



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

Upgrading Potash Boat Launch Area Environmental Assessment

June 2010



Looking up the Colorado River from the Potash Boat Ramp

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Upgrading Potash Boat Launch Area

Environmental Assessment

Summary

Canyonlands National Park (CANY) proposes to construct several improvements to the Potash Boat Launch area. The new improvements would upgrade the existing area. The Potash Boat Launch Area is a major launch site for park visitors and commercial outfitters, who are accessing Canyonlands National Park via the Colorado River. Though the Potash Boat Launch is on private land, the NPS and its partners (the landowner, Utah Guides and Outfitters Association and individual outfitters) want to improve the visitor experience for people conducting river trips on the Colorado River through Canyonlands National Park. The improvements would provide important information about the area, the trip ahead and Canyonlands National Park. Improvements will also provide basic facilities at the launch ramp for those launching river trips and using the area for day use. An environmental assessment (EA) was developed to address the impacts the proposed projects may have on the visitor and other resources within the project area.

This EA evaluates two alternatives: a no action and an action alternative. The no action alternative describes the current condition if no improvements were constructed, and the action alternative address the construction of the new improvements within the boat launch area. Proposed improvements by the NPS include constructing three shade structures to cover picnic tables, a private changing area, and three informational kiosks. An access trail from the picnic area to the boat launch would be established and access to the picnic area would be done via a new loop road behind the existing double vault toilets. The current parking area would be improved by re-grading and new gravel. The boundaries of the parking area would also become better defined and signs will inform visitors where to park when on overnight river trips.

Resource topics included in this document because the resultant impacts may be greater-than-minor are soil, vegetation, threatened and endangered species and species of concern, and visitor use and experience. All other resource topics have been dismissed because the project would result in negligible or minor effects to those resources. Public scoping was performed to assist with the development of this document and two comments were received, all in support of the proposed project.

Public Comment

If you wish to comment on the Environmental Assessment, you may post comments online at <http://parkplanning.nps.gov/cany> under Upgrading Potash Boat Launch or mail comments to:

Planning and Compliance Coordinator, Southeast Utah Group
National Park Service
2282 S. West Resource Blvd
Moab, UT 84532

This EA would be on public review for 30 days. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we would be able to do so.

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Abbreviations

CANY	Canyonlands National Park
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
DO	Director's Order
DOI	Department of Interior
EA	Environmental Assessment
NEPA	National Environmental Policy Act
NHPA	National Historical Protection Act
NPS	National Park Service
SEUG	Southeast Utah Group
SHPO	State Historical Preservation Office
UGO	Utah Guides and Outfitters Association
USFWS	United States Fish and Wildlife Service
§	Section

CHAPTER 1: PURPOSE AND NEED

Introduction

Canyonlands National Park (CANY) was established by Congress "...to preserve an area in the State of Utah possessing superlative scenic, scientific, and archeological features for the inspiration, benefit, and use of the public..." (Public Law 88-590, 1964).

Canyonlands National Park has been expanded since it was originally established in 1964 to its present size of 337,370 acres centered on the confluence of the Green and Colorado Rivers. The rivers divide the park into three geographical districts: the Island in the Sky District is the triangle of land between the two rivers, the Needles District lies east of the Colorado River and the Maze District lies to the west of the Colorado and Green Rivers. The Horseshoe Canyon Detached Unit is managed as part of the Maze District. In addition, the Green and Colorado River corridors are managed as a separate River District of the park. In summary, the park is divided into the Island in the Sky, Maze, Needles and River districts.

The park is located southwest of Moab, Utah, 100 miles (166.7 kilometers) west of Grand Junction, Colorado, and 240 miles (400 kilometers) southeast of Salt Lake City, Utah. Parts of the park are readily accessible by major travel routes such as Interstate I-70 and Utah Highway 191. The area surrounding the park is sparsely populated with a density of approximately two people per square mile (0.8 people per square kilometer). Tourism is currently the most important economic activity.

The purpose of this environmental assessment (EA) is to examine the environmental impacts associated with the proposal to construct several improvements at Potash Boat Launch area near CANY. The improvements would be constructed within the site that currently serves as the Potash Boat Launch area. These improvements are to enhance the visitors experience for people conducting river trips, private or commercial, on the Colorado River through CANY. This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) (40 CFR §1508.9), and the National Park Service Director's Order (DO)-12 (*Conservation Planning, Environmental Impact Analysis, and Decision-Making*).

Background

The Potash Boat Launch area is a major launch site for private and commercial river trips and is located along the right (northwest) bank of the Colorado River, about 20 miles (30 km) west of Moab, Utah, at the south end of State Route 279 and the Kane Creek Subdivision of the Union Pacific Railroad. The location is east of Canyonlands National Park and Dead Horse Point State Park. The Potash Boat Launch area is located on private land owned by Intrepid Potash Inc. This company produces potash to be used in fertilizers and salt. According to USGS reports, the Paradox Basin contains up to 2.0 billion tons (1.8 billion metric tons) of potash, with the primary mine being the one at the end of SR 279. The Potash plant was built by the Texas Gulf Sulphur Company in the early 1960s. Intrepid bought the mine in 2000 from the Potash Corporation of Saskatchewan, which bought Texas Gulf in 1995.

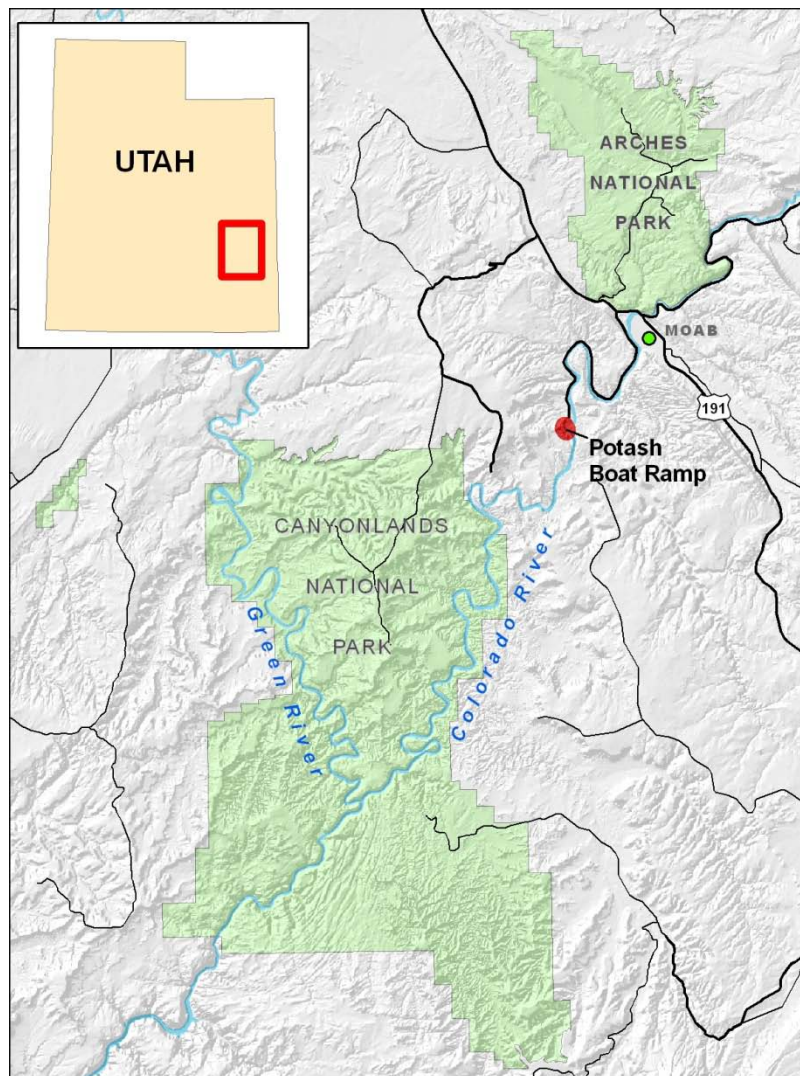


Figure 1. Location of the Potash Boat Launch area

Although the company has changed hands several times in the last 50 years, they have always granted access to river runners who use this area to launch onto the Colorado River. For over a year now, the National Park Service and its partners, who include the landowners, the Utah Guides and Outfitters Association (UGO) and individual outfitters jointly developed the overall plan to construct several improvements within the boat launch parking area. The current site structures include three vault toilets which the NPS has provided and a concrete launch ramp that was built by UGO.

Purpose and Need

The use of the Colorado River has significantly increased since Canyonlands National Park was established in 1964. White and calm water use within the park has caused the NPS to increase its visitor information and management activities. The Potash Boat Launch area is a major launch site for park visitors and local

commercial outfitters who are accessing Canyonlands National Park via the Colorado River. This is also the main launch site for jet-boat trips that are putting in and taking river trips to the confluence of the Green and Colorado rivers and then returning to Potash. Though the Potash Boat Launch area is on private land, by providing basic facilities and improved access to information at this launch site, NPS visitors would get a better sense of the standards they are to maintain while on their trip along the Colorado River through the park.

The proposed improvements would include constructing three shade structures, one changing station, three informational kiosks, a small loop road around the back of the double vault toilet, and an access trail from the shade structures to the boat ramp. The boundaries of the parking area would become better established by lining the limits of the parking area with rocks and dirt mounds and closing off one of the two access roads. The parking area would also be re-graveled. Signs will be placed in the parking area to delineate overnight and day use parking areas.

The project is needed to accomplish the following objectives:

1. To provide basic facilities to accommodate the high level of use from park visitors, the general public and commercial outfitters.
2. To provide access to park information that would educate the public on the rules and regulations of the area, the river and a national park.
3. To provide a parking area that is functional for all user groups.

Relationship to Other Plans and Policies

Current plans and policy that pertain to this proposal include the *General Management Plan* (NPS 1978), the *River Management Plan* (NPS 1981) and the 2006 *Management Policies* (NPS 2006). The following is more information pertaining to how this proposal meets the goals and objectives of these plans and policies.

- This project is consistent with the General Management Plan, which proposes to manage use of the Green and Colorado Rivers and their canyons in order to preserve their primitive character.
- The Canyonlands River Management Plan states the park should insure equitable river access to existing and future river users through employment of user allocation and management systems and to enhance the river user's opportunity to learn about the natural systems, history, and archeology of the river canyons.
- The proposal is consistent with the goals and objectives of the 2006 National Park Service *Management Policies* (NPS 2006) that state that the NPS interpretive and educational programs must explore new and innovative approaches to inform a diverse constituency, many of whom may never set foot inside a park's boundaries.
- Although this proposal does not occur on federal land the proposal is a federal undertaking. The project would be funded by the federal government and would use federal resources and any federal

undertaking or action requires compliance with NEPA as stated in Director's Order #12.

Appropriate Use

Sections 1.4 and 1.5 of NPS 2006 *Management Policies* direct that the National Park Service must ensure that park uses that are allowed would not cause impairment of, or unacceptable impacts on, park resources and values. A new form of park use may be allowed within a park only after a determination has been made in the professional judgment of the park manager that it would not result in unacceptable impacts.

Section 8.1.2 of NPS 2006 *Management Policies, Process for Determining Appropriate Uses*, provides evaluation factors for determining appropriate uses. All proposals for park uses are evaluated for

- consistency with applicable laws, executive orders, regulations, and policies;
- consistency with existing plans for public use and resource management;
- actual and potential effects on park resources and values;
- total costs to the service; and
- whether the public interest would be served.

Park managers must continually monitor all park uses to prevent unanticipated and unacceptable impacts. If unanticipated and unacceptable impacts emerge, the park manager must engage in a thoughtful, deliberate process to further manage or constrain the use, or discontinue it. More information on the definition of unacceptable impacts as cited in §1.4.7.1 of NPS 2006 *Management Policies* can be found in the *Affected Environmental and Environmental Consequences* chapter.

Providing basic facilities and information kiosks are a common and vital structure in most park units. Proper location, sizing, as well as construction materials for these facilities and establishing best management practices would ensure that unacceptable impacts to natural resources and values would not occur. The proposed improvements are consistent with the park's general management plan and other related park plans. With this in mind, the NPS finds that creation and use of these parking area improvements are an acceptable use for Canyonlands National Park.

Public Scoping

Scoping is a process to identify the resources that may be affected by a project proposal, and to explore possible alternative ways of achieving the proposal while minimizing adverse impacts. Canyonlands National Park conducted both internal scoping with appropriate NPS staff and external scoping with the public and interested/affected groups and agencies.

Internal scoping was conducted by an interdisciplinary team of professionals from Canyonlands National Park, the Southeast Utah Group (SEUG), Utah Guides and Outfitters Association and the landowner in the fall of 2008. Interdisciplinary team members met the spring of 2009 to discuss the purpose and need for the

project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. Over the course of the project, team members also conducted additional site visits to view and evaluate the proposed improvements and issues for the Potash Boat Launch area.

External scoping was initiated with the distribution of a scoping brochure to inform the public of the proposal to construct new improvements to the existing parking area at the Potash Boat Launch, and to generate input on the preparation of this EA. The scoping brochure was mailed to interested parties, in the Moab area including landowners adjacent to the park. In addition, the scoping brochure was mailed to various federal and state agencies, consulted Native American Tribes, and local governments. The scoping brochure was also posted on the NPS Planning, Environment and Public Comment (PEPC) website.

During the two week scoping period, only three responses were received. Two responses came from consulted Native American Tribes who had no objection to the proposed project and requested to be kept informed of the project's progress if additional cultural resources are identified during the projects progress that would be adversely affected by project activities; they would like the opportunity for additional review and comment. One response came from a local business that wished to be added to the mailing list to receive a final EA. More information regarding scoping can be found in *Comments and Coordination*.

Impact Topics Retained for Further Analysis

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; 2006 *Management Policies*; and National Park Service knowledge of resources at the Potash Boat Ramp Area. Impact topics that are carried forward for further analysis in this EA are listed below along with the reasons why the impact topic is further analyzed. For each of these topics, the existing setting or baseline conditions (i.e. affected environment) within the project area would be used to analyze impacts against the current conditions of the project area in the *Affected Environment and Environmental Consequences* chapter.

Soil

According to the National Park Service's 2006 *Management Policies*, the NPS would strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

The proposed construction of new improvement would be located in an area that has been heavily disturbed by visitor use and does not contain significant topographic or geologic features. Soils would be disturbed and compacted in the immediate area of the parking lot, the new road and in the areas of the proposed shade structures. Therefore, soil would be retained for further analysis.

Vegetation

According to the National Park Service's 2006 *Management Policies*, the National Park Service strives to maintain all components and processes of naturally

evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants (NPS 2006). The existing vegetation in the project area primarily consists of several exotic species such as tamarisk (*Tamarix chinensis*), Kochia (*Bassia scoparia*), and annual wheatgrass (*Eremopyrum triticeum*). Some native species that are present include Cottonwood (*Populus fremontii*), Coyote willow (*Salix exigua*) as well as Red-root flat sedge (*Cyperus erythrorhizos*).

Restoration work is proposed as part of this project. The potential to introduce or increase exotic vegetation during construction activities is a possibility also. Therefore, vegetation would be retained for further analysis.

Threatened, Endangered and Species of Concern

The Endangered Species Act of 1973 requires examination of impacts on all federally-listed threatened, endangered, and candidate species. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service (or designated representative) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the NPS 2006 *Management Policies* and Director's Order-77 *Natural Resources Management Guidelines* require the National Park Service to examine the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2006). For the purposes of this analysis, the U.S. Fish and Wildlife Service (USFWS) and the Utah Division of Wildlife were contacted with regards to federally- and state-listed species to determine those species that could potentially occur on or near the project area.

It was determined by the NPS with consultation with the USFWS that since the project area is located within 100 feet of the Colorado River in some areas that the Bonytail, Colorado Pikeminnow, Humpback Chub and Razorback Sucker may be impacted from the project. There also may be potential habitat in the project area for the Mexican Spotted owl, Southwest willow flycatcher and Yellow-billed Cuckoo. This EA would serve as the Biological Assessment for the USFWS. Therefore, threatened and endangered and candidate species would be retained for further analysis.

Visitor Use and Experience

According to NPS 2006 *Management Policies*, the enjoyment of park resources and values by people is part of the fundamental purpose of all park units (NPS 2006). The National Park Service is committed to providing appropriate, high quality opportunities for visitors to enjoy the parks, and would maintain within the parks an atmosphere that is open, inviting, and accessible to every segment of society. Further, the National Park Service would provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found in the parks. The National Park Service 2006 *Management Policies* also state that scenic views and visual resources are considered highly valued associated characteristics that the National Park Service should strive to protect (NPS 2006). Also in accordance with NPS 2006 *Management Policies*, policy states that the National Park Service and its

concessionaires, contractors, and cooperators would seek to provide a safe and healthful environment for visitors as well as employees.

Canyonlands National Park requires that river users (private and commercial) have a river permit when using the Colorado River within CANY. In 2009, an estimated 5,000 people accessed the Colorado River via the Potash Launch with a river permit. This boat launch area is a high value recreation site and park visitors, commercial outfitters and the general public access the Colorado River at this site. Construction of the proposed facilities may create adverse and beneficial impacts that would be minor to moderate to visitor use and experience. Not improving this parking area may also have moderate adverse impacts to visitor use and experience. Establishing a clean, restored, informative parking area with facilities for visitors and concessioners to use when accessing the Colorado River is a beneficial objective of this EA. Therefore, visitor use and experience would be retained for further analysis.

Impact Topics Dismissed from Further Analysis

In this section of the EA/AEF, NPS provides a limited evaluation and explanation as to why some impact topics are not evaluated in more detail. Impact topics are dismissed from further evaluation in this EA if:

- they do not exist in the analysis area, or
- they would not be affected by the proposal, or the likelihood of impacts are not reasonably expected, or
- through the application of mitigation measures, there would be minor or less effects (i.e. no measurable effects) from the proposal, and there is little controversy on the subject or reasons to otherwise include the topic.

Due to there being no effect or no measurable effects, there would either be no contribution towards cumulative effects or the contribution would be low. For each issue or topic presented below, if the resource is found in the analysis area or the issue is applicable to the proposal, then a limited analysis of direct and indirect, and cumulative effects is presented. There is no impairment analysis included in the limited evaluations for the dismissed topics because the NPS's threshold for considering whether there could be an impairment is based on "major" effects.

Air Quality

The Clean Air Act of 1963 (42 U.S.C. 7401 *et seq.*) was established to promote the public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality related values associated with National Park Service units. Section 118 of the Clean Air Act requires a park unit to meet all federal, state, and local air pollution standards. Canyonlands National Park is designated as a Class I air quality area under the Clean Air Act. A Class I designation indicates the maximum allowable increase in concentrations of pollutants over baseline concentrations of sulfur dioxide and particulate matter as specified in §163 of the Clean Air Act. Further, the Clean Air Act provides that the federal land manager has an affirmative responsibility to protect air quality related

values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse pollution impacts (EPA 2009).

Construction activities such as hauling materials and operating heavy equipment would result in temporary increases of vehicle exhaust, emissions, and fugitive dust in the general project area. Any exhaust, emissions, and fugitive dust generated from construction activities would be temporary and localized and would likely dissipate rapidly because air stagnation at the Potash Boat Ramp area is rare. Overall, the project could result in a negligible degradation of local air quality, and such effects would be temporary, lasting only as long as construction. Because there would be negligible effects on air quality, and the proposed actions would not result in any unacceptable impacts, this topic is dismissed from further analysis.

Cultural Resources

The National Park Service, as steward of many of America's most important cultural resources, is charged to preserve cultural resources for the enjoyment of present and future generations. Cultural resources include archeological resources, historical resources, cultural landscapes, ethnographic resources and museum collections. Management decisions and activities throughout the National Park System must reflect awareness of the irreplaceable nature of these resources. The National Park Service would protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in the 2006 *Management Policies* and the appropriate Director's Orders.

Section 106 of the National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq.*); the National Park Service's Director's Order-28 *Cultural Resource Management Guideline*; and National Park Service 2006 *Management Policies* require the consideration of impacts on historic properties that are listed on or eligible to be listed in the National Register of Historic Places. The National Register is the nation's inventory of historic places and the national repository of documentation on property types and their significance. The above-mentioned policies and regulations require federal agencies to coordinate consultation with State Historic Preservation Officers regarding the potential effects to properties listed on or eligible for the National Register of Historic Places.

The Potash Boat Ramp area has had 50+ years of human disturbance as well as periodic flooding of the Colorado River. A memo was sent to the Utah State Historic Preservation Office (SHPO) on February 23, 2010 for their concurrence on using the Southeast Utah Group Programmatic Agreement for categorically excluding this project under section A and B: "human and natural impacts such that, if sites were once present, no integrity remains". A No Historic Properties determination was made by the NPS. The Utah SHPO concurred with the NPS determination on March 17, 2010. Therefore this topic would be dismissed from further analysis.

Water Resources

The primary legislation governing water is the 1972 Federal Water Pollution Control Act, commonly referred to as the Clean Water Act. This act furthers the objectives of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and of eliminating the discharge of pollutants

into navigable waters. It establishes effluent limitation for new and existing industrial discharge into U.S. waters, and authorizes states to substitute their own water quality management plans developed under Section 208 of the act for federal controls. This act also provides an enforcement procedure for water pollution abatement and requires conformance to a permit required under Section 404 for actions that may result in discharge of dredged or fill material into a tributary to, wetland, or associated water source for a navigable river.

The Rivers and Harbors Act of 1899 establish the USACE regulatory authority over U.S. navigable waters. This act also establishes permit requirements for construction of bridges, causeways, dams, or dikes within or over navigable waters of the U.S. Bridge and causeway construction is regulated by the Transportation Secretary, while dam and dike permits are reviewed by the USACE. Section 10 of the Act requires a USACE permit for construction of any "obstruction of navigable waters" of the U.S. and for any excavation, fill, or other modification to various types of navigable waters. Section 13 requires a USACE permit for discharge of refuse of any kind (except liquid from sewers or urban runoff) from land or vessel, into the navigable waters of the U.S. or into their tributaries. Similarly, discharge of refuse is prohibited upon the banks of navigable waters or their tributaries where the refuse could be washed into the water.

National Park Service policies require protection of water quality consistent with the Clean Water Act. The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." To enact this goal, the U.S. Army Corps of Engineers has been charged with evaluating federal actions that result in potential degradation of waters of the United States and issuing permits for actions consistent with the Clean Water Act. The U.S. Environmental Protection Agency also has responsibility for oversight and review of permits and actions, which affect waters of the United States.

All construction activities would occur near or within the existing parking lot footprint which is several hundred feet from the Colorado River. All proposed activities would have negligible impacts to water resources and there would be no unacceptable impacts to water resources; the proposed actions are consistent with §1.4.7.1 of NPS 2006 *Management Policies*. Because there would be no unacceptable impacts, this topic is dismissed from further analysis.

Floodplains

Executive Order 11988 *Floodplain Management* requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. The National Park Service under 2006 *Management Policies* and Director's Order 77-2 *Floodplain Management* would strive to preserve floodplain values and minimize hazardous floodplain conditions. According to Director's Order 77-2 *Floodplain Management*, certain construction within a 100-year floodplain requires preparation of a statement of findings for floodplains. Potash Boat Ramp area is within a 100 year flood regulatory floodplain along the Colorado River. However, the project is an exempted action as these improvements are for picnic facilities and small associated daytime parking

facilities and campsite facilities would not be established. This action does not require a statement of findings.

A site visit with the Utah USFWS mentioned that some floodplains harbor fish larvae or juveniles when the floodplain is flooded. It was determined that the floodplain height is above winter river stage and would not harbor federally listed Colorado River fish. Further, there would be no unacceptable impacts to floodplains; the proposed actions are consistent with §1.4.7.1 of NPS 2006 *Management Policies*. Because the impacts to floodplains in the project area would be minor, this topic is dismissed from further analysis.

Wetlands

For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." Executive Order 11990 *Protection of Wetlands* requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, §404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as stated in 2006 *Management Policies* and Director's Order 77-1 *Wetlands Protection*, strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In accordance with DO 77-1 *Wetlands Protection*, proposed actions that have the potential to adversely impact wetlands must be addressed in a statement of findings for wetlands.

Although there are wetlands located below the project area, there are not wetlands within the proposed construction site. The impact of constructing or not constructing the picnic facilities on wetlands would be negligible. Further, there would be no unacceptable impacts to wetlands; the proposed actions are consistent with §1.4.7.1 of NPS 2006 *Management Policies*. Because there are no wetlands in the project area and because there would be no unacceptable impacts, this topic is dismissed from further analysis.

Soundscape

In accordance with 2006 *Management Policies* and Director's Order-47 *Sound Preservation and Noise Management*, an important component of the National Park Service's mission is the preservation of natural soundscapes associated with national park units (NPS 2006). Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among National Park Service units as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

During construction, human-caused sounds would likely increase due to construction activities, equipment, vehicular traffic, and construction personnel. Any sounds generated from construction would be temporary, lasting only as long as the construction activity is generating the sounds, and would have a negligible to minor adverse impact on visitors and employees. Further, such negligible or minor impacts would not result in any unacceptable impacts; the proposed actions are consistent with §1.4.7.1 of NPS 2006 *Management Policies*. Because these effects are minor or less in degree and would not result in any unacceptable impacts, this topic is dismissed from further analysis.

Park Operations

Improving the parking area and constructing new facilities at the Potash Boat Launch area may have a minor effect on park operations. The material used would have a minor effect on maintenance issues and would not require additional equipment or staff to implement and maintain the new facilities outside of current maintenance issues. Maintenance needs after completion would be minimal due to the fact that the Bureau of Land Management would continue to clean the vault toilets as they previously have done. The NPS would pump the vault toilets as part of their current park operations. The new kiosks would provide another information source for park personnel to inform park visitors and concessioners about the Colorado River, Canyonlands National Park and the expectations of visiting a national park. The interpretive operations would have less than minor impacts to current park operations. Because there would be minor effects on overall park operations and the proposed actions would not result in any unacceptable impacts, this topic is dismissed from further analysis.

Socioeconomics

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Implementation of the proposed action could provide a negligible beneficial impact to the economy of nearby Moab, UT due to beneficial impacts to local businesses generated from these improved facilities. The materials for the project would be acquired from local business but would be temporary and negligible, lasting only as long as construction. Since National Park Service is providing the workforce there would be no increase in local workforce and revenue. Because the impacts to the socioeconomic environment would be negligible, this topic is dismissed from further analysis.

Prime and Unique Farmlands

The Farmland Protection Policy Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that would result in the conversion of these lands to non-agricultural uses. Prime or unique farmland is classified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), and is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. According to the NRCS, the project area does not contain prime or unique farmlands (NRCS 2003). Further, there would be no unacceptable impacts to prime and unique farmlands; the proposed actions are consistent with §1.4.7.1 of NPS 2006

Management Policies. Because there would be negligible effects on prime and unique farmlands, this topic is dismissed from further analysis.

CHAPTER 2: ALTERNATIVES CONSIDERED

During fall of 2008 an interdisciplinary team of National Park Service employees, Utah Guides and Outfitters and the owner of Intrepid Potash land met for the purpose of developing project alternatives. This meeting resulted in the definition of project objectives as described in the *Purpose and Need*, and a list of alternatives that could potentially meet these objectives. Three alternatives were developed, a no action alternative and two action alternatives. Of these, one of the action alternatives was dismissed from further consideration for various reasons, as described later in this chapter. The no action alternative and the action alternative are carried forward for further evaluation in this EA. A summary table comparing alternative components is presented at the end of this chapter.

Alternatives Carried Forward

Alternative 1- No Action- Do not construct additional facilities or improve the parking area.

The Potash Boat Launch area contains 1.6 acres of roughly developed dirt parking area for river runners to access the Colorado River with their motorized and non-motorized boats. Currently the parking area is not delineated very well and issues arise when groups who utilize the river for several days would park their vehicles near the boat ramp. Other visitors using the boat ramp as a daily use had a difficult time getting their boats on and down the ramp with vehicles parked along the top of the boat ramp. Also there are two entrances into the parking lot from the main dirt road.

Currently three vault toilets are provided within the Potash area. A basic vault toilet and kiosk is provided near the concrete boat ramp. This vault toilet is not sufficient enough facility to accommodate the use of thousands of river users and was frequently in need of cleaning and maintenance. The basic board kiosk between the pit toilet and the boat ramp contains simple information regarding exotic mussels but does not have enough room to provide additional information about Canyonlands National Park, the expectations of using the Colorado River and entering a national park. In the summer of 2009, the NPS did build a double vault toilet near the main parking area to better accommodate visitors.

Although this area is not a formal camping area, some camping does occur. Several campfire rings and trash in the area are evidence of this. A network of informal trails also runs throughout this area.

In attempt to get a handle of the invasion of tamarisk (*Tamarix chinensis*), a non-native species, the Utah Division of Forestry, Fire and State Lands, cut down one acre of tamarisk along the high water bench within the Potash Boat Launch area in the summer of 2009.

Under this alternative, this parking area would remain as is and no further improvements would be provided or constructed.

Alternative 2 – Action- Upgrade the Potash Boat Launch Area

This alternative proposes to provide improvements (See Figure 2: Proposed Site Plan) to the area by constructing three 14'x16' shade structures. These shade structures would have lattilla roofs that would provide shade only and would not stop the rain. The floor area would be compacted soil or road base.

One 6'x6' changing station would be constructed near the shade structures for people to use to change in and out of their river gear. The changing room would have no roof, but it would have a concrete floor. A road would be constructed around the back of the double vault toilet as shown on the site plan to enable visitors with trailers with boats to access the picnic area. The road would be 36' wide and 320' long, and would have a compacted road base running surface. The total road area is 13,750 square feet. A 24" diameter culvert may be needed at the approximate location shown on the site plan.

Boundaries of the parking area would be established by lining the limits of the parking area with dirt mounds and rocks from the area. One access road would be closed off as shown in the site plan to expand the area for more parking. The entire existing parking area would be graded and graveled. Rock material may be acquired from the Intrepid quarry and gravel material would be commercially purchased and brought to the proposed site as a haul and dump operation. There would be no staging areas or borrow sources.

Three information kiosks would be constructed near the boat ramp, near the double vault toilet and the entrance to the parking area. A trail would be developed from the shade structures to the boat ramp. This would require clearing an additional 1,000 square feet of tamarisk. The informal trails may be revegetated to keep foot traffic localized on the main trail and prevent additional social trails.

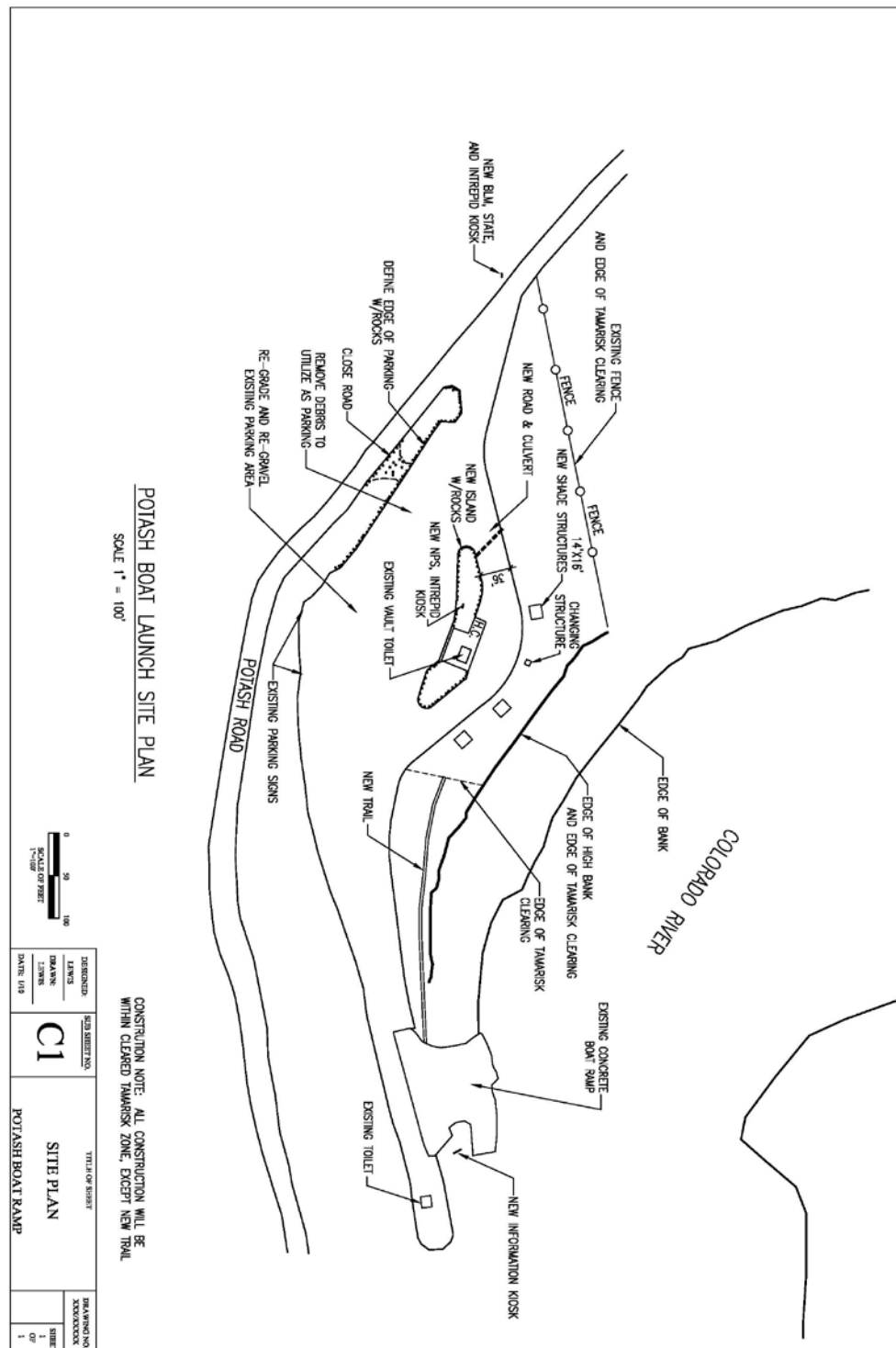


Figure 2: Proposed Site Plan

Alternatives Considered and Dismissed

A number of alternatives were developed based on the results of internal and external scoping. Alternatives are different ways to meet the purpose and objectives, while resolving needs or issues. The following section discusses those alternatives considered, but eliminated from further study. This discussion also includes an explanation of why these alternatives did not warrant additional analysis. These alternatives and issues were eliminated from detailed study because they did not meet the criteria below.

- (a) technical or economic infeasibility.
- (b) inability to meet project objectives or resolve need.
- (c) duplication with other, less environmentally damaging or less expensive alternatives.
- (d) conflict with an up-to-date and valid park plan, statement of purpose and significance, or other policy, such that a major change in the plan or policy would be needed to implement.
- (e) too great an environmental impact.

One alternative was considered, but was eliminated from detailed study:

Upgrade the Potash Boat Launch area and expand the boat ramp.

Work to expand or improve the launch ramp at Potash would include areas that are outside the private land the National Park Service is authorized by the landowner to operate on so this alternative was dismissed from further consideration.

Best Management Practices

The following best management practices were developed to minimize the degree and/or severity of adverse effects and are common to the action alternative.

- All construction equipment would remain within the existing project area. No equipment would be allowed in the floodplain area.
- To minimize the amount of ground disturbance, staging and stockpiling areas would be in previously disturbed areas, away from visitor use areas and the river channel to the extent possible. All staging and stockpiling areas would be returned to pre-construction conditions or improved by restoring to more natural conditions following construction.
- Because disturbed soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as silt fences and/or sand bags would be used to minimize any potential soil erosion.
- Revegetation efforts would strive to reconstruct the natural spacing, abundance, and diversity of native plant species using native species. All disturbed areas would be restored as nearly as possible to pre-construction conditions shortly after construction activities are completed.

- Fugitive dust generated by construction would be controlled by spraying water on the construction site. Water would be hauled in and would not be pumped from the Colorado River.
- To reduce noise and emissions, construction equipment would not be permitted to idle for long periods of time.
- To minimize possible petrochemical leaks from construction equipment, regularly monitor and check construction equipment to identify and repair any leaks. Equipment will be refueled in disturbed areas, away from the river channel and floodplain.
- Maintenance workers and supervisors would be informed about special status species. If a species were discovered in the project area, provisions would require the cessation of construction activities until resource management staff re-evaluates the project.
- Prior to construction activities, the project area would be resurveyed. If listed species are found in the vicinity of the project area activities would be limited to ones that are unobtrusive or to times of the year when the listed species are not present or less affected by disturbance.
- Any groundbreaking construction activities should be performed before migratory birds return to the site (approximately March 15) or after all young have fledged (approximately July 31) to avoid incidental take.
- If construction is scheduled to start during the period in which migratory bird species are present, steps should be taken to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures and use of various excluders (e.g., noise). Birds can be harassed to *prevent* them from nesting on the site. Once a nest is established, they cannot be harassed until all young have fledged and are capable of leaving the nest site.
- If construction is scheduled to start during the period when migratory birds are present, a site specific survey for nesting migratory birds should be performed starting at least 2 weeks prior to site clearing.
- If nesting birds are found during the survey, buffer areas should be established around nests.
- Construction should be deferred in buffer areas until birds have left the nest. Confirmation that all young have fledged should be made by a qualified biologist.
- Construction activities would maintain a seasonal buffer from March 1 through August 31, if occupied Mexican spotted owl nesting sites area found within 1 mile of Potash, to protect breeding and nesting owls.
- Construction activities would maintain a seasonal buffer from early May through mid September to protect nesting and fledgling Southwestern willow flycatchers, if occupied nests found within one quarter mile of Potash.

- Construction activities would maintain seasonal buffers if occupied raptor nesting sites are found in the vicinity of Potash.
- Parking area would be identified and may be fenced with construction tape or some similar material prior to construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction.
- In the unlikely event cultural resources materials are inadvertently discovered during the project, all construction activities would be halted until the materials can be analyzed and recovered by NPS archeologists. The state historic preservation officer and the Advisory Council on Historic Preservation, would be consulted as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. If needed, formal §106 compliance would be conducted prior to resuming construction. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.

Alternative Summaries

Table 1 summarizes the major components of Alternatives 1 and 2 and compares the ability of these alternatives to meet the project objectives (the objectives for this project are identified in the *Purpose and Need* chapter). As shown in the following table, Alternative 2 meets each of the objectives identified for this project, while Alternative 1 does not address all of the objectives.

Table 1: Alternatives Summary and Project Objectives

Meets Project Objectives?	Alternative 1: No Action	Alternative 2: Proposed Alternative
	Leave Potash Boat Launch area as is and no further improvements would be provided or constructed.	Construct three shade structures, one changing station, a road around the toilets accessing the picnic area, a trail from the picnic area to the boat launch, establish parking boundaries and signage, and construct three informational kiosks.
To provide basic facilities to accommodate the high level of use by park visitors, the general public and commercial outfitters.	No. This alternative does not provide enough facilities for the high level of use this area receives throughout the season. The facilities currently are inadequate.	Yes. This alternative provides shaded picnic facilities for all user groups, a changing station for river users, a delineated parking area for overnight river users and day use visitors.
To provide access to park information that would educate the public on the rules and regulations of the area, the river, and a	No. This alternative does not provide enough access to park information. The existing information board is small and not in a prominent location for	Yes. This alternative would provide three kiosks to display information to the public in several key locations throughout the Potash boat launch area. These kiosks would provide information

Meets Project Objectives?	Alternative 1: No Action	Alternative 2: Proposed Alternative
national park.	the majority of the public to access.	that would educate the public on the rules and regulations while visiting a national park. Information on proper river etiquette would also be provided along with any other relevant information needed.
To provide a parking area that is functional for all user groups.	No. This alternative would leave the parking area as is. There would be no delineation of parking boundaries or signage to inform the public of where to park overnight.	Yes. This alternative would clean up the parking area and delineate the boundaries with local rock. Signage would also be placed to inform the public where to park while using the river overnight.

Table 2 summarizes the anticipated environmental impacts for both alternatives. Only those impact topics that have been carried forward for further analysis are included in this table. The *Affected Environment and Environmental Consequences* chapter provides a more detailed explanation of these impacts.

Table 2: Environmental Impact Summary by Alternative

Impact Topic	Alternative 1: No Action	Alternative 2: Proposed Alternative
Soil	<i>Negligible</i> impacts to soil.	Impacts to soils in undisturbed sites would be slight and in small areas. The majority of work would be conducted in highly disturbed areas and mostly within the parking area. The impacts to soil productivity would be <i>direct, adverse, minor, site-specific and short-to long term</i> .
Vegetation	<i>Negligible</i> impacts to vegetation.	Some native vegetation in the project area would be removed but these areas are small and have already been impacted by visitor use. The impacts would be <i>directly adverse, minor, site-specific and short-to long term</i> .
Threatened and Endangered Species	<i>Minor</i> impacts to threatened and endangered species.	Any ground-disturbing activity may have a detectable effect on threatened and endangered species and species of special concern. The impacts of proposed activities may be <i>directly and indirectly adverse, minor, site-specific, and short-term</i> .
Visitor Use and Experience	Impacts would be <i>directly and indirect adverse, moderate, site-specific and long-term</i> . Not providing shade structures and informational kiosks for visitors would have an adverse impact. Current parking for visitors is not	The establishment of new facilities to the Potash area would have beneficial moderate effects. Construction disturbances (noise, dust, limited parking) would have a minor, temporary adverse effect. Overall this alternative would have <i>direct and indirect adverse and beneficial, minor to moderate, site-specific, short and long-term</i> impacts.

Impact Topic	Alternative 1: No Action	Alternative 2: Proposed Alternative
	delineated. Therefore, the no action alternative would have <i>direct and indirect adverse, moderate, site-specific and long-term</i> impacts.	

Identification of the Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the Council on Environmental Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in NEPA’s §101:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that would permit high standards of living and a wide sharing of life’s amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative 1, no action alternative, barely meets the above six evaluation factors because it only preserves important historic, cultural and natural aspects and supports a diverse environment. Alternative 1 does not fulfill the responsibilities attaining the widest range of beneficial uses of the environment without risk of health or assure for all generations a safe, healthful and productive surrounding, or achieve the balance between population and resource use. Although Alternative 1 minimizes potential impacts to significant resources such as natural resources, it does not achieve a balance between these resources without degradation.

Alternative 2 is the environmentally preferred alternative because it best addresses these six evaluation factors. This alternative would provide improvements to the area for visitors, while minimizing environmental impacts to the extent possible. The proposed facilities and improved parking area would be used by future generations.

No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. Because it meets the purpose and need for the project, the project objectives, and is the environmentally preferred alternative, Alternative 2 is also recommended as the National Park Service preferred alternative. For the remainder of the document, Alternative 2 would be referred to as the preferred alternative.

CHAPTER 3- AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the affected environment (existing condition or baseline information) and potential environmental consequences, or impacts that would occur as a result of implementing the proposed project. Topics analyzed in this chapter include soil, vegetation, water resources, threatened and endangered species and visitor use and experience. Direct, indirect, and cumulative effects, as well as impairment are analyzed for each resource topic carried forward. Potential impacts are described in terms of intensity, type, context, and duration. General definitions are defined as follows, while more specific impact thresholds are given for each resource at the beginning of each resource section.

- **Intensity** describes the degree, level, or strength of an impact. For this analysis, intensity has been categorized into negligible, minor, moderate, and major. Because definitions of intensity vary by resource topic, intensity definitions are provided separately for each impact topic analyzed in this EA/AEF.
- **Type** describes the classification of the impact as either beneficial or adverse, direct or indirect:
 - *Beneficial*: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
 - *Adverse*: A change that moves the resource away from a desired condition or detracts from its appearance or condition.
 - *Direct*: An effect that is caused by an action and occurs in the same time and place.
 - *Indirect*: An effect that is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable.
- **Context** describes the area or location in which the impact would occur. Are the effects site-specific, local, regional, or even broader? In this document site-specific impacts refer to the immediate project footprint, localized impacts refer to the park as a whole and regional impacts refer to the southeastern Utah region.
- **Duration** describes the length of time an effect would occur, either short-term or long-term:
 - *Short-term* impacts generally last only during construction, and the resources resume their pre-construction conditions following construction.
 - *Long-term* impacts last beyond the construction period, and the resources may not resume their pre-construction conditions for a longer period of time following construction

Cumulative Effects

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and preferred alternative.

Cumulative impacts were determined by combining the impacts of the preferred alternative with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Canyonlands National Park and the surrounding region including the Potash Boat Launch area. The temporal scope includes projects within a range of approximately thirty years. Given this, the following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

- **Mining of oil and gas:** Oil and gas exploration and development has been ongoing and is widespread on BLM land in southeastern Utah. Mining and exploration is allowed in the Potash region of BLM land, adjacent to the northern and western boundaries of Canyonlands National Park.
- **Intrepid Potash Mine:** According to USGS reports, the Paradox Basin contains up to 2.0 billion tons (1.8 billion metric tons) of potash, with the primary mine being the one at the end of State Road 279. River water is pumped into the mine and dissolves the potash, after which the brine solution is pumped to evaporation ponds. The plant was built in the early 1960's and continues to produce potash today.
- **Building the boat ramp:** the Utah Guides and Outfitters Association built the ramp and have done some of the current improvements to the area.
- **Exotic species:** Improving the parking area and constructing the new facilities could further introduce non-native plant species into the Potash Boat Launch area.
- **Recreation:** Several thousands of visitors vacation in Moab each year and come to explore the diverse and extraordinary canyons of southeastern Utah, and those especially Canyonlands National Park and Arches National Park. It is also the preeminent base of operations for river trips, bicycle excursions, hikes, and four-wheel-drive expeditions through the red-rock country near-by. Visitation along the Potash road increases each year and the new facilities would be able to accommodate more visitors to the Potash Boat launch area.

Impairment

NPS 2006 *Management Policies* require analysis of potential effects to determine whether or not actions would impair park resources (NPS 2006). The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, 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 parks, 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. An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

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

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. Although this project is federally funded and is using federal resources, this project occurs on private land. Therefore, there will be no impairment to park resources and a determination on impairment does not need to be made in the *Conclusion* section for each of the resource topics carried forward in this chapter.

Unacceptable Impacts

The impact threshold at which impairment occurs is not always readily apparent. Therefore, the National Park Service applies a standard that offers greater assurance that impairment would not occur by avoiding unacceptable impacts. These are impacts that fall short of impairment, but are still not acceptable within a particular park's environment. Park managers must not allow uses that would cause unacceptable impacts; they must evaluate existing or proposed uses and determine whether the associated impacts on park resources and values are acceptable.

Virtually every form of human activity that takes place within a park has some degree of effect on park resources or values, but that does not mean the impact is unacceptable or that a particular use must be disallowed. Therefore, for the purposes of these policies, unacceptable impacts are impacts that, individually or cumulatively, would

- be inconsistent with a park's purposes or values, or
- impede the attainment of a park's desired future conditions for natural and cultural resources as identified through the park's planning process, or
- create an unsafe or unhealthful environment for visitors or employees, or
- diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or
- unreasonably interfere with
 - * park programs or activities, or
 - * an appropriate use, or
 - * the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park.
 - * NPS concessionaire or contractor operations or services.

In accordance with NPS 2006 *Management Policies*, park managers must not allow uses that would cause unacceptable impacts to park resources. To determine if unacceptable impact could occur to the resources and values of Canyonlands National Park, the impacts of proposed actions in this EA were evaluated based on the above criteria. A determination on unacceptable impacts is made in the *Conclusion* section for each of the resource topics carried forward in this chapter.

Soil

Affected Environment

There is only one map unit that describes the soils found within in the Potash area according to the soil survey conducted by the Natural Resources Conservation Service (NCRS) and updated in 2009 (NCRS 2010). The map unit is called the Rock-outcrop-Moenkope association and is found on structural benches and cuestas. Major components of this soil complex are the Rock outcrop which makes up 60 percent of the unit and the Moenkope that makes up 25 percent of the map unit. Minor components make up the remaining 15 percent. The Rock outcrop component is a term used to describe a miscellaneous area that has little or no soil and consequently supports little or no vegetation without major reclamation. Moenkope composition consists of eolian deposits derived from sandstone and /or residuum weathered from sandstone with a slope of 3 to 20 percent. This soil profile typically consists of fine sandy loam at 0 to 2 inches, sandy loam from 2 to 19 inches and unweathered bedrock from 19 to 23 inches and is well drained.

Methodology and Intensity Thresholds

Analyses of the potential intensity of impacts to soils were derived from available soils information (NCRS 2009), US Geologic Survey soil scientists, and from park

staff's past observations of the effects on soils from visitor use and construction activities. The thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** Any effects to soils (loss of soil surface roughness, increase in compaction or erosion) would be below or at the lower levels of detection. Any effects to soils would be slight and short term. Impacted area would be very small (e.g., footprints), site-specific, and no mitigation measures would be necessary.
- Minor:** The effects to soils (loss of soil surface roughness, increase in compaction or erosion) would be detectable. Effects would be slight (e.g., the impact of one pass of a vehicle), the area affected would be small (e.g., 20' of vehicle tracks), and the damage site-specific. Impacts would be short-term. If mitigation were needed to offset adverse impacts, it would be simple to implement and likely successful.
- Moderate:** The effects to soils (loss of soil surface roughness, increase in compaction or erosion) would be readily apparent and detectable, likely long-term, and would result in a change to the soil character over a relatively localized area (up to 0.5 acre). Mitigation measures would probably be necessary to offset adverse impacts and would likely succeed.
- Major:** The effect on soil and more mature soil crust (colored lichen present) would be readily apparent and detectable, long-term, and would substantially change the character of the soils over a large localized or regional area. Mitigation measures to offset adverse impacts would be needed, extensive, and their success could not be guaranteed.

Impacts of Alternative 1 (No Action)

The no action alternative would have *negligible* impacts to soil because no construction activities would be conducted within the Potash Boat Ramp area. However, social trailing would continue to be a problem and cause greater loss of soil from soil erosional issues.

Cumulative Effects:

A number of potential activities affect soils, including visitors, vehicle traffic, and road/trail maintenance. Surface-disturbing activities such as four wheeling on nearby dirt roads could have additive effects on regional soil loss and erosion. Not constructing the improvements to the project area would have negligible additional effects on soils.

Conclusion:

Overall, the no action alternative would have negligible to minor, adverse, site-specific, long-term impacts to soil. Although construction activities would not occur, there will be minor impacts from the social trails. Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of NPS 2006 *Management Policies*.

Impacts of Alternative 2 (Preferred)

Under the preferred alternative, intrusion by personnel and equipment constructing within the project area may cause minor long-term impacts to the soil within the area of shade structures, changing structure and loop road and short-term impacts around the parking lot edge. Some impacts to soils would occur from the new trail building and digging for concrete foundations of shade structures. Additional effects could include compaction of soil and disturbance to upper soil profiles. All these effects to soil would be detectable in some areas and minor. To reduce the impacts of park personnel on soils, crews and equipment would stay within the parking lot boundaries as much as possible when developing the road and spreading the gravel surface. Fill material that has eroded off the parking area has the potential to impact additional soil productivity around the parking area. Overall soil productivity impacts would be *direct, adverse, minor, site specific and short to long-term*.

Cumulative Effects:

A number of potential activities affect soils, including visitors, vehicle traffic, and road/trail maintenance. Surface-disturbing activities such as recreational four wheeling on nearby dirt roads could have additive effects on regional soil loss and erosion. Constructing a new parking lot would have minor additional adverse effects on soil productivity.

Conclusion:

Under the preferred alternative, the impacts to soils in undisturbed sites would be slight and in small areas. The majority of work would be conducted in highly disturbed areas and mostly within the parking area. The impacts to soil productivity would be *direct, adverse, minor, site-specific and short-to long term*. Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of NPS 2006 *Management Policies*.

Vegetation

Affected Environment

The Potash Boat Launch area is located eighteen miles from Moab, Utah down State Road 279 along the Colorado River. The immediate environment is in a highly disturbed area either by visitor use or from flooding events over the years. Non- native plants are more abundant than native vegetation. Parts of this area were almost completely overgrown with Tamarisk (*Tamarix chinensis*) until the Utah Department of Natural Resources mechanically removed one acre in the fall of 2009. Currently, the majority of tamarisk is found along the high bank of the Colorado River. A field survey conducted by the park biological technician in April 2010 recorded approximately 10 other non-native species within the project area (Moran 2010). A dominant carpet of Kochia (*Bassia scoparia*) seedlings were found coming up in the cut tamarisk area. Other non-native species that are present is African mustard (*Malcolmia africana*), Stork's-bill (*Erodium cicutarium*), Russian thistle (*Salsola tragus*), Tumble mustard (*Sisymbrium altissimum*), and Annual wheatgrass (*Eremopyrum triticeum*). Very few native species are found in the project area. Some native species that are found and are scattered throughout the project area are Coyote willow (*Salix exigua*), Red-root flat sedge (*Cyperus erythrorhizos*), Wild rhubarb (*Rumex hymenosepalus*), Mountain

pepperweed (*Lepidium montanum*) and a few Cottonwood (*Populus fremontii*) saplings.

Methodology and Intensity Thresholds

Analyses of the potential intensity of impacts to vegetation were derived from the available scientific data and literature and park staff's past observations of the effects on vegetation from visitor use and construction activities. The thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** No native vegetation populations would be affected but some individual native plants could be affected as a result of the alternative (site-specific). The effects would be short-term, and on a small scale.
- Minor:** The alternative would affect some individual native plants and a relatively minor portion of that species' population (site-specific). Impacts would be short-term. Mitigation to offset adverse impacts could be required and would be effective.
- Moderate:** The alternative would affect individual native plants and a sizeable segment of the species' population long-term and over a relatively large area (site-specific or local). Mitigation to offset adverse impacts could be extensive, but would likely be successful.
- Major:** The alternative would have a considerable long-term effect on native plant populations over a relatively large local or regional area. Mitigation measures to offset the adverse impacts would be required, extensive, and success would not be guaranteed.

Impacts of Alternative 1 (No Action)

The no action alternative would have *negligible* impacts to vegetation because no construction activities would be conducted within the project area.

Cumulative Effects:

Increasing recreation and road traffic to the boat launch area would continue to spread exotic species and potentially impact native plant communities. Surface disturbances associated with road and trail maintenance projects as well as nearby four wheel driving could lead to the establishment of exotic plants. Not constructing the improvements to the project area would have negligible additional effects on vegetation.

Conclusion:

The no action alternative would have negligible impacts to vegetation because no construction activities would be conducted. Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of NPS 2006 *Management Policies*.

Impacts of Alternative 2 (Preferred)

Under this alternative, construction activities would result in minor impacts to vegetation. The establishment of shade structures and kiosks and improving the existing parking area would have short to long term adverse impacts to the vegetation within the 1.6 acres of the project area. Some vegetation would be removed within the shade structure sites and changing room site as well as

within the loop road. As a result of the construction and improvements to the parking area, there could be a higher likelihood of the transport of exotic species from vehicles and visitors. Creating an established trail from the boat ramp to the restrooms and picnic area would further improve local vegetation conditions by keeping foot traffic localized. Informal social paths may be reseeded if possible. Impacts to vegetation would be *directly adverse, minor, site-specific and short and long-term* in the surrounding area.

Cumulative Effects:

Increasing recreation and road traffic to the boat launch area would continue to spread exotic species and potentially impact native plant communities. Surface disturbances associated with road and trail maintenance projects as well as nearby four wheel driving could lead to the establishment of exotic plants. Constructing improvements to the parking area would have minor additional negative effects on vegetation.

Conclusion:

The preferred alternative would have minor to moderate impacts on vegetation in the area's vegetation community. Clearing of dense non-native tamarisk and replanting native riparian plants would be a positive impact as natural riparian ecological values are restored. Some native vegetation in the project area would be removed but these areas are small and have already been impacted by visitor use. The impacts to vegetation would be *directly adverse, minor, site-specific and short-to long term*. Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of NPS 2006 *Management Policies*.

Threatened, Endangered and Species of Concern

Affected Environment

This section summarizes federally threatened and endangered species and candidate species potentially present within the project area. The biological assessment analysis pursuant to section 7 of the Endangered Species Act (ESA) is also included in this section. This section and the following Impact Analysis section for Alternative 2 (Preferred) of this EA contain information and analysis pertaining to the relevant federally listed and candidate species consistent with the NPS obligations under the ESA. Collectively, these would serve as a biological assessment for these species. Table 3 summarizes federally listed threatened, endangered and candidate species that may be present or have habitat in the project area as identified through correspondence with the Utah USFWS Field Office and National Park wildlife surveys. Best management practices for each specific species are included in Chapter 2. The information and determination of effects for federally listed and candidate species under the preferred alternative is also included.

Mexican Spotted Owl- Steep-walled rocky canyonlands provide typical owl habitat for the federally threatened *Strix occidentalis lucida* within the Utah portion of the Colorado Plateau Recovery Unit. Canyon habitat is used by owls for nesting, roosting, and foraging and includes landscapes dominated by vertical walled rocky cliffs within complex watersheds, including many tributary side canyons. Rock walls must include caves, ledges, and fracture zones that

provide protection for nesting and roosting sites. Breeding sites are located below canyon rims; however, it is known that owls use areas outside of the canyons (i.e., rims and mesa tops). Owls nest and roost primarily on cliff faces using protected caves and ledges, and forage in canyon bottoms, on cliff faces and benches, and along canyon rims and adjacent lands. Extensive inventories have been conducted and a number of breeding Mexican spotted owls were found in Canyonlands National Park. Most of the existing twenty-two Protected Activity Centers (PAC) in the park were surveyed sometime during 2002 and 2003. A total of 47 Mexican spotted owls were confirmed within Canyonlands in 2002-2003. This total includes 10 pairs and 27 individuals (Schelz et al. 2004). Two pairs and 5 individuals were confirmed in the Maze District, 3 pairs and 7 individuals were in the Island-in-the-Sky District, and 5 pairs plus the remaining 15 individuals were in the Needles District (Schelz et al. 2004). There is only one known nest outside the park boundaries near the project area. This nest is approximately 2 miles northwest of the Potash Boat Launch area on Bureau of Land Management land (Sloan 2010).

Southwestern Willow Flycatcher- This endangered migratory bird, *Empidonax traillii extimus*, requires dense riparian, cottonwood- willow habitat (although it has adapted to tamarisk) that is associated with rivers, streams and wetlands for nesting and breeding. The SEUG area, especially in Canyonlands and Arches National Park has this potential habitat. In 1999, a survey of the Southwestern willow flycatcher by the USGS was conducted along the Colorado and Green Rivers in Canyonlands. The survey from the park's boundary to the Colorado/Green River confluence determined that although many flycatchers were detected they appeared to use these portions of rivers as a migratory stopover rather than as a breeding area (Johnson et. al.1999). The USGS conducted a study on the southwestern willow flycatcher from 1999 to 2001. They surveyed the segment of river adjacent to Arches National Park from the Canyonlands National Park boundary to Dewey Bridge (30 miles upstream from the park). The same results were found as in Canyonlands. Although some willow flycatchers were detected, the flycatcher appears to use this portion of the river as a migratory stopover as well (Johnson et al. 1999). In the summer of 2009 a SEUG wildlife biologist conducted a wildlife survey within the project area and no southwestern willow flycatchers were detected (Sloan 2010).

Colorado Pikeminnow, Razorback Sucker, Humpback Chub and Bonytail Chub- These four federally endangered fish species occur in the Upper Colorado River Basin, including the Green and Colorado Rivers. These fish require a diversity of habitats within the Colorado River Basin, which differ across species and life stages. In addition to main channel habitat, low velocity side channels, backwaters, oxbows, sloughs, and flooded bottom lands are all important habitats for both young and adult fish. Potash Boat Launch area is along the Colorado River sixteen miles upstream from Canyonlands National Park. The entire segments of the Green and Colorado Rivers that flow through the park have been designated as critical habitats by the USFWS for the Colorado pikeminnow and razorback sucker (USFWS 2010). The humpback chub and bonytail prefer eddies, pools, and backwaters near swift current in canyon-bound stretches of larger rivers and are found near the confluence of the Green and Colorado rivers in Cataract Canyon (USFWS 2010).

Yellow-billed Cuckoo- *Coccyzus americanus occidentalis* habitat consists of old-growth riparian cottonwood- willow galleries with dense understories. The riparian zone along the Colorado includes many areas that appear, based on vegetation characteristics, to be potential yellow-billed cuckoo breeding habitat (e.g., overstory of cottonwood spp. and/or old growth tamarisk with dense understory (Halterman 1991). During 1999, 2000 and 2001 surveys in Canyonlands National Park by the USGS, only three yellow-billed cuckoo were documented. It was determined that all three cuckoos were likely migrants or unpaired non-breeding birds since none of the birds were detected on subsequent surveys (Johnson 2002). In the summer of 2009 a SEUG wildlife biologist conducted a wildlife survey within the project area and no yellow-billed cuckoos were detected (Sloan 2010).

Methodology and Intensity Thresholds

Identification of state and federally listed species and designated critical habitats was accomplished through discussions with park staff, informal and formal consultation with Utah USFWS Field Office and reviewing the Utah Division of Wildlife natural heritage databases. A letter requesting a current list of federal threatened, endangered, and special concern species was sent to the U.S. Fish and Wildlife Service.

- Negligible:** The alternative would not affect any federal or state listed individuals or their habitat within the project area.
- Minor:** The alternative would affect a few individuals of a listed species or have very localized impacts upon their habitat along the Colorado River. The change would require considerable scientific effort to measure and have barely perceptible consequences to the species or habitat function.
- Moderate:** The alternative would cause measurable effects on: (1) a relatively moderate number of individuals within a sensitive species population, (2) the existing dynamics between multiple species (e.g., predator-prey, herbivore-forage, vegetation structure-wildlife breeding habitat), or (3) a relatively large habitat area or important habitat attributes along the Colorado River. A sensitive species population or habitat might deviate from normal levels under existing conditions, but would remain indefinitely viable along the river.
- Major:** An action that would have drastic and permanent consequences for a sensitive species population, dynamics between multiple species, or almost all available critical or unique habitat area along the Colorado River. A sensitive species population or its habitat would be permanently altered from normal levels under existing conditions, and the species would be at risk of extirpation from the area.

Impacts of Alternative 1 (No Action)

The boat launch area is used frequently by visitors and the opportunity for threatened and endangered species and species of concern to nest and breed

within the project area is limited. The no action alternative would have *minor* impacts to threatened and endangered species and species of concern even though no construction activities would be conducted within the project area.

Cumulative Effects:

The definition of cumulative effects under Section 7 of the ESA is “those effects of future State or private activities, not involving Federal activities, which are reasonably certain to occur within the action area of the Federal action are subject to consultation.” The cumulative impacts analysis at the end of this section refers solely to the NEPA definition of cumulative impacts.

Mining of oil, gas and uranium, agricultural operations, increased visitation, urban development and new roads could affect threatened and endangered species and species of concern found outside park boundaries by causing habitat fragmentation and a reduction in habitats. This alternative is not expected to contribute to adverse cumulative impacts on these populations because a number of species-specific conservation measures would be implemented under this alternative to protect habitat of threatened and endangered species and species of concern. Not constructing the improvements to the project area would have negligible additional effects on threatened and endangered species of concern.

Conclusion:

The no action alternative would have *negligible* impacts to threatened and endangered species and species of concern because no construction activities would be conducted. Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of NPS 2006 *Management Policies*.

Impacts of Alternative 2 (Preferred)

Under the preferred alternative several proposed improvements would be conducted. Any ground-disturbing activity using backhoes, graders and other heavy construction equipment may have a detectable effect on threatened and endangered species and species of special concern. Management practices such as not conducting treatment during sensitive times (i.e. nesting) would limit these effects to being short-term and of little consequence to the species population. The impacts of proposed activities on threatened and endangered species and species of special concern may be *directly and indirectly adverse, minor, site-specific, and short-term*.

Cumulative Effects:

The definition of cumulative effects under Section 7 of the ESA is “those effects of future State or private activities, not involving Federal activities, which are reasonably certain to occur within the action area of the Federal action subject to consultation.” The cumulative impacts analysis at the end of this section refers solely to the NEPA definition of cumulative impacts.

Mining of oil, gas and uranium, agricultural operations, increased visitation, urban development and new roads could affect threatened and endangered species and species of concern found outside park boundaries by causing habitat fragmentation and a reduction in habitats. This alternative is not expected to contribute to adverse cumulative impacts on these populations because a

number of species-specific conservation measures would be implemented under this alternative to protect habitat of threatened and endangered species and species of concern. As a result, this alternative is not expected to have additive adverse cumulative impacts on threatened and endangered species and species of concern.

Conclusion:

Based on the analysis in a biological assessment, one of three possible determinations was chosen for each listed species based on the best available scientific literature, a thorough analysis of the potential effects of the plan, and the professional judgment of the biologists and ecologists who completed the evaluation. The three possible determinations are:

"No effect" – where no effect is expected;

"May affect - not likely to adversely affect" – where effects are expected to be beneficial, insignificant (immeasurable), or discountable (extremely unlikely); and

"May affect - likely to adversely affect" – where effects are expected to be adverse or detrimental.

Mexican spotted owl- Although there is suitable nesting habitat near the project there is only one known nest site 2 miles from the project area. This nesting site is outside the recommended spatial buffer of one mile from the project area. The proposed improvements *may affect but not likely to adversely affect* the Mexican spotted owl.

Southwestern willow flycatcher- Though flycatchers are documented most frequently nesting in dense willow thickets they have been known to occupy tamarisk thickets. Proposed project activities would have no effect on the tamarisk or other vegetation that the southwestern willow flycatcher would nest in. Although no southwestern willow flycatchers were detected in the project area the project may potentially impact their habitat. Spatial and seasonal buffers would be implemented if nesting birds are found within the project area. The proposed improvements *may affect but not likely to adversely affect* the southwestern willow flycatcher.

Colorado pikeminnow, Razorback sucker, Humpback chub and Bonytail chub- With the proposed improvements there is the potential for erosion due to the manual or mechanical removal of soil stabilizing vegetation on banks of the Colorado River. Loss of vegetation could result in temporary increases in surface water runoff. However, these fish are well adapted to the high silt load conditions of Colorado River. Potential increases in sediment resulting from the construction activities would have negligible effects to these fishes or designated critical habitats. All use of construction equipment and practices would adhere to the best management practices outlined in Chapter 2. The proposed improvements *may affect but not likely to adversely affect* these four endangered fish or their habitat.

Yellow-billed cuckoo- Although the yellow-billed cuckoo does not require as dense habitat as the southwestern willow flycatcher, the potential impacts for the cuckoo are the same as the flycatcher. Proposed project activities would have

no effect on the tamarisk or other vegetation that the yellow-billed cuckoo would nest in. Although no yellow-billed cuckoos were detected in the project area the project may potentially impact their habitat. Spatial and seasonal buffers would be implemented if nesting birds are found within the project area. The proposed improvements *would not contribute to listing* the yellow-billed cuckoo.

Implementation of this alternative would not result in any unacceptable impacts to threatened, endangered and species of concern and is consistent with §1.4.7.1 of NPS 2006 *Management Policies*.

Table 3: Summary of Federal and State Species of Concern found in Grand County, Utah and their likelihood of occurrence within the project area.

Common Name	Scientific Name	Status	Likelihood of occurrence	Determination of Effect for Alternative 2
Birds				
Mexican spotted owl	<i>Strix occidentalis</i>	T	Low. Limited suitable canyon habitat. No nesting sites found within project area during park surveys. Nearest known site is two miles away.	May affect, not likely to adversely effect
Southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	E	Moderate. Suitable habitat exists due to the dense tamarisk thickets along Colorado River corridor and in project area. No nesting sites found within project area during park surveys.	May affect, not likely to adversely effect
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C	Moderate. Suitable habitat exists due to the dense tamarisk thickets along Colorado River corridor and in project area. No nesting sites found within project area during park surveys.	Would not contribute to listing
Fish				
Bonytail chub	<i>Gila elegans</i>	E	Moderate. Native to the Colorado River system preferring eddies, pools and backwaters near swift current.	May affect, not likely to adversely effect
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	E	High. Found in Colorado River system in habitats from deep turbid rapids to flooded lowlands. Migrates through project area to reach spawning locations. Larval and juvenile fish will drift downstream after spawning events.	May affect, not likely to adversely effect
Humpback chub	<i>Gila cypha</i>	E	High. Found in Colorado River system. Spawn in slow, shallow backwater areas where young remain. Adults found in fast-moving whitewater environments. Known upstream in Desolation Canyon and downstream in Cataract Canyon.	May affect, not likely to adversely effect
Razorback sucker	<i>Xyrauchen texanus</i>	E	Low. In Utah, only found in Green River and tributaries in northeast corner of state.	May affect, not likely to adversely effect

References: Federal list as of March 2010 from US Fish and Wildlife Service; Utah Division of Wildlife Resources List by County in Utah from March 2010;
Status: E - Federally Endangered; T - Federally Threatened; C - Federal Candidate Species

Visitor Use and Experience Affected Environment

Canyonlands National Park is open year 'round and has an annual visitation of approximately 430,000 people. The busy season is usually from March through October with May typically being the peak month for visitation. The park averages 2,000 visitors a day and provides opportunities for camping, hiking, boating, and interpretive programs. The Colorado River flows calmly for 31 miles from the northeast park boundary past many attractions to its confluence with the Green River and is the eastern boundary of the Island in the Sky district. From the confluence to the south park boundary, the river passes through Cataract Canyon. These 14 miles of river contain 21 rapids representing some of the wildest white water in the United States. The Colorado is used by most river parties with the majority of users beginning their Cataract Canyon trip at Potash.

Currently 18 separate companies have concession contracts with the park and offer a wide variety of river trips to park visitors. Commercial operations by river running companies actually pre-date the establishment of Canyonlands National Park. These "concessioners" provide the opportunity for a river experience to those who could not or would not otherwise be able to engage in this type of activity. In 2009, commercial operations provided the opportunity for 3,096 visitors to experience the Colorado River put in the river at Potash. The park issued a total 360 river permits to individual parties in 2009 and 1,850 visitors accessed the Colorado from Potash that year. It is important to note that these numbers are what the park records via a river permit system and annual use logs submitted by the concessioners. It is unknown the number of visitors that access the river from Potash as a daily use or use Potash as a picnic/rest area.

Providing additional facilities such as shade structures, as well as informational kiosks and improving the parking area would benefit thousands of park visitors, local concession companies and the visitors to the Moab area.

Methodology and Intensity Thresholds

Visitor records and staff observations of visitation patterns combined with assessment of what is available to visitors under current management were used to estimate the effects of the actions on all alternatives. The impact on the ability of the visitor to experience a full range of park resources was analyzed by examining the resources impacted. The following definitions are used to define intensity levels:

- Negligible:** The effect on availability of desired visitor experiences, or the number of visitors affected, would be slight or nonexistent.
- Minor:** The effect on availability of desired visitor experiences, or the number of visitors affected, would be relatively small. The effect would be limited to relatively few individuals, be localized in area or short in duration, and/or affect recreation opportunities common in the park or region.
- Moderate:** The effect on availability of desired visitor experiences, or the number of visitors affected, would be intermediate. The effect would involve an intermediate number of visitors, portion of the park, duration, and/or affect recreation opportunities uncommon

in the park or region. The visitor would likely be able to express an opinion about the changes.

Major: The effect on availability of desired visitor experiences, or the number of visitors affected, would be substantial. The effect would involve a substantial number of visitors, portion of the monument, duration, and/or affect recreation opportunities uncommon or unique in the park or region. The visitor would likely be able to express a strong opinion about the changes.

Impacts of Alternative 1 (No Action)

The no action alternative would have moderate adverse impacts to visitor use and experience. The current parking area is very basic and the boat ramp area congested when many river parties leave their vehicles overnight parked above the ramp. Day use visitors have a difficult time maneuvering their boats down the ramp to put in the river. The summers are also extremely hot. The summer temperatures of the area average 92 degrees from May through September with July temperatures averaging at least 100 degrees. Not providing adequate shade could adversely impact visitors. With thousands of visitor accessing Canyonlands National Park via the Colorado River, there is no opportunity to interact with park staff to inform visitors about the park or the area, especially the river. Not providing informational kiosks for visitors would have an adverse impact. Therefore, the no action alternative would have *direct and indirect adverse, moderate, site-specific and long-term* impacts to visitor use and experience.

Cumulative Effects:

Any construction activities have the potential to affect visitor use and experience. Projects such as road improvements, exotic vegetation management, and trail maintenance have had or could have an adverse effect on visitor use and experience because of the inconvenience of construction noise, dust, and possible off-limit areas. Ultimately, however, these actions would have a beneficial effect on visitor use and experience because they were long-term enhancements to the functionality of the park, improving the visual and natural environments, visitor experience, interpretive opportunities and ease of visitor use. Under this alternative, visitor functions in the project area are not expected to change, and past actions have had beneficial impacts on visitor use and experience. Not constructing the improvements to the project area would have negligible additional effects on visitor use and experience.

Conclusion:

The no action alternative would have *direct adverse, moderate, site-specific and long-term* impacts to visitor use and experience because no construction activities would be conducted. Potash Boat Launch area is an opportunity to reach many visitors and provide beneficial improvements to enhance their visit in the area and on the river. By not providing shade or facilities that would benefit these visitors and other user groups using this area, impacts would be adverse and long-term.

Impacts of Alternative 2 (Preferred)

Under the preferred alternative, constructing improvements would have a beneficial, moderate, long-term impact to visitor use and experience. Building

shade structures over picnic tables would allow visitors to enjoy the area even during the hottest months. A changing area would benefit river users to change in and out of their river attire. Constructing a trail from the boat ramp to the picnic area and double vault toilets would reduce the use of the many social trails in the area. Constructing a loop road around the double vault toilets near the picnic tables would provide a pull through for visitors towing long trailers with rafts. At first, visitors may be adversely impacted during the constructing of these improvements but this would be short term and minor and would not affect their recreational opportunities.

Three informational kiosks would provide opportunities to display maps, local information, rules and regulations of a national park, emergency notices, and any other pertinent information. By providing this information on kiosks visitors would get a sense of what is expected of them in the area, on the river and in Canyonlands National Park.

By cleaning up and enhancing the parking area, closing off one of the access roads and creating separate areas for overnight and day use parking impacts to visitors would have beneficial impacts. Visitors would know where they should park their vehicles overnight and where they should park for day use activities. This would allow better access to the ramp when putting in or taking out boats.

Overall, this alternative would have *direct and indirect adverse and beneficial, minor to moderate, site-specific, short and long-term* impacts on visitor experience and use.

Cumulative Effects:

Any construction activities have the potential to affect visitor use and experience. Projects such as road improvements, exotic vegetation management, and trail maintenance have had or could have an adverse effect on visitor use and experience because of the inconvenience of construction noise, dust, and possible off-limit areas. Ultimately, however, these actions would have a beneficial effect on visitor use and experience because they were long-term enhancements to the functionality of the area, improving the visual and natural environments, visitor experience, interpretive opportunities and ease of visitor use. Under this alternative, visitor functions in the project area may potentially increase or decrease from the improved facilities. River use may increase because of the new improvements. This increase may decrease the availability of campsites along the river and reduce the nature of solitude found along the river. Constructing improvements to the parking area would have moderate additional negative and beneficial effects on visitor use and experience.

Conclusion:

Under the preferred alternative, the establishment of new facilities to the Potash area would have beneficial moderate effects on visitor use and experience. Construction disturbances (noise, dust, limited parking) would have a minor, temporary adverse effect to visitor use and experience. However, the long-term overall benefits of providing several improvements to the area that meet project objectives would outweigh the short-term minor inconveniences of construction disturbances. The new improvements may also bring more river users to use this boat launch to access the river. This increase may decrease the solitude that visitors are seeking when running the river. Overall this alternative would have

direct and indirect adverse and beneficial, minor to moderate, site-specific, short and long-term impacts on visitor experience and use.

Summary Statement of Impacts for Each Alternative

Under Alternative 1 (No Action), continuing current park operations without actions or changes in the present condition at Potash Boat Launch area, there would be no effect on vegetation and threatened and endangered species. There would be minor impact to soils. Continued use of social trails will enhance soil loss due to erosion. Visitor use and experience would face moderate impacts. Not providing adequate shade structures could adversely impact visitors and with thousands of visitor accessing Canyonlands National Park via the Colorado River. There is also no opportunity to interact with park staff to inform visitors about the park or the area, especially the river. Parking whether it is for overnight or day use, would continue to be an issue for visitors accessing the ramp.

Under Alternative 2 (Preferred), the construction of several improvements to the area and the parking lot at Potash would result in minor adverse and beneficial impacts to soils, vegetation and threatened and endangered species. Visitor use and experience will benefit the greatest from proposed improvements and impacts would be moderate. The establishment of shade structures and kiosks and improving the existing parking area would have short to long term adverse impacts to the soils and vegetation within the 1.6 acres of the project area. Some impacts to soils and vegetation would occur from the new trail building and digging for concrete foundations of shade structures and changing structure. Some vegetation would be removed within the shade structure sites and changing room site as well as within the loop road. Constructing a trail from the boat ramp to the picnic area and double vault toilets would reduce the use of the many social trails in the area and would further improve local vegetation and soil conditions by keeping foot traffic localized on one trail. Any ground-disturbing activity using backhoes, graders and other heavy construction equipment may have a detectable effect on threatened and endangered species and species of special concern. Construction practices such as not conducting activities during sensitive times (i.e. nesting) would limit these effects to being short-term and be of little consequence to the species population. Building shade structures over picnic tables would allow visitors to enjoy the area even during the hottest months. A changing area would benefit river users to change in and out of their river attire. At first, visitors may be adversely impacted during the constructing of these improvements but this would be short term and minor. It is important to note that the new improvements may also bring more river users to use this boat launch to access the river. This increase may decrease the solitude that visitors are seeking when running the Colorado River and would be a moderate adverse impact.

CHAPTER 4- CONSULTATION AND COORDINATION

External Scoping

External (public) scoping was conducted to inform various agencies and the public about the proposal to construct new improvements at Potash Boat Launch area and to generate input on the preparation of this EA. This effort was initiated with the distribution of a scoping letter and brochure, which was sent to interested parties and adjacent landowners. In addition, the scoping brochure was posted on the PEPC website. With this press release, the public was given 30 days to comment on the project beginning February 15, 2010.

In addition to the aforementioned public entities, the following agencies and Native American Tribes were sent scoping information or were contacted for information regarding the project:

Federal Agencies

U.S. Department of Interior – Fish and Wildlife Service
U.S. Department of Interior – Bureau of Land Management

State Agencies

Dead Horse Point State Park
Utah Department of Natural Resources

Other Interested Parties

Utah Guides and Outfitters Association
Intrepid Potash, Inc.

Consulted Native American Tribes and Pueblos

Hopi Tribal Council
Jicarilla Apache Nation
Kaibab-Paiute Tribal Council
Navajo Nation Tribal Council
Paiute Indian Tribes of Utah Tribal Council
Pueblo Isleta
Pueblo of Acoma
Pueblo of Cochiti
Pueblo of Jemez
Pueblo of Laguna
Pueblo of Nambe
Pueblo of Picuris
Pueblo of Pojoaque
Pueblo of San Felipe
Pueblo of San Ildefonso
Pueblo of San Juan
Pueblo of Santa Ana
Pueblo of Santa Clara
Pueblo of Santo Domingo
Pueblo of Taos
Pueblo of Tesuque
Pueblo of Zia

San Juan Southern Paiute Tribal Council
Sandia Pueblo
Southern Ute Tribe Council
Ute Indian Tribe
Ute Mountain Ute
White Mesa Ute Board
Ysleta Del Sur Pueblo
Zuni Tribal Council

During the 30-day scoping period, two responses were received from the public through letters. One affiliated tribe responded to state the undertaking will not have a significant impact at this time and if any archeological resource is discovered during the project they would like to be notified. One public letter wanted to be notified when the EA is released for public comment. No other federal or state agencies responded during the scoping period. The tribes that responded affirmed their affiliation with the project area and stated that they do not anticipate impacts to Native American sites or resources. They had no objection to the proposed project, and requested to be kept informed of the project's progress, including immediate notification if Native American materials are discovered during construction.

Internal Scoping

Internal scoping was conducted by an interdisciplinary team of professionals from Canyonlands National Park, Utah Guides and Outfitters and the landowner. Interdisciplinary team members met on June 7, 2008 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. Over the course of the project, team members have conducted individual site visits to view and evaluate the proposed improvements to the boat launch area site. The results of the June 2008 meeting and subsequent meetings are documented in this EA.

Environmental Assessment List of Recipients

The EA will be released for public review in June 2010. To inform the public of the availability of the EA, the National Park Service will publish and distribute a letter or press release to various agencies, tribes, and members of the public on the park's mailing list, as well as place an ad in the local newspaper. Copies of the EA would be provided to interested individuals, upon request. Copies of the document would also be available for review at the park's visitor center, Grand County Library and on the internet at <http://parkplanning.nps.gov/cany>.

The EA is subject to a 30-day public comment period ending July 4, 2010. During this time the public is encouraged to post comments online at <http://parkplanning.nps.gov/cany> or mail their written comments to the National Park Service address provided at the beginning of this document. Following the close of the comment period, all public comments would be reviewed and analyzed, prior to the release of a decision document. The National Park Service would issue responses to substantive comments received during the public comment period, and would make appropriate changes to the EA, as needed.

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