

National Park Service
U.S. Department of the Interior

Glen Canyon National Recreation Area
Arizona



FINDING OF NO SIGNIFICANT IMPACT
PAGE-LECHEE WATER SUPPLY PROJECT

BACKGROUND

In compliance with the National Environmental Policy Act (NEPA) of 1969, the City of Page, Arizona, (City) and the Navajo Nation, LeChee Chapter (LeChee) in cooperation with the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine various alternatives and environmental impacts associated with the proposal to construct and operate a new water supply pumping station and a conveyance pipeline originating in the Chains recreation area near the Glen Canyon Dam at Glen Canyon National Recreation Area (GCNRA). The domestic water supply for the City and neighboring LeChee is obtained from Lake Powell through pumping and conveyance facilities that were first constructed at the time Glen Canyon Dam was built between 1957 and 1964.

The proposal is needed to improve the existing system in a way that provides dependability and redundancy, as well as additional capacity to meet current and future peak demands. While the proposal would allow higher diversions of water from Lake Powell, actual consumptive use would continue to be subject to the City's contract with Reclamation. The proposed new pumping station and intakes would improve the dependability and provide the redundancy needed while also meeting the need for increased capacity during peak demand periods.

The City's current water supply facilities access Lake Powell water via a 12-inch diameter intake pipe located on the upstream face of the Glen Canyon Dam at an elevation of 3,470 feet above mean sea level (amsl). This 12-inch pipe feeds four pumping units, one of which is used as a standby for backup, inside the dam. Each pump discharges into a 12-inch manifold pipe. That pipe discharges into a single 18-inch diameter pipeline that ascends to the canyon rim through a tunnel in the canyon wall, downstream from the dam. Once the pipeline reaches the canyon rim, it turns toward the City's water treatment plant, which is located at a high point in the City at an elevation of 4,375. The existing system capacity with three pumps operating is estimated to be 3,050 gallons per minute (gpm).

This system is currently vulnerable to interruption by any failure of the pipeline from the Glen Canyon Dam to the water treatment plant in the city. Failure of this pipeline or the pumping equipment inside the dam could take anywhere from several days to weeks to repair depending on where and what kind of failure occurs. The City can only store approximately one day's supply of water with its current pumping capacity and storage tanks. The pumping and storage capacity of the existing water supply system is barely able to meet peak demands in the summer months each year. The pumps and pipes that transport water through the system from the dam to the water treatment plant often operate 24 hours a day during the peak demand period in order to keep the storage tank from being completely emptied.

Through a contract with the Bureau of Reclamation (Reclamation) and as clarified through subsequent letters of concurrence, the City is allocated an annual delivery of water from storage in

Lake Powell to allow for the consumptive use of 2,740 acre-feet per year (afy). As a contractual obligation assigned by Reclamation, the City is required to deliver up to 100,000 gallons of treated water per day to LeChee. The existing water supply facilities would not provide enough capacity to allow the City and LeChee to withdraw their full water allocation, should the demand increase to that level. Additional details regarding the purpose and need for the proposed action can be found in the Summary Report, Page-LeChee Water Supply Project Alternatives (TTRMC, 2003), and are incorporated by reference.

The EA has been prepared and distributed for agency and public comment, pursuant to the requirements of NEPA, to address the potential impacts associated with the construction and operation of a new water pumping station and conveyance pipeline. The current NEPA document assesses the potential social, economic, and environmental impacts associated with one Action Alternative (construct and operate new water pumping station, the Preferred Alternative) and the No Action Alternative. In addition, this document summarizes the alternatives development process, explains the rationale for eliminating specific alternatives, and summarizes the public participation process.

SELECTION OF THE PREFERRED ALTERNATIVE

Two alternatives were evaluated in the EA: Alternative A—No Action Alternative and Alternative B—Preferred Alternative. Alternative B is the NPS preferred alternative and the selected course of action to be implemented because it best meets the purpose and need for the project as well as the project objectives to (1) increase the dependability of the water supply system for the City, (2) provide redundancy so that the system is less susceptible to service interruptions, and (3) add capacity to the system to meet current and future peak demands.

The preferred alternative consists of drilling six 48-inch diameter boreholes at an angle from the surface to a point within the lake at an approximate elevation of 3,373.0 feet amsl. The angle of the boreholes, or shafts, will be set at an approximately 2:1 (vertical:horizontal) slope (which means for every two feet down, the borehole angles one foot over toward the canyon wall), which, when combined with the 3,373.0 feet amsl intake elevation, will ultimately determine the exact location of the aboveground pumping facility within the site. A steel casing will be grouted into each shaft with screens placed over the lower ends to prevent the uptake of fish and other materials. The boreholes may all be drilled at the very beginning of construction or they may be drilled in two phases with three drilled at the beginning of construction and the remaining three drilled later when they become necessary. If all six boreholes are drilled at the very beginning of construction, three will be capped until they are needed later.

Submersible pumps will be installed in the bottom of the shafts. These pumps will supply water to a common sump in the pumping plant. A turbine booster pump will be installed in the sump for each actively used shaft. These booster pumps discharge into a 12-inch diameter conveyance pipeline that will carry the water to the tie-in point on the existing system. The length of the conveyance pipeline will be approximately 2 miles. All of it will be buried.

For security and the protection of equipment, the booster pumps and electrical and mechanical controls will be enclosed in a small aboveground pumping plant building. The approximately 55 x 90 feet pumping plant will be designed to NPS architectural standards using colored, split-faced concrete blocks and metal roofing similar to the type used for other facilities in the GCNRA. The pumping plant will be surrounded by a 7-foot chain link security fence. The building color and fence coating will be selected to match the surrounding rock. A transformer pad and water flow meter vault will be located outside of the pumping plant, but within the fence. The fenced area will have a total footprint of approximately 175 x 125 feet. A portable outdoor steel hoist frame,

stored offsite, will be occasionally used to facilitate installation and removal of the submersible pumps when needed.

The conveyance pipeline from the pumping plant to the tie-in point on the existing system will generally follow the access road to the Chains recreation area. From the intersection of the Chains recreation area access road and US 89, the conveyance pipeline will cross US 89 to the west side, and then follow it within the right-of-way with the Arizona Department of Transportation, which will require an encroachment permit, to the tie-in point on the existing system. Electricity for the pumping plant will be delivered through a power cable that will be buried in the same trench with the conveyance pipeline up to the Page Electric Utility connection point located just outside the NPS boundary on US 89. When this connection point was constructed, a breaker for the proposed pumping plant was installed in anticipation of the future need (Faulk, pers. comm., 2005). The new alternate water supply system will be managed concurrently with the existing system. The new facilities will be accessed by City staff, as required, for maintenance.

The preferred alternative is based on preliminary designs and best information available at the time of this writing. Specific distances, areas, and layouts used to describe the alternative are only estimates and could change during final site design. If changes during final site design are not consistent with the intent and effects of the selected alternative, then additional compliance would be completed, as appropriate.

MITIGATING MEASURES

These measures will be implemented if the project is undertaken. These measures are not part of the preferred alternative because they are not designed to meet the purpose and need of the project; however, they are necessary to minimize the potential effects to the environment that may result from implementation of the preferred alternative.

- A temporary chain-link security fence will be placed around stored materials and equipment during construction for public safety and to protect the materials and equipment from theft and vandalism.
- The construction contractor will be required to provide water for dust abatement.
- The construction contractor will be required to prepare and submit to NPS for approval a Stormwater Pollution Prevention Plan (SWPPP) prior to the initiation of construction activities. This plan will provide specific details on handling, containment, and disposal of hazardous materials used and wastes generated during construction. Adherence to the plan will be strictly required by GCNRA. The contractor will be required to immediately report to GCNRA any spills of hazardous materials or wastes that cannot be immediately contained and cleaned up in accordance with the plan.
- The construction contractor will be required to implement the Best Management Practices contained in the appendix to this EA to help control the spread of invasive plants. This list will be included in the construction specifications and discussed with the construction contractor at a preconstruction conference.
- A landscaping plan for site restoration, developed by the City in cooperation with the GCNRA botanist, that uses the native species listed in the appendix to this EA, will be implemented immediately following construction.
- During construction of the conveyance pipeline, the trench will be backfilled over the pipe at the end of each day to prevent the accidental trapping of small reptiles and mammals. If the trench must be left open, then a ramp in the form of a short board will be placed in the trench

with one end at the bottom of the trench and the other end out of the trench to provide a means for their escape.

- To reduce the attractiveness of the construction site to California condors, the following measures will be implemented in accordance with the USF&WS recommendations:
 - Prior to the start of construction, personnel monitoring California condor locations and movement will be contacted to determine the locations and status of condors in the project vicinity.
 - If a condor occurs at the construction site, construction will cease until the condor leaves on its own or until techniques are employed by permitted personnel that result in it leaving the area.
 - Construction workers and supervisors will be instructed to avoid interaction with condors and to immediately contact the appropriate GCNRA personnel if or when condors occur at the construction site.
 - The construction site will be cleaned up (e.g., trash removed) at the end of each day that work is conducted to minimize the likelihood of condors visiting the area. Unannounced random site inspections by GCNRA staff will ensure that adequate cleanup measures are taken.
 - To prevent water contamination and potential poisoning of condors, the SWPPP will include provisions for immediate cleanup of any hazardous substance and define how to treat each hazardous substance in case of leakage or spill.
- Rock bolts will be used to increase the stability of the cliff face if necessary. These bolts will be painted to match the surrounding rock.
- Access to the Chains area will remain open and at least one lane of the access road will be kept open past the pumping plant site unless site remediation activities in the northern portion of the Chains area are carried out concurrently with the construction of the proposed pumping plant. In this case, the NPS may choose close the area to public use until construction and remediation activities have been completed.
- Should construction unearth previously undiscovered cultural resources, work will be stopped in the area of any discovery and Glen Canyon NRA will consult with the State Historic Preservation Officer and the Advisory Council of Historic Preservation, as necessary, according to 36 CFR 800.13, Post Review Discoveries. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- Where the conveyance pipeline crosses beneath US 89, it will be emplaced using equipment that will bore under the roadway, thus allowing traffic to continue on the road unimpeded.

ALTERNATIVES CONSIDERED

A total of seven alternatives were considered for this project, including two that are analyzed in the EA and five that were dismissed prior to analyzing it in the EA. The two alternatives that were evaluated in the EA include Alternative A—No Action Alternative, in which no new pumping station and conveyance pipeline would be constructed and operated, and Alternative B—Preferred Alternative, as discussed in the previous section.

The alternatives that were dismissed prior to being analyzed in the EA were a deep groundwater well-field project, tapping into the Navajo Generating Station water system, locating the intake

borehole 100 feet higher in the side of the lake, a vertical borehole configuration for the intake, and two other potential sites for the pumping station as discussed in the EA. These alternatives were dismissed for the following reasons; high risk of failure, higher potential costs relative to Alternative B, less protection from lower lake levels, lack of advantage in combination with substantially higher costs, and insufficient room for the pumping plant combined with a more expensive borehole configuration requirement.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the six criteria suggested in § 101 of NEPA. According to these criteria, the environmentally preferred alternative should (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations, (2) assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings, (3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences, (4) preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice, (5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities, and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative B is the environmentally preferred alternative because it best addresses these six evaluation factors. Alternative B, *Construct and Operate New Water Pumping Station*, if implemented would provide a more reliable water supply to the residents of Page and LeChee. Since water is a critical necessity of life, this, in turn, would fulfill a responsibility of the current generation to future generations to plan ahead and take the steps required to assure its availability. Alternative B would increase the range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences. No important historic, cultural, or natural aspects of our natural heritage would be adversely affected and the environment of diversity and variety of individual choice would be preserved. This alternative would optimize the balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

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

Impacts that may be both beneficial and adverse

There would be a minor, local, long-term effect to topography as a result of cliff face scaling, if it is determined that such scaling is necessary to ensure the stability of the cliff wall. Also, clearing and leveling, and the addition of a pumping station building would have similar effects. There would be a negligible effect to the geology of the Chains area. Soil disturbance would be minor, local, and short-term in areas that have already been disturbed several times in the past. There would be minor, local, short- and long-term adverse effects to visitor use and experience. The effects of construction activities on the visual quality of the area would be moderate, but temporary. The intent of the area's Class III visual management objectives would be met. The effects to the visual quality of the area, following construction, would be permanent and negligible.

Degree of effect on public health or safety

The preferred alternative will have no effect on public health and safety. The exposure of hazardous materials or wastes during construction would not be expected since it is currently believed that such materials and wastes are restricted to an area well north of where any project-related

excavation would take place. A Stormwater Pollution Prevention Plan, as described on page 10 under, *Water Resources*, in the EA, would be expected to eliminate any potential effects of the use of hazardous materials or the generation of hazardous waste during construction.

A few small quantities of hazardous materials such as lubricants for the pumps and possibly some cleaning fluids may be stored on-site during operation of the pumping plant. These materials would be stored in appropriate containers inside the pumping plant building. There would be no effects from storage and use of these materials on-site.

If the Chains area is kept open during construction, than a flagman would be used to control traffic around the construction site. A temporary chain-link security fence around stored materials and equipment would protect the public from any safety hazards during construction.

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

The preferred alternative will not impact unique characteristics of the area, including park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas because these resources do not exist in the project area. The preferred alternative will have a “negligible effect” on the geological stability of the project area.

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

The overall effect of the preferred alternative on the human environment will be beneficial as a result of increased pumping capacity, system redundancy, and the ability to withdraw water from the lake below the existing intake elevation in the dam. No issues or concerns raised during the NEPA process were identified as highly controversial issues.

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

Surface joint analysis and the results of a test borehole indicate that there are no joints in the Navajo sandstone that extend into the area where drilling would occur; thus, drilling operations would not be expected to result in block failure. Additional evaluation during the design phase would be required by the GCNRA to confirm this. The steel casings and grout within the intake shafts would be expected to reinforce the surrounding rock so that the boreholes would not result in any potential overall weakening of the cliff wall. The environmental analysis in the EA has not identified any effects that may involve highly unique or unknown risks to the resources analyzed.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The complete satisfaction of the objectives by the preferred alternative precludes the likelihood of a future similar action. Future construction of even lower intakes should additional drought conditions lower the lake level below the currently proposed elevation is not possible. Any future pumping station proposals would be subject to environmental analysis under NEPA. No NPS policies will be violated by the preferred alternative. The preferred alternative does not set a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration.

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

Cumulative effects were analyzed in the EA, and no significant cumulative impacts were identified.

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

Site surveys and file searches have determined that there are no National Historic Preservation Act (NHPA) eligible properties in the area of potential effect for this project. The determination by the NPS through existing agreement with the Arizona State Historic Preservation Officer is one of no adverse effect to NHPA-eligible or listed resources.

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

As a result of the lack of suitable habitat, no federally listed threatened or endangered species are known or expected to occur in the project area. No portion of the site lies in or near designated critical habitat for any listed species. Informal communication between consulting biologists and U.S. Fish and Wildlife Service biologists from the Arizona Ecological Services Field Office determined that the project would not impact any of the basin fish species because they are seldom found in the impoundment area of Lake Powell. In addition, it was determined that the California condor mitigation measures included in the EA are sufficient to protect this species from any project-related impacts. No further consultation under § 7 of the Endangered Species Act is necessary.

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

The action will not violate any federal, state, or local environmental protection laws.

Appropriate Use, Unacceptable Impacts, and Impairment

Sections 1.5 and 8.12 of NPS *Management Policies* underscore the fact that not all uses are allowable or appropriate in units of the National Park System. The proposed use was screened to determine consistency with applicable laws, executive orders, regulations, and policies; consistency with existing plans for public use and resource management; actual and potential effects to park resources; total costs to the Park Service; and whether the public interest would be served.

The proposed pumping plant and intakes are compatible with previous and nearby land use activities and the Recreation and Resource Utilization zone designation in the Chains area. Construction of the proposed new pumping station and conveyance pipeline in the selected location and configuration meets the project purpose and need while ensuring that unacceptable impacts to park resources and values will not occur. The preferred alternative is consistent with the park's general management plan and other related park plans. With this in mind, the NPS finds that constructing and operating a new water supply pumping station in the Chains recreation area is an acceptable use at Glen Canyon NRA.

In analyzing impairments in the NEPA analysis for this project the NPS takes into account the fact that if an impairment were likely to occur, such impacts would be considered to be major or significant under CEQ regulations. This is because the context and intensity of the impact would be sufficient to render what would normally be a minor or moderate impact to be major or significant. Taking this into consideration, NPS guidance documents note that "Not all major or significant impacts under a NEPA analysis are impairments. However, all impairments to NPS resources and values would constitute a major or significant impact under NEPA. If an impact results in impairment, the action should be modified to lessen the impact level. If the impairment cannot be avoided by modifying the proposed action, that action cannot be selected for implementation."

(“Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources” National Park Service, Natural Resource Program Center, July 2003).

In addition to reviewing the definition of “significant” under the NEPA regulations, the NPS has determined that implementation of the preferred alternative would not constitute an impairment to the integrity of Glen Canyon’s resources or values as described by NPS *Management Policies* (NPS 2006 § 1.4). This conclusion is based on the NPS’s analysis of the environmental impacts of the proposed action as described in the EA, the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in 2006 NPS *Management Policies*. The EA identified less than major adverse impacts on topography, geology, and soils, and visitor use and experience. As a result, the NPS has determined that implementation of the proposal will not constitute an impairment to the resources and values at Glen Canyon.

PUBLIC INVOLVEMENT

During the planning process for the proposed project, formal and informal efforts were made by the NPS to involve the public, including federal, state, tribal, and local agencies in the planning process. The project was launched by requesting comments through the scoping process to identify issues and concerns related to the project. In preparation for scoping, a mailing list that included individuals, local, state, federal agencies and multiple Native American Tribes was established. A public scoping press release was prepared and circulated to area media sources, posted on the Glen Canyon NRA website, and posted on the NPS Planning, Environmental and Public Comment (PEPC) Website. The 30-day scoping period occurred from December 1 through December 31, 2004. Additionally, public meetings were held at the City of Page town hall on January 6, 2005, and at the LeChee Chapter House on January 16, 2005. All comments received were considered during the development of the alternatives.

The EA was made available for public, agency and tribal review from April 22 through May 21, 2009. A postcard was sent to all individuals, local, state and federal agencies included on the original mailing list, as well as any other requests received during the scoping period. Letters were sent to the Native American Tribes. These postcard and letters notified the recipient of the availability of the EA and the opportunity to review and comment. A press release dated April 22, 2009 was distributed to area media sources, posted on the Glen Canyon NRA park website, and posted on the NPS PEPC website. The document could be accessed from the PEPC website direction or from the park’s website via a link to the PEPC website.



In total, four responses were received. The Arizona Department of Environmental Quality provided comments pertaining to the construction permit requirements in Arizona. The City of Page and the Navajo Nation Department of Water Resources raised both minor technical and substantive issues with the EA. One response was received from the Sierra Club. Substantive comments focused on the following topics: public scoping, environmental justice, Indian trust resources, socioeconomics, cumulative impact analysis, global climate change, project costs, water usage, and impairment of resources. These concerns resulted in no changes to the text of the environmental assessment but are addressed in the comment responses in the Errata Sheet attached to the FONSI. The FONSI and Errata will be sent to all commenters.

CONCLUSION

As described above, the preferred alternative does not constitute an action meeting the criteria that normally requires preparation of an Environmental Impact Statement (EIS). The preferred alternative will not have a significant adverse effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized to

widespread, short- to long-term, and negligible to moderate. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, sites or districts listed on or eligible for listing on the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, major cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

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

Recommended:		12/2/09
	Stan Austin, Superintendent	Date
	Glen Canyon National Recreation Area	
Approved:		12/9/09
	Michael D. Snyder	Date
	Director, Intermountain Region	
	National Park Service	

Errata Sheets

NPS Response to Public Comments Page-LeChee Water Supply Environmental Assessment Glen Canyon National Recreation Area

The environmental assessment (EA) was made available for public review and comment period between April 22 and May 21, 2009. A total of 4 written responses were received, three of which contained 10 substantive comments. Comments were received by letter, fax and on the NPS PEPC website. Of the 4 letters, 3 were letters from local, state and tribal entities. One letter was from a public interest group.

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

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

The following non-substantive technical comments were received and have been corrected within the text of the EA.

1. The EA on the first page of text incorrectly identifies Glen Canyon National Recreation Area as "Glen Canyon National Monument." The same mistake is repeated within the text on the *Summary* page. This oversight has been corrected in the EA text.
2. Under *Impact Topics Retained for Further Analysis* on page 9, the EA mistakenly uses the name "Florissant Fossil Beds National Monument" instead of "Glen Canyon National Recreation Area." This mistake has been corrected in the EA.
3. The EA on page 18 incorrectly identified that the Tetra Tech RMC, Summary Report, Page-LeChee Water Supply Project, was produced in 2002, when the report was produced in 2003. This error has been corrected in the final EA.
4. Under the section titled "Environmental Justice" on page 15 of the EA, the text in the April 2009 EA has been replaced with the following: "Executive Order 128989, *General Actions to Address Environmental Justice in Minority Populations and Low Income Populations* (1994), requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low income populations and communities. The proposed action would not have disproportionate health or environmental effects on minority or low income populations or communities as defined in the Environmental Protection Agency's *Environmental Justice Guidance* (1998). Therefore, environmental justice was dismissed as an impact topic in this EA."

5. The title of the EA released in April 2009 is not accurate. The title of the project has been corrected throughout the document from *Page Water Supply Project*, to the *Page-LeChee Water Supply Project*, the project title that was identified during public scoping.
6. Point #1 under the *Purpose and Need* section of the EA has been edited to read "Increase the dependability of the water supply for the City and the Chapter of LeChee." The underlined text has been added to the final document.

RESPONSE TO PUBLIC COMMENTS:

The following comments represent substantive comments and are followed by the NPS response.

Comment 1: As presented in this EA, neither the Arizona Department of Water Resources nor the Navajo Nation Department of Water Resources were contacted to participate in public scoping.

NPS Response: The NPS sent public scoping notices to the Office of the President of the Navajo Nation, the office of historic preservation for the Navajo Nation, and to the Navajo Chapters of LeChee Chapter, Navajo Mountain, Shonto, and Oljato.

In addition to the public scoping meeting, a meeting was held between Page city officials and LeChee chapter officials the morning of January 6, 2005. An additional meeting was held with the LeChee Chapter on January 16, 2005.

Following public scoping, the NPS received requests to add the following officials to the project mailing list: Stan Powers, Bureau of Reclamation; John Leeper, Navajo Nation Department of Water Resources; Kevin Black, Sr., Study Manager, NCAWSS, Bureau of Reclamation; and Tom Whitmer from the Arizona Department of Water Resources. These entities received notice of the availability of the EA.

Comment 2 The NPS failed to consult with the Navajo Nation Department of Fish and Wildlife.

NPS Response: The project footprint occurs on lands administered by the NPS and lands owned by the City of Page. No lands owned by the Navajo Nation will be affected by this project. The NPS consulted with the US Fish and Wildlife Service as required by federal law.

Comment 3: The discussion of potential impacts to Indian Trust Resources is inadequate and should be considered an impact topic.

NPS Response: The unique legal and political responsibilities of the federal government to American Indian tribes arise from treaties, statutes, and executive orders. The term "Indian trust resources" is used to define the precise legal duties of the United States in managing property and resources of tribes. The proposed water intake facility would be constructed on land administered by the NPS. The land originally belonged to the Navajo Nation. The Navajo Land Exchange Act of September 2, 1958 authorized the exchange of the land to create Lake Powell and Glen Canyon Dam for other lands near Blanding, Utah. While the lands on which the water intake facility will be constructed are no longer owned by the Navajo Nation, the NPS does recognize its responsibility to identify and protect the resources and assets of traditionally associated peoples such as the Navajo.

The Navajo Nation does retain the mineral rights to the lands exchanged under the 1958 Act. No action proposed in this undertaking would impact these rights possessed by the Navajo Nation. Therefore, Indian Trust Resources was dismissed as an impact topic for analysis in the EA.

Comment 4: The discussion of Environmental Justice is inadequate: the project would have a major beneficial impact to the Navajo Nation and the Chapter of LeChee; and the project may affect the Navajo Nation's ability to obtain sufficient water from Arizona's Upper Colorado River Basin apportionment. For these reasons, the Environmental Justice section should be rewritten.

NPS Response: The existing water system provides water to the Chapter of LeChee. As stated in the *Purpose and Need* for the environmental assessment, this project would construct a second water intake to increase the dependability and redundancy of the current water supply system for the City of Page and the Chapter of LeChee. We consider this to be a minor beneficial impact.

This project does not propose to alter or affect the apportionment of any water right from the Upper Colorado River Basin. Neither would this project alter or affect the City of Page's allocated water rights. This undertaking has no potential to impact either water allocations or water rights apportioned from the basin.

The National Park Service follows applicable federal guidance in implementing Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low Income Populations* (1994), and evaluates environmental justice in all environmental documents. Proposed projects and policies are evaluated to determine if minority or low-income populations exist in the project area or may be affected by the project. The NPS then evaluates whether the proposed action would result in any "*disproportionately high and adverse human health or environmental effects*." Such effects could include effects on human health, economic or social conditions, or the environment.

The Navajo Chapter of LeChee qualifies as a low income and minority population under federal guidance. However, the NPS determined that this project does not have a *disproportionate* effect on this population, as the physical impacts of the project occur on federal lands, and the social and economic benefits accrue both to the City of Page, as well as the Navajo Chapter of LeChee, in similar proportions and to a minor degree.

The NPS determined that the project would not result in effects that are *high and adverse*. Under federal guidance, such effects are described in terms of significant adverse effects that can be measured in terms of rates, risks, or hazards associated with human health, environmental hazard, or exposure to elements due to agency actions or policies.

As stated above, the effects of this undertaking – to build a redundant water supply system – may be beneficial to a minor extent, and would not result in high and adverse consequences in a disproportionate manner to the Chapter of LeChee. Therefore the subject of environmental justice was dismissed as an impact topic.

Comment 5: Because this project serves drinking water to the Chapter of LeChee, the discussion of socioeconomics on page 15 of the EA should note the major beneficial impacts to LeChee from this project.

NPS Response: As stated in the *Purpose and Need* section of the EA, the undertaking is required to provide dependability and redundancy within the existing water system. The project would not have an appreciable impact on socioeconomic resources in the project area, and the topic was dismissed from further analysis in the EA.

Comment 6: The NPS failed to consider in the analysis of cumulative impacts other proposed water supply projects that would withdraw water from Lake Powell, including the Western Navajo Pipeline and the North Central Arizona Water Project.

NPS Response: The purpose of this undertaking is to provide dependability and redundancy to an existing water system by constructing a new water intake facility. This project does not affect the existing allocation of water to the City of Page or the Navajo Nation. This EA does not evaluate effects to water resources or supply due to the fact that the project would have no impact on water resources. Therefore, the NPS did not identify or evaluate other potential water supply projects under the *Cumulative Effects* section of the EA.

Comment 7: The EA fails to discuss the estimated cost of this pipeline and does not include a cost benefit analysis.

NPS Response: The NPS is not involved in funding the construction of this project. NPS NEPA policy does not require the completion of a cost benefit analysis to be included in an EA for a Right of Way.

Comment 8: The EA does not discuss the increased amount of water to be used by the City of Page.

The project does not affect the allocation of water for either the City of Page or the Chapter of LeChee. Water allocation agreements are under the purview of the Bureau of Reclamation. As stated in the *Purpose and Need* section of the EA, this undertaking would allow the City to construct a new water intake system to provide redundancy and dependability to the existing water intake system and to meet peak demands under their current water allocation.

Comment 9: The analysis in the EA fails to consider a continued drop in lake elevations, as well as the long-term impacts of climate change to future water levels.

NPS Response: As stated in the *Purpose and Need* section of the EA, this undertaking would allow the City to construct a new water intake system to provide redundancy and dependability to the existing water intake system. The project, as proposed and analyzed in the EA, does not propose to alter the allocation of water the City of Page or the Chapter of LeChee are allocated per written agreement with the Bureau of Reclamation. The NPS did not evaluate potential effects to water supply or water resources in the EA because the project has no effect on water supply or water resources. The discussion of climate change is not germane to a facility construction project.

Comment 9: An additional alternative should be included in the EA to consider the possibility to use water conservation methods to negate the need for this project.

NPS Response: The undertaking evaluated in the EA does not propose to alter the current allocation of water to the City of Page. Alternative actions involving water conservation are not germane to the undertaking.

Comment 10: We are opposed to any further impairment of Glen Canyon.

NPS Response: As stated in the EA chapter titled *Environmental Consequences*, the proposed undertaking would not result in impairment to any resources or values within Glen Canyon National Recreation Area.