

FINAL ENVIRONMENTAL ASSESSMENT

**WATER SERVICE CONTRACT BETWEEN THE UNITED
STATES AND THE NAVAJO NATION/NAVAJO TRIBAL
UTILITY AUTHORITY**

**950 ACRE FEET FOR MUNICIPAL INDUSTRIAL BENEFIT
- COMMUNITY OF LECHEE, ARIZONA**

**Environmental Assessment Number: WCAO-DUR- 01-
2009**

**Technical Services Division
Environmental and Planning Group
Western Colorado Area Office
Durango, CO**



**U.S. Department of the Interior
Bureau of Reclamation**

May 2009

MISSION STATEMENT

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

INTRODUCTION

PURPOSE

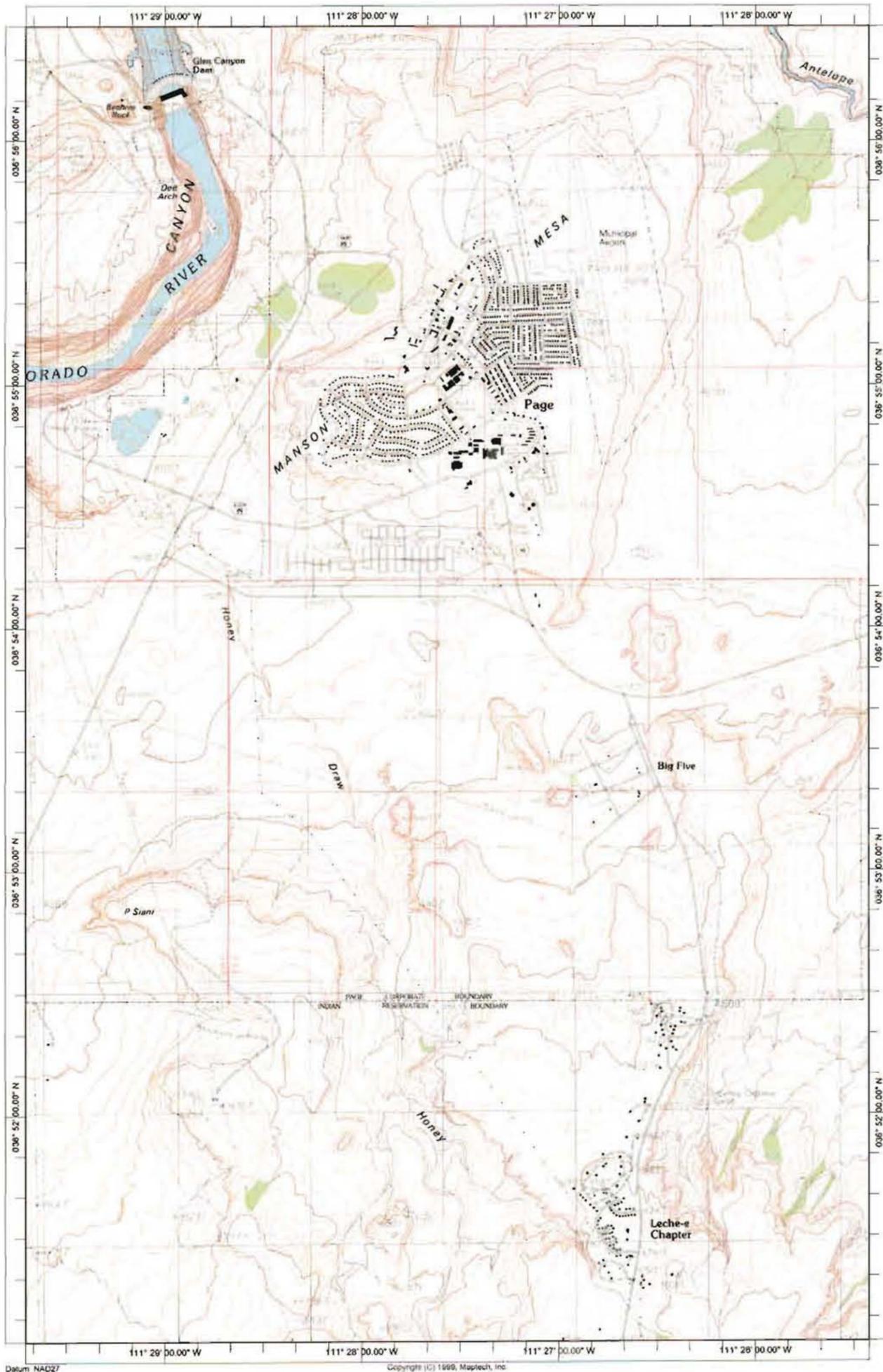
The Bureau of Reclamation (Reclamation) has the authority within the Reclamation Act (U.S. 32 Stat. 388--June 17, 1902 and acts amending there of) to furnish water from the Colorado River Storage Project (CRSP) for the purposes of irrigation, municipal & industrial (M&I) and other beneficial uses. Administratively, the Western Colorado Area Office, Upper Colorado Region, has issued contracts for those above purposes from the Glen Canyon Dam and Lake Powell (a unit of CRSP). This Environmental Assessment (EA) will analyze for significant impacts associated with the sale of project water to the Community of LeChee and determine whether approval of the sale represents a significant impact on the human environment, and determine whether the sale is in compliance with the National Environmental Policy Act (NEPA).

BACKGROUND

The Upper Colorado Basin Compact of 1948 allocated 50,000 acre-feet (af) of consumptive use from the upper basin of the Colorado River to the State of Arizona. The 50,000 af allocation is included in Reclamation's water supply modeling for activities related to the operation of Glen Canyon Dam. The most recent Consumptive Uses and Losses Report for the Arizona Portion of the Upper Colorado River Basin, Calendar Year 2005 (August 2007) concluded the total consumptive use from the upper basin within Arizona during 2005 was 36,135 (+ or - 1,235) af. There have been no new water uses developed within the Arizona portion of the Upper Basin since completion of this report, therefore, there is room in the allocation for use of the water provided by the proposed contract.

The Navajo Nation's water rights claims from Arizona's portion of the upper basin have not been quantified. The Arizona Department of Water Resources has indicated the water provided under this proposed contract should be included as a part of any future water right settlement with the Navajo Nation.

In 1975 the City of Page was established by legislation that also provided a permanent water supply from Lake Powell for the City and the community of LeChee. Water is obtained from Lake Powell through pumping and conveyance facilities that were initially constructed by Reclamation during the construction of Glen Canyon Dam and Power Plant between 1957 and 1964. Water is diverted through the dam to pumps located in the Glen Canyon Power Plant that are operated by Reclamation. The pumped water is delivered to the Page Water Treatment Plant, owned and operated by the City of Page, through a pipeline constructed, owned, and operated by the City. Treated water is delivered via gravity pipeline to a pumping plant located near the Navajo Nation Reservation boundary in accordance with terms of a contract between the City and the Navajo Nation. The pumping plant and all water storage and delivery facilities for the community of LeChee are owned and operated by the Navajo Nation Tribal Utility Authority (NTUA).



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NEED--Community of LeChee

The Navajo community of LeChee is located on the Navajo Nation Reservation about 4-miles south of the City of Page, AZ (see attached map). Under a contract transferred from the Bureau of Reclamation, the City of Page delivers up to 100,000 gallons of treated water per day to a pumping plant located near the Navajo Reservation boundary. The Navajo Tribal Utility Authority owns and operates the pumping plant and pipelines that delivers the treated water to LeChee. Water deliveries often exceed the 100,000 gallons per day contract amount during the summer months.

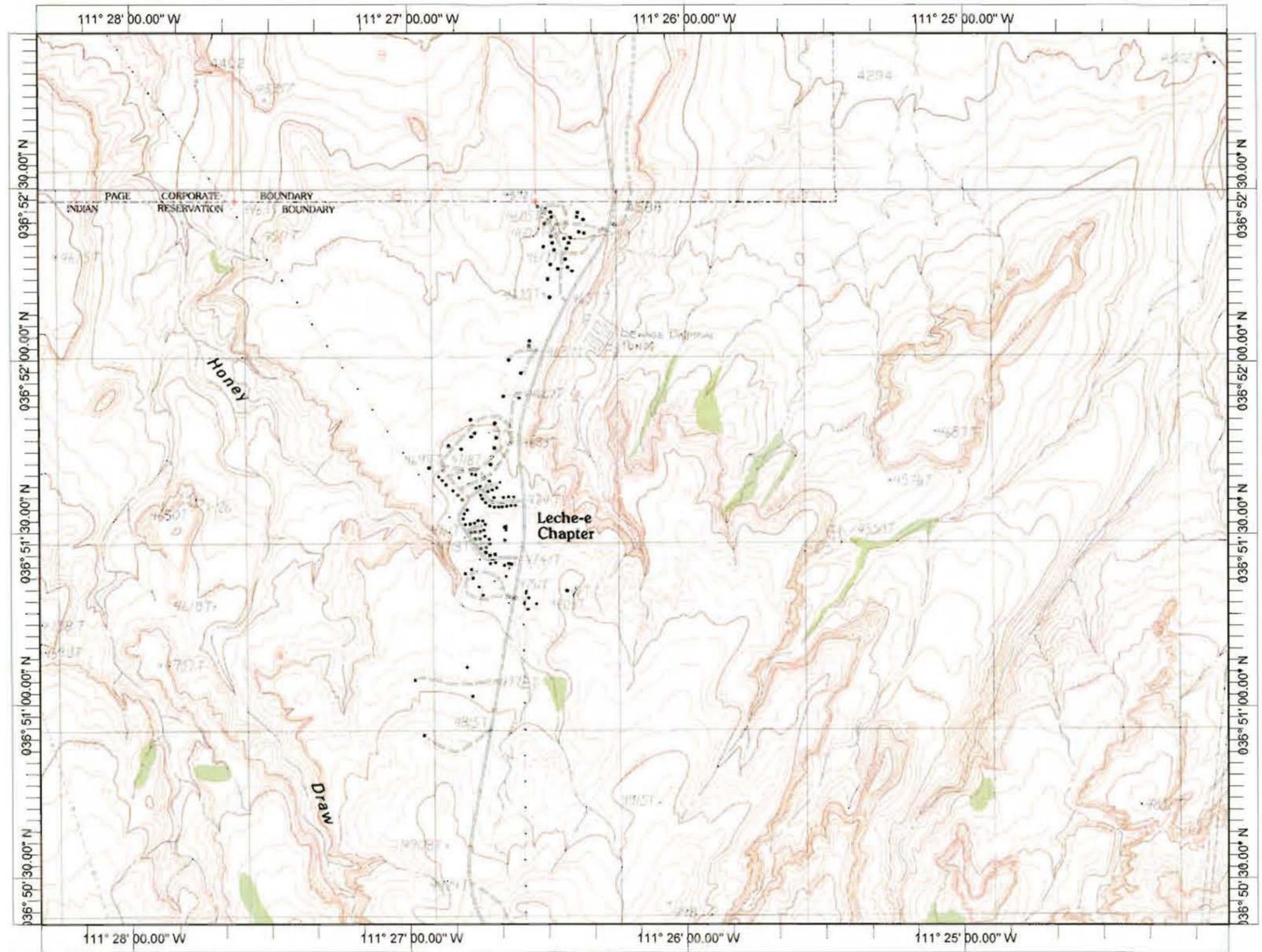
The U.S. 2000 Census data shows the population of LeChee at 1,890 people, however, the Navajo Nation typically has an undercount of about 5%. Navajo Nation communities have an average growth rate of 2.48% to 2.5%. The per capita water use in LeChee is about 45 gallons per day compared to about 300 gallons per day for the City of Page and a national average of about 160 gallons per day. The purpose of this contract is to provide additional water for the population of LeChee to achieve the standard of living that would accompany an increased water use and to meet the future needs of the community. Future water demands presented in a Summary Report entitle Page-LeChee Water Supply Project Alternatives (2003) were based on a population growth rate of 2.48% per year and a gradual increase in per capita use to the national average by the year 2020. Following are population, per capita use, and water demands as presented in the report:

YEAR	2000	2020	2040
Population	1,980	3,322	5,275
Per Capita Use	45	160	160
Water Demand	100	582	941

The existing water supply has limited growth and development in LeChee for a number of years. If an adequate water supply is secured for the community under the proposed contract, growth will likely exceed the projections in the above table.

PROPOSED ACTION

Reclamation proposes to contract with the Navajo Nation for an additional water supply for the community of LeChee for M&I purposes. The contract will cover a 40 year period, reserve in standby 950 af annually (10 year maximum for standby), and deliver water in 25 af blocks. (Specifics relating to repayment, measurements, and other administrative functions are found in the attached draft contract). Some water provided by the proposed contract would be delivered to LeChee through the existing facilities described above. In order to deliver the total amount of water contained in this contract, additional facilities would be constructed in the future by the Navajo Nation (separate action—See "New Lake Powell Intake for the City of Page and LeChee" and "Upgrades to the LeChee Water Delivery System" under the "Cumulative Actions" section.)



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The proposed action and NEPA analysis are solely for the execution of the water service with the Navajo Nation and not for any future actions currently being considered by the City of Page or the Navajo Nation.

NO ACTION ALTERNATIVE

Under the no action alternative this contract for 950 af per year of M&I water for 40 years would not be approved. The Community of LeChee would continue to receive its allocation of 100,000 gallons per day of M&I water from the City of Page. The domestic water system would likely see increased shortages during peak demand; and the community would have to take drastic steps to deal with those shortages. Growth and development would not be possible.

OTHER ALTERNATIVE ACTIONS NOT VIEWED AS ACCEPTABLE

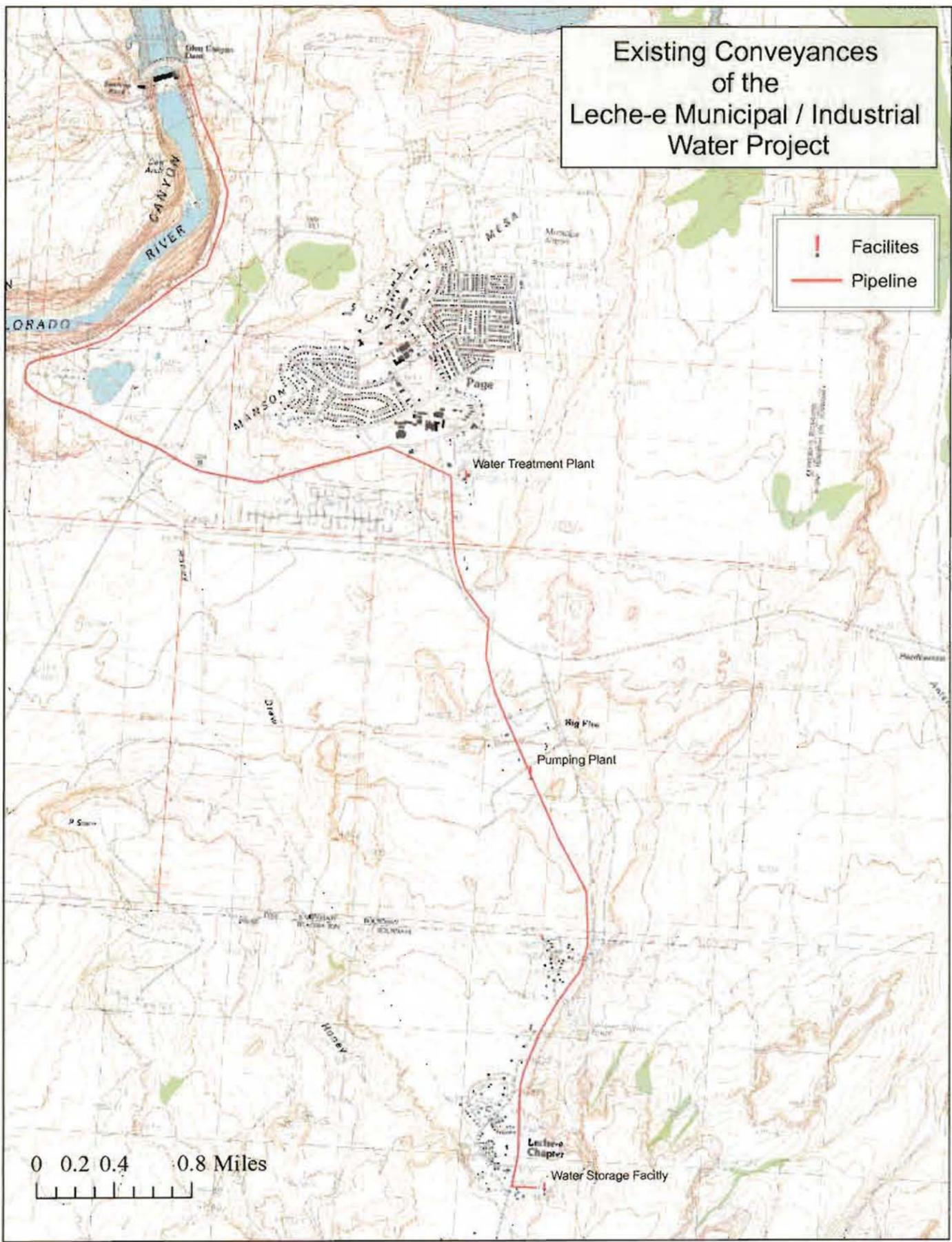
1. NTUA Develop Groundwater—The NTUA does not want to develop groundwater when a large body of fresh water (Lake Powell) is in close proximity; cost associated with groundwater well drilling is prohibitive; and quality and quantity of subsurface well water is currently unknown.
2. Water Hauling—The only available surface water is from Lake Powell, and any sale to the Nation or private water hauler would require a contract for sales of water from Reclamation. Additionally water hauling of volumes equivalent to that requested within the proposed contract are logistically prohibitive and cost of water would exceed projected costs under the proposed contract.
3. Settlement and Adjudication of Navajo Nation Water Rights for the Colorado River in the Upper Basin in Arizona—A contract could be executed by Reclamation following settlement; however the timeframe for the settlement and future contracts are unknown and far in the future.
4. Purchase additional water from the City of Page—The City of Page currently does not have additional allocations of M&I water and would have to enter into a water service contract with Reclamation for additional water. The City of Page has stated to Reclamation that in the future it intends to ask for additional allocation through an M&I water contract. However, the City would first need to apply for and obtain the appropriate water right approval from the State of Arizona. The State has indicated that any protests to the City's water right application would result in the State denying the application. The Nation has stated that it would object to such application until such time that the Nation had received its contract for LeChee and/or received settlement for water rights claims in the Upper Basin.

ENVIRONMENTAL EFFECTS AND CONSEQUENCES:

This section forms the scientific and analytic basis for the comparisons of the no action and proposed action alternatives. This includes an analysis of direct, indirect, and cumulative effects.

Existing Conveyances of the Leche-e Municipal / Industrial Water Project

- ! Facilites
- Pipeline



Land Use: Planning and Development—The Nation has responsibility for review and approval of all land use projects and actions occurring within the boundaries of the Navajo Indian Reservation. All future development in LeChee and surrounding sections of the Nation that would receive water as part of this contract will undergo additional levels of NEPA analysis by the Bureau of Indian Affairs or by another lead federal agency if tied through a “federal nexus”, and would be subject to the regulatory review and approval by the branches of the Nation that manage specific environmental quality programs and resources. (Branch offices potentially involved in future review include and not solely limited to the: Departments of Environmental Protection, Transportation, Fish and Wildlife, Archeology—Tribal Historic Preservation Office, Water Resources, and Housing Services.)

No impacts to land use or development would result from this water contract and no mitigative measures would be required should the proposal be implemented.

Wildlife and Aquatic Resource

Threatened and Endangered Species--Federal listed species for Coconino County Arizona include: humpback chub, razorback sucker, Kanab ambersnail, and Southwest willow flycatcher. (Found on U.S Fish and Wildlife Service website:

http://ecos.fws.gov/tess_public/pub/stateListing.jsp?status=listed&state=AZ)

Aquatic T&E Species—The Kanab Ambersnail is not found in Lake Powell, and while the razorback sucker and humpback chub may occur there, no critical habitat has been designated within the Reservoir. (Reclamation, December 2007a)

The ESA consultation (Service, November 2007) (for the Reclamation Guidance: The Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead--Reclamation, December 2007b) provides the Services concurrence for implementation of Section 6 of the Guidelines. Section 6 details the strategy by which the Secretary of Interior directs Reclamation to coordinate the operations of Lake Powell and Lake Mead with the objectives of avoiding curtailment of uses in the Upper Basin, minimizing shortages in the Lower Basin and not adversely affecting the yield for development available in the Upper Basin.

As previously discussed, the Federal action area lies within the Upper Basin, is included within Arizona’s Upper Basin allocation (50,000 af), and has been counted as part of the historic baseline for the Upper Colorado River. Currently approximately 36,000 af have been utilized/dispersed, and the proposed contract will come out of the final 14,000 af of unused water in the allocation. The development of this 950 af of water for the community of LeChee will not cause any new depletion in the historic baseline and should have no new effects that have not already been consulted upon. It should be noted that the 950 af of water to be delivered annually under this contract represents 0.008% of the annual unregulated inflow into Lake Powell (approximately 12,000,000 af). Additionally, the Service has concurred that the water sale will have no effect on the four

ESA listed species (see following paragraph entitled, “Summary-Threatened and Endangered Species”).

Avian T&E Species—The Southwest Willow Flycatcher is not found in areas immediately surrounding Lake Powell and no critical habitat is designated for the project area. (Reclamation, December 2007a).

The 950 af of full contract depletion from Lake Powell is equivalent to a draw down of 1/8 of an inch of lake level (Communication, D. Kubly, June 2008) The potential effect of full depletion on shore based vegetation that could be utilized by the species is negligible and insignificant.

“Summary-Threatened and Endangered Species”: Informal discussions between Reclamation and the Ecological Services Office, US Fish and Wildlife Service Region 2 (Glen Knowles, Phoenix office) took place on July 2 and 10, 2008. The Service informally concurred with Reclamations determination of no effect for all four species (humpback chub, razorback sucker, Kanab ambersnail, and Southwest willow flycatcher), that the ESA Section 7 consultation within the Shortage analysis (Service, November 2007) covered the Arizona portion of the Upper Basin allocation. (Glen Knowles E-mail, attached) Additionally, it was stated that modeling conducted by the Service included annual depletions in the Page and LeChee area of 45,000 af for 2008 and 2009, and 50,000 af 2010 through 2060.

Reclamation believes that a determination of no effect is warranted for all T&E species listed for the project and surrounding areas. There would be no adverse modification of critical habitat for any listed species.

Land Based Terrestrial Species and Associated Habitat --- All future projects resulting from water development will be evaluated by the Nation, BIA and/or other Federal agencies, and approval of those actions will be granted on a case by case basis by those land and resource managing agencies.

This assessment does not evaluate future potential impacts that that might result from future construction or development tied to the utilization of this allocation of M&I water because specific development plans are not available. Adequate protective language and on-site conservation measures for the Species of Special Concern and associated habitat affected by future development actions will be required by the Nation as part of those future actions if impacts are identified under the Nation’s environmental regulatory authorities.

Cultural Resources

Cultural resource assessment includes addressing compliance for the protection of historic properties, cultural items, and sacred sites as defined under the National Historic Preservation Act (NHPA), sacred sites under Executive Order 13007, the Native American Graves Protection and Repatriation Act (NAGPRA), the American Indian

Religious Freedom Act (AIRFA), and Navajo Nation cultural resources laws and policies.

This Federal undertaking is limited to the delivery of water through existing facilities. It does not involve the construction, expansion, or development of any new facilities. As such there is no potential to cause effects to cultural resources as a result of the undertaking. All future development projects resulting from subsequent water use will be evaluated by the Nation, BIA and/or other Federal agencies, and approval of those actions will be granted on a case by case basis by those land and resource managing agencies.

Adequate protections and on-site conservation measures for cultural resources, including mitigation measures affected by the planning and development actions will be required as part of those future actions, if impacts are identified

Indian Trust Assets and Environmental Justice

This Federal action is designed to specifically address a water shortage situation for LeChee, a community on the Navajo Indian Reservation. Therefore it will address existing negative effects upon a minority population and improve the standard of living in the community without conversely causing adverse effects to low-income or minority populations.

Furthermore, the water provided under this proposed contract would be included as a part of any future water right settlement with the Navajo Nation, making use of a Tribal Trust Asset without conversely affecting any individual Indian Trust Assets.

Effects of Climatic Change over the 40 Year Period of the Contract

“The action period for this environmental assessment may include wetter or drier conditions than today or wetter or drier conditions than modeled in the Colorado River Simulation System. A continued drought like those documented in proxy records could result in decreased mean annual inflow to Lake Powell and decreased average storage in Lake Powell. This could affect downstream water resources and the effects on water resources under no action or the proposal.” (Part 3.1.1.1 Climate Change, p.14 -- Reclamation, February 8, 2008) If those conditions ensue, users of Upper Basin allocations may need to formulate a cooperative method of conservation and shortage sharing.

Cumulative Actions - Other Actions Tied To Lake Powell As A Water Supply

New Lake Powell Intake for the City of Page and LeChee – In 2004, Reclamation completed a report entitled Page-LeChee Water Supply - Part 1, Concept Design Study – Report of Findings that developed and evaluated alternatives for lakeside intake facilities to increase the diversion capacity to permit the City and LeChee to meet

peak summer demands and provide dependability and redundancy to their water delivery system.

The lakeside intake facilities proposed in the report would be funded and constructed by the City of Page. The City is currently completing NEPA compliance activities for the new intake facilities with the U.S. Park Service as the lead Federal agency.

A New Reclamation Water Contract with the City of Page - The City of Page has requested a contract with Reclamation for an additional 975 af of M&I water. It is anticipated that contract negotiations will be initiated following completion of this Contract with the Nation for the Community of LeChee, and after the City obtains the necessary approvals regarding water rights and water availability from the State of Arizona. (Probable period of contract development is in CY 2009.) This project will be tied to the construction of the second intake structure either at Glen Canyon Dam/Lake Powell or downstream of the dam, and additional conveyance features extending to the City.

Upgrades to the LeChee Water Delivery System – In 2005, Reclamation completed a report entitled Page-LeChee Water Supply – Part 2, Concept Design Study-Report of Findings that developed and evaluated alternatives to upgrade the LeChee water system to provide a safe and dependable water supply to meet current and future needs of the community. Facilities described in this report would be funded and constructed by the Navajo Nation. However, there are no capital improvement projects currently scheduled for the community of LeChee by the Division of Community Development of the Navajo Nation.

As previously stated any future land based improvement projects resulting from usage of contract water (including upgrades to the LeChee water delivery system) will be evaluated by appropriate authorities within the Nation, the BIA and/or other Federal agency, and those parties will be responsible for environmental and cultural resources compliance tied to those actions.

New Water Intake Facilities for the Navajo Generating Station – The Salt River Project is currently constructing new lakeside intake facilities to provide a more dependable water supply for operation of the Navajo Generating Station. NEPA compliance was completed by the Salt River Project with the U.S. Park Service as the lead Federal agency.

St. George, Utah Water Supply Project – The State of Utah is developing plans for lakeside intake facilities and a water transmission pipeline to deliver up to 100,000 af of water annually from Lake Powell to the City of St. George Utah and nearby communities. These facilities would be funded and constructed by the State of Utah. NEPA compliance activities have been initiated with the Federal Energy Regulatory Commission as the lead Federal agency.

Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead, December 2007 – Section 6 of the Guidelines detail the strategy by which the Secretary of Interior directs Reclamation to coordinate the operations of Lake Powell and Lake Mead with the objectives of avoiding curtailment of uses in the Upper Basin, minimizing shortages in the Lower Basin and protect the yield for development available in the Upper Basin.

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) (Reclamation, October 26, 2007)—This program is a 50 year combined ESA section 7 and section 10 effort. It addresses the effects to endangered and threatened species of the Colorado water delivery and hydropower generation by Federal and state agencies and water and power users in the three states. Concurrence is provided by the Service within the Confirmation of Endangered Program for Certain Identified Elements of the Proposed Adoption of Colorado River Interim Guidelines for Lower Basin Shortages and Coordination Operations and Lake (Service, November 26, 2007).

Environmental Assessment--Experiment Experimental Releases from Glen Canyon Dam, Arizona, 2008 through 2012 (Reclamation, February 8, 2008). Experimental release from the Glen Canyon Dam to assist in the conservation of endangered species as well as providing benefits to sediment conservation, increase scientific understanding, and also provides data for use in determining future dam operations. The Final Biological Opinion for the Operation of Glen Canyon Dam (Service, February 27, 2008) determined that threatened and endangered species would be provided protection though the adoption of a suite of conservation measures to be implemented by Reclamation and other agencies and water management organizations.

COMMITMENTS OF THIS ACTION:

1. Further NEPA analysis tied to future development will be conducted by the lead Federal agency involved (BIA, other Federal agency).
2. The Navajo Nation will ensure that future land planning and development actions tied to and /or resulting from use of the M&I water from this contract will receive review and appropriate regulatory approval by Navajo Nation Branch Offices.

COORDINATION

Two meetings were conducted. One meeting was a non-public meeting held at the WCAO-Durango Reclamation Office with representatives of the Navajo Nation Division of Water Resources, the Navajo Tribal Utility Authority, and Reclamation on December 5, 2007. The purpose of the meeting was to discuss a proposal for water sales contract brought forward by the Navajo Nation Division of Water Resources. The other meeting was a public meeting held at the LeChee Chapter Administration Building on June 23, 2008. The purpose of that meeting was to discuss the terms and conditions of the Contract and to describe the Federal action to those present and take any comments on the proposal. Advertisements for the meeting were run for 3 days prior to the meeting on

local radio and within the local newspaper. Additionally, announcements for the meeting were brought up during City of Page council meetings and at Chapter meetings at LeChee.

Representatives from the City of Page attended the June 23, 2008, meeting and did not provide any objection to the proposed Contract. In the past, representatives from the City of Page have stated their support for the proposed Contract.

The State of Arizona has provided Reclamation with a letter of no objection to this contract for M&I water to the Navajo Nation, dated June 16, 2008.

Contact with the U.S. Fish and Wildlife Service regarding the ESA issue took place on July 2 and 10, 2008. The Service verbally concurred that Reclamations conclusion of a no effect determination was appropriate for the four listed endangered species (humpback chub, razorback sucker, Kanab ambersnail, and Southwest willow flycatcher).

CONCLUSION

The proposed action would provide a reliable water supply for existing and future needs of the LaChee community. The action would not have significant effects on environmental resources considered and would not affect endangered species.

ATTACHMENTS

- *Page LeChee Area Map
- *LeChee Chapter Map
- *Water Service Contract between the United States and the Navajo Nation`
(Draft 06-24-08)

CITATIONS

Reclamation, U.S. Bureau of., September 2005, Page- LeChee Water Supply—Part 2, Concept Design Study: Report of Findings, U.S. Department of Interior, Bureau of Reclamation, Phoenix, Arizona.

Reclamation, U.S. Bureau of., October 2007, Lower Colorado River Multi-Species Conservation Program (LCR MSCP), U.S. Department of Interior, Bureau of Reclamation, Phoenix , Arizona.

Reclamation, U.S. Bureau of., December 2007a, Biological Assessment of the Operation of Glen Canyon Dam and Proposed Experimental Flows for the Colorado River Below Glen Canyon Dam During the Years 2008-2012, U.S. Department of the Interior, Bureau of Reclamation, Salt Lake City, Utah.

Reclamation, U.S. Bureau of., December 2007 b, The Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and

Lake Mead, U. S. Department of Interior, Bureau of Reclamation, Salt Lake City, Utah.

Reclamation, U.S. Bureau of. February 2008, Environmental Assessment-- Experimental Releases from Glen Canyon Dam, Arizona, 2008 through 2012, U. S. Department of Interior, Bureau of Reclamation, Salt Lake City, Utah.

Reclamation, U.S. Bureau of. (July 2008 Draft), Water Service Contract Between the United States and the Navajo Nation/Navajo Tribal Utility Authority, U.S. Department of Interior, Bureau of Reclamation, Durango, Colorado.

Service, U.S. Fish and Wildlife., November 2007a, Biological Opinion and Lower Colorado River Multi-Species Conservation Program (LCR MSCP) Concurrence Letter, U.S. Department of the Interior, U.S. Fish and Wildlife Service, Phoenix, Arizona.

Service, U. S. Fish and Wildlife., November 2007 b, Confirmation of Endangered Program for Certain Identified Elements of the Proposed Adoption of Colorado River Interim Guidelines for Lower Basin Shortages and Coordination Operations and Lake, U.S. Department of the Interior, U.S. Fish and Wildlife Service, Phoenix Arizona.

Service, U. S. Fish and Wildlife., February 2008, Final Biological Opinion for the Operation of Glen Canyon Dam, U.S. Department of Interior, U.S. Fish and Wildlife Service, Phoenix, Arizona