



Finding of No Significant Impact
Development of Bullfrog and Hite Low Water Launch Ramps
Glen Canyon National Recreation Area

Recommended

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Glen Canyon National Recreation Area

Date

Approved

for

Herbert C. Frost, Ph.D., Regional Director (Acting)
National Park Service
Interior Regions 6, 7, 8

Date

The National Park Service has considered the factors mandated by the National Environmental Policy Act (NEPA). This decision document represents the National Park Service's (NPS) good-faith effort to fulfill NEPA's requirements by prioritizing documentation of the most important relevant considerations within the statutorily mandated page limits and timeline. This prioritization reflects the NPS's expert judgment. The NPS certifies this Finding of No Significant Impact (FONSI) is substantially complete and thoroughly considered all relevant criteria raised in the NEPA process and the NEPA process has concluded. The NPS also certifies that the EA contained analysis adequate to inform and reasonably explain this decision to issue a FONSI regarding the proposed action.

1. Introduction

In compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code 4321 et seq), and the Department of the Interior NEPA regulations (43 CFR Part 46), the National Park Service (NPS) prepared an Environmental Assessment (EA) to evaluate alternative actions and environmental impacts associated with the development of low-water launch ramps at Bullfrog and Hite in Glen Canyon National Recreation Area (Glen Canyon NRA).

The purpose of constructing the proposed Bullfrog and Hite Low Water Launch Ramps (the project) is to provide continuous and predictable lake access at lower elevations at Bullfrog and Hite. This will provide water access for watercraft users/visitors in the uplake portion of Lake Powell while protecting natural and cultural resources. The project is needed to address specific operational and visitor experience requirements:

- Meet legislative mandates: Ensure Glen Canyon NRA can continue to fulfill its legislative mandate to provide for outdoor recreation and use of Lake Powell and the Colorado River for the foreseeable future.
- Provide reliable access: Offer reliable recreational and operational access to and from north Lake Powell and the Colorado River during low-water conditions.
- Improve visitor experience: Enhance visitor experience by restoring boat launch and retrieval access for vessels of all sizes consistent with recreational demand on Lake Powell and the Colorado River.
- Protect natural and cultural resources by providing designated ingress and egress to/from the water during low-water conditions.

The statements and conclusions presented in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA, the attached appendices and the associated decision file.

The EA is available at: [ParkPlanning - Environmental Assessment - Development of Bullfrog and Hite Low Water Launch Ramps](#). To the extent necessary, relevant sections of the EA are incorporated by reference below.

2. Selected Action and Rationale for the Decision

The NPS analyzed two alternatives in detail in the EA – a no action alternative (Alternative A), and a proposed action alternative (Alternative B). Based on this analysis, the NPS selected Alternative B, the proposed action. The selected action summarized in this FONSI is the same as the proposed action described on pages 6 through 11 and illustrated in Figure 1 of the EA. The selected action at Bullfrog includes upgrading and extending an access road; constructing a parking area and new launch ramp; extending new potable water, wastewater, telecommunications, and electrical lines; and removing tamarisk and planting native willow species as mitigation for impacts to wetlands. Similarly, at Hite, the selected action includes improving and extending an access road, constructing two parking areas and a new launch ramp, and tamarisk removal and willow planting as mitigation. In addition to implementing the mitigation measures identified in the EA (see also Appendix D of the FONSI), Glen Canyon NRA will develop a Communications Plan to notify the public of any road closures in advance of construction.

Notifications will be communicated on Glen Canyon NRA's website, through social media, and through press releases to inform the media so that visitors are aware of the work and can plan accordingly.

2.1. Selected Action

Bullfrog

Access Road

Stanton Creek Road, an existing primitive access road, will be upgraded and extended to connect SR 276 to the new parking area and boat launch ramp. The existing gravel road varies in width from 25 to 30 feet. The new alignment will follow the first 2 miles of the existing Stanton Creek Road alignment south of SR 276, then the access road will take a new route for 1 mile to reach the north Lake Powell shoreline, for a total of a 3-mile-long access road. The new road will consist of one approximately 12-foot-wide travel lane and 3-foot-wide shoulder in each direction, with some curve widening, as needed, to accommodate vehicles pulling large boat trailers. The road will be designed to accommodate a truck hauling a 125-foot-long boat.

Extension of the road will require grading, vegetation removal, and drainage improvements. Stormwater crossing the roadway will be directed through reinforced concrete pipes or box culverts maintaining existing flow patterns. The pipes and box culverts will be designed to handle different volumes of water, depending on the specific needs of the area. The road may be paved, depending on availability of funding at the time of construction. Blasting to remove rock may be required along portions of the road to achieve the desired alignment and grade.

Parking Area

The new parking area will cover between 8 and 16 acres depending on available funding and will include parking spots sized to accommodate trucks and boat trailers. Design of the parking area will include a two-lane circulatory ingress/egress and truck turnaround that will accommodate trucks hauling 125-foot-long house boats. Constructing the parking area will involve clearing vegetation, leveling the ground, and grading the gravel blasted or cut during construction within the parking area. The parking area will be situated above the lake's ordinary high-water mark.

Launch Ramp

Access to the launch ramp will begin immediately south of the parking area. The proposed ramp will be approximately 150 feet wide, about 0.5-mile long, and constructed on a 10.5 percent grade. Ramp construction will require blasting or excavation of cut areas, followed by installation of precast concrete planks and cast-in-place concrete sections to create the ramp surface. The extent of in-water work, which may include blasting, will depend on water levels at the time of construction. Additional ramp construction activities will include installing temporary rail systems to support the precast concrete panels, dredging, erosion control, dewatering, and placing a turbidity curtain around the construction area to provide sediment retention and to exclude fish and other aquatic species from the work area. Approximately 160,000 cubic yards of rock will be blasted to facilitate an adequate ramp grade to the water. Rock and gravel will be used in the construction of the access road and parking areas to the maximum extent possible.

Utilities

Utility work for the new launch ramp will include relocating existing utility lines and installing new potable water, wastewater, electrical, and communications infrastructure. All proposed sanitary sewer, telecommunications, and electrical lines will follow the new roadway alignment, with approximately 14,910 feet of sewer line installed within a 5-foot-wide trench and approximately 17,750 feet each of telecom and electric lines installed within 2-foot-wide trenches, except where horizontal directional drilling is used. Consequently, there will be no permanent surface disturbance. The potable water line will partially diverge from the roadway, and 3,925 feet will be constructed along an alternate alignment in a trench measuring approximately 5 feet wide at the top and 2 feet wide at the bottom, disturbing roughly 19,625 square feet. The remaining 15,460 feet of water line will follow the new road within a 5-foot-wide trench. In addition, two 12-foot-diameter lift stations, each equipped with two pumps, will be constructed to support sanitary sewer pump-out. One lift station will be at the top of the launch ramp, and the second will be approximately midway along the access road. Each station will have an area of disturbance of approximately 2,700 square feet. There is some potential for rock fall hazards where rock is cut for the ramp. During final design, measures to minimize these risks will be assessed and incorporated into the design.

Tamarisk Removal

Construction of the new Bullfrog launch ramp will also involve removing tamarisk mechanically, followed by planting native willow species at mitigation sites approximately 60 miles southwest of the Bullfrog project area on NPS-managed lands within Glen Canyon NRA. Tamarisk removal will be completed using chainsaws and hand tools-. All cut stumps will be treated with an approved herbicide to kill the plants. Willow stem cuttings from Glen Canyon NRA will be propagated in a greenhouse until ready for planting. Appendix D provides a full list of mitigation measures.

Hite

Access Road

The proposed access road will improve and extend an existing primitive road from its intersection with the Hite Marina Road for approximately 0.5 mile. Beyond the existing road, a new road will be constructed for 0.8 mile to reach the river. The road will be approximately 18 feet wide, and although primarily designed for one-way traffic, the width will allow two vehicles to pass at the same time. The two parking areas included along the road can be used to accommodate the passage of wider truck and trailer combinations.

Extension of the road will include grading, vegetation removal, and drainage improvements. Stormwater crossing the roadway will be directed through reinforced concrete pipes or box culverts, maintaining existing flow patterns. The pipes and box culverts will be designed to handle different volumes of water depending on the specific needs of the area. No paving is included for the Hite access road, which will be composed of rock and gravel. Blasting to remove rock may be required along portions of the road to achieve the desired alignment and grade.

Parking Areas

Two parking areas are proposed at the new Hite ramp: an upper parking area of approximately 5.25 acres and a lower parking area of approximately 0.7 acre. Both will accommodate boat trailers and trucks/passenger vehicles. Construction of the parking areas will involve clearing vegetation and leveling the ground/adding fill to achieve the desired contour and grade. The gravel parking areas will be

constructed from the surplus rock and gravel generated onsite through blasting and cutting for the ramp construction to the maximum extent practical. Parking areas will be outside of the ordinary high-water mark.

Launch Ramp

The new 1,025-foot-long launch ramp will be approximately 35 feet wide and constructed on a 16 percent grade. Ramp construction will require blasting or excavation of cut areas and will be constructed of cast-in-place concrete sections for out of water work and installation of precast planks in the water to create the ramp surface. In-water work may include grading, blasting, dredging, installing a turbidity curtain, creating a cofferdam, placing gravel, dewatering, and installing concrete planks. The parking areas and launch ramp may also be used for materials processing during construction, including crushing rock for road fill and surfacing aggregate. The proposed project is estimated to require removal of approximately 250,000 cubic yards of rock via blasting to facilitate adequate ramp grade to the water. Sediment will be disposed of at a location identified during final design and not used in construction. The new launch ramp will include broadcasted weather warnings and instructional signage for ramp users.

There is some potential for rock fall hazards where rock is cut for the ramp. During final design, measures to minimize these risks will be assessed and incorporated into the design.

Utilities

There will be no utility work at Hite.

Tamarisk Removal

Construction of the new Hite launch ramp will also involve mechanical tamarisk removal followed by planting native willow species adjacent to the Hite project area on NPS-managed lands within Glen Canyon NRA. Methods will be the same as described for Bullfrog. Appendix D provides a full list of mitigation measures.

2.2. Rationale for Decision

The NPS has selected Alternative B from the EA for implementation because it best meets the purpose and need for the action without causing significant impacts on park resources. In contrast to Alternative A, the No Action Alternative, the selected alternative will provide continuous and predictable lake access at elevations down to 3,450 feet above sea level (asl) at Bullfrog and 3,490 feet asl at Hite, which will provide water access for watercraft users/visitors in the uplake part of Lake Powell. This will improve the visitor experience while protecting natural and cultural resources. The selected alternative will be implemented to avoid or reduce effects on park resources and values as described in the EA and mitigation measures (Appendix D).

The selected alternative incorporates conservation measures developed through consultation with the U.S. Fish and Wildlife Service (USFWS) to avoid or minimize effects to federally listed species and designated critical habitat. The NPS will implement all required conservation measures and mitigation identified in the EA and summarized in Appendix D.

To ensure appropriate treatment of historic properties, the Glen Canyon NRA, in consultation with the Utah State Historic Preservation Officer (SHPO) and tribes, developed monitoring and inadvertent

discovery plans (MDP) to minimize potential impacts at both the Bullfrog and the Hite locations, as described below under *Degree of Effects in the Action*.

The NPS completed Floodplain Statements of Findings for Bullfrog and Hite and incorporated measures to avoid or minimize adverse effects on floodplain functions and values. The selected alternative has been designed to minimize encroachment into floodplains and avoid increasing flood risks to people, infrastructure, or natural resources.

The selected alternative incorporates measures to avoid, minimize, and compensate for impacts on wetlands and other waters, including Best Management Practices (BMPs), obtaining Clean Water Act (CWA) permits, monitoring construction around wetlands, and use of a barrier in the water during in-water construction will be implemented to protect water quality during construction.

2.3. Mitigation Measures

The NPS strongly emphasizes avoiding, minimizing, and mitigating potentially adverse environmental impacts. Therefore, the NPS requires mitigation measures and BMPs to protect environmental and cultural resources potentially affected by the project. The selected alternative incorporates the mitigation measures and BMPs listed in Appendix D of this document.

The authority for mitigation of the proposed project comes from laws and policies, including the following:

- Clean Water Act (33 U.S.C §1251 et seq.)
- Endangered Species Act, as amended (16 §1531 et seq.)
- Executive Order 11988 Floodplain Management
- Migratory Bird Treaty Act of 1918 (16 U.S.C §703-712)
- National Environmental Policy Act (42 U.S.C §4321 et seq.)
- National Historic Preservation Act of 1966, as amended (54 U.S.C §300101 et seq.)
- NPS Director's Order #77-2: Floodplain Management
- NPS Management Policies 2006 (chapters 4,5, and 9)
- NPS Organic Act of 1916 (16 U.S.C §1)

3. Significance Criteria

In determining whether the selected action would result in significant impacts, the NPS considered the analysis presented in the EA, which is incorporated herein by reference. Consistent with the Department of the Interior NEPA procedures, significance was evaluated by considering the characteristics of the potentially affected environment and the degree of the action's effects, including effects on public health and safety and whether the action would violate applicable federal, state, Tribal, or local environmental protection laws. The NPS also considered the duration, context, intensity, and extent of the anticipated effects, as well as the avoidance, minimization, and mitigation measures incorporated into the selected action.

4. Potentially Affected Environment

A description of all potential resources and environmental effects associated with the selected action and other alternatives included in the EA is incorporated by reference herein. In determining whether the selected action would result in significant impacts, the NPS considered the context and intensity of the effects, including potential effects on public health and safety, and effects that would violate federal, state, Tribal, or local laws protecting the environment.

The selected alternative would impact several resources that were retained for further analysis and discussed in detail in Chapter 3 of the EA. These resources are biological resources, cultural resources, water resources, visitor use and experience, and socioeconomics.

Under the selected alternative, the Project Area at Bullfrog is defined as the access road; parking area; new launch ramp; and extension of the new potable water, wastewater, telecommunications, and electrical lines. Similarly, at Hite, the Project Area is defined as the access road, two parking areas, and new launch ramp.

4.1. Biological Resources

4.1.1. Vegetation and Invasive Species

Bullfrog: Vegetation is very sparse, consisting of various grasses, weeds, and some scattered shrubs. Portions of the project area near the water are dominated by invasive tamarisk and riparian/wetland plant communities.

Hite: Vegetation is sparse, primarily consisting of grasses, weeds, and scattered shrubs. No riparian woodland or emergent wetland vegetation is present. Invasive species include Russian thistle and saltlover.

4.1.2. Sensitive Species

Monarch Butterfly

Bullfrog: No overwintering habitat occurs in Utah and milkweed has not been identified within the Bullfrog action area; therefore, no suitable breeding habitat is present (Xerces Society n.d.).

Hite: Suitable breeding habitat is present within the project area but no milkweed was observed within the project area during fieldwork. Other flowering plants in the Hite action area provide foraging habitat for the monarch butterfly, though vegetation in the Hite project area is very sparse and widely distributed.

Mexican Spotted Owl

Bullfrog: Although the action area is within a Critical Habitat Unit, NPS determined that the area contains no suitable habitat for this species. There are no Protected Activity Centers within the project vicinity (NPS 2017).

Hite: The action area is within Critical Habitat Unit CP-14. The nearest suitable habitat is approximately 0.4 miles away. The Hite project area contains two of four elements that contribute to Physical and Biological Features (PBFs) of critical canyon habitat (NPS 2025a). The nearest Protected Activity Center is more than 5 miles from the Hite project area (pers. comm., R. Reisor, USFWS Deputy State Supervisor, October 2024).

Razorback Sucker

Bullfrog: Although this species is known to occur in Lake Powell and within the Bullfrog action area, the project area does not contain suitable habitat and is outside of designated critical habitat for the species (NPS 2017).

Hite: The Hite action area is within designated critical habitat for the species. However, the species distribution does not overlap the action area. While suitable habitat is present, the project area does not contain elements that contribute to PBFs for critical habitat.

4.2. Cultural Resources

Bullfrog: The Bullfrog Area of Potential Effects (APE)/project area includes ten prehistoric lithic scatters, only one of which has been determined eligible for the National Register of Historic Places (NRHP). An additional seven NRHP-eligible sites are adjacent to the APE.

Hite: The Hite APE/project area includes eleven cultural resources, two of which are eligible for the NRHP. Both eligible sites at Hite are flaked stone scatter/lithic procurement areas.

4.3. Water Resources

4.3.1. Floodplains

Bullfrog: The Bullfrog project area is identified as a Special Flood Hazard Area. However, water levels are fully controlled by the dam.

Hite: There is no FEMA-regulated floodplain within the Hite project area. The floodplain elevation in the Hite project area is largely controlled by the elevation of Lake Powell, rather than by riverine flooding. The future Lake Powell water level and consistent characterization of floodplain elevations cannot be reliably predicted due to the uncertainty in future climate conditions, water use, and policy.

4.3.2. Wetlands

Bullfrog: NPS identified 17 ephemeral drainages, 1 deepwater lacustrine wetland (Lake Powell), and 4 waterbodies with wetland indicators within the Bullfrog project area. NPS concluded that the function and values of the ephemeral drainage wetland features are of low quality and the functions and values of three wetland features are of moderate quality. One wetland feature is of low to moderate quality.

Aquatic features delineated within and adjacent to the Bullfrog project area include 4.98 acres of ephemeral drainages, 9.72 acres of wetlands potentially subject to regulation by the NPS under DO #77-1, and 0.524 acres of wetlands potentially subject to United States Army Corps of Engineers (USACE) jurisdiction.

Hite: The Hite project area contains 9.29 acres of aquatic resources, including 2.60 acres of ephemeral drainages, 0.07 acre of intermittent watercourse, 3.61 acres of Lake Powell, and 3.08 acres of open water (deepwater habitat) associated with Lake Powell (NPS 2024). The ephemeral drainages are of low quality, and the intermittent watercourse is of low to moderate quality. The Lake Powell and open water areas are of moderate quality.

Approximately 6.21 acres of aquatic resources within the Hite project area are potentially subject to regulation by the NPS under DO #77-1. Approximately 0.19 acre of aquatic resources (0.12 acre of open

water and 0.07 acre of lacustrine littoral wetlands associated with Lake Powell) within the Hite project area are potentially subject to regulation by the USACE.

4.3.3. Water Quality

Bullfrog: Key concerns include elevated levels of *Escherichia coli* (E. coli) and harmful algal blooms (NPS 2025b). However, the Bullfrog project area is not within or adjacent to any impaired waters.

Hite: The Hite project area lies within a segment of the Colorado River that is on the CWA 303(d) list as an impaired water for aquatic wildlife due to temperature (EPA 2025).

4.4. Visitor Use and Experience

Annual visitation to Glen Canyon NRA has steadily increased over the last 10 years (NPS 2025c). However, low visitor numbers in 2022 coincide with historically low water levels at Lake Powell and the closure of several launch ramps in the Glen Canyon NRA (Duval et al 2023).

Bullfrog: Bullfrog supports marina operations including fuel, pump-out, rentals, storage, repairs, food and retail services, showers, laundry, and a small-plane landing strip. Visitor lodging and camping are provided through concessioner run facilities and Utah operates a ferry connecting Bullfrog and Halls Crossing at water levels above 3565 feet. The Stanton Creek Primitive Camping Area and seasonal Bullfrog Visitor Center are nearby. Visitor use at Bullfrog totaled 114,925 recreation visits and 99,820 overnight stays in 2023.

As of February 2026, the North Launch Ramp at Bullfrog was open to all vessels, while the Main Ramp and its spur were restricted or “launch at own risk” conditions for various vessel types. When the Main Ramp is closed, congestion at the North Ramp requires active NPS traffic management.

Scenic qualities around Bullfrog include expansive views from SR 276 and Stanton Creek Road and increasingly prominent lake vistas as the road descends. The area’s visual character is defined by red sandstone mesas, cliffs, and the contrast between rock and water.

Hite: Hite previously provided boating and visitor services, but declining river levels rendered the launch ramp unusable, leading to suspension of services in 2021 and the closure of the developed area in 2024. Some boaters and rafting operators use the primitive North Wash takeout. The nearest services are currently 70 miles away in Blanding, Utah.

Because the road to Hite from SR 95 is closed, the river is only visible from portions of SR 95 or from the shoreline at North Wash.

4.5. Socioeconomics

In 2023, park visitors to Glen Canyon NRA generated approximately \$540 million in direct visitor spending, supporting about 6,300 jobs and \$226 million in labor income. In 2023, Glen Canyon NRA received 5.2 million visitors who generated about \$540 million in spending, supporting 6,300 jobs and \$226 million in labor income. The park contributes roughly one-third of Utah’s total park-related visitor spending and employment, with most spending (96%) coming from non-local visitors. Nearby Kane and San Juan counties rely heavily on this tourism and function as gateway communities where visitors stay and spend money (Kane County 2018; San Juan County 2022; Flyr and Koontz 2024).

5. The Degree of Effects of the Action

As described in the EA and below, although the selected action may have adverse impacts on biological resources, cultural resources, visitor use and experience, socioeconomics, and water resources, no significant adverse impacts were identified for the resource topics described below.

In addition, the DOI Handbook of NEPA Implementing Procedures (February 2026) identifies several considerations when determining whether an action will have significant impacts. The NPS reviewed each of these considerations and determined the selected action will not result in significant adverse effects.

5.1. Biological Resources

5.1.1. Vegetation and Invasive Species

Construction of both launch ramps would result in about 435 acres of ground disturbance. When restoration of temporary impacts is accounted for, the net permanent disturbance will be about 100 acres.

Bullfrog: Approximately 328 total acres of temporary ground disturbance will occur as a result of the construction of this project. Once restoration of temporary impact areas has occurred, the net permanent disturbance will be approximately 65 acres for the project's road, parking area, launch ramp, cut and fill slopes, and pump stations. During operations some impact on vegetation may occur immediately adjacent to the improvements due to vehicle maneuvering or people walking. However, ongoing impacts are anticipated to be infrequent, and vegetation would reestablish over time. The loss of vegetation on these 65 acres is not significant as much of the land in the disturbed area currently does not support vegetation, some areas are already clear of vegetation, and the vegetation lost is common throughout the Glen Canyon NRA. Furthermore, non-rocky temporarily impacted areas will be seeded with native species following construction.

Implementation of mitigation measures identified in Appendix D, including weed management, equipment cleaning, and use of certified weed-free fill, would minimize the potential for introduction and spread of invasive species. Therefore, the long-term risk of introducing invasive plant species associated with construction activities is not significant.

Hite: Approximately 107 acres of temporary disturbance will occur as a result of the construction of this project. Once restoration of temporary impact areas has occurred, the net permanent disturbance will be approximately 35 acres for the project's road, parking area, and launch ramp, and the cut and fill slopes. During operations some impact on vegetation may occur immediately adjacent to the improvements due to vehicle maneuvering or people walking. However, ongoing impacts are anticipated to be infrequent, and vegetation would reestablish over time. The loss of vegetation on these 35 acres is not significant as much of the land in the disturbed area currently does not support vegetation, some areas are already clear of vegetation, and the vegetation that is lost is common in the Glen Canyon NRA. Furthermore, non-rocky temporarily impacted areas will be seeded with native species following construction. The long-term risk of introducing invasive species is not significant given the implementation of mitigation measures, as described for Bullfrog.

5.1.2. Sensitive Species

Monarch Butterfly

Bullfrog: The construction of the new launch ramp at Bullfrog is not expected to impact the monarch butterfly because no suitable habitat has been identified within the Bullfrog action area.

Hite: The proposed project construction and operation at Hite will result in minor adverse effects from short-term disturbance of approximately 107 acres, and the permanent ground disturbance of 35 acres of vegetation. However, this acreage represents a small portion of available habitat in the surrounding area, and increased human activity will not affect the species at a population level. Because impacts are limited in scale and do not affect unique or critical habitat, the adverse effects would not be significant.

Mexican Spotted Owl

Bullfrog: The Bullfrog biological analysis (BA) found that the Mexican spotted owl critical habitat would not be affected because the habitat in the project area lacks trees, prey habitat, steep/north facing cliffs, and nesting or roosting sites. It was determined that Mexican spotted owls may pass through the project area, but construction will not result in an adverse effect on the species or its critical habitat. The U.S. Fish and Wildlife Service (USFWS) concurred with Glen Canyon NRA's determination.

Hite: The Hite Biological Opinion determined that the project may affect, and is likely to adversely affect, the Mexican spotted owl and its critical habitat. However, the selected action within the Hite project area would not result in the loss of suitable habitat, as no such habitat occurs within the construction footprint. Construction activities could temporarily disrupt individual Mexican spotted owls due to noise disturbance during the 24-month construction period. There is also a potential for long-term increase in human activity during operation of the boat ramp that could disrupt individual Mexican spotted owls. However, the nearest suitable habitat is located approximately 0.4 mile from the project area, and no habitat will be lost or directly affected. Noise effects are expected to attenuate over distance, and conservation measures described in Appendix D (e.g., timing restrictions) will further reduce potential impacts.

Overall, the proposed Hite project may adversely affect individual Mexican spotted owls if present, but it is not anticipated to affect the species at the population level. The U.S. Fish and Wildlife Service (USFWS) concurred with this determination on August 28, 2025 (USFWS 2025). Because impacts will be limited to localized disturbance, will not affect suitable habitat, and will not influence the species at a population level, the overall adverse effects of Mexican Spotted Owls are not significant.

Razorback Sucker

Bullfrog: The selected alternative may result in adverse effects to individual razorback sucker during the 21-month construction period from temporary in-water disturbance. However, effects will be localized, minimized through the use of a turbidity curtain, and will not affect suitable habitat. The operation of the launch ramps is not anticipated to result in an increased potential for fish to be affected because operations are relocating rather than increasing. Therefore, neither construction nor operational impacts are significant. USFWS concurred with this determination on April 20, 2023 (USFWS 2023).

5.2. Cultural Resources

Bullfrog: The selected alternative will avoid direct impacts on NRHP-eligible sites, but ground disturbance related to construction activities and access may cause inadvertent disturbance to these sites that could happen during the operation of equipment or construction activities accidentally extending into the site due to their proximity to proposed work areas. The potential for adverse impacts is not significant and is not anticipated to affect the integrity of the site or its eligibility for listing because these impacts will be minimized through implementation of mitigation measures described in the Bullfrog project MDP, including site fencing and monitoring. The Utah SHPO concurred with a finding of no adverse effect on historic properties on March 16, 2023. Additionally, by formalizing water access and reducing unmanaged use in the area, the project is expected to reduce the potential for inadvertent damage to cultural resources.

Hite: The selected alternative will avoid direct impacts on NRHP-eligible sites, but the proximity of these sites to work areas may result in inadvertent site disturbance during construction and access. The potential for adverse impacts is not significant because these impacts will be minimized through implementation of mitigation measures outlined in the Hite project MDP, including site fencing and monitoring. The Utah SHPO concurred with a finding of no adverse effect on historic properties on October 14, 2025. Additionally, formalizing access and concentrating visitor use within designated areas would reduce the potential for resource degradation associated with unmanaged use

5.3. Water Resources

5.3.1. Floodplains

Bullfrog: Because water levels in the vicinity of the Bullfrog launch ramp are fully controlled by the dam, the project is not expected to result in changes to floodplain function or increase the flood risk. No impact is anticipated.

Hite: Construction of the selected alternative may cause minor, localized changes to floodplain elevations. The rock excavation quantities are minuscule in comparison to the volume of the lake, and the new ramp will not adversely affect floodplain values such as aquatic habitat, groundwater recharge, erosion, water quality, nutrient cycling, or geomorphic considerations. Refer to Section 5.3.2 regarding wetland vegetation. Therefore, overall effects on floodplain function would not be significant.

5.3.2. Wetlands

Bullfrog: The selected alternative is estimated to impact 11.605 acres of wetlands, including 2.996 acres of ephemeral drainages (riverine wetlands) of low functional value and 8.609 acres of waterbodies (lacustrine and palustrine wetlands) of low to moderate functional value.

Construction of the launch ramp will result in permanent and temporary adverse impacts associated with grading, dredging, and cofferdam installation, which may affect habitat, hydrology, and wetland functions. However, BMPs, restoration of temporarily disturbed areas, and compliance with Clean Water Act permitting for 0.542 acre of jurisdictional waters will minimize these effects. Of the total impacts, approximately 8.103 acres are associated with low-quality reservoir shoreline wetlands and are exempt from mitigation. The remaining 3.502 acres will be offset through compensatory mitigation at a 5:1 ratio, including restoration of approximately 17.3 acres of degraded riverine wetlands. With these measures in place, overall impacts are not significant.

A CWA Section 404 permit for the disturbance to 0.542 acre of USACE jurisdictional water would be obtained during final design, and all terms and conditions of the permit would be adhered to during construction.

Hite: The selected alternative will impact 0.195 acre of waterbodies (lacustrine wetlands) of moderate functional value and 1.21 acres of ephemeral drainages (riverine wetlands) of low functional value.

Construction-related impacts to wetland functions and values will be similar to those described for Bullfrog. The 0.195 acre of lacustrine wetlands is considered an intentional, fluctuating reservoir feature and is exempt from mitigation. The remaining 1.21 acres of riverine wetlands will be offset through compensatory mitigation using the same approach as Bullfrog, including restoration of an approximately 6.05-acre site within Glen Canyon NRA. Approximately 0.07 acres of USACE jurisdictional wetlands will be permanently affected, but all impacts will be managed in compliance with a Clean Water Act Section 404 permit. With these measures in place, impacts will be minimized and offset, and effects are not significant.

5.3.3. Water Quality

Bullfrog: The selected alternative may cause water quality impacts from activities such as erosion, dust, and potential spills during the 24-month construction period. These effects are not significant because they will be localized and compliance with Clean Water Act requirements, and implementation of BMPs would minimize these effects. Ongoing recreation use would continue to present risks of *E. coli* contamination, fuel spills, and harmful algal blooms in the project area. However, long-term effects associated with relocating operations from the existing Bullfrog ramps to the new ramp are not significant because operations will not increase overall use.

Hite: The selected alternative may cause water quality impacts from activities such as erosion, dust, and potential spills during the 21-month construction period. These effects are not significant because they will be localized and compliance with Clean Water Act requirements, and implementation of BMPs will minimize these effects. Long-term impacts associated with the selected alternative, including potential spills, dust, sedimentation, and *E. coli* contamination, are not significant because operations will not increase overall if the new ramp is used in lieu of the North Wash take out, and the proposed Hite ramp will reduce the potential for erosion and sedimentation along the riverbank.

5.4. Visitor Use and Experience

Bullfrog: The selected alternative will result in long-term benefits by maintaining lake access during low-water conditions, improving reliability of recreation opportunities, reducing congestion at existing ramps, enhancing boater convenience, and supporting faster and more efficient emergency response.

Construction activities may temporarily disrupt access to Stanton Canyon and its primitive camping area and impact traffic flow and cause delays along SR276. Those seeking natural ambience and tranquility may also be affected by the presence of construction equipment and vehicles. These adverse effects are not significant because they will be localized and would cease after the estimated 24-month construction period.

Operation of the selected alternative may increase ambient noise and change views for some users of Lake Powell and the Stanton Creek Primitive Camping Area. For some visitors, this may reduce the natural character and scenic quality of the area. However, these effects are not significant because broader

views of Lake Powell and the surrounding landscape would remain the dominant visual elements; Bullfrog's scenic qualities and remote character are not unique; and other areas with these qualities exist in the Glen Canyon NRA.

Hite: The selected alternative will provide long-term benefits by restoring long-term river access for rafters, improving reliability for exiting Cataract Canyon, and creating safer conditions for staging and gear handling. Reestablishing a permanent launch site in this area will reduce pressure at Bullfrog, leading to a more balanced distribution of visitor activity across Glen Canyon NRA. Because the action restores access and public service functionality to a currently underserved and constrained area, the project will result in beneficial effects for visitor use and experience. Operation of the selected alternative will alter views for users. As visitors travel toward the site, views would shift from a remote, rugged landscape to one that would include constructed elements (graded road, parking areas, and the launch ramp). For some visitors, this change may alter the perceived natural character of the immediate area, however, this long-term effect is not significant because the surrounding canyon and river would remain the primary visual features and similar views are available elsewhere in the Glen Canyon NRA.

Construction activities at Hite may temporarily affect boater and rafter navigation of Lake Powell near the project area. Those seeking natural ambience and tranquility may also be impacted by the presence of construction equipment and vehicles. These adverse effects are not significant because they will be localized and would cease after the estimated 21-month construction period.

5.5. Degree to Which the Proposed Action Affects Public Health and Safety

Under the selected action, there will be no significant impacts on public health or safety. Effects on human health and safety associated with the construction of the Hite launch ramp within a floodplain are not significant given planned warning signs, closures during hazardous conditions, and flood-resistant design. The selected action would improve emergency response in the Hite area and maintain consistent access for emergency services at Bullfrog despite fluctuating water levels.

5.6. Degree to Which the Proposed Action Affects Economic Activity

The selected alternatives at Bullfrog and Hite would result in beneficial economic effects during construction through local contracting, material purchases, temporary employment, and worker spending in nearby communities. These effects would provide a temporary increase in economic activity for local businesses, including lodging, food service, fuel, and retail establishments.

During operations, the projects would maintain and restore reliable access to Lake Powell and the Colorado River, supporting continued recreational visitation and associated spending in gateway communities and surrounding counties. The Bullfrog project would help preserve boating access during low water conditions, and the Hite project would restore a reliable take-out location for commercial and private rafting trips exiting Cataract Canyon. These improvements would support concession operations, visitor spending, and recreation-related employment by reducing uncertainty associated with changing reservoir conditions and access limitations.

The affected environment is characterized by economies that benefit from recreation and tourism associated with Glen Canyon National Recreation Area. Relative to existing conditions, the selected alternatives would maintain or improve recreation access and are not expected to adversely affect jobs, income, property values, business activity, or other economic indicators. Any construction-related disruptions would be temporary, localized, and offset by construction expenditures and long-term access benefits. Because the projects would primarily generate beneficial economic effects and would not result in substantial adverse effects on local or regional economic activity, the degree of economic effects is not significant.

5.7. Degree to Which the Proposed Action Affects the Quality of Life of the American People

The selected action will improve quality of life for the American public by maintaining reliable recreational and operational access to Lake Powell during prolonged low-water conditions. Continued access to boating, rafting, fishing, and water-based recreation will support visitor experience, outdoor recreation opportunities, and continued public use of Glen Canyon NRA consistent with its legislative purpose. The project will also improve public services and visitor safety by providing more reliable launching, retrieval, and emergency response access at Bullfrog and Hite. Overall, the effects on quality of life are expected to be beneficial at the local and regional levels and the selected action will not result in significant adverse impacts.

6. Public Involvement and Agency Consultation

6.1. Civic Engagement

Civic engagement related to potential new launch ramps has been ongoing quarterly since 2021 to provide the public opportunities to learn about the projects and offer input. Before commencing the NEPA process, NPS sent letters to stakeholders, and engagement methods included early listening sessions, fact sheets, a project history with photographs, press releases, and electronic newsletters. Social media posts announcing the project and opportunities for public involvement were also provided. The park continues to actively engage stakeholders and the public throughout the planning process.

6.2. Environmental Assessment Public Comment Period

The Draft EA was made available for public review and comment during a 30-day period from March 26, 2026 through April 26, 2026. During the review period, 42 correspondences were submitted to the NPS through the PEPC website, including one correspondence from an organization. The NPS comment summary is included in Appendix C. All comments received have been incorporated into the project record. Public notices of the comment period were distributed through the same sources as civic engagement, listed above.

6.3. Utah State Historic Preservation Officer and Tribal Consultation

As required by Section 106 of the National Historic Preservation Act, Glen Canyon NRA consulted with the SHPO and affiliated tribes to address the effects of the project on historic properties, including the cultural landscape. The Section 106 consultation process was conducted separately from, but concurrently with, the NEPA process.

Bullfrog: The NPS initiated consultation with the SHPO in a letter dated March 14, 2023. The letter described steps taken to identify historic properties within the APE, an assessment of effects for the project, and a draft Archaeological Monitoring and Inadvertent Discovery Plan. The NPS determined that the selected alternative will not result in any adverse effects on historic properties. The SHPO concurred with this finding of effect and draft plan in a letter dated March 16, 2023.

Initial consultation letters were sent to 7 tribes on December 29, 2022, seeking comments on preliminary project details and the preliminary APE and identification of historic properties and requesting assistance with identifying any properties of cultural and/or religious significance within the vicinity of the project area. No responses or comments regarding Section 106 compliance or historic properties were received. The assessment of effects and proposed Archaeological Monitoring and Inadvertent Discovery Plan were sent to all tribes on March 14th, 2023, and no responses were received. A complete list of affiliated tribes included in tribal consultation can be found on page 57 of the EA.

Hite: The NPS initiated consultation with the SHPO in a letter dated September 15, 2025, requesting review and concurrence with the identification of historic properties, determinations of NRHP eligibility for sites in the APE, a proposed monitoring and discovery plan, and assessment of effects for the project. The NPS determined that the selected alternative will not result in any adverse effects on historic properties. The SHPO concurred with this finding of effect and draft plan in a letter dated October 14, 2025. A minor modification to the construction elevation with a finding of no adverse effect was submitted to the SHPO on August 19, 2026, to which the SHPO concurred on August 20, 2026.

Consultation letters were sent to 7 tribes on September 12, 2025, seeking comments on the proposed project, APE and identification of historic properties, and finding of no adverse effect for the project. The Hite Class III survey report and proposed Monitoring and Inadvertent Discovery Plan were also shared for review and comment. The Kaibab Band of Paiute Indians concurred with the finding in a response dated 9/17/25. No other responses or comments from tribes were received.

In a letter dated December 16, 2024, the Utah Public Lands Policy Coordinating Office (PLPCO) requested Section 106 consulting party status for the proposed undertaking at Hite. The NPS invited the Utah PLPCO to participate as a consulting party on September 15, 2025, requesting input on the proposed project, identification of historic properties, and finding of no adverse effect. No response was received.

6.4. U.S. Fish and Wildlife S

Bullfrog BA in a biological opinion (BO) dated April 20, 2023. The Hite BO, signed August 28, 2025, concluded that the selected alternative *may affect and is likely to adversely affect* Mexican spotted owl but *is not likely to affect* Mexican spotted owl critical habitat.

6.5. U.S. Army Corps of Engineers

Because the proposed action includes work below the ordinary high-water mark (OHWM) of Lake Powell, a jurisdictional water of the United States, the NPS submitted a Clean Water Act Section 404 permit application to the U.S. Army Corps of Engineers to discharge materials into waters of the U.S. at Hite and will obtain a similar authorization for Bullfrog during final design.

6.6. Other Stakeholders

NPS staff met with key stakeholders early in the planning process to discuss impacts and concerns. In addition to these informal conversations, park staff held virtual meetings throughout the planning process.. Refer to Sections 4.1 and 4.2 of the EA for a list of stakeholders and a brief summary of the civic engagement process.

7. Finding of No Significant Impact

This Finding of No Significant Impact is based on the analysis presented in the EA, which is incorporated herein by reference, the supporting administrative record, and the significance criteria described in this FONSI.

Therefore, the NPS has determined that the selected alternative will not have a significant effect on the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act (NEPA), nor does it constitute a major Federal action meeting the criteria that normally requires preparation of an environmental impact statement. Based on the foregoing, the NPS has determined that an environmental impact statement is not required and will not be prepared.

Appendix A:
References

Appendix A:

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Appendix B:

Non-Impairment Determination

Appendix B: Non-Impairment Determination
Development of Bullfrog and Hite Low Water Launch Ramps
Environmental Assessment
Glen Canyon National Recreation Area

Introduction

The National Park Service (NPS) has prepared this non-impairment determination for the selected action, as described in the Finding of No Significant Impact (FONSI) for the Development of Bullfrog and Hite Low Water Launch Ramps Environmental Assessment (EA). As a basis for evaluating the potential impairment of park resources, the NPS relied on the EA, which is incorporated by reference herein.

The NPS Organic Act of 1916 directs the NPS to “conserve the scenery, natural, and historic objects, and wildlife in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wildlife in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (54 USC 100101).

NPS Management Policies 2006, section 1.4.4, explains the prohibition on impairment of park resources and values:

“While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically says otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.”

An action constitutes impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values” (NPS 2006, Section 1.4.5). To determine impairment, the NPS must evaluate the “particular resources and values that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact; and the cumulative effects of the impact in question and other impacts.”

An impact on any park resource or value may constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006 Section 1.4.5)”.

Before approving a proposed action that could lead to impairment of park resources and values, a NPS decision-maker must consider the impacts of the proposed action and determine, in writing, whether the action will lead to an impairment of park resources and values (NPS 2006, 1.4.7).

Fundamental resources and values for Glen Canyon National Recreation Area (Glen Canyon NRA) are identified in the park's Foundation Document (NPS 2014).

As described in the Foundation Document, the purpose of the park is to provide for public enjoyment through diverse land- and water-based recreational opportunities and to protect scenic, scientific, natural, and cultural resources on Lake Powell, the Colorado River, its tributaries, and surrounding land.

The fundamental resources and values for Glen Canyon NRA as identified in the Foundation Document include:

- Heritage Resources: archaeological and historic sites, cultural landscapes, and traditional cultural properties that reflect the long-standing relationship between people and the Glen Canyon area.
- Lake Powell: As the second largest human-made lake in North America, Lake Powell is internationally known as a top destination for boating and other water-based recreation.
- Landscape: Glen Canyon encompasses a vast and dramatic terrain shaped by water and wind, featuring deep canyons, mesas, buttes, rivers, springs, seeps, and hanging gardens that support diverse and often rare plant and wildlife communities.
- Paleontology: Glen Canyon NRA protects one of the world's most complete sequences of Mesozoic rock layers, with ongoing fossil discoveries expanding scientific knowledge of ancient life.
- Water: Adequate water quality and availability are critical to supporting high desert ecosystems and providing safe and enjoyable outdoor recreation opportunities for the public.

The resources carried forward for detailed analysis in the EA and for which a non-impairment determination has been made are considered necessary to fulfill specific purposes identified in the establishing legislation of the park, are identified for management in relevant NPS planning documents, or are key to the natural or cultural integrity of the park. Accordingly, a non-impairment determination is made for each of these resources, except for Visitor Use and Experience because it is not generally considered to be a park resource or value subject to the written non-impairment determination requirement found in NPS Management Policies 2006. (see below).

Impacts Considered but Dismissed

As documented in the EA, certain resource topics, including paleontological resources, were considered but dismissed from detailed analysis because impacts were found to be negligible or minimal, or because issues associated with those resource topics were adequately addressed under related resource topics that were retained for analysis. See Appendix B of the EA for impact topic dismissal rationales.

The impacts to these resources are expected to be minor in magnitude, localized in extent, and not expected to measurably affect their overall condition or integrity. These resources will remain available to be enjoyed by current and future generations. Therefore, implementation of the selected alternative will not result in impairment of these resources. For example, paleontological resources were dismissed from further analysis because surveys identified no known paleontological resources within the project areas and a low potential for impacts, provided mitigation measures are implemented (see Appendix B of the EA).

Non-Impairment Determination for the Selected Action

Based on the analysis in the Development of Bullfrog and Hite Low Water Launch Ramps Environmental Assessment (2026 EA), the NPS has evaluated potential effects on the following park resources and values that are fundamental to the purposes and significance of the park and therefore subject to the non-impairment standard under Section 1.4.6 of NPS Management Policies (2006). Resources evaluated for potential impairment were vegetation, Monarch Butterfly, Mexican spotted owl, Razorback Sucker, cultural resources, and water resources. Other resources subject to a non-impairment determination (see NPS 2006, section 1.4.6) were considered in the EA and determined to be so minor that they were not carried forward for detailed analysis in the EA (see Appendix B of the EA) and would not result in impairment.

Section 1.4.6 of *NPS Management Policies 2006* identified several park resources and values that are subject to evaluation in a non-impairment determination. Consistent with the April 2025 NPS Guidance for Non-Impairment Determinations, non-impairment determinations do not include a discussion of impacts on visitor experience, socioeconomics, public health and safety, land use, or park operations, as they do not constitute park resources and values identified through the NPS Organic Act or General Authorities Act that are subject to the impairment standard.

Vegetation

As described in the 2026 EA, construction of the selected alternative will result in approximately 328 acres of temporary and permanent ground disturbance at Bullfrog and 107 acres at Hite – roughly 435 acres total. During operations some impact on vegetation may occur immediately adjacent to the improvements due to vehicle maneuvering or people walking. However, ongoing impacts are anticipated to be infrequent, and disturbed vegetation would reestablish over time. Following restoration of temporary impact areas, the net permanent disturbance would be approximately 65 acres at Bullfrog and 35 acres at Hite, with the actual loss of vegetation occurring on only a portion of those acres given that the disturbed area is sparsely vegetated. Vegetation is anticipated to regrow in non-rocky temporarily impacted areas, and these areas will be reseeded following construction. The equipment used during construction and trucks/boats launching from the ramp will also have a long-term potential to introduce invasive species seed/vegetation. Manual or chemical treatments will be used to control invasive species as necessary in the entirety of the project area. Additional mitigation measures will be implemented as described in the 2026 EA in Appendix B to prevent the spread of invasive plant species as the result of vegetation and soil disturbance and to avoid or minimize impacts on existing vegetation near the project area.

Given the large scale of Glen Canyon NRA (over 1.25 million acres), the relatively limited geographic extent of permanent vegetation loss (0.008% of the total park acreage), and the implementation of mitigation measures, the selected alternative would not substantially reduce the long-term viability or sustainability of vegetation resources. The vegetation would be available for the enjoyment of future generations. Therefore, impacts on vegetation would not result in impairment of park resources under NPS Management Policies (2006, §1.4.5–1.4.7).

Monarch Butterfly

As described in the 2026 EA and Biological Assessments (NPS 2023, 2025a), the selected alternative may affect monarch butterflies in the project area due to the loss of potential habitat and increased human

activity but will not adversely affect the species as a whole. The construction of the selected alternative at Hite would permanently affect 35 acres of Monarch Butterfly habitat. During operations some inadvertent disturbance to vegetation may occur if a vehicle goes off the road or due to people walking. Vegetation in the Hite project area is sparse and widely dispersed. While some flowering nectar plants are present, no milkweed—the monarch’s larval host plant—was observed, and no overwintering habitat exists within the action area. As a result, habitat suitability for breeding monarch butterflies is limited, and very few, if any, individuals are expected to occur in the project area. The Bullfrog action area does not contain suitable monarch habitat, and the selected action is not expected to affect the species.

The monarch butterfly is currently proposed as threatened. However, should the monarch butterfly be listed as “threatened” during the life of the Hite project, the proposed project may result in incidental death of individual monarch butterflies.

The affected habitat represents a small fraction of suitable habitat available within the broader Hite action area. Given the very small proportion of habitat affected, low habitat suitability, and the absence of critical life-stage habitat, the selected alternative would not reduce the long-term viability of monarch butterflies within Glen Canyon NRA. Habitat for butterflies would remain, and butterflies would be expected to return to the project area for the enjoyment of future generations. Therefore, the selected alternative would not result in impairment of monarch butterfly resources under NPS Management Policies (2006, §1.4.5–1.4.7).

Mexican Spotted Owl

As described in the 2026 EA and the Hite Biological Assessment (NPS 2025a) prepared to support consultation under the Endangered Species Act, the selected alternative may affect and is likely to adversely affect Mexican spotted owls. At Hite, construction noise could temporarily disturb individual owls if present due to noise disturbance during the 24-month construction period; however, suitable habitat is located approximately 0.4 mile from construction areas, and noise levels are expected to attenuate substantially over this distance. During ramp operations, increased human activity could result in occasional disturbance closer to suitable habitat, but effects would be localized and intermittent. Use at Hite is expected to be primarily related to rafting operations, and most recreational activity would remain concentrated near the boat ramp, limiting the extent of disturbance. Mexican spotted owls are not anticipated to occur at Bullfrog because the project area does not contain suitable habitat, and the Bullfrog project would not affect designated critical habitat because the area does not support the physical or biological features (trees, prey habitat, steep/north facing cliffs, and nesting or roosting sites) essential to the conservation of the species.

The Hite project would not compromise the overall integrity or function of designated critical habitat and would not affect the distribution, reproduction, or long-term viability of the species within Glen Canyon NRA. Given the limited spatial extent of impacts, the distance from suitable habitat, and the absence of widespread habitat modification, Mexican spotted owls would be available for the enjoyment of future generations. The selected alternative would not result in impairment of Mexican spotted owl resources as defined by NPS Management Policies (2006, §1.4.5–1.4.7).

Razorback Sucker

As described in the 2026 EA and Biological Analyses (NPS 2023, 2025a), it is unlikely that selected alternative will adversely affect the razorback sucker. While the razorback sucker is known to inhabit and migrate through Lake Powell, razorback suckers are not anticipated at Hite and are unlikely to occur in the Bullfrog area. The Bullfrog area does not support adequate spawning, resting, or feeding habitat favored by the species. Potential construction-related effects, such as increased turbidity, would be temporary and localized. Best management practices, including the use of a turbidity curtain, would be implemented to minimize impacts on fish during construction. The operation of the launch ramps is not anticipated to result in an increased potential for fish to be affected because operations are relocating rather than increasing.

Given the absence of suitable habitat within the project areas, the localized and temporary nature of potential construction effects, and the implementation of mitigation measures, the selected alternative would not affect the viability, distribution, or recovery of the razorback sucker within the park. Accordingly, the selected alternative would not result in impairment of razorback sucker resources under NPS Management Policies (2006, §1.4.5–1.4.7), and razorback suckers would continue to be available for the enjoyment of future generations.

Cultural Resources

As described in the 2026 EA, implementing the selected alternative would not adversely affect cultural resources at Bullfrog or Hite (Purcell et.al 2022, NPS 2025b). The selected alternative would avoid direct impacts on National Register of Historic Places (NRHP)-eligible sites within and adjacent to the Bullfrog Area of Potential Effects (APE)/project area and Hite APE/project area. Although ground-disturbing activities associated with construction and access could pose a risk of inadvertent disturbance due to the proximity of known sites, this risk would be minimized through implementation of avoidance and monitoring measures. Protective measures include installation of temporary fencing prior to construction to clearly delineate avoidance areas and restrict access, as well as monitoring of ground-disturbing activities by a qualified archaeologist who meets the Secretary of the Interior's Professional Qualification Standards. These measures are outlined in the Archaeological Monitoring and Inadvertent Discovery Plans prepared for the Bullfrog and Hite projects and would ensure timely identification and protection of cultural resources should previously unknown materials be encountered. Additionally, formalized access to Lake Powell at Hite and Bullfrog would reduce the potential for cultural resource damage associated with unmanaged use during operations.

Given the avoidance of direct impacts to identified cultural resources and the implementation of monitoring and protective measures identified in the Archaeological Monitoring and Inadvertent Discovery Plans, the selected alternative would not diminish the integrity, context, or significance of cultural resources within the park. Therefore, implementation of the selected alternative would not result in impairment of cultural resources as defined by NPS Management Policies (2006, §1.4.5–1.4.7). Cultural resources would continue to be available for the enjoyment of future generations.

Water Resources

As described in the 2026 EA, implementation of the selected alternative will result in impacts to water resources, including floodplains, wetlands, Waters of the United States, and water quality at Bullfrog and

Hite. At Bullfrog, the new launch ramp will result in a small change in floodplain elevation. The Hite ramp would extend into the river channel and be periodically inundated which will result in some risk to floodplain characteristics. Risk will be associated with the placement of fill into the floodplain which could result in some erosion and sedimentation and a small change in floodplain elevation. However, the impact on floodplain characteristics will be very low and confined to the immediate project area.

The selected alternative will result in permanent impacts to approximately 11.605 acres of wetlands at Bullfrog and 1.405 acres of wetlands at Hite, most of which are of low to moderate functional value. Temporary wetland impacts will also occur during construction due to grading, dewatering, and turbidity; however, these impacts would be short-term and localized. Adverse effects on wetlands and other waters will be avoided, minimized, and compensated in accordance with NPS Director's Order #77-1: Wetland Protection. Compensatory mitigation will focus on restoring native wetland functions, primarily through tamarisk removal and native willow planting at mitigation sites within Glen Canyon NRA. This mitigation will achieve no net loss of wetland function and would improve wetland quality and ecological function beyond existing conditions.

Construction activities at both Bullfrog and Hite could result in localized impacts to water quality from erosion, fugitive dust, and potential fuel spills during the respective 24-month and 21-month construction periods. These impacts would be minimized through compliance with Clean Water Act Section 401 requirements and implementation of best management practices, including spill prevention measures and erosion control. Once operational, launch ramp use would relocate existing recreational activity rather than substantially increase overall use. While ongoing recreational use presents a continued risk of *E. coli* contamination, fuel spills, and harmful algal blooms, these risks are consistent with existing conditions at Lake Powell and would not represent a substantial change in water quality.

Given the low functional value of affected wetlands and the implementation of mitigation combined with restoration measures that improve wetland function, very low impacts to the floodplain, and the limited impacts to water quality, the selected alternative would not diminish the integrity, resilience, or long-term sustainability of water resources. Therefore, implementation of the selected alternative would not result in impairment of water resources as defined by NPS Management Policies (2006, §1.4.5–1.4.7).

Conclusion

The NPS has determined that implementation of the selected alternative will not constitute an impairment of the resources or values of the park. This conclusion is based on the park's purpose, significance, fundamental resources and values, and a thorough analysis of the environmental impacts described in the EA and appendices, comments provided by the public and others, relevant scientific studies and resource reports, and the professional judgment of the decision maker guided by the direction in *NPS Management Policies 2006*. The selected alternative will not result in major adverse impacts on a resource or value, the conservation of which is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; (2) key to the natural or cultural identity of the park; or (3) identified as a goal in the park's General Management Plan or other relevant NPS planning documents.

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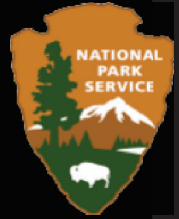
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Appendix C:

Comments Summary

Glen Canyon National Recreation Area
Arizona, Utah

National Park Service
U.S. Department of the Interior



Public Comments Summary

Development of Bullfrog and Hite Low Water Launch Ramps (PEPC 114054)

May 2026

In accordance with the Final Interim Department of the Interior National Environmental Policy Act (NEPA) Handbook, Sections 1.5(e)(4), 1.5(f)(6), and 2.4(e), 2.5(e)), the Responsible Official certifies that page number and timeline requirements have been met, the effort is substantially complete, the agency has thoroughly considered the factors mandated by NEPA, and that, in the agency's judgment, the analysis is adequate to inform and reasonably explain the agency's decision regarding the proposed Federal Action.

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Introduction

The Bullfrog and Hite Low Water Launch Ramps Draft Environmental Assessment (EA) was made available to the public via the Planning, Environment, and Public Comment (PEPC) system online at [ParkPlanning - Environmental Assessment - Development of Bullfrog and Hite Low Water Launch Ramps](#) from March 26, 2026 to April 24, 2026. During the scoping period, 42 pieces of correspondence were entered into the PEPC system through direct entry by the commenter. No hard copy correspondence was received.

Definition of the Terms

Primary terms used in the document are defined below:

Correspondence: A correspondence is the entire document received from a commenter. It can be in the form of a letter, email, written comment form, note card, open house transcript, or petition.

Comment: A comment is a portion of the text within a correspondence that addresses a single subject. It could include such information as an expression of support for or opposition to the use of a potential management tool, additional data regarding the existing condition, or an opinion debating the adequacy of an analysis.

Methodology

Each correspondence was reviewed and summarized to capture general support or opposition and the substantive issues discussed.

Nature of the Comments Received

Public comments primarily focused on issues related to access, alternative configurations, implementation timing, and long-term functionality, with comparatively fewer comments focused on site-specific environmental effects. Almost all comments (98%) were from unaffiliated individuals; one comment came from a conservation/preservation organization.

Of the 42 comments, 34 expressed support for the project with a strong emphasis on constructing the projects quickly. Conversely, three comments were in opposition to one or both ramps citing that the receding water levels will leave the proposed ramps out of the water in the near future, that the investment is not warranted, or suggested that alternatives to new boat launches, including the use of cranes to place boats into the water and the construction of a bridge between Halls Crossing and Bullfrog should be considered. Other comment themes included the need for improvements at Halls Crossing, accessibility considerations to get to relocated boat slips, potential impacts to local communities without water access, and native vegetation be used to restore disturbed areas. A few comments noted that the social and economic impacts are understated, that visitor use numbers were inaccurate, challenged the adequacy of the biological assessment (that it overstated impacts), and requested that the floodplain limits be revised. Several comments identified needs that are outside the scope of this project, such as removing the dam and provision of mid-lake fueling options.

Public Comment Summary and Response

Corr ID	Summary of Comments	Response
1	Advocates for dam removal, rewilding, and ending reservoir use; argues long-term water scarcity and climate change make boating infrastructure inappropriate.	<i>General opposition noted.</i>
2	Supports the construction of the Bullfrog launch ramp and paved access to reduce dust and vehicle impacts. Commenter states that they are a business owner who relies on North Lake Powell recreation.	<i>General support noted.</i>
3	Expresses support for Alternative B and continued public access.	<i>General support noted.</i>
4	Proposes new ramp at Halls Crossing/Ferry area with supporting infrastructure and fuel access; states that visitor use of the area requires a ramp at both Hall's Crossing and the Stanton Creek Bullfrog project location.	<i>Comment noted. Outside the scope of this project. Bullfrog prioritized as it has more infrastructure, a larger community and higher visitation. Serves the northern part of UT.</i>
5	Supports Bullfrog launch ramp to maintain recreation.	<i>General support noted.</i>
6	Supports construction of a new launch ramp based on long-term family use.	<i>General support noted.</i>
7	Supports Alternative B and analysis but criticizes delayed timing.	<i>General support noted.</i>
8	Argues No Action is unreasonable and urges faster advancement of Alternative B due to declining access.	<i>General support noted.</i>
9	Supports a launch ramp at Hite location because it will reduce travel time to access Lake Powell as a resident of Blanding. Requests additional efforts near Halls Crossing to lower or move ramp access, or to construct a bridge connection from Halls Crossing to Stanton Creek.	<i>General support noted.</i> <i>Comment noted. Outside the scope of this project.</i>
10	Supports ramp construction based on long-term use.	<i>General support noted.</i>
11	Expresses strong support based on decades of use.	<i>General support noted.</i>
12	General support for moving forward.	<i>General support noted.</i>
13	Supports Hite launch ramp given its location in the northern portion of Lake Powell. Suggests that low water ramp at Bullfrog project location will increase wake boat traffic in the main channel and waves near the Hall's Crossing buoy field. Suggests that Lake Powell users are unaware that buoy field is wakeless and request patrol of the area.	<i>General support noted.</i> <i>Comment noted. Hall's Crossing no wake zone is out of the scope of this project.</i>

14	States that launch ramps are necessary for owners to access their houseboats; supports construction of launch ramps but criticizes delayed timing.	<i>General support noted.</i>
15	Supports Alternative B; notes long delay and urges rapid implementation.	<i>General support noted.</i>
16	General request to proceed with project.	<i>General support noted.</i>
17	Supports lake access at Bullfrog to protect local community and services.	<i>General support noted.</i>
18	Provides independent hydrologic analysis indicating continued and accelerating declines in Lake Powell elevations through at least 2027; questions long-term viability of boating ramps. Proposes focusing infrastructure investment on kayaks, hiking, and canyon access rather than boat ramps.	<i>Does not meet the purpose and need of the project to accommodate boat launch activities for vessels of all sizes consistent with recreational demand on Lake Powell. Ramps are designed so that when water levels recede, the ramps can be extended.</i>
19	Supports Bullfrog ramps based on long-term family use.	<i>General support noted.</i>
20	Supports construction of a launch ramp so upper lake remains usable.	<i>General support noted.</i>
21	Criticizes the No Action Alternative for leaving the northern portion of Lake Powell inaccessible. Requests that Bullfrog access be prioritized and fast-tracked as an emergency action. Questions the adequacy of the biological resources analysis, asserting that prior inundation and recreation disturbance should reduce the level of effects. Requests revision of floodplain mapping to reflect the current lake footprint. Challenges visitation and use statistics for Hite but asserts that beneficial visitor use and socioeconomic impacts associated with Alternative B—particularly to families, local communities, and private investments such as houseboats—are understated. Requests additional coordination with Bureau of Reclamation to keep recreational activities feasible.	<i>Comment noted.</i> <i>General support noted.</i> <i>The biological assessments were conducted by technical experts in coordination with U.S. Fish and Wildlife Service. The documents reflect the findings from field visits and investigations.</i> <i>The floodplain mapping followed FEMA's guidelines.</i> <i>Comment noted. Visitor use and socioeconomic analysis is based on the best available data from the official NPS Visitor Use Statistics program and the U.S. Census Bureau. This information would not change the NEPA analysis.</i> <i>Comment noted.</i>
22	Supports construction of launch ramps and requests mid-lake gas station.	<i>General support noted.</i> <i>Construction of mid-lake fuel station is out of project scope.</i>
23	Supports construction of a launch ramp at Bullfrog.	<i>General support noted. Primitive ramp has been developed at Bullfrog.</i>

	Notes imminent loss of access for recreation users and associated economic impacts on local business. Requests temporary, primitive ramp to allow access to Lake Powell until the proposed launch ramps are functional. Also proposes launch ramp at Halls Crossing.	<i>Construction of launch ramp at Halls Crossing is out of project scope</i>
24	Supports low-water lake access at Bullfrog, but questions why no action occurred in 2021–2022 despite known low-water conditions.	<i>General support noted.</i>
25	Supports Stanton Creek/Bullfrog launch ramp; asserts that loss of boat launch access would result in trip cancellations and have significant negative economic impacts on Bullfrog, Ticaboo, and Hanksville.	<i>General support noted.</i>
26	Supports access during low-water conditions to sustain local towns which are dependent on Lake Powell recreation.	<i>General support noted.</i>
27	Supports full infrastructure support at Bullfrog for boating and camping.	<i>General support noted.</i>
28	States that ADA access to Bullfrog and Halls Crossing slips is necessary.	<i>Comment noted. Future construction will be consistent with Architectural Barriers Act (ABA) required standards for federal projects.</i>
29	Criticizes concessionaire service quality and maintenance.	<i>Comment noted.</i>
30	Emphasizes need for north-lake access for Utah/Colorado residents.	<i>General support noted.</i>
31	Argues north lake access neglected; criticizes reactive management and equity.	<i>Comment noted.</i>
32	Expresses appreciation for access efforts.	<i>General support noted.</i>
33	General support for spending on Bullfrog and Hite improvements.	<i>General support noted.</i>
34	States that investment in Hite access is not justified due to persistent low water levels, sediment accumulation, and the unlikelihood of lake elevations returning to prior conditions. Recommends prioritizing upgrades at Halls Crossing and Bullfrog as the most viable means of maintaining north-lake access. Requests that any improvements include ramp extensions to accommodate continued lake level declines of 30–40 feet in order to sustain recreational use over the long term.	<i>The concession services at Hite are needed in this remote area not only for lake and river users, but to provide services for a range of visitors and recreational users in the area, including those accessing Orange Cliffs and off-road vehicle areas. Ramps are designed so that if water levels recede the ramps can readily be reconfigured to service lower water levels.</i>

35	Expresses emotional attachment to Lake Powell and lake recreation.	<i>Comment noted.</i>
36	Requests prioritization of boat launch access at Bullfrog and Halls Crossing, including temporary ramps. Requests mid lake fueling infrastructure after construction of Bullfrog launch ramp is complete.	<i>General support noted. Fueling infrastructure is outside of the scope of this project.</i>
37	Opposes project based on dam viability and climate change; argues against use of taxpayer funds.	<i>General opposition noted.</i>
38	States that the EA does not adequately evaluate a reasonable range of alternatives, asserting that adaptive infrastructure (e.g., crane-assisted launches) was dismissed without sufficient analysis. Argues that the EA does not adequately analyze tradeoffs between adaptive infrastructure and the environmental impacts, habitat disturbance, wetland effects, erosion, and costs associated with blasting-based ramp construction, and asserts that dismissal of adaptive infrastructure may not satisfy NEPA requirements to rigorously explore reasonable alternatives that meet the purpose and need.	<i>The purpose and need for the plan indicate that the solution must provide continuous, predictable, and reliable access to the lake. While cranes could technically provide physical access under lower water conditions, this solution is limited in terms of the number and type of vessels that could be reasonably accommodated. Further, the volume of vessels needing access would likely overwhelm any such operation on higher visitation days/seasons, which affects the ability of the park to meet the requirements of Secretarial Order 3426: Ensuring National Parks are Open and Accessible.</i>
39	Supports Alternative B. Requests expansion of mitigation measures to include additional native plant species sourced from local or regional native plant nurseries, asserting that broader native restoration would further enhance ecological integrity and visitor experience.	<i>General support noted. Disturbed areas with topsoil will be reseeded using native species.</i>
40	Supports Hite launch ramp access for Cataract Canyon rafters.	<i>General support noted.</i>
41	The commenter strongly supports Alternative B and asserts that delay in constructing the ramps would reduce equitable public access to Lake Powell. Argues that the No Action Alternative is not viable and would perpetuate worsening access conditions. Requests expedited implementation of Alternative B. Recommends continued coordination with recreation user groups during design and construction and coordination with Bureau of Reclamation and other federal partners on water-management strategies to support long-term recreational viability at Lake Powell	<i>General support noted.</i>

	Requests adequate signage, safety features, staging areas.	
42	Appreciates efforts to maintain access to Lake Powell so it can continue to be enjoyed.	<i>General support noted.</i>

Appendix D:

Selected Alternative Mitigation

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Selected Alternative Mitigation

The following mitigation measures will be implemented to minimize potential environmental impacts. Some measures apply to both proposed projects, while others are project-specific, as indicated in the text.

Air Quality

- For any stationary sources to be used during construction, the contractor shall obtain required permits or register any exempted equipment before the installation and operation of such sources at the sites. **(BULLFROG AND HITE)**

Biological Resources

Vegetation

- Disturbed areas no longer needed for construction will be reclaimed, as appropriate, and noxious weeds will be managed as needed to reduce existing and prevent new weed infestations. **(BULLFROG AND HITE)**
- Construction equipment transported from outside the Park will first be pressure-washed to minimize the potential to import noxious weed seeds. **(BULLFROG AND HITE)**
- Any fill materials imported for the project will be sourced from a local commercial supplier and will be certified weed-free. **(BULLFROG AND HITE)**

Mexican Spotted Owl

- Avoid, when feasible, construction within 0.5-mile of likely suitable Mexican spotted owl breeding habitat during the Mexican spotted owl breeding season (March 1 – August 31). **(HITE)**
- If construction must occur within 0.5-mile of suitable Mexican spotted owl breeding habitat during the breeding season (i.e., March 1 through August 31), no blasting, impact pile driving, or other construction activities that measure over 90 dBA at a distance of 50 feet from the source will occur. **(HITE)**
- If individual Mexican spotted owls are observed in the project area during construction, construction activities will halt until the bird has left the area. **(BULLFROG AND HITE)**

Razorback Sucker

- A barrier such as a turbidity curtain will be placed to isolate the construction work area and prevent fish and other aquatic species from entering the work area, and to provide sediment retention, turbidity control, and noise reduction during high-decibel work activities such as rock blasting. **(BULLFROG AND HITE)**

Wildlife Species

- Care will be taken not to disturb any wildlife species (reptiles, migratory birds, raptors, or bats) found nesting, hibernating, estivating, or otherwise living in, or immediately nearby, worksites. **(BULLFROG AND HITE)**

Cultural Resources

- Design for construction activities and contractor access will be restricted to areas within the APE. The entire APE has been delineated (with geographic coordinates) in the 30 percent design submission so that the construction contractor is able to accurately define the limits in the field. Language regarding these restrictions and all measures to protect sensitive areas are included in the design and construction contract documentation. **(BULLFROG AND HITE)**
- Temporary fencing will be installed to further limit construction activities and access in sensitive areas. A buffer has been established around the NRHP-eligible archaeological site (42KA7601) within the APE and this area will be fenced off with a temporary barrier to restrict access. To protect NRHP-eligible sites located adjacent to the APE (42KA3375, 42KA4294, 42KA8613, 42KA9495, 42KA9496, 42KA9500, and 42KA9501), temporary fencing will be installed along the APE boundary to restrict access beyond the APE. An NPS staff or contracted archaeologist will approve the final fencing locations and be present onsite during installation. The NPS and archaeologist will be provided 14 days advance notice before installing barrier fencing. **(BULLFROG)**
- Within the APE, the western boundary of site GLCA02443/42SA24695 will be fenced for avoidance before and during construction. An archaeologist will periodically monitor the condition of the site during construction activities. **(HITE)**
- Protective fencing will be installed around a 15-foot buffer of the site boundary, and archaeological monitoring will be conducted for construction ground disturbance within 50 feet of the 15-foot buffer of GLCA03063/42SA35785. **(HITE)**
- NPS will provide or contract a Secretary of the Interior (SOI)-qualified archaeologist responsible for monitoring during ground-disturbing activities in sensitive areas, including near known sites or previously undisturbed sediment. Glen Canyon NRA's Monitoring and Inadvertent Discovery Plan provides procedures to address monitoring during construction and treatment of previously unidentified resources. **(BULLFROG AND HITE)**
- NPS will provide or contract a Secretary of the Interior (SOI)-qualified archaeologist to monitor for the duration of construction. The contractor will notify the archaeologist and the NPS at least 14 days in advance of ground-disturbing activities. **(BULLFROG)**
- If archaeological resources are found during construction, the contractor must immediately stop all work in the immediate vicinity (at least 100-foot radius), protect it from further impact, and contact the NPS and the archaeologist monitor. Work may not resume without approval from the monitor or from NPS archaeology staff. **(BULLFROG AND HITE)**
- The archaeologist monitor will be on hand for a project kick-off meeting at the project area to provide an educational briefing describing the types of archaeological materials that have been found and could be encountered during construction and provide guidance for protecting and reporting any discoveries during construction. All workers will be informed of the penalties for illegally collecting artifacts or intentionally damaging any archaeological or historic property. **(BULLFROG AND HITE)**
- Stockpiling and staging areas will avoid known archaeological resources. **(BULLFROG AND HITE)**

Water Resources

- The proposed projects will be constructed following standard erosion and sediment control BMPs. National Pollutant Discharge Elimination System (NPDES) permit requirements for general construction will apply to the project, and Glen Canyon NRA will ensure that BMPs are installed and maintained in such a manner as to limit the potential for surface and subsurface impacts. General BMPs may include but are not limited to silt fencing; straw wattles; erosion control mats; maintaining established vegetation; and designated vehicle construction entrance and exits. **(BULLFROG AND HITE)**
- CWA Sections 401 and 404 permitting will be required for the projects and will dictate the environmental criteria and special conditions required to mitigate adverse impacts. **(BULLFROG AND HITE)**
- Project disturbance will be limited to approved clearing limits, which will also be demarcated before construction using removable flagging or similar methods. **(BULLFROG AND HITE)**
- An NPS-designated wetland monitor will be onsite during construction around wetlands, as determined necessary by Glen Canyon NRA staff. **(BULLFROG AND HITE)**
- Mitigation would be conducted at rate of 5 acres mitigation for every 1 acre of impact. Compensatory mitigation and wetland restoration would involve mechanical tamarisk removal followed by planting native willow species. Approximately 17.3 acres of wetlands would be restored to mitigate the Bullfrog project impacts and approximately 6.05-acres would be restored to mitigate the Hite project impacts. Tamarisk removal would be completed using chainsaws and hand tools. All cut stumps would be treated with an approved herbicide to kill the plants. **(BULLFROG AND HITE)**
- The performance of the wetland mitigation sites would be monitored annually, with photo documentation to record changes over time. Monitoring would continue until 70 percent native vegetation cover is achieved relative to adjacent reference locations, anticipated within 3 to 5 growing seasons. Noxious weed cover would be limited to less than 20 percent relative to reference locations. Annual monitoring and photos would document restoration efforts and identify additional required activities, such as supplemental planting or invasive species removal. **(BULLFROG AND HITE)**
- Appropriately sized culverts will be installed under the access road at wetland crossings to sustain the ephemeral fluvial processes including flow, water level fluctuations, sediment transport, and stream morphology. **(BULLFROG AND HITE)**
- A construction barrier (e.g., turbidity curtain) will be placed in the water during work activities to isolate the project area and prevent fish and other aquatic species from entering the underwater construction area. **(BULLFROG AND HITE)**
- Work in or around wetlands will not occur during or immediately following precipitation events until soil conditions are adequate to prevent sediment loss, substrate compaction, and unnecessary disturbance. **(BULLFROG AND HITE)**

- No material stockpiling will occur in, or immediately adjacent to wetland areas. **(BULLFROG AND HITE)**
- Equipment and supplies will be staged and stored in already disturbed areas onsite or in designated staging areas outside of wetland features. **(BULLFROG AND HITE)**

Paleontological Resources

- Glen Canyon NRA will provide or contract a qualified paleontologist responsible for monitoring during ground-disturbing activities in depositional units that are known to preserve paleontological resources. **(BULLFROG)**
- All workers will be informed of the potential to encounter paleontological resources in the project area, which may be in the form of body fossils, tracks, and burrows, and to remain vigilant for these resources during construction. If paleontological resources are discovered, work will stop, and the discovery will be reported to Glen Canyon NRA's Chief of Planning and Compliance for further evaluation and appropriate treatment. **(BULLFROG)**

Appendix E:
Errata

ERRATA

Development of Bullfrog and Hite Low Water Launch Ramps Environmental Assessment

An Errata sheet is necessary to make factual corrections to the environmental assessment (EA). The corrections in this Errata sheet do not change the project activities or increase the degree of impact described in the environmental assessment. Changes to the text are provided below.

CHANGES TO TEXT

Page 3, PURPOSE AND NEED—BACKGROUND / third paragraph

Text in environmental assessment reads:

Glen Canyon NRA is evaluating options for boat launch ramps that can handle fluctuating water levels at Bullfrog and in the Hite. For Bullfrog, this means considering the full pool elevation of 3,700 feet asl and a low water level of 3,450 feet asl. For Hite, the new ramp is expected to be operational between a low lake level of 3,535 feet asl, the elevation of the original Colorado River channel bed at this location, up to a lake level of 3,650 feet asl. Above this level, the existing Hite ramp would be functional. The following two sections will provide the background of Bullfrog, then Hite.

Corrected Text:

Glen Canyon NRA is evaluating options for boat launch ramps that can handle fluctuating water levels at Bullfrog and in the Hite. For Bullfrog, this means considering the full pool elevation of 3,700 feet asl and a low water level of 3,450 feet asl. For Hite, the new ramp is expected to be operational between a low lake level of 3,535 feet asl, the elevation of the original Colorado River channel bed at this location, 3,490 asl up to a lake level of 3,650 feet asl. Above this level, the existing Hite ramp would be functional. The following two sections will provide the background of Bullfrog, then Hite.

Note: The lower elevation for Hite does not have any bearing on the original impact analysis in the EA or the selected action in the Finding of No Significant Impact.

Page 3, PURPOSE AND NEED—BACKGROUND / Hite / second paragraph

Text in environmental assessment reads:

An unmaintained access road on the north riverbank leads to an informal takeout location known as North Wash, downstream of the Dirty Devil River confluence. The site, however, is not an ideal location to access the river due to unstable sediment conditions, fluctuating water levels, and high velocity river currents. Glen Canyon NRA has undertaken multiple efforts to provide reliable access at this location, but maintenance activities have only temporarily been effective due to the river eroding the bank away. As a

currents. Glen Canyon NRA has undertaken multiple efforts to provide reliable access at this location, but maintenance activities have only temporarily been effective due to the river eroding the bank away. As a result, the Park does not actively maintain the North Wash area, and Glen Canyon NRA has notified river rafting operators that Bullfrog is a more reliable option for takeout than Hite/North Wash.

Corrected Text:

An unmaintained access road on the north riverbank leads to an ~~informal~~ takeout location known as North Wash, downstream of the Dirty Devil River confluence. The site, however, is not an ideal location to access the river due to unstable sediment conditions, fluctuating water levels, and high velocity river currents. Glen Canyon NRA has undertaken multiple efforts to provide reliable access at this location, but maintenance activities have only temporarily been effective due to the river eroding the bank away. In 2026, comprehensive improvements were made to the North Wash takeout in partnership with the State of Utah as an interim fix ahead of a longer-term access solution at Hite. The facility remains relatively primitive and subject to ongoing wear from visitor use, fluctuating water levels, and natural erosional processes. ~~As a result, the Park does not actively maintain the North Wash area, and Glen Canyon NRA has notified river rafting operators that Bullfrog is a more reliable option for takeout than Hite/North Wash.~~

Page 4, PURPOSE AND NEED—BACKGROUND / Purpose and Need / first paragraph

Text in environmental assessment reads:

The purpose of constructing the proposed Bullfrog and Hite Low Water Launch Ramps (the project) is to provide continuous and predictable lake access at elevations down to 3,450 feet asl at Bullfrog and 3,535 feet asl at Hite. This would provide water access for watercraft users/visitors in the uplake part of Lake Powell while protecting natural and cultural resources.

Corrected Text:

The purpose of constructing the proposed Bullfrog and Hite Low Water Launch Ramps (the project) is to provide continuous and predictable lake access at lower elevations ~~down to 3,450 feet asl at Bullfrog and 3,535 feet asl at Hite.~~ This would provide water access for watercraft users/visitors in the uplake part of Lake Powell while protecting natural and cultural resources.

Note: Specific elevations are not relevant to the overall purpose and need for the project, so the reference has been removed from this section of the document. This editorial change does not have any bearing on the original impact analysis in the EA or the selected action in the Finding of No Significant Impact.

Text in environmental assessment reads:

Alternative A provides a baseline to evaluate the changes and impacts presented in the action alternative. For Bullfrog, the no action alternative represents continued operation and maintenance of the existing boat launch ramps, which are functional only when lake water levels allow. For Hite, the no action alternative reflects a continuation of inoperable or unavailable facilities that have historically relied on access to the water at this location; Lake Powell has been variably inaccessible for over a decade. While Glen Canyon NRA advises raft operators to use Bullfrog, the use of the takeout location at North Wash on the north bank at Hite would likely continue because it is necessary for rafting operations to be able to offer shorter rafting trips.

Corrected Text:

Alternative A provides a baseline to evaluate the changes and impacts presented in the action alternative. For Bullfrog, the no action alternative represents continued operation and maintenance of the existing boat launch ramps, which are functional only when lake water levels allow. For Hite, the no action alternative reflects a continuation of inoperable or unavailable facilities that have historically relied on access to the water at this location; Lake Powell has been variably inaccessible for over a decade. ~~While Glen Canyon NRA advises raft operators to use Bullfrog, t~~The use of the takeout location at North Wash on the north bank at Hite would likely continue because it is necessary for rafting operations to be able to offer shorter rafting trips.

Text in environmental assessment reads:

Construction of the new Bullfrog launch ramp would also involve removing tamarisk mechanically, followed by planting native willow species at mitigation sites approximately 60 miles southwest of the Bullfrog project area on NPS-managed lands within Glen Canyon NRA. Tamarisk removal would be completed using chainsaws and hand tools, with debris distributed within both sites. All cut stumps would be treated with an approved herbicide to kill the plants. Willow stem cuttings from Glen Canyon NRA would be propagated in a greenhouse until ready for planting. Appendix C provides a full list of mitigation measures.

Corrected Text:

Construction of the new Bullfrog launch ramp would also involve removing tamarisk mechanically, followed by planting native willow species at mitigation sites approximately 60 miles southwest of the Bullfrog project area on NPS-managed lands within Glen Canyon NRA. Tamarisk removal would be completed using chainsaws and hand tools, ~~with debris distributed within both sites~~. All cut stumps would

be treated with an approved herbicide to kill the plants. Willow stem cuttings from Glen Canyon NRA would be propagated in a greenhouse until ready for planting. Appendix C provides a full list of mitigation measures.

Page 19, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—
BIOLOGICAL RESOURCES/ Impacts of Alternative B (Proposed Action) / Vegetation / first paragraph

Text in environmental assessment reads:

Bullfrog: Vegetation would be removed from roughly 328 total acres as a result of this project. This estimate is conservative as some rocky areas do not support vegetation and some areas are already clear of vegetation. Approximately 65 acres of permanent impacts would be required for the project's road, parking area, launch ramp, cut and fill slopes, and pump stations. Temporary impacts would amount to 263 acres and be associated with construction equipment movement, relocated utility trenches where they deviate from the road, and pump stations. Vegetation is anticipated to regrow in non-rocky temporarily impacted areas.

The equipment used during construction and trucks/boats launching from the ramp would have a long-term potential to introduce invasive species seed/vegetation. To minimize the introduction and spread of weeds, the following mitigation measures would be implemented during construction (Appendix C). Disturbed areas would be reclaimed, and noxious weeds would be managed during construction to reduce existing and prevent new weed infestations. In addition, construction equipment brought in from outside the Park would be pressure-washed to minimize the potential of importing noxious weed seeds. Finally, all fill material imported for the project would be sourced from local commercial suppliers and would be certified weed-free.

Corrected Text:

Bullfrog: Vegetation would be removed from roughly 328 total acres as a result of this project. This estimate is conservative as some rocky areas do not support vegetation and some areas are already clear of vegetation. Approximately 65 acres of permanent impacts would be required for the project's road, parking area, launch ramp, cut and fill slopes, and pump stations. Temporary impacts would amount to 263 acres and be associated with construction equipment movement, relocated utility trenches where they deviate from the road, and pump stations. Vegetation is anticipated to regrow in non-rocky temporarily impacted areas.

The equipment used during construction and trucks/boats launching from the ramp would have a long-term potential to introduce invasive species seed/vegetation. To minimize the introduction and spread of weeds, the following mitigation measures would be implemented during construction (Appendix C). Disturbed areas would be reclaimed, and noxious weeds would be managed during construction to reduce existing and prevent new weed infestations. In addition, construction equipment brought in from outside the Park would be pressure-washed to minimize the potential of importing noxious weed seeds. Finally,

all fill material imported for the project would be sourced from local commercial suppliers and would be certified weed-free.

During operations some impact on vegetation may occur immediately adjacent to the improvements due to vehicle maneuvering or people walking. However, ongoing impacts are anticipated to be infrequent, and vegetation would reestablish over time.

Page 23, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—
BIOLOGICAL RESOURCES/Trends and Planned Actions/fifth paragraph

Current Text in environmental assessment reads:

While Glen Canyon NRA advises raft operators to use Bullfrog, the use of the unmaintained takeout location at North Wash on the north bank at Hite would likely continue. Ongoing use-at-own-risk of North Wash takeout would continue to disturb the bank of the river, destabilizing it and making it more vulnerable to erosion, thereby increasing localized sediment load and turbidity. Due to the steep conditions and unstable terrain, recreational users often employ winches to pull watercraft out of the river. These activities disturb the edge of the river channel and could further contribute to sediment transport and deposition, affecting fish habitat both in the immediate area and downstream.

Corrected Text:

~~While Glen Canyon NRA advises raft operators to use Bullfrog, the use of the unmaintained takeout location at North Wash on the north bank at Hite would likely continue. Ongoing use-at-own-risk of North Wash takeout would continue to disturb the bank of the river, destabilizing it and making it more vulnerable to erosion, thereby increasing localized sediment load and turbidity. Due to the steep conditions and unstable terrain, recreational users often employ winches to pull watercraft out of the river. These activities disturb the edge of the river channel and could further contribute to sediment transport and deposition, affecting fish habitat both in the immediate area and downstream.~~

the use of four-wheel-drive vehicles with high ground clearance is recommended, and backing a trailer into the water is not advised.

Page 35, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—
BIOLOGICAL RESOURCES / Impacts of Alternative A – No Action / Hite

Text in EA reads:

In the Hite District, river access would continue under a “launch at own risk” advisory. While Glen Canyon NRA advises raft operators to use Bullfrog, the use of the unmaintained takeout location at North Wash on the north bank at Hite would be expected to continue and would contribute to erosion of the riverbank and the contribution of sediment into the river affecting water clarity. In addition, low water

levels combined with the introduction of contaminants from pet feces or other waste added to the water would continue to contribute to impaired water quality in the Hite project area. The risk of harmful algal blooms would remain a concern in the Hite project area. No impact on floodplains, NPS wetlands, or WOTUS would occur.

Corrected Text:

In the Hite District, river access would continue under a “launch at own risk” advisory. ~~While Glen Canyon NRA advises raft operators to use Bullfrog, the use of the unmaintained takeout location at North Wash on the north bank at Hite would be expected to continue and would contribute to erosion of the riverbank and the contribution of sediment into the river affecting water clarity. In addition, low water levels combined with the introduction of contaminants from pet feces or other waste added to the water would continue to contribute to impaired water quality in the Hite project area. The risk of harmful algal blooms would remain a concern in the Hite project area. No impact on floodplains, NPS wetlands, or WOTUS would occur.~~

Page 43 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—WATER RESOURCES / Trends and Planned Actions / second paragraph

Text in environmental assessment reads:

In addition, ongoing ferry operations and associated maintenance, routine roadway and bridge maintenance, utility system maintenance, and infrastructure upgrades, including the State of Utah’s proposal to construct improvements at the North Wash takeout would contribute to impacts on floodplains, wetlands, and water quality. Ground disturbance associated with these actions could mobilize sediment and increase turbidity in nearby drainages, which could affect water quality if unmanaged. However, these actions would be expected to include erosion control measures to minimize sediment transport. With these measures in place, combined effects on water quality would be short-term and limited to temporary increases in sedimentation during active ground disturbance.

Corrected Text:

In addition, ongoing ferry operations and associated maintenance, routine roadway and bridge maintenance, utility system maintenance, and infrastructure upgrades, ~~including the State of Utah’s proposal to construct improvements at the North Wash takeout~~ would contribute to impacts on floodplains, wetlands, and water quality. Ground disturbance associated with these actions could mobilize sediment and increase turbidity in nearby drainages, which could affect water quality if unmanaged. However, these actions would be expected to include erosion control measures to minimize sediment transport. With these measures in place, combined effects on water quality would be short-term and limited to temporary increases in sedimentation during active ground disturbance.

Although the State of Utah has constructed improvements at the North Wash takeout, the facility remains relatively primitive and subject to ongoing wear from visitor use, fluctuating water levels, and natural

erosional processes. As a result, localized bank erosion and sediment delivery to the river would be expected to continue over time.

Page 47, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—VISITOR USE AND EXPERIENCE / Affected Environment / Hite / third paragraph

Text in environmental assessment reads:

With the Hite launch ramp closed, boaters and rafting operators have been advised by Glen Canyon NRA to use Bullfrog, but some use the primitive North Wash informal takeout. This location is not maintained, and use of the area is not sanctioned by Glen Canyon NRA. Visitors use it at their own risk, and four-wheel drive vehicles are recommended. NPS evaluated this site for potential ramp development but found it unsuitable because repeated repair efforts on the existing take out have failed, with the site continually eroding into the river due to high-velocity currents wearing away the shoreline.

Corrected Text:

~~With the Hite launch ramp closed, boaters and rafting operators have been advised by Glen Canyon NRA to use Bullfrog, but some use the primitive North Wash informal takeout. This location is not maintained, and use of the area is not sanctioned by Glen Canyon NRA. Visitors use it at their own risk, and four-wheel drive vehicles are recommended. NPS evaluated this site for potential ramp development but found it unsuitable because repeated repair efforts on the existing take out have failed, with the site continually eroding into the river due to high-velocity currents wearing away the shoreline.~~

Page 48, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—VISITOR USE AND EXPERIENCE / Impacts of Alternative A – No Action / Hite / first paragraph

Text in environmental assessment reads:

Under Alternative A, the Hite District developed area would remain closed due to low water levels and the absence of a concession operator. The existing launch ramp would remain inoperable, and the road from SR 95 would remain closed. While Glen Canyon NRA advises raft operators to use Bullfrog as a pullout for the Cataract Canyon river experiences, the use of the unmaintained North Wash takeout would likely continue as it saves considerable time compared to the longer trip to Bullfrog. The continued closure of the existing Hite launch ramp would limit recreational opportunities in the northern portion of the Park, concentrate visitor use in other areas like Bullfrog, and reduce the Park's ability to distribute visitor impacts more evenly. These factors would likely contribute to a continued decline in use at Hite and reduced visitor satisfaction in this portion of the Park. Emergency response in the Hite area would remain limited, relying on regional support without improvements to local infrastructure or services.

Corrected Text:

Under Alternative A, the Hite District developed area would remain closed due to low water levels and the absence of a concession operator. The existing launch ramp would remain inoperable, and the road from SR 95 would remain closed. ~~While Glen Canyon NRA advises raft operators to use Bullfrog as a pullout for the Cataract Canyon river experiences, the~~ use of the ~~unmaintained interim~~ North Wash takeout would likely continue as it saves considerable time compared to the longer trip to Bullfrog. The continued closure of the existing Hite launch ramp would limit recreational opportunities in the northern portion of the Park, concentrate visitor use in other areas like Bullfrog, and reduce the Park's ability to distribute visitor impacts more evenly. These factors would likely contribute to a continued decline in use at Hite and reduced visitor satisfaction in this portion of the Park. Emergency response in the Hite area would remain limited, relying on regional support without improvements to local infrastructure or services.

Page 49, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—VISITOR USE AND EXPERIENCE / Impacts of Alternative B (Proposed Action) / Hite

Text in environmental assessment reads:

At Hite, Alternative B would provide long-term benefits to visitor use and experience by restoring formal river access for private and commercial rafters exiting Cataract Canyon. Designated river access would create more predictable conditions for staging and gear handling and offer a more organized exit to multi-day river trips. Visitors and river rafting operators would experience more reliable trip logistics and reduced uncertainty compared to relying on informal and unmaintained shoreline areas. Reestablishing a functional launch site in this remote uplake area would eliminate the public use of unmaintained launch areas, and reduce pressure at Bullfrog, leading to a more balanced distribution of visitor activity across Glen Canyon NRA.

Users of the proposed Hite launch ramp would have a different visual experience in their approach to the new location. The new access road and ramp would introduce formal but primitive infrastructure into an area that is currently undeveloped and characterized by natural terrain and minimal human-made features. As visitors travel toward the site, views would shift from a remote, rugged landscape to one that would include constructed elements (graded road, parking areas, and the launch ramp). For some visitors, this change may alter the perceived natural character of the immediate area, although the surrounding canyon and river would remain the primary visual features.

Corrected Text:

At Hite, Alternative B would provide long-term benefits to visitor use and experience by restoring ~~formal~~ reliable river access for private and commercial rafters exiting Cataract Canyon. Designated river access would create more predictable conditions for staging and gear handling and offer ~~a more organized an improved exit to~~ a more organized and improved exit for multi-day river trips. Visitors and river rafting operators would experience more reliable trip logistics and reduced uncertainty ~~compared to relying on informal and unmaintained~~

shoreline areas. Reestablishing a functional launch site in this remote uplake area would eliminate the public use of unmaintained launch areas, and reduce pressure at Bullfrog, leading to a more balanced distribution of visitor activity across Glen Canyon NRA.

Construction activities at Hite may temporarily affect boater and rafter navigation of Lake Powell near the project area, primarily disembarking river rafters. Those seeking natural ambience and tranquility may also be impacted by the presence of construction equipment and vehicles. However, given that the current launch ramp is inoperable, the access road is closed, and no concession services are in place, construction-related effects on visitor use and recreation opportunities would be limited and temporary.

Users of the proposed Hite launch ramp would have a different visual experience in their approach to the new location. The new access road and ramp would introduce formal but primitive infrastructure into an area that is currently undeveloped and characterized by natural terrain and minimal human-made features. As visitors travel toward the site, views would shift from a remote, rugged landscape to one that would include constructed elements (graded road, parking areas, and the launch ramp). For some visitors, this change may alter the perceived natural character of the immediate area, although the surrounding canyon and river would remain the primary visual features.

Pages 49 and 50, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES— VISITOR USE AND EXPERIENCE / Trends and Planned Actions

Text in environmental assessment reads:

Past, current, and future actions and trends that affect visitor use and experience include development of launch ramps, marinas, campgrounds, and visitor amenities at Bullfrog and Hite, as well as fluctuating lake levels that affect the operability of these facilities. Visitor access at Bullfrog is constrained by the seasonal availability of the Bullfrog Main Launch Ramp and the limited capacity and distance of the Bullfrog North Ramp. At Hite, the closure of the developed area and the loss of functional river access have reduced visitor opportunities in the uplake region. Reliance on the primitive North Wash area would continue to limit convenient takeout from the river, primarily by river rafting operations.

The limited operability of existing launch ramps during low-water conditions have increasingly constrained visitor access and contributed to localized congestion and reduced convenience, diminishing the visitor experience. Future actions, such as routine maintenance of existing official lake ramps and potential improvements at the North Wash takeout, would provide incremental benefits but are not expected to resolve the broader limitations on reliable uplake access.

Foreseeable trends include changes in visitor use patterns based on ramp availability, which could lead to overcrowding, congestion, longer wait times at the ferry (Bullfrog) or launch ramps, and a diminished visitor experience. Rising temperatures, changing precipitation patterns, and more frequent extreme weather events could influence water levels, visitor behavior, infrastructure reliability, and overall park experience. In addition, reasonably foreseeable actions also include the State of Utah's proposed improvements at North Wash takeout, which could provide some short-term improvement for river users

if constructed. Given the area's geomorphological conditions, the long-term viability of this takeout point is uncertain.

Alternative A would maintain the current limitations on infrastructure and access, particularly if the proposed North Wash takeout improvements do not get constructed or fail due to riverbank erosion. Over time, these conditions would likely result in a measurable decline in the quality of the visitor experience. This includes increased crowding, longer wait times, reduced convenience, and diminished recreational opportunities.

When considered with past, present, and reasonably foreseeable actions, Alternative A would continue the current pattern of constrained access. These conditions would influence visitation patterns, user satisfaction, and the Park's ability to meet visitor expectations under changing environmental conditions.

Alternative B would improve visitor use and experience by constructing new launch ramps and supporting infrastructure at both Bullfrog and Hite. These new facilities would increase the reliability of lake and river access during low-water conditions, reduce congestion at existing ramps, and support a more balanced distribution of visitor use across the uplake region. The Hite ramp would provide predictable accessible access if North Wash takeout improvements are not constructed. When considered with past, present, and future actions, Alternative B would contribute long-term beneficial impacts on recreational access and improve the quality and predictability of the visitor experience and enhance the Park's ability to manage demand and adapt to changing conditions.

Corrected Text:

Past, current, and future actions and trends that affect visitor use and experience include development of launch ramps, marinas, campgrounds, and visitor amenities at Bullfrog and Hite, as well as fluctuating lake levels that affect the operability of these facilities. Visitor access at Bullfrog is constrained by the seasonal availability of the Bullfrog Main Launch Ramp and the limited capacity and distance of the Bullfrog North Ramp. At Hite, the closure of the developed area and the loss of functional river access have reduced visitor opportunities in the uplake region. ~~Reliance on the primitive North Wash area would continue to limit convenient takeout from the river, primarily by river rafting operations.~~

The limited operability of existing launch ramps during low-water conditions have increasingly constrained visitor access and contributed to localized congestion and reduced convenience, diminishing the visitor experience. Future actions, such as routine maintenance of existing official lake ramps ~~and potential improvements at the North Wash takeout~~, would provide incremental benefits but are not expected to resolve the broader limitations on reliable uplake access.

Foreseeable trends include changes in visitor use patterns based on ramp availability, which could lead to overcrowding, congestion, longer wait times at the ferry (Bullfrog) or launch ramps, and a diminished visitor experience. Rising temperatures, changing precipitation patterns, and more frequent extreme weather events could influence water levels, visitor behavior, infrastructure reliability, and overall park experience. In addition, although improvements have been constructed at the North Wash takeout ~~reasonably foreseeable actions also include the State of Utah's proposed improvements at North Wash takeout, which could to provide some short-term improvement for river users if constructed. Given the area's geomorphological conditions, the long-term viability of this takeout point is uncertain and launching is still not available.~~

Alternative A would maintain the current limitations on infrastructure and access, particularly if the proposed North Wash takeout improvements do not get constructed or fail due to riverbank erosion. Over time, the instability of this takeout site ~~ese conditions~~ would likely result in a measurable decline in the quality of the visitor experience. This includes increased crowding, longer wait times, reduced convenience, and diminished recreational opportunities.

When considered with past, present, and reasonably foreseeable actions, Alternative A would continue the current pattern of constrained access. These conditions would influence visitation patterns, user satisfaction, and the Park's ability to meet visitor expectations under changing environmental conditions.

Alternative B would improve visitor use and experience by constructing new launch ramps and supporting infrastructure at both Bullfrog and Hite. These new facilities would increase the reliability of lake and river access during low-water conditions, reduce congestion at existing ramps, and support a more balanced distribution of visitor use across the uptake region. ~~The Hite ramp would provide predictable accessible access if North Wash takeout improvements are not constructed.~~ When considered with past, present, and future actions, Alternative B would contribute long-term beneficial impacts on recreational access and improve the quality and predictability of the visitor experience and enhance the Park's ability to manage demand and adapt to changing conditions.

Pages 52 and 53, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES—
SOCIOECONOMICS / Impacts of Alternative A – No Action / Hite / first paragraph

Text in environmental assessment reads:

Under Alternative A, river access in the Hite District would continue to be “launch at own risk.” While Glen Canyon NRA advises raft operators to use Bullfrog, the informal use of the unmaintained North Wash takeout likely would continue until conditions degrade to the point that access is no longer feasible. As the site continues to erode and become less usable, opportunities for trip lengths that traditionally end in the Hite area would diminish. This could limit the variety of itinerary options rafting outfitters are able to offer, which may reduce demand for certain trips and result in a loss of revenue for commercial rafting operators.

Corrected Text:

Under Alternative A, river access in the Hite District would continue to be “launch at own risk.” ~~While Glen Canyon NRA advises raft operators to use Bullfrog, t~~The informal use of the unmaintained North Wash takeout likely would continue until conditions degrade to the point that access is no longer feasible. As the site continues to erode and become less usable, opportunities for trip lengths that traditionally end in the Hite area would diminish. This could limit the variety of itinerary options rafting outfitters are able to offer, which may reduce demand for certain trips and result in a loss of revenue for commercial rafting operators.

Text in environmental assessment reads:

Ambient noise near Hite includes vehicles traveling on SR 95, river rafting operators passing through the area, and the use of the unmaintained takeout location at North Wash. The existing Hite launch ramp is inoperable and has been closed to use since 2021. Therefore, it no longer contributes to the types of visitor-generated sounds associated with boating and recreational activities. Current ambient noise conditions are limited to intermittent roadway traffic and occasional visitor use of the surrounding area.

Corrected Text:

Ambient noise near Hite includes vehicles traveling on SR 95, river rafting operators passing through the area, and the use of the ~~unmaintained~~ interim takeout location at North Wash. The existing Hite launch ramp is inoperable and has been closed to use since 2021. Therefore, it no longer contributes to the types of visitor-generated sounds associated with boating and recreational activities. Current ambient noise conditions are limited to intermittent roadway traffic and occasional visitor use of the surrounding area.

Text in environmental assessment reads:

- The proposed projects would be constructed following standard erosion and sediment control BMPs. National Pollutant Discharge Elimination System (NPDES) permit requirements for general construction would apply to the project, and Glen Canyon NRA would ensure that BMPs are installed and maintained in such a manner as to limit the potential for surface and subsurface impacts. General BMPs may include but are not limited to silt fencing; straw wattles; erosion control mats; maintaining established vegetation; and designated vehicle construction entrance and exits. **(BULLFROG AND HITE)**
- CWA Sections 401 and 404 permitting would be required for the projects and would dictate the environmental criteria and special conditions required to mitigate adverse impacts. **(BULLFROG AND HITE)**
- Project disturbance would be limited to approved clearing limits, which would also be demarcated before construction using removable flagging or similar methods. **(BULLFROG AND HITE)**
- An NPS-designated wetland monitor would be onsite during construction around wetlands, as determined necessary by Glen Canyon NRA staff. **(BULLFROG AND HITE)**
- Appropriately sized culverts would be installed under the access road at wetland crossings to sustain the ephemeral fluvial processes including flow, water level fluctuations, sediment transport, and stream morphology. **(BULLFROG AND HITE)**

- A construction barrier (e.g., turbidity curtain) would be placed in the water during work activities to isolate the project area and prevent fish and other aquatic species from entering the underwater construction area. **(BULLFROG AND HITE)**
- Work in or around wetlands would not occur during or immediately following precipitation events until soil conditions are adequate to prevent sediment loss, substrate compaction, and unnecessary disturbance. **(BULLFROG AND HITE)**
- No material stockpiling would occur in, or immediately adjacent to wetland areas. **(BULLFROG AND HITE)**
- Equipment and supplies would be staged and stored in already disturbed areas onsite or in designated staging areas outside of wetland features. **(BULLFROG AND HITE)**

Corrected Text:

- The proposed projects would be constructed following standard erosion and sediment control BMPs. National Pollutant Discharge Elimination System (NPDES) permit requirements for general construction would apply to the project, and Glen Canyon NRA would ensure that BMPs are installed and maintained in such a manner as to limit the potential for surface and subsurface impacts. General BMPs may include but are not limited to silt fencing; straw wattles; erosion control mats; maintaining established vegetation; and designated vehicle construction entrance and exits. **(BULLFROG AND HITE)**
- CWA Sections 401 and 404 permitting would be required for the projects and would dictate the environmental criteria and special conditions required to mitigate adverse impacts. **(BULLFROG AND HITE)**
- Project disturbance would be limited to approved clearing limits, which would also be demarcated before construction using removable flagging or similar methods. **(BULLFROG AND HITE)**
- An NPS-designated wetland monitor would be onsite during construction around wetlands, as determined necessary by Glen Canyon NRA staff. **(BULLFROG AND HITE)**
- Mitigation would be conducted at rate of 5 acres mitigation for every 1 acre of impact. Compensatory mitigation and wetland restoration would involve mechanical tamarisk removal followed by planting native willow species. Approximately 17.3 acres of wetlands would be restored to mitigate the Bullfrog project impacts and approximately 6.05-acres would be restored to mitigate the Hite project impacts. Tamarisk removal would be completed using chainsaws and hand tools. All cut stumps would be treated with an approved herbicide to kill the plants. **(BULLFROG AND HITE)**
- The performance of the wetland mitigation sites would be monitored annually, with photo documentation to record changes over time. Monitoring would continue until 70 percent native vegetation cover is achieved relative to adjacent reference locations, anticipated within 3 to 5 growing seasons. Noxious weed cover would be limited to less than 20 percent relative to reference locations. Annual monitoring and photos would document restoration efforts and identify additional required activities, such as supplemental planting or invasive species removal. **(BULLFROG AND HITE)**
- Appropriately sized culverts would be installed under the access road at wetland crossings to sustain the ephemeral fluvial processes including flow, water level fluctuations, sediment transport, and stream morphology. **(BULLFROG AND HITE)**
- A construction barrier (e.g., turbidity curtain) would be placed in the water during work activities to isolate the project area and prevent fish and other aquatic species from entering the underwater construction area. **(BULLFROG AND HITE)**

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- Equipment and supplies would be staged and stored in already disturbed areas onsite or in designated staging areas outside of wetland features. (**BULLFROG AND HITE**)