Resources Impacts.** To minimize potential impacts to cultural resources, the following best management practices will be incorporated into the action alternative:

- In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, all work will stop and the contractor will contact the FHWA Contracting Officer Representative who will then contact the NPS Project Manager. The NPS Project Manager will consult the NPS Archaeologist to ensure steps are taken to comply with the provisions outlined in the Native American Graves Protection and Repatriation Act.
- All contractors and subcontractors will be informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. They will be instructed regarding procedures to follow in case previously unknown archeological resources are uncovered during construction.
- Monitoring will occur for previously unidentified archeological resources by having a professionally qualified archeologist on site during all project activities that could include subsurface disturbance to areas determined to be sensitive and/or to possess the potential for presence of intact subsurface archeological remains, as identified by the NPS Archaeologist.

- If access outside the construction limits is required, the contractor will submit a plan to the FHWA Contracting Officer Representative who will then contact the NPS Project Manager. The plans will detail how the access will be provided, including typical sections for temporary access roads and limits of disturbance. This plan will be submitted to and approved by the NPS Project Manager before any work can begin at the site. The NPS Manager will coordinate with the NPS Archaeologist and Planning and Compliance Office prior to providing approval to the FHWA Contracting Officer Representative. All areas will be restored to pre-construction conditions as approved by the NPS Project Manager.
- In the event of the discovery of unanticipated cultural resources, work in the immediate area will halt and the contractor will contact the FHWA Contracting Officer Representative who will then contact the NPS Project Manager. The NPS Project Manager will consult with the NPS Archeologist and work will not resume until the NPS Archeologist gives approval to resume.

**Special Status Species Protection.** To protect any unknown or undiscovered threatened, endangered, or special status species, construction contracts will include provisions for the discovery of such. These provisions will require the cessation of construction activities until park staff evaluate the project impact on the discovery and will allow modification of the contract for any protection measures determined necessary to protect the discovery.

The California condor was identified as a species with the potential to occur within the project area. The proximity to the Vermillion Cliffs indicates a slight chance that a condor could forage in or near the project area. In order to avoid any effects to this experimental/non-essential population of condor, specific best management practices adapted from the U.S. Fish and Wildlife Service California Condor Recovery Plan (USFWS 1996) are as follows:

- All project workers will be advised of the possibility of the occurrence of California condors in the project area. All construction workers and supervisors will be instructed to avoid interaction with condors should they occur or settle at the construct site.
- To prevent water contamination and potential poisoning of condors, fluid leakage and spill plans will be developed and implemented and will define how each hazardous substance will be treated in case of a leakage or spill.
- Open water sources will be covered when not in use (e.g. 'pumpkin' inflatable water storage tanks) to reduce the likelihood of condors drowning.
- The National Park Service will educate recreation area visitors to avoid interacting with condors and to immediately inform appropriate personnel when condors occur there.
- Specific protective measures provided by the U.S. Fish and Wildlife Service will be incorporated into contract language that will require the contractor and Park Service personnel to comply with the protective measures proposed.
- The contractor will immediately contact the FHWA Contracting Officer Representative who will then contact the NPS Project Manager if condor(s) occur or settle at the project area.

The NPS Project Manager will immediately consult with the appropriate NPS Science and Resource Management staff to address a condor occurrence.

- To avoid injury both to condors and to personnel, project workers will not haze condors.
- Any project activity that may cause imminent harm to condors will be temporarily suspended until permitted personnel could assess the situation and determine the correct course of action.
- The construction site will be cleaned up at the end of each day (for example, trash removed, scrap materials picked up) to minimize the likelihood of condors visiting the site.
- If a condor occurs at the project site, only permitted personnel will employ appropriate techniques to cause the condor to leave the site.

Best management practices for other special status species are as follows:

- Include contract provisions that require a stop in construction activities if a special status species is discovered in the project area, until recreation area staff-evaluate the situation. This will allow modification for any protection measures determined necessary to protect the species.
- Construction zones will be limited to the minimum area requirements and defined prior to any construction activity.
- The contractor must immediately dispose of any dead animals found within the construction limits by placing the carcass in the nearest available dumpster. If any dead animals are observed outside the construction limits, the contractor will inform the FHWA Contracting Officer Representative who will then contact the NPS Project Manager for removal of any dead animals found outside the construction limits and within 500 feet of the construction zone. All carcasses removed from the construction area will be placed in the nearest available dumpster. A local trash removal company will empty the dumpsters on a regular basis so roosting by condors is not encouraged from odor coming from the dumpsters.

**Vegetation and Invasive Species Impacts.** The following best management practices will be incorporated into the action alternative to minimize impacts of construction activities on the natural vegetation:

- Actions as identified in a National Park Service- approved re-vegetation plan will be completed to restore areas affected by construction related activities. Only National Park Service- approved native plant species and seed mixtures will be used.
- Native landscape restoration and plantings will be developed for construction projects by a landscape architect or other qualified individual in coordination with the approved park approved native plant list and seedling specifications.
- All vehicles, tools, and equipment used to implement the project will be cleaned prior to entering the park to ensure they do not introduce or spread non-native species.

- Soil and fill material must be clean, weed/seed free, and from a source approved by the National Park Service.

**Visitor Impacts.** The following best management practices will be incorporated into the action alternative to minimize impacts of construction activities on visitor experience:

- The park may consider restricting construction activities during peak use days such as holidays and some weekends during the business times of the year to minimize disruption to visitors.
- Traffic in any one direction will not be stopped for more than 20 minutes to minimize disruption to traffic flow.
- Unless otherwise approved by the park, operation of heavy construction equipment will be restricted to 6:00 am to 10:00 pm in accordance to established park quiet hours.
- Information regarding implementation of this project will be shared with the public upon their entry into the park during construction periods. This may take the form of an informational brochure distributed at fee stations or mailed to reservation-holders, postings on the park's website, and/or other methods.
- A public information program to warn of temporary closures, delays, and road hazards during construction will be implemented. This program will help convey appropriate messages to the public and aid in mitigating potential impacts on visitors' expectations and experiences
- The Public Information Officer will be provided with the project schedule as soon as it is known and will be provided periodic updates of project work.
- Visitors will be routed away from construction activities, when feasible.
- Should immediate access not be able to be provided to emergency vehicles at any time in the work zone, this will be communicated to Visitor and Resource Protection Division as early as possible.
- The safety plan and safety record of contractor will be reviewed by NPS Safety Office prior to construction.
- A copy of a Traffic Management Plan will be submitted for review and approval prior to the commencement of work activities. This plan will address location of warning signs, type of signs, placement of flaggers, placement of cones/fencing, barricades, duration of anticipated delays, use of pilot cars, etc. This plan will address vehicle and pedestrian traffic within the construction zone.

**Area Operations Impacts.** The following best management practices will be incorporated into the action alternative to minimize impacts of construction activities on area operations:



- Construction related fill material, including asphalt millings and clean dirt/rocks, will remain property of the recreation area and will be stored in the "boneyard" near the North Entrance station or at other appropriate sites.
- Project implementation will be coordinated with park staff to ensure that impacts to park visitors, concessioners, and permit holders are avoided or minimized to the greatest extent possible. Area staff will be notified in advance of project implementation to ensure implementation does not result in unexpected impacts to other park operations.
- The park Public Information Officer will be notified at least one month in advance of scheduled work and/or when start date has been established by contract, so that a news release may be prepared and sent to the public.
- Hard hats, safety vests, eye protection and other personal protective gear, as needed, will be worn by employees at all times when within construction zone.
- All construction generated debris shall be removed from the park to an approved landfill or recycled, as appropriate.
- Any park infrastructure impacted during construction, including but not limited to paved and unpaved roadways, walkways, turf, will be restored to pre-construction conditions upon completion of the project.
- Inspect equipment for leaks of oil, fuels, or hydraulic fluids before and during use to prevent soil and water contamination. Contractors will be required to have and implement a plan to promptly clean up any leakage or accidental spills from equipment, such as hydraulic fluid, oil, fuel, or antifreeze.
- To the extent practical, work will be scheduled to avoid construction activity and construction related delays during peak visitation times. Weekend work (Friday through Sunday), holiday work, or night work will not be allowed unless authorized in writing by the park Superintendent.
- The project will include a pre-construction meeting and a final inspection meeting, in addition to regularly scheduled project meetings and site visits.

**Air Quality Impacts.** Air quality impacts of the action alternative are expected to be temporary and localized. To minimize these impacts, best management practices will be implemented as follows:

- Dust containment, in accordance with National Park Service, state, and local regulations, will be achieved. This will include, but is not limited to physical barrier containment and/or water sprinkling dust controls.
- To reduce entrainment of fine particles from hauling materials, sufficient freeboard will be maintained and loose material loads (aggregate, soils, etc.) will be tarped.
- To reduce tailpipe emissions, construction equipment will not be left idling any longer than is necessary for safety and mechanical reasons.

- To reduce construction dust in the short term, water will be applied to problem areas. Equipment will be limited to the defined construction area to minimize soil disturbance and consequent dust generation.
- Landscaping and revegetation will control long-term soil dust production. Mulch and the plants themselves will stabilize the soil and reduce wind speed/shear against the ground surface.

**Night Sky Impacts.** Night sky impacts of the action alternative are expected to be temporary and local. To minimize these impacts, best management practices will be implemented as follows:

- Construction methods will be chosen based on effective night lighting that reduces and/or eliminates any additional light pollution.
- To reduce light pollution, lights will be used only where and when it is needed within the project area, lamps will be shielded and directed downward, lights with warmer colors and high energy efficiency will be selected, and only the minimum amount of light necessary for safe activity will be used.

**Soundscape Impacts.** Soundscape impacts of the action alternative are expected to be temporary and local. To minimize these impacts, best management practices will be implemented as follows:

- To reduce construction noise, quieter machinery, vehicles, and equipment will be used in addition to quiet pavement technology when/where possible.
- Timing and placement of noise generating activities will be chosen carefully in order to reduce impact on noise-sensitive park resources.
- Designs and construction methods that do not create excessive noise during project construction will be chosen and implemented.

## OTHER ALTERNATIVES CONSIDERED

The FHWA Resurfacing, Restoration, and Rehabilitation (3R) Program projects are limited in the types of activities they fund. Therefore, the alternatives considered were limited to projects that would qualify for funding and that were feasible and only those alternatives received a full analysis.

Two alternatives were considered and analyzed for this project and were included in the environmental assessment. The two alternatives that were evaluated were Alternative 1 - No Action Alternative, in which no improvements would be made to existing roadways, nor would erosion control or safety improvement occur; and Alternative 2 – Rehabilitation, the Environmentally Preferable Alternative. As previously mentioned, this alternative includes improvements to degraded drainage structures, adding a dedicated exit lane, improved visitor safety through defined pullouts, bicycle lanes, widening of the roadway, and safer turning radii. The rehabilitated roadway surface will also improve visitor experience and safety.

LAKESHORE DRIVE / WAHWEAP BOULEVARD REHABILITATION

FINDING OF NO SIGNIFICANT IMPACT

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## ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In accordance with the Director's Order #12 and Handbook (NPS 2001), the National Park Service identifies the environmentally preferable alternative in its National Environmental Policy Act documents for public review and comment. 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

The alternative that best meets the environmentally preferred criteria is alternative 2. Analysis of resource and visitor impacts and best management practices as noted indicate that alternative 2 achieves the greatest balance between the need for repairing the road to improve visitor use and experience and park operations and preserving the road corridor's natural and cultural resources. Alternative 1 would result in continued adverse impacts on visitor use and experience and does not best meet the criteria. Upon full consideration of the elements of Section 101 of the National Environmental Policy Act, alternative 2 represents the Environmentally Preferable Alternative for the Lakeshore Drive and Wahweap Boulevard Rehabilitation Project. Alternative 2 best protects, preserves, and enhances historic, cultural, and natural resources. While Alternative 2 will have short-term minor-to-moderate adverse impacts to natural resources, it is the Environmentally Preferable Alternative because it would cause the least damage to the biological and physical environment, as all long-term impacts are beneficial. The following section, as well as Table 5 on page 26 of the environmental assessment, presents in summary the impacts that would result from the Environmentally Preferable Alternative.

## 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:

**1) Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts that require analysis in an Environmental Impact Statement.** Implementation of the selected action will result in short-term minor to moderate adverse impacts; however, the overall long-term effects of the project will be beneficial. As described in the environmental assessment, there will be local and site-specific, short-term, minor-to-moderate adverse impacts on geology and soils from disturbance during construction that will affect the local shale and sandstone bedrock, as well as rock scaling along cliffs on Lakeshore Drive. Excavation of bedrock in drainages or as part of construction of the new exit bedrock excavation and soil disturbance and compaction during rehabilitation will also occur. However, following the completion of the project there would be local and site-specific, long-term, moderate beneficial impact on geology from soils from enhanced erosion control.

Impacts on visitor use and experience would be local, short-term, moderate, and adverse during rehabilitation. During rehabilitation Phase I, Lakeshore Drive would be completely closed to visitor travel and visitors in vehicles would likely be delayed along sections of Wahweap Boulevard and near the intersection of Wahweap Boulevard and Lakeshore Drive. During rehabilitation Phase II, Wahweap Boulevard will be completely closed to visitor travel and visitors would use Lakeshore Drive for Wahweap access. During project construction, the Wahweap boat ramp would be closed for a period of time and visitors would be required to use the Stateline boat ramp. This project construction is estimated to be up to 10 months including both phases, but may change due to weather or other unforeseen elements. The Wahweap boat ramp would be opened once Wahweap Marina Drive has been rehabilitated. However, there will be local, long-term, moderate, beneficial impacts on visitor use and experience, including public health and safety, following project completion. Visitor use and experience along Lakeshore Drive, Wahweap Boulevard, and Wahweap Marina Drive would be improved by actions that will include widening the radii of curves, consistent paved shoulder widths of four feet, widening of turn lanes at the 4-way intersection of Wahweap Boulevard and Lakeshore Drive, a new dedicated exit lane, and rebuilding the outlet slopes of several culverts that are currently roadside hazards. All signs, delineators, and guardrails would be improved to match current standards. Also, the project would result in measures to reduce erosion along Lakeshore Drive and would improve the stability of the roadway. Drainage improvements would substantially reduce erosion and flows that currently inundate portions of Lakeshore Drive or leave hazardous sediment deposits. In addition, the re-designed intersection of Wahweap Boulevard and Lakeshore Drive and a more convenient Wahweap boat ramp. New pavement would result in a smoother and more uniform travel surface for vehicles, which would improve visitor use and experience including public health and safety for visitors and employees.

There will be local, short-term, minor to moderate, adverse impacts on night sky viewing for recreation area visitors, residents, and contractors in the vicinity of rehabilitation activities. An increase in light pollution due to heavy equipment, vehicular traffic, and construction crews working at night during the rehabilitation project will impact night sky viewing in the project area. The project will require construction crews to set up multiple light towers and gas powered generators or other equipment to perform various rehabilitation activities. In addition, vehicle-mounted flashing lights and flashing beacons placed on drums and barriers would be present during project-related activities. This alternative is not expected to have a long-term impact on night skies along Wahweap Boulevard and Lakeshore Drive in Glen Canyon National Recreation Area following project completion.

There will be local, short-term, moderate, adverse impacts on the soundscape for recreation area visitors, residents, and contractors in the vicinity of rehabilitation activities. An increase in noise due to heavy equipment, vehicular traffic, and construction crews during this rehabilitation project would be likely impact the soundscape and acoustic environment. This alternative is not expected to have a long-term impact on the acoustic environment along Wahweap Boulevard and Lakeshore Drive in Glen Canyon National Recreation Area following project completion.

The closures of Lakeshore Drive and Wahweap Boulevard under phases I and II would disrupt normal area operations including visitor and resource protection, interpretation and visitor education, natural and cultural resources management, business management, and facilities management, resulting in a local, short-term, moderate, adverse impact. The roadway resurfacing and drainage design improvements, however, will result in long-term improvements in recreation area operations in the project area. In addition, annual maintenance and emergency repair costs of the roadways would be greatly reduced. Wider lanes would accommodate large vehicles, improving safety, including for pedestrians and bicyclists. New culverts and inlets would be easier to clean and will need to be cleaned less often, drainage ditches would be easier to grade and maintain, and the pavement surface would be level (without cracks and undulations). These upgraded features will improve facilities staff productivity and availability as maintenance on road failures would likely be reduced. These improvements will result in local, long-term, moderate, beneficial impacts on area operations.

No significant resource effects were identified. Best management practices will be implemented to minimize adverse effects. Additional detail on resource effects can be found in the environmental assessment.

**2) The degree to which public health and safety are affected.** The proposed rehabilitation and road improvements along Wahweap Boulevard and Lakeshore Drive will address various public and health and safety issues. Visitor use and experience along Lakeshore Drive, Wahweap Boulevard, and Wahweap Marina Drive will be improved by actions that will include widening the radii of curves, consistent paved shoulder widths of four feet, widening of turn lanes at the 4-way intersection of Wahweap Boulevard and Lakeshore Drive, a new dedicated exit lane, and rebuilding the outlet slopes of several culverts that are currently roadside hazards. All signs, delineators, and guardrails will be improved to match current standards. Also, the project will result in measures to reduce erosion along Lakeshore Drive and will improve the stability of the roadway. Drainage improvements will substantially reduce erosion and flows that currently inundate portions of Lakeshore Drive or leave hazardous sediment deposits. In addition, the re-designed intersection of Wahweap Boulevard and Lakeshore Drive and a more convenient Wahweap boat ramp, and new pavement will result in a smoother and more uniform travel surface for vehicles, which will improve visitor use and experience including public health and safety for visitors and employees. All construction will follow the established Safety Plan and Traffic Management Plan as indicated by the best management practices, and will continue to provide visitor access and safety during construction. As a result, alternative 2 will have local, long-term, moderate, beneficial impacts on visitor use and experience including public health and safety.

**3) Any unique characteristics of the area (proximity to historic or cultural resources, wild and scenic rivers, ecologically critical areas, wetlands or floodplains, and so forth).** No floodplains, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas will be affected because none exist within the project area. There will be no effect to historic or cultural resources or listed species.

**4) The degree to which impacts are likely to be highly controversial.** Throughout the environmental process, the rehabilitation of Wahweap Boulevard and Lakeshore Drive and associated improvements were not highly controversial and the effects are not 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 and relatively low quantity of public comments, there is no evidence that the effects on the quality of the human environment will be highly controversial.

**5) The degree to which the potential impacts are highly uncertain or involve unique or unknown risks.** Road rehabilitation work meets the project objectives through implementation of surface improvements, correcting damaged drainage structures, addressing public safety, providing for visitor enjoyment, and protecting the recreation area natural and cultural resources. The anticipated effects on human environment, as analyzed in the environmental assessment, are not highly uncertain or unique, and do not involve unknown risks. Resource conditions in the project area are well known and the anticipated impacts from implementing commonplace road rehabilitation work are understood based on Federal Highway Administration and National Park Service experience with similar projects.

**6) Whether the action may establish a precedent for future actions with significant effects, or represents a decision in principle about a future consideration.** Road rehabilitation, safety structure and drainage structure replacement and associated improvements will not set a precedent for future actions that could have significant effects because the selected action will replace and repair existing facilities in a previously developed area. In addition, repair of roads is a routine action within national parks.

**7) Whether the action is related to other actions that may have individual insignificant impacts but cumulatively significant effects. Significance cannot be avoided by terming an action temporary or breaking it down into small component parts.** The environmental assessment concluded that past, present, and future activities, when coupled with Wahweap Boulevard / Lakeshore Drive road rehabilitation, drainage structure and safety structure replacement, and other actions, will have both adverse and beneficial cumulative effects. Although some past development actions have converted natural landscapes to developed areas, this project would not contribute impacts that would individually or cumulatively result in significant adverse effects.

**8) The degree to which the action may adversely affect historic properties in or eligible for listing in the National Register of Historic Places, or other significant scientific, archeological, or cultural resources.** In accordance with Section 106 of the National Historic Preservation Act, the National Park Service provided the Arizona and Utah State Historic Preservation Offices an opportunity to comment on the effects of this project with regards to historic properties. The National Park Service submitted a determination of "no adverse effect" to historic properties to the Arizona and Utah State Historic Preservation Offices and both responded with their concurrence on the determination on April 13, 2015 and April 23, 2015, respectively.

Two written responses were received by email and the Planning, Environment and Public Comment website. The two comments received both identified actions already included in the project plan: phasing of rehabilitation to continue access to Wahweap Marina and ensuring very large trailers can effectively negotiate the four-way intersection of Lakeshore Drive and Wahweap Boulevard. These concerns resulted in no changes to the environmental assessment and are addressed in the comment responses in the errata sheet attached to the finding of no significant impact. The finding of no significant impact and errata will be sent to all commenters.

## Native American Consultation

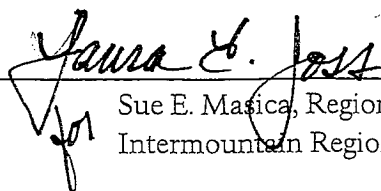
The National Park Service contacted associated tribes at the beginning of the project to determine if there were any ethnographic resources in the project area and to invite their comments as part of the environmental compliance process. The Navajo tribe responded with a comment letter stating that the "proposed project will not have adverse effects to any Traditional Cultural Properties" dated May 29, 2014. The Hopi tribe asked to review cultural report findings to assess potential adverse effects to prehistoric sites. These materials were provided to the tribe for review, and the Hopi Tribe concurred with the "no adverse effect" determination in a letter dated March 27, 2015. Letters were also sent to Native American Tribes to notify the recipient of the availability of the environmental assessment and the opportunity to review and comment.

## CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The selected action is the environmentally preferable alternative and will not have a significant effect on the human environment. 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. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, 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, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Approved:



Sue E. Masica, Regional Director  
Intermountain Region, National Park Service

6/22/2015  
Date

**9) The degree to which an action may adversely affect an endangered or threatened species or its habitat.** In accordance with the Endangered Species Act, the National Park Service contacted the U.S. Fish and Wildlife Service with regards to federally listed special status species. The U.S. Fish and Wildlife Service provided the project with two current official species lists from the Arizona and Utah Ecological Services Field Offices, on November 12, 2014, which were used in preparation of the environmental assessment (USFWS 2014a and USFWS 2014b).

In accordance with National Park Service policy and with regards to state-listed species of concern, species lists were obtained from the Arizona Game and Fish Department and Utah Department of Natural Resources Division of Wildlife Services online mapping databases (AGFD 2014 and UDNR 2014). Following a comprehensive review, none of the federally listed species or habitat for these species was identified as occurring within the project area, therefore the project will have no effect on federally listed species. In addition, the project would have no effect on any state-listed species of concern. Because there were no state or federal species or their habitat available within the project area, wildlife was dismissed from further analysis in the environmental assessment. A comprehensive list of all special status species along with habitat requirements and an explanation as to why the species was not analyzed in further detail is available in Appendix A of the environmental assessment.

**10) Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.** The selected action does not violate any federal, state, or local environmental protection laws.

## **PUBLIC INVOLVEMENT AND AGENCY CONSULTATION**

During the planning process for the proposed project, formal and informal efforts were made by the National Park Service to involve the public, including federal, state, tribal, and local agencies in the planning process. Public scoping comments were analyzed to assist in developing a range of reasonable and feasible project alternatives that meet the purpose and need and in analyzing the potential environmental impacts of each alternative in the environmental assessment. Scoping letters were electronically mailed to potentially affected private parties and public agencies and a scoping meeting was held at Glen Canyon National Recreation Area headquarters on June 10, 2014. A 30-day public scoping period for the Lakeshore Drive / Wahweap Boulevard Rehabilitation Project was conducted from May 27 through June 25, 2014. During both internal and external scoping, comments and concerns were used to identify specific resources and values that may be important to consider for this project. All comments, substantive or non-substantive, received during the scoping period have been duly considered and are now part of the administrative record for this project.

The environmental assessment was made available for public, agency and tribal review for 30 days from March 27 through April 27, 2015. A news release was issued and park partners were contacted in person or electronically. An article was printed in the *Lake Powell Chronicle* on Wednesday, April 1, 2015. The document was also posted on the Planning, Environment, and Public Comment website.



## REFERENCES

### Arizona Game and Fish Department (AGFD).

- 2014 On-line environmental review tool. Arizona Game and Fish Department, Phoenix, Arizona. Accessed March 24, 2014. <http://www.AGFD.gov/hgis>. 6pp.

### National Park Service (NPS)

- 2001 "Director's Order #12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision Making." Accessed September 11, 2014. <http://home.nps.gov/applications/npspolicy/DOrders.cfm>.
- 2006 "Management Policies 2006." Accessed September 11, 2014. <http://www.nps.gov/policy/MP2006.pdf>.

### U.S. Fish and Wildlife Service (USFWS)

- 1996 California Condor Recovery Plan, Third Revision. U.S. Fish and Wildlife Service, Pacific Region (1), Portland, Oregon. 62 pp.
- 2014a Official Species List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project (November 12, 2014). U.S. Fish and Wildlife Service, Southwestern Region (2), Arizona Ecological Services Field Office, Phoenix, Arizona. Consultation Tracking Number: 02EAAZ00-2015-SLI-0098.
- 2014b Official Species List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project (November 12, 2014). U.S. Fish and Wildlife Service, Mountain-Prairie Region (6), Utah Ecological Services Field Office, West Valley City, Utah. Consultation Tracking Number: 06E23000-2015-SLI-0032.

### Utah Department of Natural Resources (UDNR).

- 2014 Utah Sensitive Species of Lone Rock and Warm Creek Bay 7.5 Minute Quadrangle Maps. State of Utah Department of Natural Resources, Division of Wildlife Resources. Accessed November 12, 2014. <http://dwrcdc.nr.utah.gov/ucdc/>. 4pp.

## ATTACHMENT 1: ERRATA SHEET

### NATIONAL PARK SERVICE RESPONSE TO PUBLIC COMMENTS LAKESHORE DRIVE / WAHWEAP BOULEVARD REHABILITATION GLEN CANYON NATIONAL RECREATION AREA

The environmental assessment was made available for public review and comment period for 30 days from March 27 through April 27, 2015. A total of two written responses were received. Comments were received by email and web form from the Planning, Environmental and Public Comment website. These comments did not result in changes to the text of the environmental assessment.

Pursuant to the National Environmental Policy Act, responses were prepared for all substantive comments. Substantive comments are comments that raise an issue regarding law or regulation, agency procedure or performance, compliance with state objectives, validity of impact analysis, or other matters of practical or procedural importance. Substantive comments require a response or a corresponding revision in the final environmental assessment text.

Non-substantive comments are comments that offer opinions or provide information not directly related to issues or impact analysis. Non-substantive comments are used as background information for the environmental assessment team, but do not require a formal response.

#### RESPONSE TO PUBLIC COMMENTS:

**Comment 1:** One commenter suggested that the work on Lakeshore Drive and Wahweap Boulevard be phased, i.e. not contemporaneous, to ensure access to the Wahweap Marina at all times.

**National Park Service Response:** As described in Chapter 2 of the environmental assessment, the National Park Service will implement a phased approach to rehabilitation/construction with Phase I being Lakeshore Drive and Phase II Wahweap Boulevard. The National Park Service plans to complete the work during the off-season months of late winter and spring to further minimize impacts to operations and visitors. Access to the Wahweap Area will be maintained throughout the project, although there will be detours and delays as described in the environmental assessment and finding of no significant impact.

**Comment 2:** A second commenter suggested removing curbing at the Lakeshore Drive / Wahweap Boulevard intersection to allow for larger trailers and perhaps reduce costs.

**National Park Service Response:** The National Park Service, as described in Chapter 2 of the environmental assessment, will widen the turning lanes at this intersection from 20 feet to 50 feet. The designed turning radius will accommodate trailers as long as 115 feet, sufficient for the many large trailers accessing the Wahweap Marina boat launch.

## ATTACHMENT 2: NON-IMPAIRMENT FINDING

National Park Service's *Management Policies, 2006* require analysis of potential effects to determine whether or not actions will 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. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service 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 National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service 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 National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- 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 National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The National Park Service's threshold for considering whether there could be an impairment is based on whether an action will have 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 relates 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 remaining to be evaluated for impairment include geology and soils, vegetation, wildlife, special status species, hydrology, water quality, wetlands and floodplains, and cultural resources. Although night sky and soundscapes were included in the environmental assessment due to the anticipated effects to visitor experience, effects to other park resources and values would be negligible due to the project's location in the development zone.

The area was established in part because of its distinctive geology and soil resources as part of the colorful Colorado Plateau. As described in the environmental assessment, there will be local and site-specific, short-term, minor-to-moderate adverse impacts on geology and soils from bedrock excavation and soil disturbance and compaction in and immediately adjacent to the existing road corridor during rehabilitation. However, following the completion of the project there would be local and site-specific, long-term, moderate beneficial impact on geology from soils from enhanced erosion control; therefore, there will be no impairment to geology and soils resources.

As described in the environmental assessment, vegetation, wildlife, special-status species, hydrology, water quality, wetlands and floodplains, and cultural resources were dismissed from detailed consideration because these resources are either not present in the project area, or effects to these resources would be negligible to minor; therefore there will be no impairment to these resources.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the Environmentally Preferable Alternative.