RESOLUTION OF THE
RESOURCES AND DEVELOPMENT COMMITTEE
OF THE 23RD NAVAJO NATION COUNCIL --- Second Year, 2016

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT; APPROVING A RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENT TO U.S. BUREAU OF RECLAMATION OR ITS ASSIGNS TO CONSTRUCT, OPERATE AND MAINTAIN THE "21 - CUTTER LATERAL WATER SUPPLY PROJECT (WSP)" REACH PORTION LOCATED IN HUERFANO CHAPTER VICINITY, SAN JUAN COUNTY, NEW MEXICO

BE IT ENACTED:

SECTION ONE. AUTHORITY

Pursuant to 2 N.N.C. Section §501 (B)(2), the Resources and Development Committee of the Navajo Nation Council has the authority to give final approval of all land withdrawals, non-mineral leases, permits, licenses, rights-of-way, surface easements and bonding requirements on Navajo Nation land an unrestricted (fee) land. This authority shall include subleases, modifications, assignments leasehold encumbrances, transfers, renewals, and terminations.

SECTION TWO. FINDINGS

A. The United States Bureau of Reclamation (BOR), 1235 La Plata Highway, Farmington, New Mexico 87401 has submitted a right-of-way (ROW) application and temporary construction easement (TCE) to construct, operate and maintain the "Reach 21-Cutter Lateral Water Supply Projects" located on, over and across Navajo Nation Trust Lands in the Huerfano vicinity, San Juan County, New Mexico attached hereto and incorporated herein as Exhibit "A"; and

B. The proposed permanent right-of-way is 6,839 feet in the length and 60 feet wide consisting of approximately 11.89 acres, more or less, and temporary construction easement consists of 4.09 acres, more or less of Navajo Nation Trust Lands located in San Juan County, New Mexico and the location is more particularly described on the survey map attached hereto and incorporated herein as Exhibit "B"; and

C. The Project Review Section with the Navajo Land Department has obtained the consent of the affected land user, attached hereto as Exhibit "C"; and

D. The Bureau of Reclamation requests perpetual term; and

E. The Bureau of Reclamation requests a waiver of the consideration because the project will provide a public benefit to the Navajo Nation; and

F. The environmental and archaeological studies have been completed and are attached hereto and incorporated herein by this reference.

SECTION THREE. APPROVAL

A. The Resources and Development Committee of the Navajo Nation Council hereby grants approval of a Right-of-Way and Temporary Construction easement to U.S. Bureau of Reclamation to construct, operate and maintain the "21-Cutter Lateral Water Supply Project" located on Navajo Nation Trust Lands in the Huerfano Chapter vicinity, San Juan County, New Mexico. The location is more particularly described on the map attached hereto as Exhibit "B".

B. The Resources and Development Committee of the Navajo Nation Council hereby waives the consideration for the Right-of-Way and Temporary Construction Easement because the "Reach 21-Cutter Lateral Water Supply Project" will provide a public benefit to the Navajo Nation

C. The Resources and Development Committee of the Navajo Nation Council hereby approves the Right-of-Way and Temporary Construction Easement subject to, but not limited to, the terms and conditions incorporated herein as Exhibits "D" and "E".

D. The Resources and Development Committee of the Navajo Nation Council hereby authorizes the President of the Navajo Nation to execute any and all documents necessary to affect the intent and purpose of this resolution

CERTIFICATION

I, hereby, certify that the foregoing resolution was duly considered by the Resources and Development Committee of the 23rd Navajo Nation Council at a duly called meeting at Navajo Department of Transportation, (Navajo Nation) Tse Bonito, New Mexico, at which quorum was present and that same was passed by a vote of 3 in favor, 0 opposed, 1 abstained this 23rd day of August, 2016.

Alton Joe Shepherd, Chairperson
Resources and Development Committee
Of the 23rd Navajo Nation Council

Motion: Honorable Davis Filfred
Second: Honorable Leonard Pete

Document No. **005371** Date Issued: **01/29/2016**

EXECUTIVE OFFICIAL REVIEW

Title of Document: BOR ROW on NNTL Reach 21 NGWSP & TCE Contact Name: DRAPER, HOWARD

Program/Division: DIVISION OF NATURAL RESOURCES

Email: howarddraper@frontiernet.net Phone Number: 928/871-6447

☐ **Business Site Lease** — Sufficient ☐ Insufficient ☐

1. Division: _____ Date: _____
2. Office of the Controller: _____ Date: _____

(only if Procurement Clearance is not issued within 30 days of the initiation of the E.O. review)

3. Office of the Attorney General: _____ Date: _____

☐ **Business and Industrial Development Financing, Veteran Loans, (i.e. Loan, Loan Guarantee and Investment) or Delegation of Approving and/or Management Authority of Leasing transactions**

1. Division: _____ Date: _____
2. Office of the Attorney General: _____ Date: _____

☐ **Fund Management Plan, Expenditure Plans, Carry Over Requests, Budget Modifications**

1. Office of Management and Budget: _____ Date: _____
2. Office of the Controller: _____ Date: _____
3. Office of the Attorney General: _____ Date: _____

☐ **Navajo Housing Authority Request for Release of Funds**

1. NNEPA: _____ Date: _____
2. Office of the Attorney General: _____ Date: _____

☐ **Lease Purchase Agreements**

1. Office of the Controller: _____ Date: _____
   (recommendation only)
2. Office of the Attorney General: _____ Date: _____

☐ **Grant Applications**

1. Office of Management and Budget: _____ Date: _____
2. Office of the Controller: _____ Date: _____
3. Office of the Attorney General: _____ Date: _____

☐ **Five Management Plan of the Local Governance Act, Delegation of an Approving Authority from a Standing Committee, Local Ordinances (Local Government Units), or Plans of Operation/Division Policies Requiring Committee Approval**

1. Division: _____ Date: _____
2. Office of the Attorney General: _____ Date: _____

☐ **Relinquishment of Navajo Membership**

1. Land Department: _____ Date: _____
2. Elections: _____ Date: _____
3. Office of the Attorney General: _____ Date: _____

Pursuant to 2 N.N.C. § 164 and Executive Order Number 07-2013

EOR # 005371

			Sufficient	Insufficient
☐ **Land Withdrawal or Relinquishment for Commercial Purposes**				
1. Division:		Date:	☐	☐
2. Office of the Attorney General:		Date:	☐	☐
☐ **Land Withdrawals for Non-Commercial Purposes, General Land Leases and Resource Leases**				
1. NLD		Date:	☐	☐
2. F&W		Date:	☐	☐
3. HPD		Date:	☐	☐
4. Minerals		Date:	☐	☐
5. NNEPA		Date:	☐	☐
6. DNR		Date:	☐	☐
7. DOJ		Date:	☐	☐
☐ **Rights of Way**				
1. NLD		Date:	☐	☐
2. F&W		Date:	☐	☐
3. HPD		Date:	☐	☐
4. Minerals		Date:	☐	☐
5. NNEPA		Date:	☐	☐
6. Office of the Attorney General:		Date:	☐	☐
7. OPVP		Date:	☐	☐
☐ **Oil and Gas Prospecting Permits, Drilling and Exploration Permits, Mining Permit, Mining Lease**				
1. Minerals		Date:	☐	☐
2. OPVP		Date:	☐	☐
3. NLD		Date:	☐	☐
☐ **Assignment of Mineral Lease**				
1. Minerals		Date:	☐	☐
2. DNR		Date:	☐	☐
3. DOJ		Date:	☐	☐
☑ **ROW (where there has been no delegation of authority to the Navajo Land Department to grant the Nation's consent to a ROW)**				
1. NLD		Date: 13 May 16	☑	☐
2. F&W		Date: May 18, 2016	☑	☐
3. HPD		Date: 5/24/16	☒	☐
4. Minerals		Date: 6/7/16	☒	☐
5. NNEPA		Date: 6-13-2016	☑	☐
6. DNR	Robert O. Allan	Date: 6/17/16	☒	☐
7. DOJ		Date: 6/21/16	☒	☐
8. OPVP		Date: 6-29-16	☒	☐
☐ **OTHER:**				
1.		Date:	☐	☐
2.		Date:	☐	☐
3.		Date:	☐	☐
4.		Date:	☐	☐
5.		Date:	☐	☐

Pursuant to 2 N.N.C. § 164 and Executive Order Number 07-2013

NAVAJO NATION DEPARTMENT OF JUSTICE

DOCUMENT REVIEW REQUEST FORM

☐ RESUBMITTAL

RECEIVED
JUN 20 2016
DEPARTMENT OF JUSTICE
RECEPTIONIST DESK

DOJ
6/20/16 11:48am
DATE / TIME
☐ 7 Day Deadline
DOC #: 005371
SAS #:
UNIT: NRU

***** FOR NNDOJ USE ONLY - DO NOT CHANGE OR REVISE FORM. VARIATIONS OF THIS FORM WILL NOT BE ACCEPTED. *****

CLIENT TO COMPLETE

DATE OF REQUEST:	~~9/22/2015~~ 6/20/16	DIVISION:	Div. of Natural Resources
CONTACT NAME:	Howard Draper/ Kayla Bia	DEPARTMENT:	Navajo Land Department
PHONE NUMBER:	928/871-6447	E-MAIL:	howarddraper@frontiernet.net

TITLE OF DOCUMENT: *Approving Bureau of Reclamation (BOR) Right-of-way for REACH 21 on Navajo Nation Trust Lands (NGSWP)*

RECEIVED
2016
DEPARTMENT OF JUSTICE
NATURAL RESOURCES UNIT

DOJ SECRETARY TO COMPLETE

DATE/TIME IN UNIT: 06/20/16 1:04pm
REVIEWING ATTORNEY/ADVOCATE: Steven Chee 06/29/16
DATE TIME OUT OF UNIT: 06/21/16 2:00pm SB

DOJ ATTORNEY / ADVOCATE COMMENTS

— Document is legally sufficient.

REVIEWED BY: (*Print*)	Date / Time	SURNAMED BY: (*Print*)	Date / Time
Time Chee	6-20-16	Veronica Blackhat	6/21/16 11:45Am

DOJ Secretary Called: Howard Draper for Document Pick Up on 06/21/16 at 1:17pm By: SB

PICKED UP BY: (*Print*) DATE / TIME:

NNDOJ/DRRF-July 2013

Bureau of Reclamation

Navajo Gallup Water Supply Project

Tribal Trust Land

Reach 21 – Cutter Lateral

Bureau of Reclamation

Navajo Gallup Water Supply Project
Tribal Trust Land
Reach 21 – Cutter Lateral

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EXHIBIT
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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
APPLICATION FOR CONSENT TO A GRANT OF PERMANENT EASEMENT FOR RIGHT-OF-WAY

(Tribal Trust Land)

APPLICANT: The U.S. Bureau of Reclamation, having a residence or principal place of business at 1235 La Plata Highway, Farmington, New Mexico 87401 hereby files an application with the Navajo Nation, pursuant to the terms and provisions of the Act of February 5, 1948 (62 Stat. 17; 25 USC §§ 323 – 328), and to the regulations of the Department of the Interior contained in Title 25, Code of Federal Regulations, Part 169, for consent to a grant of Permanent Easement for Right-of-Way, without limitation in term, for the following purposes and reasons:

PURPOSE: The Permanent Easement for Right-of-Way will be utilized for the construction, operation, maintenance and/or replacement of a 36 inch in diameter, or less, water transmission pipeline and a fenced and graveled regulating tank yard, over, across and through Navajo Nation Tribal Trust Lands that will be crossed by a portion of Reach 21 of the Cutter Lateral; a part of the Navajo-Gallup Water Supply Project (NGWSP) located in the area of Huerfano Chapter in San Juan County, New Mexico.

Across the following described Tribal Trust Lands:

Parcel No. Reach 21-Tribal Trust-01(P): A Parcel of land crossing Navajo Nation Tribal Trust Lands and lying in the Northwest Quarter of Section 36 of Township 28 North, Range 09 West, New Mexico Principal Meridian, San Juan County New Mexico.

Parcel No. Reach 21-Tribal Trust-02(P): A Parcel land of land crossing Navajo Nation Tribal Trust Lands and lying in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

Parcel No. Reach 21 - Tribal Trust-03(P): A Parcel land of land crossing Navajo Nation Tribal Trust Lands and lying in the Northwest Quarter (NW1/4)of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

Said Permanent Easement for Right-of-Way: NGWSP Reach 21 Water Transmission Pipeline Right-of-Way would be approximately 6,839-feet (1.3 miles) in length and 60-feet wide; a Permanent Easement for Right-of-Way containing a total of 9.42 acres, more or less; and in addition, a Permanent Easement for Right-of-Way for a fenced and graveled yard that will contain Regulating Water Tank No. 3, also a part of NGWSP Reach 21 that would be 300-feet long and 230-feet wide; a Permanent Easement for Right-of-Way containing a total of 1.58 acres, more or less. The total Permanent Easement for Right-of-Way over, across and through Navajo Nation Tribal Trust Lands located in the area of Huerfano Chapter for the construction of the NGWSP Cutter Lateral Reach 21 is 11.00 acres, more or less.

The said Permanent Easements for Right-of-Way are more particularly described and illustrated on the NGWSP Cutter Lateral - Reach 21 Drawing No. 1695-529-60009, and within the Reclamation Application that are attached hereto, and by reference, made a part hereof.

A comprehensive Application for Easements for Right-of-Way, and the required attachments to support this application are contained on the accompanying CD that is included with this application and by reference is made a part hereof.

The said applicant understands and expressly agrees to the following stipulations:

(a). To construct and maintain the right-of-way in a workmanlike manner.

(b). ~~To pay all damages and compensation in addition to the deposit made pursuant to 169.4, determined by the Secretary to be due the landowners and authorized users and occupants of the land due to the survey, granting, construction, and maintenance of the right-of-way.~~

(c). ~~To indemnify the landowners and authorized users and occupants against any liability for the life, personal injury, and property damage arising from the construction, maintenance, occupancy or use of the lands by the applicant, his employees, contractors and their employees, or subcontractors and their employees.~~

(d). To restore the lands as nearly as possible to their original condition upon the completion of construction, to the extent compatible with the purpose for which the right-of-way was granted.

(e). To clear and keep clear the lands within the right-of-way to the extent compatible with the purpose of the right-of-way; and dispose of all vegetative and other material cut, uprooted or otherwise accumulated during the construction and maintenance of the project.

(f). To take soil and resources conservation projection measures, including weed control, on the land covered by the right-of-way.

(g). To do everything reasonable within its power to prevent and suppress fires on or near the lands to be occupied under the right-of-way.

(h). To build and repair such roads, fences and trails as may be destroyed or injured by the construction work and to build and maintain necessary and suitable crossings for all roads and trails that intersect the works constructed, maintained or operated under the right-of-way.

(i). That upon revocation or termination of the right-of-way, the applicant shall, so far as in reasonably possible, restore the land to its original condition.

(j). To at all times keep the Secretary informed of its address, and in case of corporations, of the address of its principle place of business and of the names and addresses of its principle officers.

(k). The applicant will not interfere with the use of the lands by or under the authority of the landowners for any purpose not inconsistent with the primary purpose for which the right-of-way is granted.

IN WITNESS WHEREOF, Rick Reese has caused this instrument to be executed this 18th day of December, 2015.

ACTING FOR Rick R Reese

Witness

Barry Longwell
Construction Engineer
U.S. Bureau of Reclamation
Four Corners Construction Office
1235 La Plata Hwy.
Farmington, NM, 87401

Required Supporting Documents:

1. ( ) Form 5-104b
2. ( ) ~~Evidence of Authority of Officers to execute Papers (ROW Form 94-4).~~
3. ( ) ~~Evidence of good faith and financial responsibility.~~
4. ( ) ~~Double estimated damages (deposit - 25 CFR 169.4).~~
5. ( ) ~~State certified corporate charter or articles of incorporation.~~
6. ( ) ~~Certified copy of resolution or by-laws of the corporation authorizing the filing of the application.~~
7. ( ) ~~State certification that the applicant is authorized to conduct business in the State of xxx.~~
8. ( ) ~~Certified copy of the articles of partnership or association.~~
9. (X) **Other attachments:**
   - (X) Application for Permanent Easement for Right-of-Way
   - (X) Right-of-Way Drawing No. 1695-529-60009 (CD)
   - (X) Plan and Profile Drawings Page 2 through Page 9 (CD)
   - (X) Final Environmental Impact Statement and Record of Decision can be viewed at: http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.
   - (X) FEIS – NGWSP – Volume 1, Volume 2, and Volume 3 (CD)
   - (X) FEIS – NGWSP – Record of Decision – Dated 2009 (CD)
   - (X) Final Environmental Assessment for Reaches 22 and 21, dated January 2015 (CD)
   - (X) FONNSI – BLM – Signed 07-17-15 (CD)
   - (X) ROD - BLM – NEPA No. DOI-BLM-NM-FO10-2014-0181-EA Signed 07-20-2015 (CD)
   - (X) FONNSI – Reclamation – Signed 10-07-2015 (CD)
   - (X) FONNSI - BIA – Signed 10-08-15 (CD)
   - (X) Class III Cultural Resources Inventory – Reach 22 - Letter of Concurrence Dated 11-21-2014 (CD)
   - (X) Memorandum – BIA - Acceptable NEPA and NHPA Compliance Documents Dated 10-29-2015 (CD)
   - (X) Biological Resources Compliance Form – NNDFW Review No. 13EM-02 Signed 01-20-2015 (CD)
   - (X) Application – Permanent Easement for ROW (CD)
   - (X) Legal Description of Permanent Easement for ROW in WORD Format (CD)
   - (X) Navajo Nation Executive Order No. 03-2012 in Support of the NGWSP (CD)
   - (X) Chapter Resolution in Support the NGWSP – Huerfano (CD)

ROW Form 94-7

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

REQUEST FOR CONSENT TO A GRANT OF PERMANENT EASEMENT FOR RIGHT-OF-WAY

(Tribal Trust Lands – NGWSP Reach 21)

LANDOWNER NAME: Navajo Tribe **Allotment No.**: Tribal Lands as Described Hereinafter

The NGWSP is a priority project of the United States Government and the Navajo Nation; therefore, the Department of Interior, the Department of Reclamation, the Navajo Nation, and the Bureau of Indian Affairs are working as partners to streamline the processes, as necessary, to meet all project deadlines. Reclamation therefore respectfully requests that this application for NGWSP Rights-of-Way be prioritized accordingly, and that the application is processed when received.

Please note that the acquisition of tribal consent is Time Sensitive. Reclamation respectfully requests that the consent to this easement be granted on or before ***May 15, 2016*** *to allow for additional processing by the BIA.*

This application requests Tribal Consent to three Permanent Easements for Right-of-Way (ROW) over, across, and through the following Tribal Trust Lands located within NGWSP Reach 21.

1) Parcel No. RCH 21-Tribal Trust-01(P): Tank Yard - Regulating Tank No. 3 – Drawing No. 1695-529-60009: A Parcel of land lying in Navajo Nation Tribal Trust Land and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

2) Parcel No. RCH 21-Tribal Trust-02(P): Pipeline and Access Road - Cutter Lateral Water Treatment Plant and Pumping Plant No. 3 to Tank Yard of Regulating Tank No. 3 – Drawing No. 1695-529-60009: A Parcel land of land crossing Navajo Nation Tribal Trust Land and lying in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

3) Parcel No. RCH 21 - Tribal Trust-03(P): Pipeline -Tank Yard Regulating Tank No. 3 to Intersect with Eastern Navajo Water Pipeline Phase 3 – Drawing No. 1695-529-60009: A Parcel land of land crossing Navajo Nation Tribal Trust Land and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

COMES NOW THE APPLICANT: The Bureau of Reclamation, Four Corners Construction Office, having a principle place of business at 1235 La Plata Highway, Farmington, New Mexico 87401, who on this 18th day of December, 2015, hereby petitions the Bureau of Indian Affairs, and respectfully files under the terms and provisions of the Act of February 5, 1948 (62 Stat. 17; 25 USC 323-328), and Departmental Regulations 25 CFR, Ch.1, Subchapter H, Part 169 § 169.5, Act of February 5, 1948 and contained in Title 25, Code of Federal Regulations, 25 CFR, Ch. 1, Subchapter H, Part 169 § 169.5, a request for Tribal Consent to three applications for grants of Permanent Easement for Right-of-Way (ROW) without limitation in term, and for as long as the easement is used for the intended purpose as described herein.

The Purpose of the Proposed Action: The Omnibus Public Land Management Act of 2009, Title X, Part III (Public Law 111-11) (Act) authorizes the Bureau of Reclamation to construct the NGWSP that includes water treatment plants, pipeline, several pumping stations and ancillary facilities. Once completed, the NGWSP will deliver a reliable source of potable water, sourced from the San Juan River, to Navajo communities in northwestern New Mexico, the City of Gallup, NM, and the southwest portion of the Jicarilla Apache Reservation for municipal and industrial use. The NGWSP will connect to existing and future water distribution systems operated on the reservation by the Navajo Tribal Utility Authority (NTUA) and in Gallup, by the City of Gallup. The high quality treated water provided by the NGWSP will bring immediate benefits, including improved health and wellbeing to the individuals on the reservation and to those living in the greater Gallup area.

Authorization: Reclamation is authorized by the Act, under Part III, Section 10602, Subsection (c)(1) and (2) which states : "As a condition of construction of the facilities authorized under this part, the Project Participants shall provide all land or interest in land, as appropriate, that the Secretary identifies as necessary for acquisition under this subsection at no cost to the Secretary". Therefore, Reclamation hereby respectfully requests that this application be processed so as to acquire ROW that is deemed necessary and appropriate in order to accommodate the construction, operation, maintenance, and replacement of the main and ancillary facilities of the NGWSP Reach 21.

The NGWSP will be constructed in segments identified as Reaches. Reach 21 of the NGWSP will begin at Station 23093+38.55 and will terminate at Station 23307+66.42, where Reach 21 will be joined to the Eastern Navajo Water Pipeline Phase 3 Transmission Line. Plan and Profile Drawings Page 5 through Page 9 (CD) illustrate the Reach 21 pipeline alignment and the locations of ancillary appurtenances.

Once Reach 21 construction is completed, Reclamation will reclaim the ROW and the TCE using a seed mixture appropriate to the area in compliance with the requirements of Departmental Regulations 25 CFR, Ch.1, Subchapter H, Part 169 § 169.5 and the NGWSP Revegetation Plan. Construction of Reach 21 is anticipated to begin in September of 2016 and be completed in March of 2019.

Reclamation hereby respectfully requests Navajo Nation Tribal Consent to grants of Permanent Easement for ROW for the following lands and facilities that make up a part of NGWSP Reach 21:

Easement Type, Size and Purpose:

1) Parcel No. RCH 21-Tribal Trust-01(P): Tank Yard - Regulating Tank No. 3– Drawing No. 1695-529-60009: A Parcel of land lying in Navajo Nation Tribal Trust Land and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Reclamation hereby requests Tribal Consent to a grant of Easement for ROW without limitation in term, in accordance with 25 CFR, Ch.1, Subchapter H, Part 169 § 169.18.

   Said Easement for ROW being approximately 230-feet in length and 300-feet in width, containing approximately 1.58 acres, more or less, for the construction, operation, maintenance and/or replacement of one or more 500,000-gallon water regulating tank(s) with appurtenances thereto. Ancillary appurtenances may include but are not limited to a fenced and graveled yard, pipeline, vaults, valves, fiber optic supervisory control and data acquisition systems (SCADA), cathodic protection systems, single phase utility power to support the operation of the pipeline, tanks, and yard infrastructure, and a patrol road. Reclamation will submit a separate application to request a

Temporary Construction Easement to obtain additional working area supplemental to the ROW. The ROW will contain 1.58 acres, more or less.

Across the following described Navajo Tribal Trust Lands: A Parcel of land lying in Navajo Nation Tribal Trust Land, and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Parcel No. Rch 21 Tribal Trust-01(P) is illustrated on Drawing No. 1695-529-60009 and Plan and Profile Drawing Page No. 3, illustration No. 3 and 4, and Page No. 9, attached hereto and by reference made a part hereof. The Regulating Tank No. 3 tank yard being more particularly described in Metes and Bounds as follows:

Legal Description of ROW – Parcel No. RCH 21-Tribal Trust-01(P): Tank Yard – Regulating Tank No. 3 – Drawing No. 1695-529-60009: The Point of Beginning being a point on the West line of said Section 18, from which the Northwest corner of said Section 18 bears North 00°10'18" East a distance of 367.38 feet; Thence, from the Point of Beginning South 89°49'42" East a distance of 230.00 feet; Thence South 00°10'18" West a distance of 300.00 feet; Thence North 89°49'42" West a distance of 230.00 feet to the West line of said Section 18; Thence, along said West line North 00°10'18" East a distance of 300.00 feet to the Point of Beginning. Parcel No. Rch 21-Tribal Trust-01(P) contains 1.58 acres, more or less.

2) Parcel No. RCH 21-Tribal Trust-02(P): Pipeline and Access Road: Drawing No. 1695-529-60009: A Parcel of land crossing Navajo Nation Tribal Trust Land and lying in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Reclamation hereby requests Tribal Consent to a grant of Easement for ROW without limitation in term, in accordance with 25 CFR, Ch.1, Subchapter H, Part 169 § 169.18.

Said Easement for ROW being a strip of land approximately 5,263-feet in length and 60-feet wide centered on the pipeline centerline containing 8.14 acres more or less, for the construction, operation, maintenance and/or replacement of a 36-inch I.D. or smaller water pipeline with appurtenances thereto. Ancillary appurtenances may include but are not limited to thrust features, vaults, valves, fiber optic supervisory control and data acquisition systems (SCADA), cathodic protection systems, single phase utility power to support the operation of the pipeline infrastructure, and a patrol road. Reclamation requests a varying width of said Easement for ROW to accommodate an access road to the regulation tank site, and to avoid cultural resources occurring in the area of the access road.

Said ROW is described as being 60-feet wide, 30-feet each side of the pipeline centerline, from Station 23237+49.70 to Station 23267+00; from Station 23267+00 to Station 23276+30, the ROW will be expanded to 80-feet wide, being 50 feet left and 30 feet right to accommodate an access road; from Station 23276+30 to Station 23279+94.14 the ROW will be reduced to 60-feet wide, 30-feet each side; thence the ROW will vary in width from 60 to 80 feet, being 30 feet left, and varying from 30-feet to 50-feet right from Station 23279+94.14 to Station 23280+42.42; thence being 80-feet wide, 30-feet left and 50 feet right from Station 23280+42.42 to Station 23290+13.40. Reclamation will submit a separate application to request a Temporary Construction Easement to obtain additional working area supplemental to the ROW. Parcel No. Rch 21–Tribal Trust-02(P) will contain 8.14 acres more or less.

Across the following described Navajo Tribal Trust Lands: A Strip of land crossing Navajo Nation Tribal Trust Land in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Parcel No. Rch 21 - Tribal Trust-02(P) is illustrated on Drawing No. 1695-529-60009 and is shown on Plan and Profile Drawing Page No. 3 illustration No. 4, and Page 9, attached hereto and by reference made a part hereof. Parcel No. Rch 21-Tribal Trust-02(P) Pipeline and Access Road is more particularly described as follows:

Legal Description of ROW – Parcel No. RCH 21-Tribal Trust-02(P): Pipeline and Access Road: **Drawing No. 1695-529-60009:** The Point of Beginning being Station 23237+49.70, a point on the East line of said Section 18 from which the Northeast corner of said Section 18 bears North 00°14'00" West a distance of 673.73 feet; Thence, from the Point of Beginning South 89°37'48" West a distance of 1780.54 feet to station 23255+30.24; Thence South 86°14'11" West a distance of 585.18 feet to station 23261+15.42; Thence South 52°29'11" West a distance of 344.55 feet to station 23264+59.97; Thence South 86°14'11" West a distance of 1592.40 feet to station 23280+52.37; Thence North 71°15'49" West a distance of 450.66 feet to station 23285+03.03; Thence North 48°45'49" West a distance of 510.37 feet to station 23290+13.40, a point on the East boundary line of Parcel Rch 21-Tribal Trust-01(P) and the point of terminus from which the Northwest corner of said section 18 bears North 21°57'41" West a distance of 610.47 feet. The sidelines of said strip shall be extended or shortened to the East line of said Section 18 and the East boundary line of Parcel Rch 21-Tribal Trust-01(P). Parcel No. Rch 21-Tribal Trust-02(P) contains 8.14 acres more or less.

3) Parcel No. RCH 21-Tribal Trust-03(P) – Pipeline - Tank Yard for Regulating Tank No. 3 to Intersect with Eastern Navajo Water Pipeline – Phase 3: Drawing No. 1695-529-60009: Parcel of land crossing Navajo Nation Tribal Trust Land and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Reclamation hereby requests Tribal Consent to a grant of Easement for ROW without limitation in term, in accordance with 25 CFR, Ch.1, Subchapter H, Part 169 § 169.18.

Said Easement for ROW being a strip of land approximately 1,576-feet in length and 60-feet wide centered on the pipeline centerline, 30-feet each side, containing 2.17 acres more or less, from station 23292+60.00 to station 23308+36.42, for the construction, operation, maintenance and/or replacement of a 36-inch I.D. or smaller water pipeline with appurtenances thereto. Ancillary appurtenances may include but are not limited to thrust features, vaults, valves, fiber optic supervisory control and data acquisition systems (SCADA), cathodic protection systems, single phase utility power to support the operation of the pipeline infrastructure, and a patrol road. Reclamation will submit a separate application to request a Temporary Construction Easement to obtain additional working area supplemental to the ROW. Parcel No. Rch 21–Tribal Trust-03(P) will contain 2.17 acres, more or less.

Across the following described Navajo Tribal Trust Lands: A Strip of land crossing Navajo Nation Tribal Trust Land in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Parcel No. Rch 21 - Tribal Trust-03(P) is illustrated on ROW Drawing No. 1695-529-60009 and shown on Plan and Profile Drawing Page No. 3, illustration No. 4, and Page 9, attached hereto and by reference made a part hereof. Parcel No. Rch 21-Tribal Trust-03(P) - Pipeline ROW are more particularly described as follows:

Legal Description of ROW – Parcel No. RCH 21-Tribal Trust-03(P) - Pipeline: ROW Drawing No. **1695-529-60009:** The Point of Beginning being Station 23292+49.60, a point on the South boundary line of Parcel No. Rch 21 Tribal Trust-01(P) from which the Northwest corner of said Section 18 bears North 13°38'33" West a distance of 687.24 feet; Thence, from the Point of Beginning South 00°11'20" West a distance of 729.74 feet to station 23299+89.74; Thence South 45°11'20" West a distance of 140.65 feet to station 23301+30.39; Thence South 00°11'20" West a distance of 636.03 feet to station 23307+66.42 that is the end of Reach 21; Thence continuing South 00°11'20" West a distance of 70.00 feet to station 23308+36.42, the point of terminus from which the Northwest corner of said section 18 bears North 01°29'50" West a distance of 2203.49 feet. The sidelines of said strip shall be extended or shortened to the South boundary line of Parcel Rch 21-Tribal Trust-01(P). Parcel No. Rch 21-Tribal Trust-03(P) contains 2.17 acres more or less.

Landowner Consent: On October 24, 2012, the Bureau of Indian Affairs, Eastern Navajo Agency granted Reclamation Permission to Survey over, across and through Reach 22B, which at that time included the aforementioned Reach 21 Tribal Trust Land, for the purpose of conducting surveys and studies to determine a final pipeline alignment. The final pipeline alignment across Reach 21 is illustrated on the aforementioned Plan and Profile and ROW Drawings. ROW Drawing 1695-529-60009 details the proposed pipeline alignment across the subject Navajo Nation Tribal Trust Land, and includes the legal description of the ROW. Reclamation requests that in granting consent to an Easement for ROW, that the Navajo Nation waives compensatory consideration of the fair market value of the easement, and to forego the requisite appraisal of the ROW over, across and through the aforementioned Tribal Trust Lands.

Environmental Clearance: The Record of Decision (ROD) and Final Environmental Impact Statement (FEIS) (Bureau of Reclamation 2009) can be viewed on the world-wide web at: http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.

Subsequently, Reclamation conducted tiered Environmental Assessment (EA) over Reaches 21 and 22 dated 01-06-15 (CD) to determine if the action would have any new potentially significant impacts not already discussed and considered in previous NEPA documentation. Resulting from this supplemental NEPA are three Finding of No New Significant Impacts (FONNSI's) prepared by Reclamation, BIA, and Bureau of Land Management, respectively.

Biological Resource Compliance: Please see attached form BRCF-NNDFW Review No. 13EM-02, that documents the approval by the NNDFW that the NGWSP Reach 21 proposed to be constructed within the area of the Huerfano Chapter is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. The NNDFW concurs with the mitigation recommendations outlined in the BE, Section 6.5 and is approved by Ms. Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife by the duly inscribed signature thereto on 01-20-15.

Cultural Resources Compliance: Please see attached letter dated November 21, 2014 that includes a summary of the Class III Inventory Report and eligibility determination prepared by Paleo West for the NGWSP Reach 22 pipeline that includes Reach 22B. The survey was conducted under the authority of General Archaeological Investigation Permit No. NM-13-210-S, BLM Cultural Resource Use Permit 247-2920-12-D, and Navajo Nation Cultural Resources Permit No. B13543. Seventy-four cultural resource sites are located within the proposed Reach 22 ROW. The report locates and documents the

archaeological resources that may be affected by the construction of the Reach 22B segment of the NGWSP.

Reclamation submitted said report to the Navajo Nation Historic Preservation Department and concurrence was received from the Tribal Historic Preservation Officer on April 17, 2015. The report was also consulted upon with all NGWSP signatory and consulting parties in compliance with the Programmatic Agreement for the NGWSP. According to the internal BIA memo from the Supervisory Environmental Protection Specialist, Branch of Environmental Quality, Act Compliance and Review, written to the Supervisory Civil Engineer, Engineering & Technical Support Division, dated October 29, 2015, attached hereto and by reference is made a part hereof, the subject report is considered acceptable for compliance with the National Historic Preservation Act (NHPA).

Waiver of Title 25, *Code of Federal Regulations*, Part 169.4: The Bureau of Reclamation, an agency of the Federal Government, is prohibited by the Anti-deficiency Act (31 C.F.R. § 1341) from obligating government funds by agreeing to open-ended indemnification, or to depositing government funds for payment of claims that have not been made. Therefore, Reclamation requests a waiver of said regulation, as is provided for in Title 25, *Code of Federal Regulations*, Part 169.4. Reclamation hereby assures that it will pay damages promptly, when they are sustained, under the provisions of the Federal Tort Claims Act (June 25, 1948, Ch. 646, Title IV, 62 Stat. 982, "28 U.S.C. Pt. VI Ch.171" and 28 U.S.C. Part 1346(b)).

SAID APPLICANT UNDERSTANDS AND EXPRESSLY AGREES TO THE FOLLOWING STIPULATIONS:

1. To construct and maintain the right-of-way in a workmanlike manner.
2. ~~To pay all damages and compensation, in addition to the deposit made pursuant to 169.4, determined by the Secretary to be due the landowners and authorized users and occupants of the land due to the survey, granting, construction and maintenance of the right-of-way.~~
3. ~~To indemnify the landowners and authorized users and occupants against any liability for loss of life, personal injury and property damage arising from the construction, maintenance, occupancy or use of the lands by the applicant, his employees, contractors and their employees, or subcontractors and their employees.~~
4. To restore the lands as nearly as may be possible to their original condition upon the completion of construction, to the extent compatible with the purpose for which the right-of-way was granted.
5. To clear and keep clear the lands within the right-of-way to the extent compatible with the purpose of the right-of-way, and dispose of all vegetative and other material cut, uprooted or otherwise accumulated during construction and maintenance of the project.
6. To take soil and resource conservation protection measures, including weed control, on the land covered by the right-of-way.
7. To do everything reasonable within its power to prevent and suppress fires on or near the lands to be occupied under the right-of-way.

8. To build and repair such roads, fences and trails as may be destroyed or injured by construction work and to build and maintain necessary and suitable crossings for all roads and trails that intersect the works constructed, maintained, or operated under the right-of-way.

9. That upon revocation or termination of the right-of-way, the applicant shall, so far as in reasonably possible, restore the land to its original condition. The determination of "reasonably possible" is subject to Secretary's approval.

10. To at all times keep the Secretary informed of its address, and in case of corporations, of the address of its principal place of business and the names and addresses of its principal officers.

11. The applicant will not interfere with the use of the lands by or under the authority of the landowners, for any purpose not inconsistent with the primary purpose for which the right-of-way is granted.

12. During the term of this Grant of Easement, if any previously unidentified cultural resources are discovered within the easement area, work should be halted immediately and the BIA and/or Tribal Contractor should be contacted immediately.

THE APPLICANT FURTHER STIPULATES AND EXPRESSLY AGREES AS FOLLOWS:

To conform and to abide by all applicable requirements with respect to the right-of-way herein applied for. The applicant agrees to conform to and abide by the rules, regulations, and requirements contained in the *Code of Federal Regulations*, Title 25 Indians, Part 169, as amended, and by reference includes such rules, regulations and requirements as a part of this application to the same effect as if the same were herein set out in full.

IN WITNESS WHEREOF, Rick Rose has caused this instrument to be executed this 16th day of December 20 15.

Witness

ACTING FOR Rick Rose

Barry Longwell
Construction Engineer
U.S. Bureau of Reclamation
Four Corners Construction Office
1235 La Plata Hwy.
Farmington, NM, 87401

Required Supporting Documents:

1. ( ) Form 5-104b
2. ( ) ~~Evidence of Authority of Officers to execute Papers (ROW Form 94-4).~~
3. ( ) ~~Evidence of good faith and financial responsibility.~~
4. ( ) ~~Double estimated damages (deposit - 25 CFR 169.4).~~
5. ( ) ~~State certified corporate charter or articles of incorporation.~~
6. ( ) ~~Certified copy of resolution or by-laws of the corporation authorizing the filing of the application.~~
7. ( ) ~~State certification that the applicant is authorized to conduct business in the State of xxx.~~

8. ( ) ~~Certified copy of the articles of partnership or association.~~

9. (X) **Other attachments:**

(X) Application for Permanent Easement for Right-of-Way
(X) Right-of-Way Drawing No. 1695-529-60009 (CD)
(X) Plan and Profile Drawings Page 2 through Page 9 (CD)
(X) Final Environmental Impact Statement and Record of Decision can be viewed at: http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.
(X) FEIS – NGWSP – Volume 1, Volume 2, and Volume 3 (CD)
(X) FEIS – NGWSP – Record of Decision – Dated 2009 (CD)
(X) Final Environmental Assessment for Reaches 22 and 21, dated January 2015 (CD)
(X) FONNSI – BLM – Signed 07-17-15 (CD)
(X) ROD - BLM – NEPA No. DOI-BLM-NM-FO10-2014-0181-EA Signed 07-20-2015 (CD)
(X) FONNSI – Reclamation – Signed 10-07-2015 (CD)
(X) FONNSI - BIA – Signed 10-08-15 (CD)
(X) Class III Cultural Resources Inventory – Reach 22 - Letter of Concurrence Dated 11-21-2014 (CD)
(X) Memorandum – BIA - Acceptable NEPA and NHPA Compliance Documents Dated 10-29-2015 (CD)
(X) Biological Resources Compliance Form – NNDFW Review No. 13EM-02 Signed 01-20-2015 (CD)
(X) Application – Permanent Easement for ROW (CD)
(X) Legal Description of Permanent Easement for ROW in WORD Format (CD)
(X) Navajo Nation Executive Order No. 03-2012 in Support of the NGWSP (CD)
(X) Chapter Resolution in Support the NGWSP – Huerfano (CD)

United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Four Corners Construction Office
1235 La Plata Highway
Farmington, NM 87401

IN REPLY REFER TO:

FCCO-202
LND-3.00

DEC 18 2015

Mr. Howard P. Draper
Program and Projects Specialist
Navajo Land Department
Project Review Section
Navajo Nation Division of Natural Resources
P.O. Box 2249
Window Rock, AZ 86515

Subject: Application for Consent to a Grant of Temporary Construction Easement (TCE) - Tribal Trust Land - Reach 21 - Cutter Lateral - Navajo-Gallup Water Supply Project, San Juan County, New Mexico

Dear Mr. Draper:

The Bureau of Reclamation hereby requests consent to a grant of TCE over, across and through the subject Navajo Nation Tribal Trust Land that is located in the area of Huerfano Chapter in San Juan County, New Mexico. The Bureau of Indian Affairs (BIA) requires that said consent be obtained by Reclamation and that it be submitted with an application for TCE. Enclosed is the application for said consent, and pertinent documents on CD format that are respectfully submitted for your review and processing.

Reclamation requests that all customary fees be waived as allowed by the Omnibus Public Land Management Act of 2009, Title X, Part III (Public Law 111-11).

Also, in order to allow for additional processing by the BIA, Reclamation requests that consent to the grant of this ROW be received on or before May 15, 2016.

If you have any questions, please contact Mike Braman at 505-324-5024.

Sincerely,

ACTING FOR Rick R Rose

Barry Longwell
Construction Engineer

cc: Ms. Bidtha Becker, Executive Director
Navajo Nation Division of Natural Resources
P.O. Box 9000
Window Rock, AZ 86515

Mr. Ray Benally, Director
Navajo Nation Department of Water Resources
P.O. Box 678
Ft. Defiance, AZ 86504

Mr. Jason John, Branch Director
Navajo Nation Department of Water Resources
Water Management Branch
P.O. Box 678
Ft. Defiance, AZ 86504
(w/o encls to ea)

bc: FCCO-100, FCCO-110, FCCO-120, FCCO-150, FCCO-152, FCCO-230, FCCO-232
(w/o encl to ea)

ROW Form 94-7

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

APPLICATION FOR CONSENT TO A GRANT OF TEMPORARY CONSTRUCTION EASEMENT

(Tribal Trust Lands – NGWSP Reach 21)

LANDOWNER NAME: Navajo Tribe **Allotment No.**: Tribal Lands as Described Hereinafter

The NGWSP is a priority project of the United States Government and the Navajo Nation; therefore, the Department of Interior, the Department of Reclamation, the Navajo Nation, and the Bureau of Indian Affairs are working as partners to streamline the processes, as necessary, to meet all project deadlines. Reclamation therefore respectfully requests that this application for NGWSP Rights-of-Way be prioritized accordingly, and that the application is accorded top priority and is processed when received.

Please note that the acquisition of tribal consent is Time Sensitive. Reclamation respectfully requests that the consent to these easements be granted on or before ***May 15, 2016*** *to allow for additional processing by the BIA.*

This application requests Tribal Consent to three Temporary Construction Easements (TCE) over, across, and through the following Tribal Trust Lands located within NGWSP Reach 21.

1) **Parcel No. RCH 21-Tribal Trust-01(T): Tank Yard - Regulating Tank No. 3 – Drawing No. 1695-529-60009:** A Parcel of land lying in Navajo Nation Tribal Trust Land and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

2) **Parcel No. RCH 21-Tribal Trust-02(T): Pipeline and Access Road - Cutter Lateral Water Treatment Plant and Pumping Plant No. 3 to Tank Yard - Regulating Tank No. 3 – Drawing No. 1695-529-60009:** A Parcel land of land crossing Navajo Nation Tribal Trust Land and lying in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

3) **Parcel No. RCH 21 - Tribal Trust-03(T): Pipeline - Tank Yard Regulating Tank No. 3 to Intersect with Eastern Navajo Water Pipeline Phase 3 – Drawing No. 1695-529-60009:** A Parcel of land crossing Navajo Nation Tribal Trust Land and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

COMES NOW THE APPLICANT: The Bureau of Reclamation, Four Corners Construction Office, having a principle place of business at 1235 La Plata Highway, Farmington, New Mexico 87401, who on this 18th day of December, 2015, hereby petitions the Navajo Nation, and respectfully files under the terms and provisions of the Act of February 5, 1948 (62 Stat. 17; 25 USC 323-328), and Departmental Regulations 25 CFR, Ch.1, Subchapter H, Part 169 § 169.5, a request for Tribal Consent for grants of Temporary Construction Easements to be effective for a term of forty-eight months (4 years) from the date granted, for the following purposes and reasons:

The Purpose of the Proposed Action: The Omnibus Public Land Management Act of 2009, Title X, Part III (Public Law 111-11) (Act) authorizes the Bureau of Reclamation to construct the Navajo-Gallup Water Supply Project (NGWSP) that includes water treatment plants, pipeline, several pumping stations and ancillary facilities. Once completed, the NGWSP will deliver a reliable source of potable water, sourced from the San Juan River, to Navajo communities in northwestern New Mexico, the City of Gallup, NM, and the southwest portion of the Jicarilla Apache Reservation for municipal and industrial use. The NGWSP will connect to existing and future water distribution systems operated on the reservation by the Navajo Tribal Utility Authority (NTUA) and in Gallup, by the City of Gallup. The high quality treated water provided by the NGWSP will bring immediate benefits, including improved health and wellbeing to the individuals on the reservation and to those living in the greater Gallup area.

Authorization: Reclamation is authorized by the Act, under Part III, Section 10602, Subsection (c)(1) and (2) which states : "As a condition of construction of the facilities authorized under this part, the Project Participants shall provide all land or interest in land, as appropriate, that the Secretary identifies as necessary for acquisition under this subsection at no cost to the Secretary". Therefore, Reclamation hereby respectfully requests that this application be processed so as to acquire ROW that is deemed necessary and appropriate in order to accommodate the construction, operation, maintenance, and replacement of the main and ancillary facilities of the NGWSP Reach 21.

The NGWSP will be constructed in segments identified as Reaches. Reach 21 of the NGWSP will begin at Station 23093+38.55 and will terminate at Station 23307+66.42, where Reach 21 will be joined to the Eastern Navajo Water Pipeline Phase 3 Transmission Line. Plan and Profile Drawings Page 5 through Page 9 (CD) illustrate the Reach 21 pipeline alignment and the locations of ancillary appurtenances.

Once Reach 21 construction is completed, Reclamation will reclaim the ROW and the TCE using a seed mixture appropriate to the area in compliance with the requirements of Departmental Regulations 25 CFR, Ch.1, Subchapter H, Part 169 § 169.5 and the NGWSP Revegetation Plan. Construction of Reach 21 is anticipated to begin in September of 2016 and be completed in March of 2019.

Reclamation hereby respectfully requests Navajo Nation Tribal Consent to grants of Temporary Construction Easement for the following lands and facilities that make up a part of NGWSP Reach 21:

Easement Type, Size and Purpose:

1) Parcel No. RCH 21-Tribal Trust-01(T): Tank Yard - Regulating Tank No. 3– Drawing No. 1695-529-60009: The TCE will overlay and supplement the working space of the ROW acreage, which is 1.58 acres, by an additional 0.37 acres. Therefore, the TCE hereby requested will contain a total of 1.95 acres, more or less.

   Reclamation hereby requests Navajo Tribal Consent to a grant of Temporary Construction Easement Parcel No. Rch 21-Tribal Trust-01(T) containing 1.95 acres, across, over, and through the Tribal Trust Lands described as being the Northwest Quarter (NW1/4) of Section 18 of T25N, R09W, N.M.P.M, San Juan County, NM, to be effective for a term of forty-eight months (4 years) from the date granted, in accordance with 25 CFR, Ch.1, Subchapter H, Part 169 § 169.18.

   Said TCE being approximately 255-feet in length and 350-feet in width, containing approximately 1.95 acres, more or less, as illustrated on Drawing No. 1695-529-60009 and Plan and Profile Drawing Page No. 9, to supplement the ROW during the construction of a 36-inch I.D. or smaller water pipeline,

with appurtenances thereto. No structure will be constructed inside the TCE, and all construction related activities will be confined to within the TCE boundary.

The TCE will total 1.95 acres and overlay and extend 25-feet beyond the Permanent Easement for ROW on three sides. That part of the TCE that that extends beyond the Permanent ROW will contain 0.37 acres, more or less, as shown on the parcel description on said drawing.

This acreage, being duly calculated, does not appear on Drawing No. 1695-529-60009 due to drawing directives and standards to which Reclamation must adhere. Therefore, Reclamation respectfully requests your consideration and acceptance of the calculated TCE acreage.

Across the following described Navajo Tribal Trust Lands: A Parcel of land lying in Navajo Nation Tribal Trust Land, and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Parcel No. Rch 21 Tribal Trust-01(T) is illustrated on ROW Drawing No. 1695-529-60009 and Plan and Profile Drawing Page No. 3, illustration No. 3 and 4, and Page No. 9, attached hereto and by reference made a part hereof. The Regulating Tank No. 3 Tank Yard being more particularly described in Metes and Bounds as follows:

Legal Description of TCE – Parcel No. RCH 21-Tribal Trust-01(T): Tank Yard - Regulating Tank No. 3 Drawing No. 1695-529-60009: The Point of Beginning being a point on the West line of said Section 18, from which the Northwest corner of said Section 18 bears North 00°10'18" East a distance of 367.38 feet; Thence, from the Point of Beginning South 89°49'42" East a distance of 230.00 feet; Thence South 00°10'18" West a distance of 300.00 feet; Thence North 89°49'42" West a distance of 230.00 feet to the West line of said Section 18; Thence, along said West line North 00°10'18" East a distance of 300.00 feet to the Point of Beginning. Parcel No. Rch 21-Tribal Trust-01(T) contains 1.95 acres, more or less.

2) Parcel No. RCH 21-Tribal Trust-02(T): Pipeline and Access Road: Drawing No. 1695-529-60009: The TCE will overlay and supplement the working space of the ROW acreage, which is 8.14 acres, by an additional 2.30 acres. Therefore, the TCE hereby requested will contain a total of 10.44 acres, more or less.

Reclamation hereby requests Navajo Tribal Consent to a grant of Temporary Construction Easement Parcel No. Rch 21-Tribal Trust-02(T) containing 10.44 acres, across, over, and through the Tribal Trust Lands described as being the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico, to be effective for a term of forty-eight months (4 years) from the date granted, in accordance with 25 CFR, Ch.1, Subchapter H, Part 169 § 169.18.

Said TCE being approximately 5,263-feet in length and 100-feet in width, centered on the Reach 21 pipeline centerline, and lying approximately 50-feet each side, across, over, and through said parcel from Station 23237+49.70 to Station 23290+13.40 as illustrated on Drawing No. 1695-529-60009 and Plan and Profile Drawing Page 8 and 9, to supplement the ROW during the construction of a 36-inch I.D. or smaller water pipeline, with appurtenances thereto. No structure will be constructed inside the TCE, and all construction related activities will be confined to within the TCE boundary.

The TCE will total 10.44 acres and will overlay and extend by varying distances along each side of the ROW. That part of the TCE that that extends beyond the Permanent ROW will contain 2.30 acres, more or less, as shown on the parcel description on said drawing.

This acreage, being duly calculated, does not appear on Drawing No. 1695-529-60009 due to drawing directives and standards to which Reclamation must adhere. Therefore, Reclamation respectfully requests your consideration and acceptance of the calculated TCE acreage.

Across the following described Navajo Tribal Trust Lands: A Strip of land crossing Navajo Nation Tribal Trust Land in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Parcel No. Rch 21 - Tribal Trust-02(T) is illustrated on Drawing No. 1695-529-60009 and is shown on Plan and Profile Drawing Page No. 3 illustration No. 4, and Page 9, attached hereto and by reference made a part hereof. Parcel No. Rch 21-Tribal Trust-02(T) Pipeline and Access Road is more particularly described as follows:

Legal Description of TCE – Parcel No. RCH 21-Tribal Trust-02(T): Pipeline and Access Road: **Drawing No. 1695-529-60009:** The Point of Beginning being station 23237+49.70, a point on the East line of said Section 18 from which the Northeast corner of said Section 18 bears North 00°14'00" West a distance of 673.73 feet; Thence, from the Point of Beginning South 89°37'48" West a distance of 1780.54 feet to station 23255+30.24; Thence South 86°14'11" West a distance of 585.18 feet to station 23261+15.42; Thence South 52°29'11" West a distance of 344.55 feet to station 23264+59.97; Thence South 86°14'11" West a distance of 1592.40 feet to station 23280+52.37; Thence North 71°15'49" West a distance of 450.66 feet to station 23285+03.03; Thence North 48°45'49" West a distance of 510.37 feet to station 23290+13.40, a point on the East boundary line of Parcel Rch 21-Tribal Trust-01(P) and the point of terminus from which the Northwest corner of said section 18 bears North 21°57'41" West a distance of 610.47 feet. The sidelines of said strip shall be extended or shortened to the East line of said Section 18 and the East boundary line of Parcel Rch 21-Tribal Trust-01(P). Parcel No. Rch 21-Tribal Trust-02(T) contains 10.44 acres, more or less.

3) **Parcel No. RCH 21 - Tribal Trust-03(T): Pipeline - Tank Yard for Regulating Tank No. 3 to Intersect with Eastern Navajo Water Pipeline Phase 3: Drawing No. 1695-529-60009:** The TCE will overlay and supplement the working space of the ROW acreage, which is 2.17 acres, by an additional 1.42 acres. Therefore, the TCE hereby requested will contain a total of 3.59 acres, more or less.

Reclamation hereby requests Navajo Tribal Consent to a grant of Temporary Construction Easement Parcel No. Rch 21-Tribal Trust-03(T) containing 3.59 acres, across, over and through the Tribal Trust Lands described as being the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico, to be effective for a term of forty-eight months (4 years) from the date granted, in accordance with 25 CFR, Ch.1, Subchapter H, Part 169 § 169.18.

Said TCE being approximately 1,576-feet in length and 100-feet in width, centered on the Reach 21 pipeline centerline, and lying approximately 50-feet each side, across, over, and through said parcel from station 23292+60.00 to station 23308+36.42 as illustrated on Drawing No. 1695-529-60009, and Plan and Profile Drawing Page No. 3, illustration No. 4, and Page No. 9, to supplement the ROW during the construction of a 36-inch I.D. or smaller water pipeline, with appurtenances thereto. No

structure will be constructed inside the TCE, and all construction related activities will be confined to within the TCE boundary.

The TCE will total 3.59 acres and overlay and extend beyond the permanent ROW by 20-feet on each side. That part of the TCE that that extends beyond the permanent ROW will contain 1.42 acres, more or less, as shown on the parcel description on said drawing.

This acreage, being duly calculated, does not appear on Drawing No. 1695-529-60009 due to drawing directives and standards to which Reclamation must adhere. Therefore, Reclamation respectfully requests your consideration and acceptance of the calculated TCE acreage.

Across the following described Navajo Tribal Trust Lands: A Strip of land crossing Navajo Nation Tribal Trust Land in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico. Parcel No. Rch 21 - Tribal Trust-03(T) is illustrated on Drawing No. 1695-529-60009 and shown on Plan and Profile Drawing Page No. 3, illustration No. 4, and Page 9, attached hereto and by reference made a part hereof. Parcel No. Rch 21-Tribal Trust-03(T)_- Pipeline and Access Road TCE is more particularly described as follows:

Legal Description of TCE – Parcel No. RCH 21-Tribal Trust-03(T) - Pipeline: Drawing No. 1695-529-60009: The Point of Beginning being station 23292+49.60, a point on the South boundary line of Parcel No. Rch 21 Tribal Trust-01(P) from which the Northwest corner of said Section 18 bears North 13°38'33" West a distance of 687.24 feet; Thence, from the Point of Beginning South 00°11'20" West a distance of 729.74 feet to station 23299+89.74; Thence South 45°11'20" West a distance of 140.65 feet to station 23301+30.39; Thence South 00°11'20" West a distance of 636.03 feet to station 23307+66.42, the end of Reach 21; Thence continuing South 00°11'20" West a distance of 70.00 feet to station 23308+36.42, the point of terminus from which the Northwest corner of said section 18 bears North 01°29'50" West a distance of 2203.49 feet. The sidelines of said strip shall be extended or shortened to the South boundary line of Parcel Rch 21-Tribal Trust-01(P). Parcel No. Rch 21-Tribal Trust-03(T) contains 3.59 acres more or less.

Landowner Consent: On October 24, 2012, the Bureau of Indian Affairs, Eastern Navajo Agency granted Reclamation Permission to Survey over, across and through Reach 22B, which at that time included the aforementioned Reach 21 Tribal Trust Land, for the purpose of conducting surveys and studies to determine a final pipeline alignment. The final pipeline alignment across Reach 21 is illustrated on the aforementioned Plan and Profile and ROW Drawings. ROW Drawing 1695-529-60009 details the proposed pipeline alignment across the subject Navajo Nation Tribal Trust Land, and includes the legal description of the ROW. Reclamation requests that in granting consent to an Easement for ROW, that the Navajo Nation waives compensatory consideration of the fair market value of the easement, and to forego the requisite appraisal of the ROW over, across and through the aforementioned Tribal Trust Lands.

Environmental Clearance: The Record of Decision (ROD) and Final Environmental Impact Statement (FEIS) (Bureau of Reclamation 2009) can be viewed on the world-wide web at: http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.

Subsequently, Reclamation conducted tiered Environmental Assessment (EA) over Reaches 21 and 22 dated 01-06-15 (CD) to determine if the action would have any new potentially significant impacts not

already discussed and considered in previous NEPA documentation. Resulting from this supplemental NEPA are three Finding of No New Significant Impacts (FONNSI's) prepared by Reclamation, BIA, and Bureau of Land Management, respectively.

Biological Resource Compliance: Please see attached form BRCF-NNDFW Review No. 13EM-02, that documents the approval by the NNDFW that the NGWSP Reach 21 proposed to be constructed within the area of the Huerfano Chapter is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. The NNDFW concurs with the mitigation recommendations outlined in the BE, Section 6.5 and is approved by Ms. Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife by the duly inscribed signature thereto on 01-20-15.

Cultural Resources Compliance: Please see attached letter dated November 21, 2014 that includes a summary of the Class III Inventory Report and eligibility determination prepared by Paleo West for the NGWSP Reach 22 pipeline that includes Reach 22B. The survey was conducted under the authority of General Archaeological Investigation Permit No. NM-13-210-S, BLM Cultural Resource Use Permit 247-2920-12-D, and Navajo Nation Cultural Resources Permit No. B13543. Seventy-four cultural resource sites are located within the proposed Reach 22 ROW. The report locates and documents the archaeological resources that may be affected by the construction of the Reach 22B segment of the NGWSP.

Reclamation submitted said report to the Navajo Nation Historic Preservation Department and concurrence was received from the Tribal Historic Preservation Officer on April 17, 2015. The report was also consulted upon with all NGWSP signatory and consulting parties in compliance with the Programmatic Agreement for the NGWSP. According to the internal BIA memo from the Supervisory Environmental Protection Specialist, Branch of Environmental Quality, Act Compliance and Review, written to the Supervisory Civil Engineer, Engineering & Technical Support Division, dated October 29, 2015, attached hereto and by reference is made a part hereof, the subject report is considered acceptable for compliance with the National Historic Preservation Act (NHPA).

Waiver of Title 25, *Code of Federal Regulations*, Part 169.4: The Bureau of Reclamation, an agency of the Federal Government, is prohibited by the Anti-deficiency Act (31 C.F.R. § 1341) from obligating government funds by agreeing to open-ended indemnification, or to depositing government funds for payment of claims that have not been made. Therefore, Reclamation requests a waiver of said regulation, as is provided for in Title 25, *Code of Federal Regulations*, Part 169.4. Reclamation hereby assures that it will pay damages promptly, when they are sustained, under the provisions of the Federal Tort Claims Act (June 25, 1948, Ch. 646, Title IV, 62 Stat. 982, "28 U.S.C. Pt. VI Ch.171" and 28 U.S.C. Part 1346(b)).

SAID APPLICANT UNDERSTANDS AND EXPRESSLY AGREES TO THE FOLLOWING STIPULATIONS:

1. To construct and maintain the right-of-way in a workmanlike manner.

2. ~~To pay all damages and compensation, in addition to the deposit made pursuant to 169.4, determined by the Secretary to be due the landowners and authorized users and occupants of the land due to the survey, granting, construction and maintenance of the right-of-way.~~

3. ~~To indemnify the landowners and authorized users and occupants against any liability for loss of life, personal injury and property damage arising from the construction, maintenance, occupancy or use of the lands by the applicant, his employees, contractors and their employees, or subcontractors and their employees.~~

4. To restore the lands as nearly as may be possible to their original condition upon the completion of construction, to the extent compatible with the purpose for which the right-of-way was granted.

5. To clear and keep clear the lands within the right-of-way to the extent compatible with the purpose of the right-of-way, and dispose of all vegetative and other material cut, uprooted or otherwise accumulated during construction and maintenance of the project.

6. To take soil and resource conservation protection measures, including weed control, on the land covered by the right-of-way.

7. To do everything reasonable within its power to prevent and suppress fires on or near the lands to be occupied under the right-of-way.

8. To build and repair such roads, fences and trails as may be destroyed or injured by construction work and to build and maintain necessary and suitable crossings for all roads and trails that intersect the works constructed, maintained, or operated under the right-of-way.

9. That upon revocation or termination of the right-of-way, the applicant shall, so far as in reasonably possible, restore the land to its original condition. The determination of "reasonably possible" is subject to Secretary's approval.

10. To at all times keep the Secretary informed of its address, and in case of corporations, of the address of its principal place of business and the names and addresses of its principal officers.

11. The applicant will not interfere with the use of the lands by or under the authority of the landowners, for any purpose not inconsistent with the primary purpose for which the right-of-way is granted.

12. During the term of this Grant of Easement, if any previously unidentified cultural resources are discovered within the easement area, work should be halted immediately and the BIA and/or Tribal Contractor should be contacted immediately.

THE APPLICANT FURTHER STIPULATES AND EXPRESSLY AGREES AS FOLLOWS:

To conform and to abide by all applicable requirements with respect to the right-of-way herein applied for. The applicant agrees to conform to and abide by the rules, regulations, and requirements contained in the *Code of Federal Regulations*, Title 25 Indians, Part 169, as amended, and by reference includes such rules, regulations and requirements as a part of this application to the same effect as if the same were herein set out in full.

IN WITNESS WHEREOF, Rick Lesse has caused this instrument to be executed this 10th day of December 20 15.

Witness

ACTING FOR Barry Longwell
Construction Engineer
U.S. Bureau of Reclamation
Four Corners Construction Office
1235 La Plata Hwy.
Farmington, NM, 87401

Required Supporting Documents:

1. ( ) ~~Form 5-104b – Signed Statement of Owners of Allotted Indian Lands~~
2. ( ) ~~Evidence of Authority of Officers to execute Papers (ROW Form 94-4).~~
3. ( ) ~~Evidence of good faith and financial responsibility.~~
4. ( ) ~~Double estimated damages (deposit - 25 CFR 169.4).~~
5. ( ) ~~State certified corporate charter or articles of incorporation.~~
6. ( ) ~~Certified copy of resolution or by-laws of the corporation authorizing the filing of the application.~~
7. ( ) ~~State certification that the applicant is authorized to conduct business in the State of xxx.~~
8. ( ) ~~Certified copy of the articles of partnership or association.~~
9. (X) **Other attachments:**
   - (X) Reclamation Application for Temporary Construction Easement (CD)
   - (X) Right-of-Way Drawing No. 1695-529-60009
   - (X) Plan and Profile Drawings Page 2 through Page 9 (CD)
   - (X) Final Environmental Impact Statement and Record of Decision can be viewed at: http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.
   - (X) FEIS – NGWSP – Volume 1, Volume 2, and Volume 3 (CD)
   - (X) FEIS – NGWSP – Record of Decision – Dated 2009 (CD)
   - (X) Final Environmental Assessment for Reaches 22 and 21, dated January 2015 (CD)
   - (X) FONNSI – BLM – Signed 07-17-15 (CD)
   - (X) ROD - BLM – NEPA No. DOI-BLM-NM-FO10-2014-0181-EA Signed 07-20-2015 (CD)
   - (X) FONNSI – Reclamation – Signed 10-07-2015 (CD)
   - (X) FONNSI - BIA – Signed 10-08-15 (CD)
   - (X) Class III Cultural Resources Inventory – Reach 22 - Letter of Concurrence Dated 11-21-2014 (CD)
   - (X) Memorandum – BIA - Acceptable NEPA and NHPA Compliance Documents Dated 10-29-2015 (CD)
   - (X) Biological Resources Compliance Form – NNDFW Review No. 13EM-02 Signed 01-20-2015 (CD)
   - (X) Application – Permanent Easement for ROW (CD)
   - (X) Legal Description of Permanent Easement for ROW in WORD Format (CD)
   - (X) Navajo Nation Executive Order No. 03-2012 in Support of the NGWSP (CD)
   - (X) Chapter Resolution in Support the NGWSP – Huerfano (CD)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
APPLICATION FOR CONSENT TO A GRANT OF TEMPORARY CONSTRUCTION EASEMENT

(Tribal Trust Land)

APPLICANT: The U.S. Bureau of Reclamation, having a residence or principal place of business at 1235 La Plata Highway, Farmington, New Mexico 87401 hereby files an application with the Navajo Nation, pursuant to the terms and provisions of the Act of February 5, 1948 (62 Stat. 17; 25 USC §§ 323 – 328), and to the regulations of the Department of the Interior contained in Title 25, Code of Federal Regulations, Part 169, for consent to a grant of Temporary Construction Easement to be effective for a term of forty-eight months (4 years) from the date granted, for the following purposes and reasons:

PURPOSE: The Temporary Construction Easement will supplement a Permanent Easement for Right-of-Way and provide additional working space for the construction of a 36 inch in diameter, or less, water transmission pipeline and a fenced and graveled regulating tank yard, over, across and through Navajo Nation Tribal Trust Lands that will be crossed by a portion of Reach 21 of the Cutter Lateral; a part of the Navajo-Gallup Water Supply Project (NGWSP) that is located in the area of Huerfano Chapter in San Juan County, New Mexico.

Across the following described Tribal Trust Lands:

Parcel No. Reach 21-Tribal Trust-01(T): A Parcel of land crossing Navajo Nation Tribal Trust Lands and lying in the Northwest Quarter (NW1/4) of Section 36 of Township 28 North of Range 09 West, New Mexico Principal Meridian, San Juan County New Mexico.

Parcel No. Reach 21-Tribal Trust-02(T): A Parcel of land crossing Navajo Nation Tribal Trust Lands and lying in the North Half (N1/2) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

Parcel No. Reach 21-Tribal Trust-03(T): A Parcel of land crossing Navajo Nation Tribal Trust Lands and lying in the Northwest Quarter (NW1/4) of Section 18 of Township 25 North of Range 09 West, New Mexico Principle Meridian, San Juan County, New Mexico.

Said Temporary Construction Easement would contain: NGWSP Reach 21 Water Transmission Pipeline that would be approximately 6,839-feet (1.3 miles) in length, more or less; a Temporary Construction Easement containing a total of 14.03 acres; and in addition: a Temporary Construction Easement for a fenced and graveled yard that will contain Regulating Water Tank No. 3; also a part of the NGWSP Cutter Lateral - Reach 21 that would be 350-feet long and 255-feet wide; a Temporary Construction Easement containing a total of 1.95 acres, more or less. The total Temporary Construction Easement over, across and through Navajo Nation Tribal Trust Lands located in the area of Huerfano Chapter for the construction of the NGWSP Cutter Lateral Reach 21 is 15.98 acres, more or less.

The said Temporary Construction Easements are more particularly described and illustrated on the NGWSP Cutter Lateral - Reach 21 Drawing No. 1695-529-60009, and within the Reclamation Application that are attached hereto, and by reference, made a part hereof.

A comprehensive Application for Temporary Construction Easements, and the required attachments to support this application are contained on the accompanying CD that is included with this application and by reference is made a part hereof.

The said applicant understands and expressly agrees to the following stipulations:

(a). To construct and maintain the right-of-way in a workmanlike manner.

(b). ~~To pay all damages and compensation in addition to the deposit made pursuant to 169.4, determined by the Secretary to be due the landowners and authorized users and occupants of the land due to the survey, granting, construction, and maintenance of the right-of-way.~~

(c). ~~To indemnify the landowners and authorized users and occupants against any liability for the life, personal injury, and property damage arising from the construction, maintenance, occupancy or use of the lands by the applicant, his employees, contractors and their employees, or subcontractors and their employees.~~

(d). To restore the lands as nearly as possible to their original condition upon the completion of construction, to the extent compatible with the purpose for which the right-of-way was granted.

(e). To clear and keep clear the lands within the right-of-way to the extent compatible with the purpose of the right-of-way; and dispose of all vegetative and other material cut, uprooted or otherwise accumulated during the construction and maintenance of the project.

(f). To take soil and resources conservation projection measures, including weed control, on the land covered by the right-of-way.

(g). To do everything reasonable within its power to prevent and suppress fires on or near the lands to be occupied under the right-of-way.

(h). To build and repair such roads, fences and trails as may be destroyed or injured by the construction work and to build and maintain necessary and suitable crossings for all roads and trails that intersect the works constructed, maintained or operated under the right-of-way.

(i). That upon revocation or termination of the right-of-way, the applicant shall, so far as in reasonably possible, restore the land to its original condition.

(j). To at all times keep the Secretary informed of its address, and in case of corporations, of the address of its principle place of business and of the names and addresses of its principle officers.

(k). The applicant will not interfere with the use of the lands by or under the authority of the landowners for any purpose not inconsistent with the primary purpose for which the right-of-way is granted.

IN WITNESS WHEREOF, Rick Reese has caused this instrument to be executed this 15th day of December, 2015.

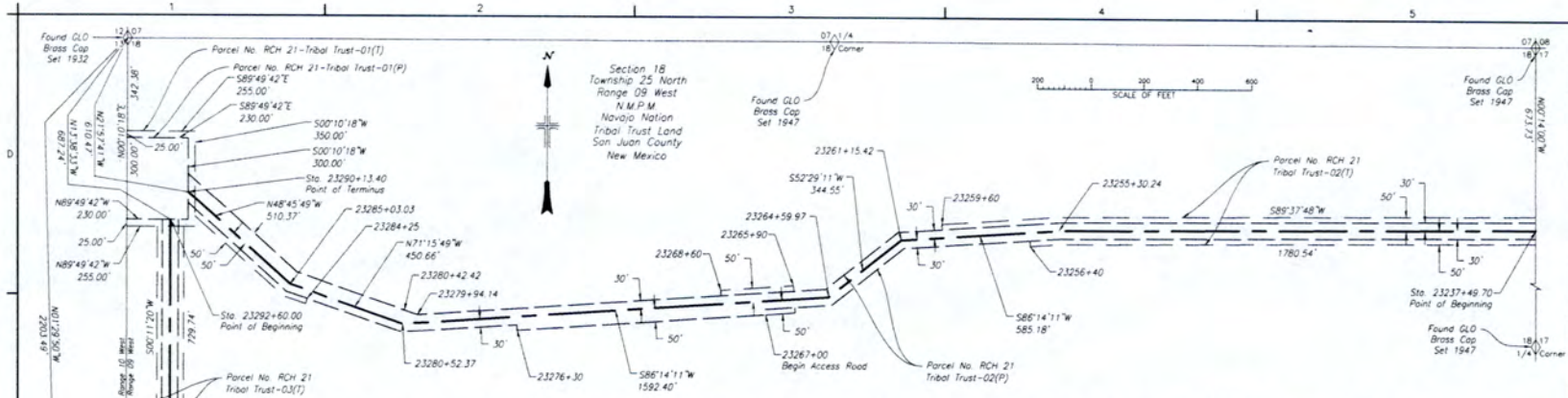
Witness

ACTING FOR Rick Reese

Barry Longwell
Construction Engineer
U.S. Bureau of Reclamation
Four Corners Construction Office
1235 La Plata Hwy.
Farmington, NM, 87401

Required Supporting Documents:

1. ( ) Form 5-104b
2. ( ) ~~Evidence of Authority of Officers to execute Papers (ROW Form 94-4).~~
3. ( ) ~~Evidence of good faith and financial responsibility.~~
4. ( ) ~~Double estimated damages (deposit - 25 CFR 169.4).~~
5. ( ) ~~State certified corporate charter or articles of incorporation.~~
6. ( ) ~~Certified copy of resolution or by-laws of the corporation authorizing the filing of the application.~~
7. ( ) ~~State certification that the applicant is authorized to conduct business in the State of xxx.~~
8. ( ) ~~Certified copy of the articles of partnership or association.~~
9. (X) **Other attachments:**
   - (X) Reclamation Application for consent to a grant of Temporary Construction Easement (CD)
   - (X) Right-of-Way Drawing No. 1695-529-60009
   - (X) Plan and Profile Drawings Page 2 through Page 9 (CD)
   - (X) Final Environmental Impact Statement and Record of Decision can be viewed at: http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.
   - (X) FEIS – NGWSP – Volume 1, Volume 2, and Volume 3 (CD)
   - (X) FEIS – NGWSP – Record of Decision – Dated 2009 (CD)
   - (X) Final Environmental Assessment for Reaches 22 and 21, dated January 2015 (CD)
   - (X) FONNSI – BLM – Signed 07-17-15 (CD)
   - (X) ROD - BLM – NEPA No. DOI-BLM-NM-FO10-2014-0181-EA Signed 07-20-2015 (CD)
   - (X) FONNSI – Reclamation – Signed 10-07-2015 (CD)
   - (X) FONNSI - BIA – Signed 10-08-15 (CD)
   - (X) Class III Cultural Resources Inventory – Reach 22 - Letter of Concurrence Dated 11-21-2014 (CD)
   - (X) Memorandum – BIA - Acceptable NEPA and NHPA Compliance Documents Dated 10-29-2015 (CD)
   - (X) Biological Resources Compliance Form – NNDFW Review No. 13EM-02 Signed 01-20-2015 (CD)
   - (X) Application – Permanent Easement for ROW (CD)
   - (X) Legal Description of Permanent Easement for ROW in WORD Format (CD)
   - (X) Navajo Nation Executive Order No. 03-2012 in Support of the NGWSP (CD)
   - (X) Chapter Resolution in Support the NGWSP – Huerfano (CD)



Navajo-Gallup Water Supply Project – Reach 21 – Parcel No. RCH 21-Tribal Trust-01(P) – Tank Yard Permanent Right-of-Way

A parcel of land lying in Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

Point of Beginning being a point on the West line of said Section 18, from which the Northwest corner of said Section 18 bears North 00°10'18" East a distance of 367.38 feet; thence, from the point of beginning, South 89°49'42" East a distance of 230.00 feet; thence South 00°10'18" West a distance of 300.00 feet; thence North 89°49'42" West a distance of 230.00 feet to the West line of said Section 18; thence, along said West line North 00°10'18" East a distance of 300.00 feet to the Point of Beginning.

Parcel No. RCH 21-Tribal Trust-01(P) contains 1.58 acres, more or less.

Navajo-Gallup Water Supply Project – Reach 21 – Parcel No. RCH 21-Tribal Trust-01(T) – Tank Yard Construction (Temporary) Right-of-Way

A parcel of land lying in Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

Point of Beginning being a point on the West line of said Section 18, from which the Northwest corner of said Section 18 bears North 00°10'18" East a distance of 342.38 feet; thence, from the point of beginning, South 89°49'42" East a distance of 255.00 feet; thence South 00°10'18" West a distance of 350.00 feet; thence North 89°49'42" West a distance of 255.00 feet to the West line of said Section 18; thence, along said West line North 00°10'18" East a distance of 350.00 feet to the Point of Beginning.

Less any portion of the above described parcel that lies in Parcels Nos. RCH 21-Tribal Trust-01(P) and RCH 21-Tribal Trust-02(P), Parcel No. RCH 21-Tribal Trust-01(T) contains 0.37 acres, more or less.

Navajo-Gallup Water Supply Project – Reach 21 – Parcel No. RCH 21-Tribal Trust-02(P) – Pipeline and Access Permanent Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the North Half of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 60 feet, lying 30 feet each side from station 23237+49.70 to station 23267+00, thence being 80 feet wide, lying 50 feet left and 30 feet right from station 23267+00 to station 23276+30, thence being 60 feet, lying 30 feet each side from station 23276+30 to station 23279+94.14, thence varying in width from 60 feet to 80 feet, lying 30 feet left and varying 30 feet to 50 feet right from station 23279+94.14 to station 23280+42.42, thence being 80 feet wide, lying 30 feet left and 50 feet right from station 23280+42.42 to station 23290+13.40, of the following described centerline.

Point of Beginning being Station 23237+49.70, a point on the East line of said Section 18, from which the Northeast corner of said Section 18 bears North 00°14'00" West a distance of 673.73 feet, thence, from the Point of Beginning, South 89°37'48" West a distance of 1780.54 feet to station 23255+30.24; thence South 86°14'11" West a distance of 585.18 feet to station 23261+15.42; thence South 52°29'11" West a distance of 344.55 feet to station 23264+59.97; thence South 86°14'11" West a distance of 1592.40 feet to station 23280+52.37; thence North 71°15'49" West a distance of 450.66 feet to station 23285+03.03; thence North 48°45'49" West a distance of 510.37 feet to station 23290+13.40, a point on the East line of parcel RCH 21-Tribal Trust-01(P) and the Point of Terminus, from which the Northwest corner of said section 18 bears North 21°57'41" West a distance of 610.47 feet.

The sidelines of said strip shall be extended or shortened to the East line of said Section 18 and the East line of parcel RCH 21-Tribal Trust-01(P).

Parcel No. RCH 21-Tribal Trust-02(P) contains 8.14 acres more or less.

Navajo-Gallup Water Supply Project – Reach 21 – Parcel No. RCH 21-Tribal Trust-02(T) – Pipeline and Access Construction (Temporary) Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the North Half of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 100 feet wide, lying 50 feet each side from station 23237+49.70 to station 23256+40, thence being 80 feet, lying 30 feet left and 50 feet right from station 23256+40 to station 23259+60, thence being 60 feet wide, lying 30 feet each side from station 23259+60 to station 23265+90, thence being 100 feet wide, lying 50 feet each side from station 23265+90 to station 23268+60, thence being 80 feet, lying 50 feet left and 30 feet right from station 23268+60 to station 23276+30, thence being 60 feet wide, lying 30 feet each side from station 23276+30 to station 23279+94.14, thence varying in width from 60 feet to 80 feet, lying 30 feet left and varying 30 feet to 50 feet right from station 23279+94.14 to station 23280+42.42, thence being 80 feet wide, lying 30 feet left and 50 feet right from station 23280+42.42 to station 23284+25, thence being 100 feet wide, lying 50 feet each side from station 23284+25 to station 23290+13.40, of the centerline described in Parcel No. RCH 21-Tribal Trust-02(T).

The sidelines of said strip shall be extended or shortened to the East line of said Section 18 and the East line of Parcel No. RCH 21-Tribal Trust-01(T).

Less any portion of the above described parcel that lies in Parcel No. RCH 21-Tribal Trust-02(P), Parcel No. RCH 21-Tribal Trust-02(T) contains 2.30 acres more or less.

Navajo-Gallup Water Supply Project – Reach 21 – Parcel No. RCH 21-Tribal Trust-03(P) – Pipeline Permanent Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 60 feet wide, lying 30 feet each side from station 23292+60 to station 23308+36.42, of the following described centerline.

Point of Beginning being Station 23292+60, a point on the South line of Parcel No. RCH 21 Tribal Trust-01(P), from which the Northwest corner of said section 18 bears North 13°38'33" West a distance of 687.24 feet; thence from the Point of Beginning, South 00°11'20" West a distance of 729.74 feet to station 23299+89.74; thence South 45°11'20" West a distance of 140.65 feet to station 23301+30.39; thence South 00°11'20" West a distance of 636.03 feet to station 23307+66.42, the end of Reach 21; thence continuing South 00°11'20" West a distance of 70.00 feet to station 23308+36.42, the Point of Terminus, from which the Northwest corner of said Section 18 bears North 01°29'50" West a distance of 2203.49 feet.

The sidelines of said strip shall be extended or shortened to the South line of Parcel No. RCH 21 Tribal Trust-01(P).

Parcel No. RCH 21-Tribal Trust-03(P) contains 2.17 acres more or less.

Navajo-Gallup Water Supply Project – Reach 21 – Parcel No. RCH 21-Tribal Trust-03(T) – Pipeline Construction (Temporary) Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 100 feet wide, lying 50 feet each side of the centerline described in Parcel No. RCH 21-Tribal Trust-03(T).

The sidelines of said strip shall be extended or shortened to the South line of Parcel No. RCH 21 Tribal Trust-01(T).

Less any portion of the above described parcel that lies in Parcels Nos. RCH 21-Tribal Trust-01(T) and RCH 21-Tribal Trust-03(P), Parcel No. RCH 21-Tribal Trust-03(T) contains 1.42 acres more or less.

STATE OF NEW MEXICO
COUNTY OF SAN JUAN

PATRICK J. PAGE, P.E. being duly sworn, says that he is the Construction Engineer of the Four Corners Construction Office, U. S. Bureau of Reclamation; That the survey of Reach 21, Cutler Lateral, Navajo-Gallup Water Supply Project, over and across Indian Lands, in the county of San Juan, New Mexico, was made under his direction and authority of the Bureau of Reclamation, and that each survey is accurately represented on this map.

Construction Engineer — Date: 11/2/15

ACTING

BARRY LOCKWELL

STATE OF NEW MEXICO
COUNTY OF SAN JUAN

Before me, a notary public, in and for said County and State on this 2nd day of November, 2015 personally appeared Patrick J. Page known to me to be the person whose name is subscribed the name of the making thereof to the foregoing instrument as the Construction Engineer of the Four Corners Construction Office, U. S. Bureau of Reclamation, and acknowledged to me that he executed said instrument for the uses and purposes therein set forth.

My commission expires: February 24, 2018

Notary Public

OFFICIAL SEAL MICHAEL P. BRABSON Notary Public State of New Mexico My Commission Expires 2-24-2018

SEAL

NOTE:
Distances shown on this drawing are developed from the New Mexico State Plane West Zone Grid (NAD83) and are based on surveys of existing monuments. Distances and Stations shown are ground (local). The Grid Factor from distances shown to New Mexico State Plane West Zone Grid (NAD83) is 0.99962043800.

No Monuments will be set.

RECLAMATION
Managing Water in the West

ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
NAVAJO-GALLUP WATER SUPPLY PROJECT
NEW MEXICO

CUTTER LATERAL – REACH 21
PIPELINE, ACCESS, AND REGULATING TANK
RIGHT-OF-WAYS

Drawn	Kevin E. Decker
Traced	Kevin E. Decker
Designed	Chris Quintana
Checked	Gagan, Ryan J. P.E.
Approved	Page, Patrick J. P.E.
Project Manager	Bureau Construction Engineer
	FARMINGTON, NM 2015-10-29

NAVAJO NATION – TRUST LAND

PARCELS NOS. RCH 21 – TRIBAL TRUST – 02(P) & 02(T), 03(P) & 03(T)

1695-529-60009

SHEET

EXHIBIT B

Navajo-Gallup Water Supply Project - Reach 21 - Parcel No. RCH 21-Tribal Trust-01(P) - Tank Yard Permanent Right-of-Way

A parcel of land lying in Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

Point of Beginning being a point on the West line of said Section 18, from which the Northwest corner of said Section 18 bears North 00°10'18" East a distance of 367.38 feet; thence, from the point of beginning, South 89°49'42" East a distance of 230.00 feet; thence South 00°10'18" West a distance of 300.00 feet; thence North 89°49'42" West a distance of 230.00 feet to the West line of said Section 18; thence, along said West line North 00°10'18" East a distance of 300.00 feet to the Point of Beginning.

Parcel No. RCH 21-Tribal Trust-01(P) contains 1.58 acres, more or less.

Navajo-Gallup Water Supply Project - Reach 21 - Parcel No. RCH 21-Tribal Trust-01(T) - Tank Yard Construction (Temporary) Right-of-Way

A parcel of land lying in Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

The Point of Beginning being a point on the West line of said Section 18, from which the Northwest corner of said Section 18 bears North 00°10'18" East a distance of 342.38 feet; thence, from the point of beginning, South 89°49'42" East a distance of 255.00 feet; thence South 00°10'18" West a distance of 350.00 feet; thence North 89°49'42" West a distance of 255.00 feet to the West line of said Section 18; thence, along said West line North 00°10'18" East a distance of 350.00 feet to the Point of Beginning.

Less any portion of the above described parcel that lies in Parcels Nos. RCH 21-Tribal Trust-01(P) and RCH 21-Tribal Trust-02(P), Parcel No. RCH 21-Tribal Trust-01(T) contains 0.37 acres, more or less.

Navajo-Gallup Water Supply Project - Reach 21 - Parcel No. RCH 21-Tribal Trust-02(P) - Pipeline and Access Permanent Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the North Half of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 60 feet wide, lying 30 each side from station 23237+49.70 to station 23267+00; thence being 80 feet wide, lying 50 feet left and 30 feet right from station 23267+00 to station 23276+30; thence being 60 feet wide, lying 30 feet each side from station 23276+30 to station 23279+94.14, thence varying in width from 60 feet to 80 feet, lying 30 feet left and varying 30 feet to 50 feet right from station 23279+94.14 to station 23280+42.42, thence being 80 feet wide, lying 30 feet left and 50 feet right from station 23280+42.42 to station 23290+13.40, of the following described centerline.

The Point of Beginning being Station 23237+49.70, a point on the East line of said Section 18, from which the Northeast corner of said Section 18 bears North 00°14'00" West a distance of 673.73 feet; thence, from the Point of Beginning, South 89°37'48" West a distance of 1780.54 feet to station 23255+30.24; thence South 86°14'11" West a distance of 585.18 feet to station 23261+15.42; thence South 52°29'11" West a distance of 344.55 feet to station 23264+59.97; thence South 86°14'11" West a distance of 1592.40 feet to station 23280+52.37; thence North 71°15'49" West a distance of 450.66 feet to station 23285+03.03; thence North 48°45'49" West a distance of 510.37 feet to station 23290+13.40, a point on the East line of parcel RCH 21-Tribal Trust-01(P) and the Point of Terminus, from which the Northwest corner of said section 18 bears North 21°57'41" West a distance of 610.47 feet.

The sidelines of said strip shall be extended or shortened to the East line of said Section 18 and the East line of parcel RCH 21-Tribal Trust-01(P).

Parcel No. RCH 21-Tribal Trust-02(P) contains 9.20 acres more or less.

Navajo-Gallup Water Supply Project - Reach 21 - Parcel No. RCH 21-Tribal Trust-02(T) - Pipeline and Access Permanent Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the North Half of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 120 feet wide, lying 50 feet left and 70 feet right from station 23237+49.70 to station 23256+40, thence being 100 feet, lying 30 feet left and 70 feet right from station 23256+40 to station 23259+60, thence being 60 feet wide, lying 30 feet each side from station 23259+60 to station 23265+90, thence being 120 feet, lying 70 feet left and 50 feet right from station 23265+90 to station 23268+60, thence being 100 feet, lying 70 feet left and 30 feet right from station 23268+60 to station 23276+30, thence being 60 feet wide, lying 30 feet each side from station 23276+30 to station 23279+94.14, thence varying in width from 60 feet to 80 feet, lying 30 feet left and varying 30 feet to 50 feet right from station 23279+94.14 to station 23280+70, thence being 100 feet wide, lying 30 feet left and 70 feet right from station 23280+70 to station 23284+25, thence being 120 feet wide, lying 50 feet left and 70 feet right from station 23284+25 to station 23290+13.40, of the centerline described in Parcel No. RCH 21-Tribal Trust-02(P).

The sidelines of said strip shall be extended or shortened to the East line of said Section 18 and the East line of Parcel No. RCH 21-Tribal Trust-01(T).

Less any portion of the above described parcel that lies in Parcel No. RCH 21-Tribal Trust-02(P), Parcel No. RCH 21-Tribal Trust-02(T) contains 3.16 acres more or less.

Navajo-Gallup Water Supply Project - Reach 21 - Parcel No. RCH 21-Tribal Trust-03(P) – Pipeline Permanent Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 60 feet wide, lying 30 feet each side from station 23292+60 to station 23308+36.42, of the following described centerline.

Point of Beginning being Station 23292+60, a point on the South line of Parcel No. RCH 21 Tribal Trust-01(P), from which the Northwest corner of said section 18 bears North 13°38'33" West a distance of 687.24 feet; thence from the Point of Beginning, South 00°11'20" West a distance of 729.74 feet to station 23299+89.74; thence South 45°11'20" West a distance of 140.65 feet to station 23301+30.39; thence South 00°11'20" West a distance of 636.03 feet to station 23307+66.42, the end of Reach 21; thence continuing South 00°11'20" West a distance of 70.00 feet to station 23308+36.42, the Point of Terminus, from which the Northwest corner of said Section 18 bears North 01°29'50" West a distance of 2203.49 feet.

The sidelines of said strip shall be extended or shortened to the South line of Parcel No. RCH 21 Tribal Trust-01(P).

Parcel No. RCH 21-Tribal Trust-03(P) contains 2.17 acres more or less.

Navajo-Gallup Water Supply Project - Reach 21 - Parcel No. RCH 21-Tribal Trust-03(T) - Pipeline Construction (Temporary) Right-of-Way

A parcel of land crossing Navajo Nation, Tribal Trust Land and lying in the Northwest Quarter of Section 18, Township 25 North, Range 9 West, N.M.P.M., San Juan County, New Mexico. More particularly described as follows:

A strip of land being 100 feet wide, lying 50 feet each side of the centerline described in Parcel No. RCH 21-Tribal Trust-03(P).

The sidelines of said strip shall be extended or shortened to the South line of Parcel No. RCH 21 Tribal Trust-01(P).

Less any portion of the above described parcel that lies in Parcels Nos. RCH 21-Tribal Trust-01(T) and RCH 21-Tribal Trust-03(P), Parcel No. RCH 21-Tribal Trust-03(T) contains 1.42 acres more or less.

THE NAVAJO NATION
Navajo Land Department
P.O. Box # 2249 · Window Rock, Arizona 86515 · (928) 871-6401 · FAX: (928) 871-7039

EXHIBIT
tabbies
C

MEMORANDUM

TO : Elerina Yazzie, Program Manager
Project Review Section, NLD

FROM : Esther Kee
Esther Kee, R/W Agent
Project Review Section, NLD

DATE : March 31, 2016

SUBJECT: Bureau of Reclamation Right of Way (ROW) and Temporary Construction Easement (TCE) for Reach 21 Cutter Lateral - Navajo Gallup Water Supply Project

Bureau of Reclamation (BOR) of 1235 La Plata Highway, Farmington, New Mexico 87401, submitted an application for right of way (ROW) and temporary construction easement (TCE) for the construction, operation and maintenance of a 36 inch water transmission pipeline across Navajo Nation Trust Lands near Huerfano Chapter, San Juan County, New Mexico.

The right of way will be 6839 feet in length, 60 feet in width, 9.42 acres, water tank No. 3 also a part of NGWSP will be 300 feet long and 230 feet wide, 1.58 acres, the temporary construction easement will be 6839 feet in length, containing 14.03 acres, TCE for a fenced and graveled yard will be 350 feet long and 255 feet wide, 1.95 acres, in Section 18, T25N, R9W, NMPM, San Juan County, New Mexico.

The Navajo Nation is the only affected land user and provided the necessary consent from the District 19 Land Board member, Jerry Castiano.

Field clearance complete, consent, map and supporting documents are all attached for your information and reference.

cc: Project file

March 31, 2016

TO : Navajo Land Department
P. O. Box 2249
Window Rock, Arizona 886515

FROM : Jerry Castiano
Jerry Castiano, Dist 19 Land Board
Eastern Navajo Agency

REF : Land Use Consent

Please be advised that tribal land in ~~Section 35 of Township 28 North, Range 9 West, and~~ Section 18 of Township 25 North, Range 18 West, New Mexico Principal Meridian, San Juan County, New Mexico is not under grazing permit in District 19 of the Eastern Agency.

If you have any questions I can be contacted at 505-960-1400.

EXHIBIT
tabbies
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EXHIBIT "D"

NAVAJO NATION RIGHT-OF-WAY TERMS AND CONDITIONS
BUREAU OF RECLAMATION (GRANTEE)
(Navajo Gallup Water Supply Project Reach 21)

1. The term of the right-of-way shall be on the date it is granted by the Secretary of Interior (Secretary) and shall continue as long as the Grantee Bureau of Reclamation (BOR) or its successors, or assigns uses the right-of-way for the construction, operation and maintenance of the Navajo Gallup Water Supply Project (Project).

2. Consideration for the use of land is assessed at $616,244.00, which shall be the Navajo Nation's contributions to the project because the Project will provide a public benefit to the Navajo Nation.

   The Grantee must obtain the approval of the Navajo Nation if any portion of the right-of-way is used for any other purpose than authorized by the approval of this right-of-way.

3. The Grantee may develop, use and occupy the right-of-way for the purpose(s) of constructing, operating and maintaining the Project. The Grantee may not develop, use or occupy the right-of-way for any other purpose without the prior written approval of the Navajo Nation and the Secretary. The approval of the Navajo Nation may be granted, granted upon conditions or withheld in the sole discretion of the Navajo Nation. The Grantee may not develop, use or occupy the right-of-way for any unlawful purpose.

4. In all activities conducted by the Grantee within the Navajo Nation, the Grantee shall abide by all applicable laws and regulations of the Navajo Nation and of the United States, now in force and effect or as hereafter may come into force and effect, including but not limited to the following:

   a. Title 25, Code of Federal Regulations, Part 169; subject to the terms of this right-of-way.

   b. All applicable federal and Navajo Nation antiquities laws and regulations, including compliance with the Programmatic Agreement for the Consideration and Management of Effects on Historic Properties Arising from Construction of the Project pursuant to section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's regulation, last date of execution by all signatories begin November 21, 2011, and any amendments thereto.

   c. BOR shall give employment preference to qualifying Navajos and other Indians in accordance with applicable Navajo and Federal law. BOR shall utilize Navajo contractors and Navajo businesses (to purchase goods and materials) in accordance with applicable law.

   d. The Navajo Nation Water Code, 22 N.N.C. §§ 1101 et seq., to the extent that it is applicable. Grantee shall apply for and submit all applicable permits and information to the Navajo Nation Water Resources Department, or its successor.

5. The Grantee shall ensure that the air quality of the Navajo Nation is not jeopardized due to violation of applicable laws and regulations by its operations pursuant to the right-of-way.

6. The Grantee shall clear and keep clear the lands within the right-of-way to the extent compatible with the purpose of the right-of-way, and shall dispose of all vegetation and other materials cut, uprooted or otherwise accumulated during any surface disturbance activities.

7. The Grantee shall reclaim all surface lands disturbed related to the right-of-way, as outlined in a restoration and revegetation plan, which shall be approved by the Navajo Nation Environmental Protection Agency (NNEPA) prior to any surface disturbance. The Grantee shall comply with all provisions of such restoration and revegetation plan and shall notify the Director of the NNEPA immediately upon completion of the surface disturbance activities so that a site inspection can be made.

8. The Grantee shall at all times during the term of the right-of-way and at the Grantee's sole cost and expense, maintain the land subject to the right-of-way and all improvements located thereon and make all necessary and reasonable repairs.

9. The Grantee shall obtain prior written permission to cross existing rights-of-way, if any, from the appropriate parties.

10. The Grantee shall be responsible for and promptly pay all damages when they are sustained.

11. The Grantee shall indemnify and hold harmless the Navajo Nation and the Secretary and their respective authorized agents, employees, landusers and occupants, against any liability for loss of life, personal injury and property damages arising from the development, use or occupancy or use of right-of-way by the Grantee.

12. The Grantee shall not assign, convey, transfer or sublet, in any manner whatsoever, the right-of-way or any interest therein, or in or to any of the improvements on the land subject to the right-of-way, without the prior written consent of the Navajo Nation and the Secretary. Any such attempted assignment, conveyance or transfer without such prior written consent shall be void and of no effect. The consent of the Navajo Nation may be granted, granted upon conditions or withheld in the sole discretion of the Navajo Nation.

13. The Navajo Nation may terminate the right-of-way for violation of any of the terms and conditions stated herein. In addition, the right-of-way shall be terminable in whole or part by the Navajo Nation for any of the following causes:

    a. Failure to comply with any term or condition of the grant or of applicable laws or regulations;
    b. A non-use of the right-of-way for the purpose for which it is granted for a consecutive two year period; and
    c. The use of the land subject to the right-of-way for any purpose inconsistent with the purpose for which the right-of-way is granted.

14. At the termination of this right-of-way, the Grantee shall peaceably and without legal process deliver up the possession of the premises, in good condition, usual wear and tear excepted. Upon the written request of the Navajo Nation, the Grantee shall provide the Navajo Nation, at the Grantee's sole cost and expense, with an environmental audit assessment of the premises at least sixty (60) days prior to delivery of said premises.

15. Holding over by the Grantee after the termination of the right-of-way shall not constitute a renewal or extension thereof or give the Grantee any rights hereunder or in or to the land subject to the right-of-way or to any improvements located thereon.

16. The Navajo Nation and the Secretary shall have the right, at any reasonable time during the term of the right-of-way, to enter upon the premises, or any part thereof, to inspect the same and any improvements located thereon.

17. By acceptance of the grant of right-of-way, the Grantee consents to the full territorial legislative, executive and judicial jurisdiction of the Navajo Nation, including but not limited to the jurisdiction of the Navajo Nation, including but not limited to the jurisdiction to levy fines and to enter judgments for compensatory and punitive damages and injunctive relief, in connection with all activities conducted by the Grantee within the Navajo Nation or which have a proximate (legal) effect on persons or property within the Navajo Nation.

18. By acceptance of the grant of right-of-way, the Grantee covenants and agrees never to contest or challenge the legislative, executive or judicial jurisdiction of the Navajo Nation on the basis that such jurisdiction is inconsistent with the status of the Navajo Nation as an Indian nation, or that the Navajo Nation government is not a government of general jurisdiction, or that the Navajo Nation government does not possess full police power (i.e., the power to legislate and regulate for the general health and welfare) over all lands, persons and activities within its territorial boundaries, or on any other basis not generally applicable to a similar challenge to the jurisdiction of a state government. Nothing contained in this provision shall be construed to negate or impair federal responsibilities with respect to the land subject to the right-of-way or to the Navajo Nation.

19. Any action or proceeding brought by the Grantee against the Navajo Nation in connection with or arising out of the terms and conditions of the right-of-way shall be brought only in the Courts of the Navajo Nation, and no such action or proceeding shall be brought by the Grantee against the Navajo Nation in any court of any state.

20. Nothing contained herein shall be interpreted as constituting a waiver, express or implied, of the sovereign immunity of the Navajo Nation.

21. Except as prohibited by applicable federal law, the law of the Navajo Nation shall govern the construction, performance and enforcement of the terms and conditions contained herein.

22. The terms and conditions contained herein shall extend to and be binding upon the successors, heirs, assigns, executors, administrators, employees and agents, including all contractors and subcontractors, of the Grantee, and the term "Grantee," whenever used herein, shall be deemed to include all such successors, heirs, assigns, executors, administrators, employees and agents.

23. There is expressly reserved to the Navajo Nation full territorial legislative, executive and judicial jurisdiction over the right-of-way and all lands burdened by the right-of-way, including without limitation over all persons, including the public, and all activities conducted or otherwise occurring within the right-of-way; and the right-of-way and all lands burdened by the right-of-way shall be and forever remain Navajo Indian Country for purposes of Navajo Nation jurisdiction.

EXHIBIT "E"

NAVAJO NATION ROW TEMPORARY CONSTRUCTION EASEMENT TERMS AND CONDITIONS

BUREAU OF RECLAMATION (GRANTEE)
(Navajo Gallup Water Supply Project Reach 21)

1. The term of the ROW temporary construction easement shall begin on the date it is granted by the Secretary of the Interior (Secretary) and shall continue as long as the Grantee Bureau of Reclamation (BOR) or its successors, or assigns uses the ROW temporary construction easement for the construction, operation and maintenance of the Navajo Gallup Water Supply Project (Project).

2. Consideration for the use of land is assessed at $42,396.00, which shall be the Navajo Nation's contribution to the project because the Project will provide a public benefit to the Navajo Nation.

   The Grantee must obtain the approval of the Navajo Nation if any portion of the ROW temporary construction easement is used for any other purpose than authorized by the approval of this right-of-way.

3. The Grantee may develop, use and occupy the ROW temporary construction easement for the purpose(s) of constructing, operating and maintaining the Navajo Gallup Water Supply Project. The Grantee may not develop, use or occupy the ROW temporary construction easement for any other purpose without the prior written approval of the Navajo Nation and the Secretary. The approval of the Navajo Nation may be granted, granted upon conditions or withheld in the sole discretion of the Navajo Nation. The Grantee may not develop, use or occupy the ROW temporary construction easement for any unlawful purpose.

4. In all activities conducted by the Grantee within the Navajo Nation, the Grantee shall abide by all applicable laws and regulations of the Navajo Nation and of the United States, now in force and effect or as hereafter may come into force and effect, including but not limited to the following:

   a. Title 25, Code of Federal Regulations, Part 169.

   b. All applicable federal and Navajo Nation antiquities laws and regulations, including compliance with the Programmatic Agreement for the Consideration and Management of Effects on Historic Properties Arising from Construction of the Navajo Gallup Water Supply Project pursuant to section 106 of the Nation Historic Preservation Act and the Advisory Council on Historic Preservation's regulation, last date of execution by all signatories being November 21, 2011, and any amendments thereto.

   c. BOS shall give employment preference to qualifying Navajos and other Indians in accordance with applicable Navajo and federal law. BOR shall utilize Navajo contractors and Navajo business (to purchase goods and materials) in accordance with applicable law.

   d. The Navajo Nation Water Code, 22 N.N.C. §§ 1101 et seq., to the extent that it is applicable. Grantee shall apply for and submit all applicable permits and information to the Navajo Nation Water Resources Department, or its successor.

5. The Grantee shall ensure that the air quality of the Navajo Nation is not jeopardized due to violation of applicable laws and regulations by its operations pursuant to the right-of-way.

6. The Grantee shall clear and keep clear the lands within the ROW temporary construction easement to the extent compatible with the purpose of the right-of-way, and shall dispose of all vegetation and other materials cut, uprooted, or otherwise accumulated during any surface disturbance activities.

7. The Grantee shall reclaim all surface lands disturbed related to the right-of-way, as outlined in a restoration and revegetation plan, which shall be approved by the Navajo Nation Environmental Protection Agency (NNEPA) prior to any surface disturbance. The Grantee shall comply with all provisions of such restoration and revegetation plan and shall notify the Director of the NNEPA immediately upon completion of the surface disturbance activities so that a site inspection can be made.

8. The Grantee shall at all times during the term of the ROW temporary construction easement and at the Grantee's sole cost and expense, maintain the land subject to the ROW temporary construction easement and all improvements located thereon and make all necessary and reasonable repairs.

9. The Grantee shall obtain prior written permission to cross existing rights-of-way, if any, from the appropriate parties.

10. The Grantee shall be responsible for and promptly pay all damages when they are sustained provided that nothing herein shall be deemed to increase the liability of the United States beyond the provisions of the Federal Tort Claims Act of June 25, 1948, 62 Stat. 982 (28 U.S.C. § 1346 (b), 2671 et seq.) or other applicable law.

11. The Grantee shall not assign, convey, transfer or sublet, in any manner whatsoever, the ROW temporary construction easement or any interest therein, or in or to any of the improvements on the land subject to the right-of-way, without the prior written consent of the Navajo Nation and the Secretary. Any such attempted assignment, conveyance or transfer without such prior written consent shall be void and of no effect. The consent of the Navajo Nation may be granted, granted upon conditions or withheld in the sole discretion of the Navajo Nation. Congress has authorized BOR to transfer Project title under P.L. 111-11 10602(f). It is anticipated that after Project title is transferred to the Navajo Nation, the Navajo Tribal Utility Authority will operate and maintain the Project. Therefore, the Grantee may assign and transfer the ROW temporary construction easement to the Navajo Tribal Utility Authority as authorized by federal law without further approval of the Navajo Nation or the Secretary.

12. At the relinquishment of this right-of-way, the Grantee, other than the United States shall peaceably and without legal process deliver up the possession of the premises, in good condition, usual wear and tear excepted. Upon the written request of the Navajo Nation, the Grantee shall provide the Navajo Nation, at the Grantee's sole cost and expense, with an environmental site assessment of the premises at least sixty (60) days prior to delivery of the said premises. This provision 12 shall not apply to the United States as Grantee.

13. Holding over by the Grantee after the relinquishment of the ROW temporary construction easement shall not constitute a renewal or extension thereof or give the Grantee any rights

hereunder or in or to the land subject to the ROW temporary construction easement or to any improvement located thereon. This provision 13 shall not apply to the United States as Grantee.

14. The Navajo Nation and the Secretary shall have the right, at any reasonable time during the term of the right-of-way, to enter upon the premises, or any part thereof, to inspect the same and any improvements located thereon.

15. By acceptance of the grant of right-of-way, the Grantee covenants and agrees never to contest or challenge the legislative, executive or judicial jurisdiction of the Navajo Nation on the basis that such jurisdiction is inconsistent with the status of the Navajo Nation as an Indian nation, or that the Navajo Nation government is not a government of general jurisdiction, or that the Navajo Nation government does not possess full police power (i.e., the power to legislate and regulate for the general health and welfare of the Navajo people) over all lands, persons and activities within its territorial boundaries, or on any other basis not generally applicable to a similar challenge to the jurisdiction of a state government. Nothing contained in this provision shall be construed to negate or impair federal responsibilities with respect to the land subject to the ROW temporary construction easement or to the Navajo Nation.

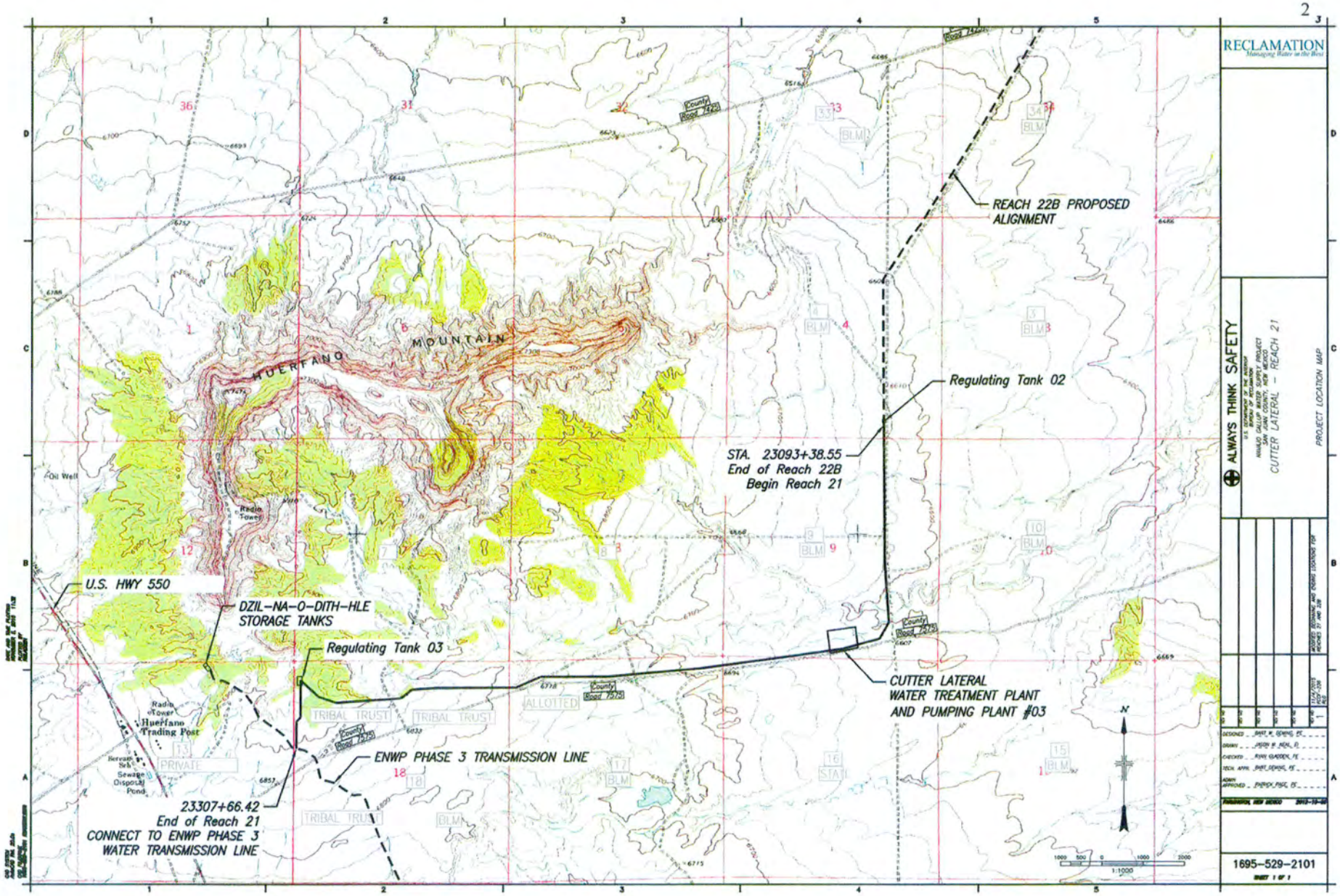
16. Any action or claim brought against the Navajo Nation arising out of the injury to person or property (tort) may be heard in the Courts of the Navajo Nation in accordance with applicable Navajo and federal law. No action or claim shall be brought against the Navajo Nation in any state court.

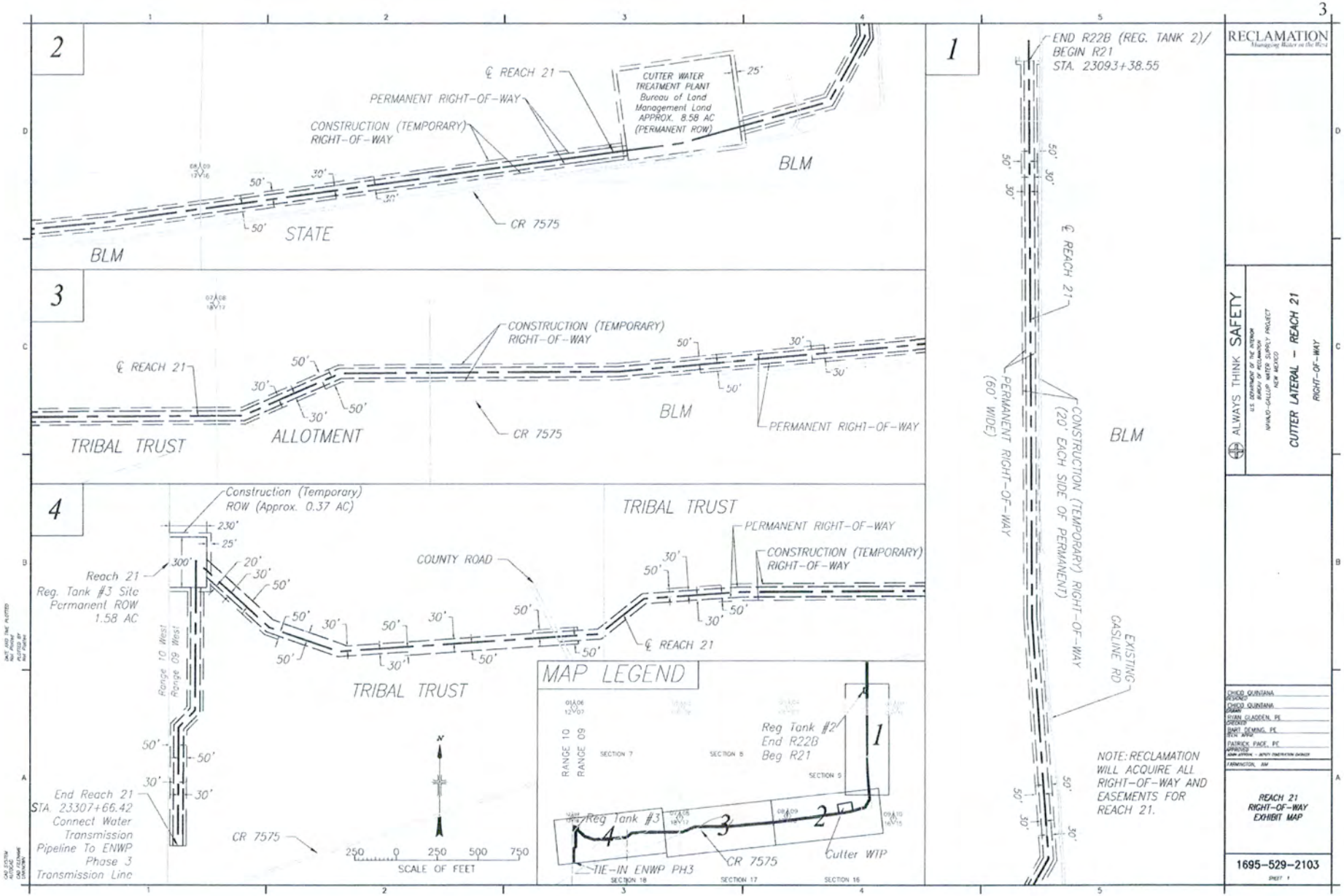
17. Nothing contained herein shall be interpreted as constituting a waiver, express or implied, of the sovereign immunity of the Navajo Nation.

18. Except as prohibited by applicable federal law, the law of the Navajo Nation shall govern the construction, performance and enforcement of the terms and conditions contained herein.

19. The terms and conditions contained herein shall extend to and be binding upon the successors, heirs, assigns, executors, administrators, employees and agents, including all contractors and subcontractors, of the Grantee, and the term "Grantee," whenever used herein, shall be deemed to include all such successors, heirs, assigns, executors, administrators, employees and agents.

20. There is expressly reserved to the Navajo Nation full territorial legislative, executive and judicial jurisdiction over the ROW temporary construction easement and all lands burdened by the right-of-way, including without limitation over all persons, including the public, and all activities conducted or otherwise occurring within the right-of-way; and the ROW temporary construction easement and all lands burdened by the ROW temporary construction easement shall remain Navajo Indian Country for purposes of Navajo Nation jurisdiction.


REACH 22B PROPOSED ALIGNMENT
Regulating Tank 02
STA. 23093+38.55
End of Reach 22B
Begin Reach 21
HUERFANO MOUNTAIN
U.S. HWY 550
DZIL-NA-O-DITH-HLE STORAGE TANKS
Regulating Tank 03
CUTTER LATERAL WATER TREATMENT PLANT AND PUMPING PLANT #03
ENWP PHASE 3 TRANSMISSION LINE
23307+66.42
End of Reach 21
CONNECT TO ENWP PHASE 3 WATER TRANSMISSION LINE
Huerfano Trading Post
Oil Well
Radio Tower
Sewage Disposal Pond
TRIBAL TRUST
ALLOTTED
PRIVATE
BLM
County Road 7420
County Road 7575
RECLAMATION
Managing Water in the West
ALWAYS THINK SAFETY
NAVAJO GALLUP WATER SUPPLY PROJECT
SAN JUAN COUNTY, NEW MEXICO
CUTTER LATERAL - REACH 21
PROJECT LOCATION MAP
1695-529-2101
SHEET 1 OF 1



RECLAMATION
Managing Water in the West

ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
NAVAJO-GALLUP WATER SUPPLY PROJECT
NEW MEXICO

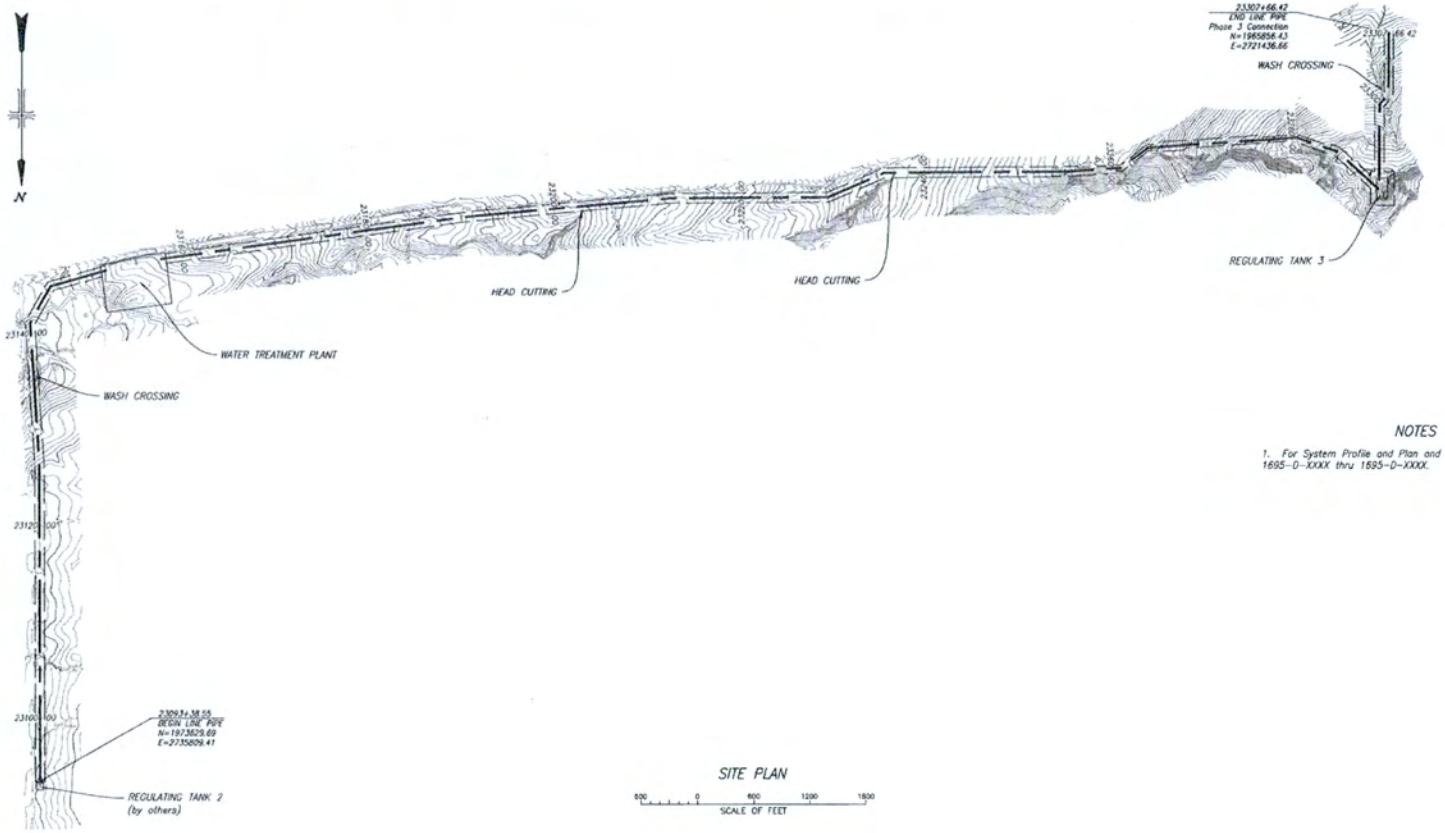
CUTTER LATERAL – REACH 21
RIGHT-OF-WAY

DESIGNED	CHICO QUINTANA
DRAWN	CHICO QUINTANA
CHECKED	RYAN GLADDEN, PE
TECH APPR	BART FEMING, PE
APPROVED	PATRICK PAGE, PE
SUBMITTED	FARMINGTON, NM

REACH 21 RIGHT-OF-WAY EXHIBIT MAP

1695-529-2103

SHEET 1



SITE PLAN

600 0 600 1200 1800
SCALE OF FEET

NOTES

1. For System Profile and Plan and Profiles see 1695-D-XXXX thru 1695-D-XXXX.

RECLAMATION
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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
NAVAJO-GALLUP WATER SUPPLY PROJECT
NEW MEXICO

CUTTER LATERAL – REACH 21

REACH 22B TO ENWSP PHASE 3

DESIGNED

APPROVED

DENVER, COLORADO 2015-10-26

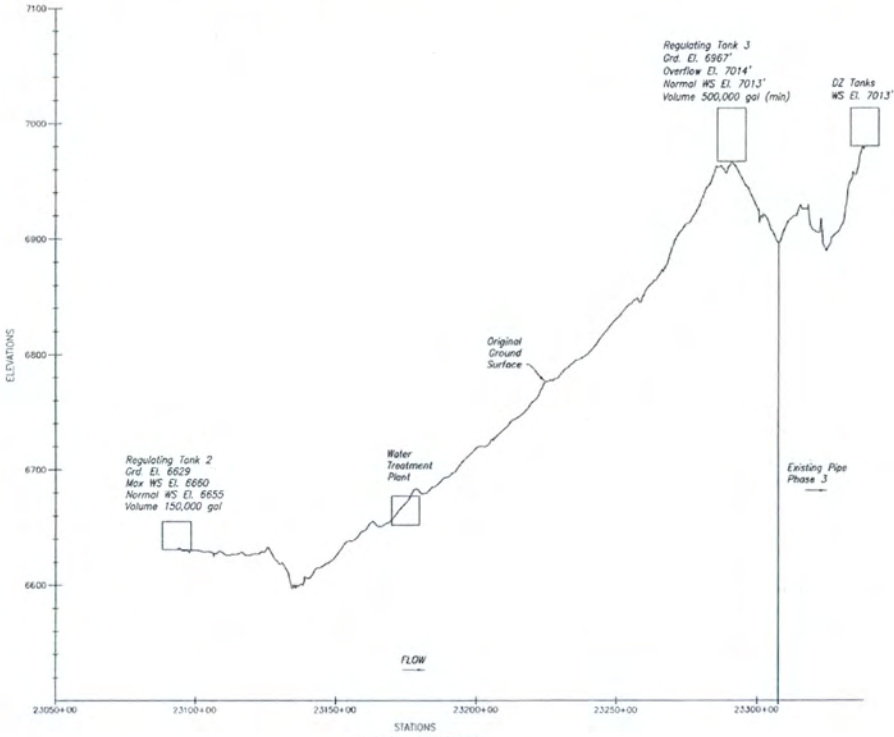
LINE PIPE

1695-D-XXXX

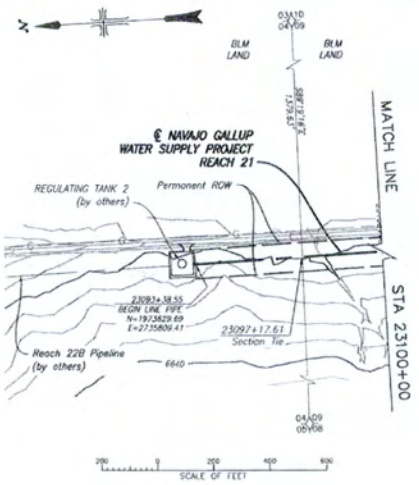
SHEET 1 OF 1

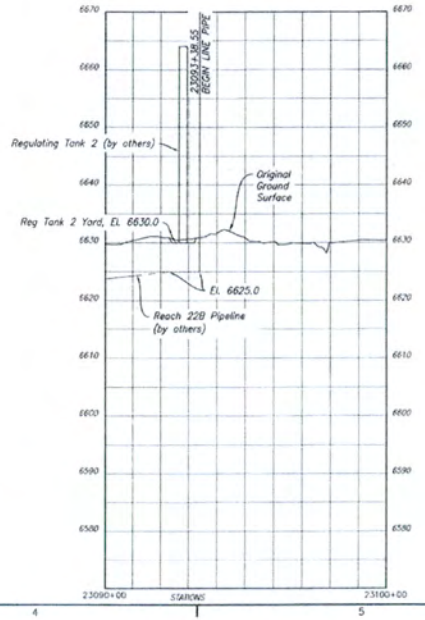
DGN SYSTEM
AUTOCAD
DGN FILENAME
UNKNOWN

DATE AND TIME PLOTTED
SEP 2015
PLOTTED BY
Pat Pickett



SYSTEM PROFILE





ABBREVIATIONS

CR – County Road
ROW – Right-of-Way

SYMBOLS

- ℄ Pipeline
- Construction ROW
- Dirt Road
- Field Fence
- Powerline
- G Natural Gas pipeline
- Telephone
- W Waterline

GENERAL NOTES

1. General Notes, Symbols, and Abbreviations apply to all plan and profile drawings.
2. Grid based on New Mexico State Coordinate West Zone
3. Ground to grid conversion factor is 0.999620438002.
4. Regulating Tank 3 Normal Water Surface Elevation equals 7013.0 to match the normal water surface of the existing DZ tanks.
5. See ROW drawings, 1695-529-XXXX to 1695-529-XXXX.

REFERENCE DRAWINGS

1695-D-XXXX	Regulating Tank 2 Site Plan
1695-D-XXXX	Regulating Tank 3 Site Plan
1695-D-XXXX	Tanks
1695-D-XXXX	22B Line Pipe Plan and Profile

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NEW MEXICO

CUTTER LATERAL – REACH 21
LINE PIPE

DESIGNED

ATHERIES

DENVER, COLORADO 2015-10-26

SYSTEM PROFILE
PLAN AND PROFILE

BEGINNING
TO
STA. 23100+00

1695-D-XXXX

SHEET 1 OF 5

DATE AND TIME PLOTTED
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For Plotter
Not Plotted

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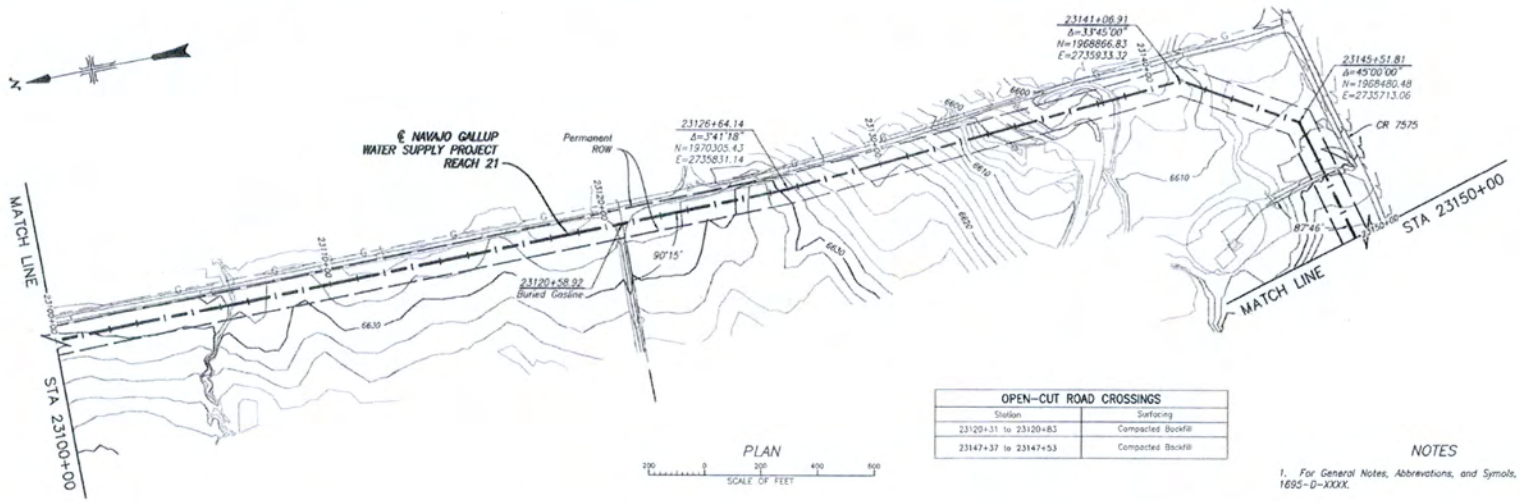


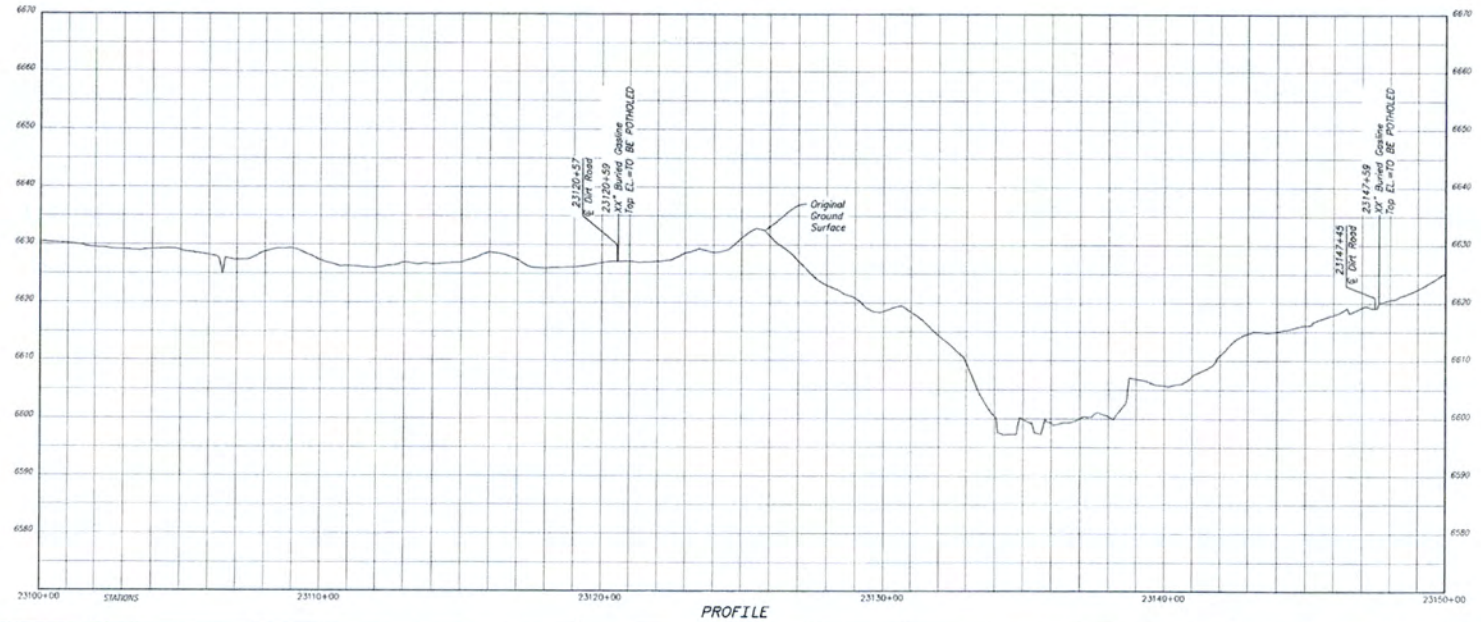
PLAN

SCALE OF FEET

OPEN-CUT ROAD CROSSINGS	
Station	Surfacing
23120+31 to 23120+83	Compacted Backfill
23147+37 to 23147+53	Compacted Backfill

NOTES

1. For General Notes, Abbreviations, and Symbols, see 1695-D-XXXX.



PROFILE

RECLAMATION
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NAVAJO-GALLUP WATER SUPPLY PROJECT
NEW MEXICO

CUTTER LATERAL – REACH 21
LINE PIPE

DESIGNED

REVIEWED

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PLAN AND PROFILE

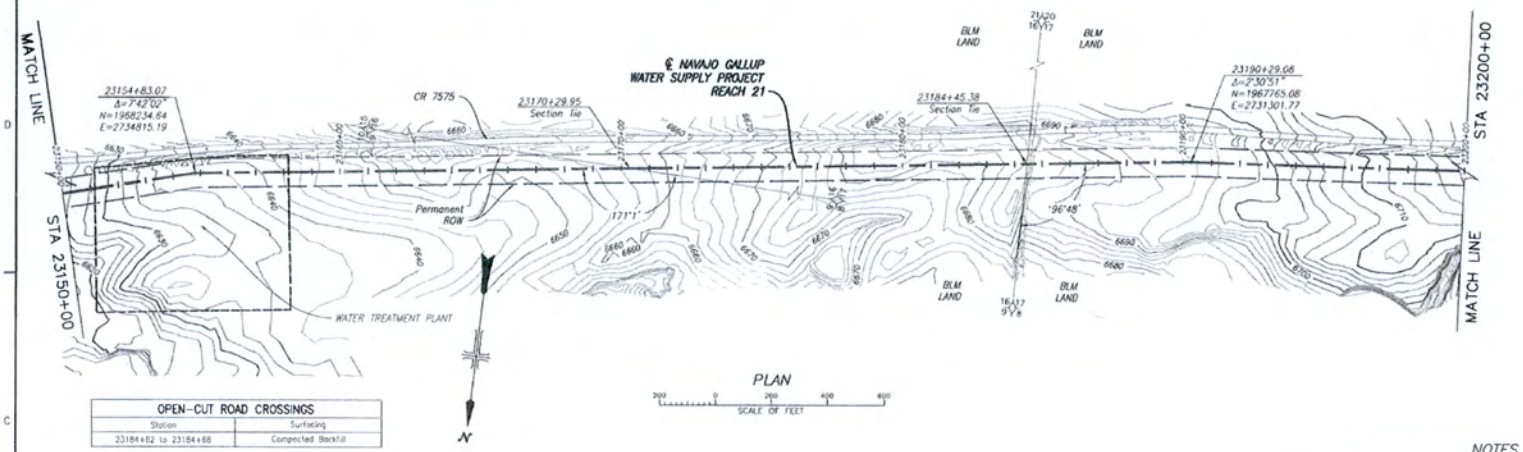
STA. 23100+00
TO
STA. 23150+00

1695-D-XXXX

SHEET 2 OF 5

DATE AND TIME PLOTTED
MAY 26, 2016
PLOTTED BY
Rui Rosa

CAD SYSTEM
AUTOCAD
CAD FILENAME
Sheet 2



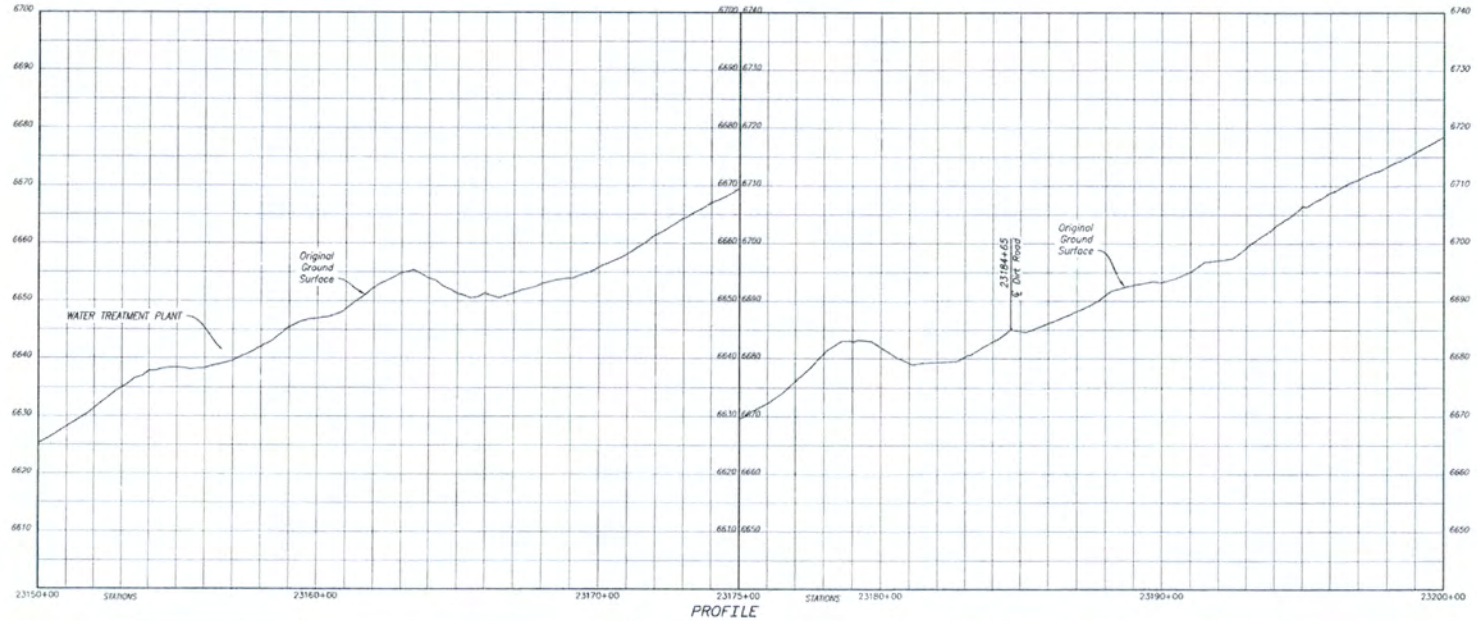
PLAN

SCALE OF FEET

OPEN-CUT ROAD CROSSINGS	
Station	Surfacing
23184+82 to 23184+88	Compacted Backfill

NOTES

1. For General Notes, Abbreviations, and Symols, see 1695-D-XXXX.
2. For Water Treatment Plant Site Plan, see 1695-D-XXXX.



PROFILE

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NEW MEXICO

CUTTER LATERAL – REACH 21
LINE PIPE

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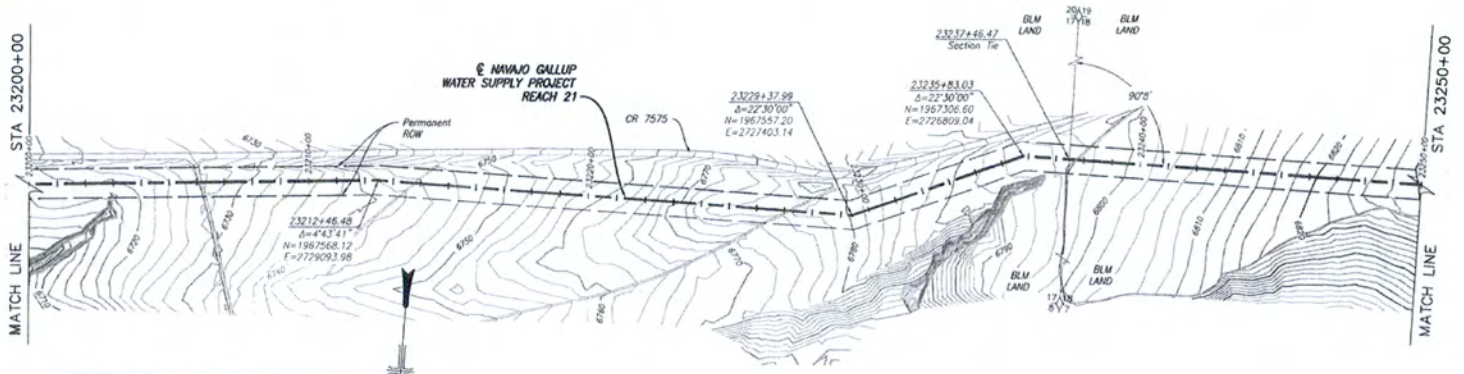
DENVER, COLORADO 2015-10-26

PLAN AND PROFILE

STA. 23150+00
TO
STA. 23200+00

1695-D-XXXX

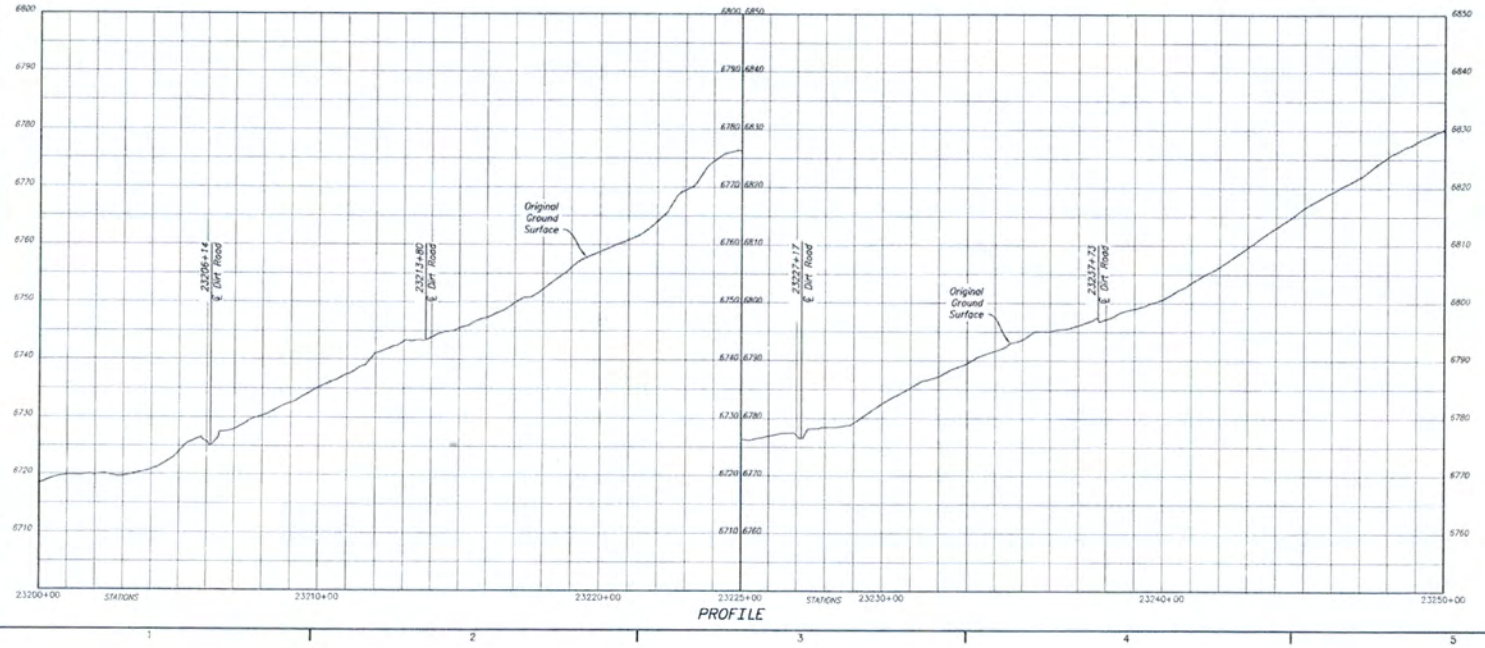
SHEET 3 OF 5



OPEN-CUT ROAD CROSSINGS	
Station	Surfacing
23206+08 to 23206+19	Compacted Backfill
23213+76 to 23213+84	Compacted Backfill
23227+11 to 23227+23	Compacted Backfill
23237+70 to 23237+78	Compacted Backfill

NOTES

1. For General Notes, Abbreviations, and Symols, see 1695-D-XXXX.



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NEW MEXICO

CUTTER LATERAL - REACH 21
LINE PIPE

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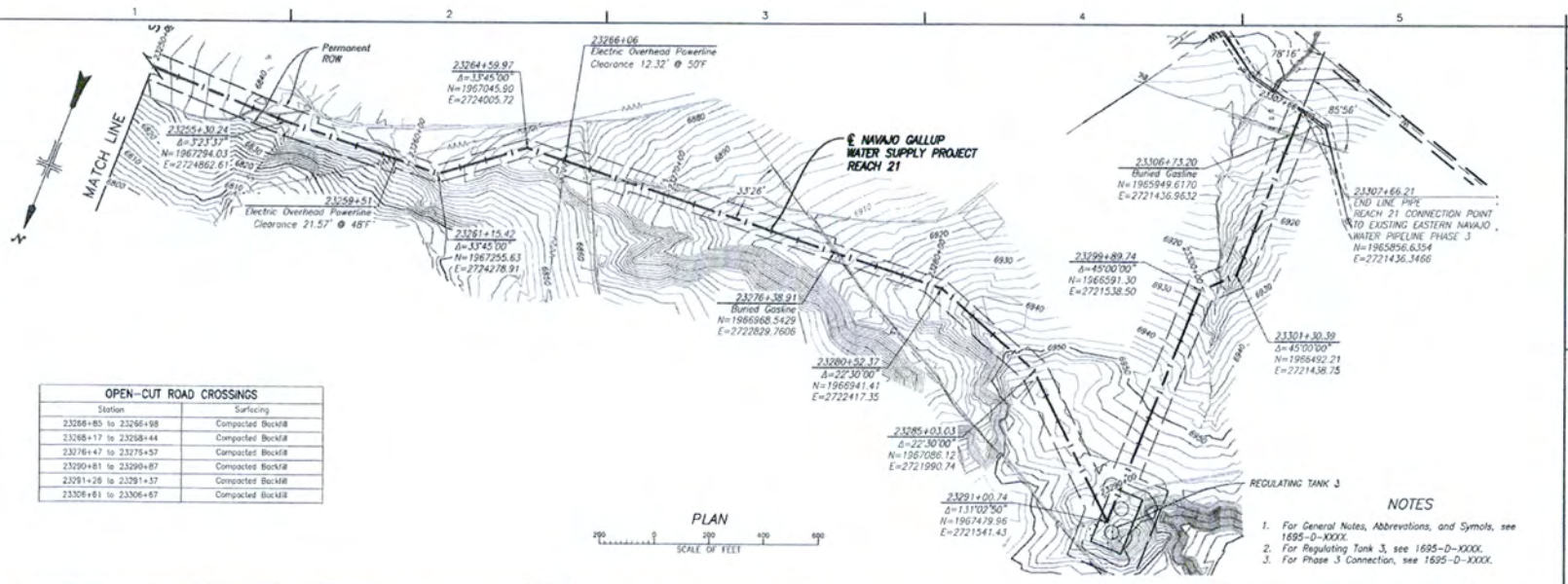
PLAN AND PROFILE

STA. 23200+00
TO
STA. 23250+00

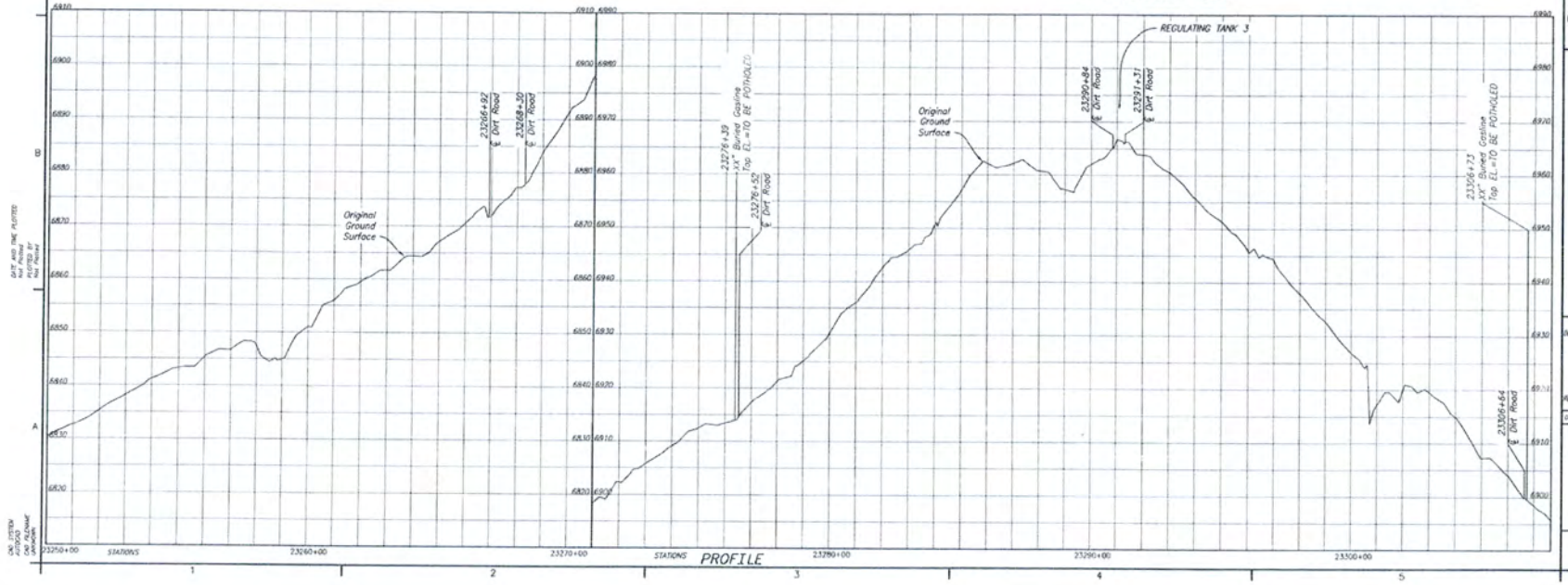
1695-D-XXXX
SHEET 4 OF 5



OPEN-CUT ROAD CROSSINGS	
Station	Surfacing
23266+85 to 23266+98	Compacted Backfill
23268+17 to 23268+44	Compacted Backfill
23276+47 to 23275+57	Compacted Backfill
23290+81 to 23290+87	Compacted Backfill
23291+26 to 23291+37	Compacted Backfill
23306+61 to 23306+67	Compacted Backfill

NOTES

1. For General Notes, Abbreviations, and Symols, see 1695-D-XXXX.
2. For Regulating Tank 3, see 1695-D-XXXX.
3. For Phase 3 Connection, see 1695-D-XXXX.



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NAVAJO-GALLUP WATER SUPPLY PROJECT
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LINE PIPE

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PLAN AND PROFILE
STA. 23250+00
TO
END

1695-D-XXXX
SHEET 5 OF 5

RECLAMATION

Managing Water in the West

Record of Decision for the Navajo-Gallup Water Supply Project Planning Report and Final Environmental Impact Statement

U.S. Department of the Interior
Bureau of Reclamation

September 2009

SUMMARY OF ACTION

The U.S. Bureau of Reclamation, Upper Colorado Region (Reclamation) has published a planning report/final environmental impact statement (PR/FEIS) for the Navajo-Gallup Water Supply Project (Project). Reclamation is lead agency for purposes of compliance with the National Environmental Policy Act of 1969 (NEPA), as amended for the development and implementation of the Project. Cooperating agencies for this EIS are the Navajo Nation, Jicarilla Apache Nation, Bureau of Indian Affairs, Indian Health Service, Navajo Tribal Utility Authority (NTUA), Northwest New Mexico Council of Governments, City of Gallup, and State of New Mexico.

Congress authorized Reclamation to complete feasibility studies for the Project to transport San Juan River water to the City of Gallup, New Mexico (P.L. 92-199, December 15, 1971). In 1975, NTUA requested that the investigations be expanded to include municipal/industrial (M&I) water supplies for various Navajo communities in the eastern part of the Navajo Reservation. A memorandum of understanding between Reclamation and NTUA to include Navajo Nation communities was executed on August 12, 1975.

The proposed action is to convey an M&I water supply to the eastern section of the Navajo Nation, the southwestern part of the Jicarilla Apache Nation, and the City of Gallup, New Mexico, via diversions from the San Juan River in northern New Mexico.

The PR/FEIS was prepared by Reclamation to address the need for a sustainable water supply to serve a future population of approximately 250,000 people by the year 2040. Existing groundwater supplies are dwindling, have limited capacity, and are of poor quality. More than 40 percent of Navajo households rely on water hauling to meet daily water needs. The City of Gallup's groundwater levels have dropped approximately 200 feet over the past 10 years, and the supply is not expected to meet current water demands within the decade. The Jicarilla Apache people are currently not able to live and work in areas of the Jicarilla Apache Reservation other than Dulce, New Mexico because of a lack of water supply. The final EIS was prepared by Reclamation to address these needs.

Before Reclamation finalized the PR/FEIS, Congress passed the Omnibus Public Land Management Act of 2009, Title X, Part III, (P.L. 111-11) which authorizes Reclamation, with delegated authority from the Secretary of the Interior, to: 1) construct, operate, and maintain the Project; 2) allocate the capacity of the Project among the Navajo Nation, Jicarilla Apache Nation, and the City of Gallup; and 3) enter into repayment contracts with the City of Gallup and the Jicarilla Apache Nation, subject to compliance with NEPA and other relevant laws.

The PR/FEIS and this record of decision (ROD) have been prepared in accordance with NEPA, the Council on Environmental Quality's NEPA regulations (40 CFR 1500-1508), and the Department of the Interior regulations for implementing NEPA (43 CFR 46). The decision made here is based on the PR/FEIS filed with the Environmental Protection

Agency (EPA) as FES 09-10 on July 6, 2009. A Notice of Availability was also published in the *Federal Register* on July 6, 2009 by Reclamation, and the EPA on July 17, 2009.

ALTERNATIVES CONSIDERED

The PR/FEIS includes the planning process that led to the selection of three alternatives evaluated in detail: No Action, the San Juan River-Public Service Company of New Mexico (SJRPNM) Alternative, and the Navajo Indian Irrigation Project-Amarillo (NIIP-Amarillo) Alternative. The SJRPNM is the preferred alternative and the environmentally preferable alternative, for reasons discussed in this document.

No Action Alternative

Under the No Action Alternative, M&I supplies and delivery systems would not be constructed on the eastern side of the Navajo Nation, for the City of Gallup, or for the southwestern area of the Jicarilla Apache Nation.

The No Action Alternative assumes that water development in the San Juan River Basin (Basin) will continue for projects with completed Endangered Species Act (ESA) Section 7 compliance. It also assumes that Reclamation will continue to operate Navajo Dam to attempt to meet ESA-related Flow Recommendations[1] to assist in conserving endangered fish in the San Juan River and to continue Basin water development. The No Action Alternative would not meet the conditions for settlement of the Navajo Nation water rights within the San Juan River Basin in New Mexico. Uncertainty regarding water rights and uses in the Basin would continue and potential adverse impacts to other water users could occur with litigation of the Navajo Nation's water rights.

SJRPNM Alternative

The SJRPNM Alternative is the preferred alternative in the PR/FEIS and consists of two separate lateral systems—the San Juan and Cutter laterals. The San Juan Lateral will divert water from the San Juan River downstream of Fruitland, New Mexico, and treat and deliver the water west along Navajo Nation Highway N36 and south along US Highway 491 to communities in the western portion of the Navajo Nation in New Mexico and the City of Gallup. This lateral also uses sub-laterals to service Window Rock, Arizona and Crownpoint, New Mexico areas.

The Cutter Lateral will obtain water from the Navajo Indian Irrigation Project (NIIP) system at the existing Cutter Reservoir and treat and deliver water south to

[1] *Flow Recommendations for the San Juan River, 1999.* The San Juan River Basin Recovery Implementation Program flow recommendations for the native fish community, including endangered Colorado pikeminnow and razorback sucker, in the San Juan River of New Mexico, Colorado and Utah.

communities in the eastern portion of the Navajo Nation in New Mexico and the Jicarilla Apache Nation.

This is the environmentally preferable alternative because it avoids significant adverse impacts except for cultural resources. The cultural resource impacts will be avoided where possible, and mitigated through archaeological data recovery under a Programmatic Agreement described in Appendix 3.

NIIP-Amarillo Alternative

The NIIP Amarillo Alternative would use the Cutter Lateral to provide water as described in the SJRPNM Alternative, but would use the NIIP Amarillo Canal to convey treated Project water to western portion of the Navajo Nation in New Mexico, the City of Gallup, New Mexico and Window Rock, Arizona. The Amarillo Canal would be winterized for year-round use and a 4,500 acre-foot lined storage pond would be constructed near the canal. The Amarillo Lateral runs west to Highway 491 and then shares a common alignment with the SJRPNM Alternative.

RECLAMATION'S DECISION AND RATIONALE

Reclamation's decision is to proceed with the SJRPNM Alternative, as identified in the PR/FEIS, subject to the Secretary of the Interior's execution of the Navajo Nation settlement agreement, repayment contracts, and the New Mexico cost-share agreement required by P.L. 111-11.

In selecting the SJRPNM and complying with P.L. 111-11, Reclamation will construct, operate, and maintain two lateral delivery systems. Project facilities include: 1 river intake and pumping plant, 2 water treatment plants, an estimated 19 forebay tanks, 24 pumping plants, 5 regulating tanks, 25 community storage tanks, and 266.4 miles of pipeline.

The San Juan Lateral will divert 33,118 acre-feet per year (afy) of water from the San Juan River above the existing Public Service Company of New Mexico (PNM) diversion dam and transport M&I water to the western New Mexico portion of the Navajo Nation, the City of Gallup, New Mexico, and the Window Rock community and surrounding Navajo chapters in Arizona.

The Cutter Lateral will be constructed below Cutter Reservoir and use existing NIIP facilities in Navajo Reservoir to deliver 4,645 afy of M&I water to the eastern Navajo Reservation, including 1,200 afy to the Jicarilla Apache Nation. Full development of the Project will result in a depletion of 35,893 afy from the San Juan River Basin, of which 5,271 afy is a new depletion. The Project incorporates a maximum Navajo Depletion Guarantee of 20,782 afy from reductions in use or changes in the operation of any of the Navajo Nation's existing projects that deplete water from the San Juan River.

ALTERNATIVE EVALUATION PROCESS

The decision to select the SJRPNM Alternative was made after carefully weighing economic, social, and technical considerations, as well as the potentially significant environmental effects and after reviewing comments and concerns of agencies, tribes, states, public and private organizations, and individuals. Particular issues of concern were wetlands, endangered species, cultural resources, the Navajo Depletion Guarantee, the Department of the Interior's trust responsibility, and the Navajo Nation's water rights settlement as described in Public Law 111-11. The decision provides the best means to minimize or avoid environmental harm while meeting the Department of the Interior's trust responsibilities. Nonetheless, certain adverse environmental effects of the Project cannot be avoided. Areas of concern are discussed below.

Clean Water Act Compliance

Implementation of the Project is estimated to result in the permanent loss of up to 1.1 acres and temporarily impacts up to 3.6 acres of jurisdictional wetlands. Final designs will attempt to minimize these impacts as practical. Construction will create temporary turbidity and other water quality concerns, and Reclamation will obtain required permits under Section 404 of the Clean Water Act (CWA) for impacts associated with jurisdictional waters of the United States. Nationwide permits authorization under Nationwide Permits No. 12 (Utility Line Activities), No. 33. (Temporary Construction, Access and Dewatering), and No. 39 (Commercial and Institutional Developments) will be requested for temporary construction disturbances to perennial and intermittent stream pipeline crossings including the San Juan River as appropriate.

Permit conditions, including compensatory wetland mitigation requirements will be incorporated as environmental commitments. Permit requirements would include Best Management Practices to minimize and avoid impacts to water quality, wetlands and special aquatic sites.

Endangered Species

A primary goal of the San Juan River Basin Recovery Implementation Program (Recovery Program) is to protect and recover endangered fishes in the San Juan River basin, while water development proceeds in the Basin in compliance with Federal and State laws, interstate compacts, Supreme Court decrees, and Federal trust responsibilities to the Southern Ute Indian Tribe, Ute Mountain Ute Tribe, Jicarilla Apache Nation, and Navajo Nation. In 2001, the Recovery Program adopted principles for ESA section 7 consultations in the San Juan River Basin. These principles are used as a guide to define how the Recovery Program can be used to provide ESA compliance for impacts to listed fish species in the Basin from water development and water management activities.

Reclamation consulted with the Fish and Wildlife Service (Service) on the preferred alternative. In its Biological Opinion (BO), dated February 26, 2009 (Cons. # 2-22-01-F-532), the Service concurred with the findings contained in Reclamation's Biological Assessment and included conservation measures which Reclamation has adopted.

The BO concluded that the Project, as described in the Biological Assessment and in the PR/FEIS, is not likely to jeopardize the continued existence of the Colorado pikeminnow or razorback sucker and is not likely to adversely modify their designated critical habitat. The BO contains an incidental take statement for Colorado pikeminnow and razorback sucker that may become entrained as a result of diversions from the San Juan River. Reasonable and prudent measures and non-discretionary terms and conditions were included in the incidental take statement. Mesa Verde cactus also may be directly taken during the construction of Project features. The BO incorporates conservation measures to minimize impacts to the Colorado pikeminnow, razorback sucker, and Mesa Verde cactus. Conservation measures and reasonable and prudent measures are included as Appendix 1 to this ROD.

Navajo Depletion Guarantee

The BO incorporates a Navajo Depletion Guarantee, which limits new depletions associated with the Project to 5,271 afy at full development. The Navajo Depletion Guarantee is a commitment by the Navajo Nation that depletions for Navajo Nation uses under the Project will be offset by unused Navajo Nation depletions that are included in the San Juan River Basin. This includes forbearance of Navajo Nation uses on NIIP and/or Hogback and Fruitland Irrigation projects as necessary, if and when there is a need to keep the total depletions in the Basin from exceeding the depletion threshold of 752,127 afy[2].

The sum of the actual annual depletions of 35,893 afy will be made without requiring any forbearance of uses in excess of the 6,740 acre-feet in change of use baseline depletions shown in tables V-5 and VI-1 of the PR/FEIS (Appendix 2). The City of Gallup may subcontract with the Jicarilla Apache Nation, the Navajo Nation, or both in combination, for the diversion of up to 7,500 afy from the Navajo Reservoir supply for its Project uses.

When comparing actual depletions against the depletion threshold, depletions for San Juan-Chama Project and any other project added to the Basin's hydrologic baseline after February 26, 2009 (the date of the Project BO) are subtracted from the actual depletions at that point in time. Baseline depletions are shown in Table V-3 of the PR/FEIS (Appendix 2).

[2] The total includes 854,370 for all depletions in the hydrologic baseline, less 107,514 AFY average depletion by the San Juan –Chama Project, plus 5,271 AFY of new depletions included in the proposed project.

If the depletion threshold is reached in the future, the Navajo Nation will reduce its total depletion in the Basin so that its consumptive uses under the Project do not cause the total actual depletions in the Basin to exceed the depletion threshold. The Navajo Nation could accomplish the required reductions in use by changes in the operation of any of the Navajo Nation's projects that deplete water from the San Juan River. The maximum Navajo Depletion Guarantee requirement in any year is a reduction in Navajo Nation depletions of 20,782 afy.

When the depletion threshold condition is reached and the Navajo Depletion Guarantee must be implemented, the quantification of the threshold depletion amount will be recalculated using the baseline uses identified in the most recent San Juan Hydrology Model. Changes in either the Flow Recommendation for the San Juan River or the status of listed species may result in reduction or removal of the Navajo Depletion Guarantee based upon reconsultation.

No specific, detailed accounting of depletions will be required unless the sum of NIIP and Animas-LaPlata Project (ALP) depletions reaches 290,000 afy. This is because it is easier to track the depletions from these two projects than those of the entire Basin. Doing so will also limit monitoring requests in the Basin. If depletions reach 290,000 afy, then all the depletions listed in the baseline for the Project will be monitored and reported on a 5-year cycle to coincide with Reclamation's Consumptive Use and Loss report.

The BO, including the description of water supply scenarios in the San Juan River Basin and the Navajo Nation's depletion guarantee commitment, is not binding on the use of water by any person or entity other than the Navajo Nation and shall not affect the ability of any person or entity to fully develop and utilize their water rights. The fact that the total amount of baseline depletions in the Basin may not be used for some period of time in the future shall not be construed to diminish in any way the rights of persons or entities other than the Navajo Nation to develop their water uses in accordance with interstate compact apportionments, Federal law and state water rights.

Cultural Resources

The PR/FEIS identifies approximately 104 cultural resource sites within the area of potential effect of the Project and estimates that between 80 and 90 of these resources will require data recovery as a mitigating measure. Reclamation will implement a program to avoid or mitigate for losses of resources that are adversely affected by construction and operation, maintenance, and replacement of the Project.

It is likely that Native American human remains, funerary objects, or objects of cultural patrimony may be encountered during Project construction. Therefore, prior to issuing any approvals or permits for activities related to the Project, Reclamation will ensure full compliance with the relevant sections of NAGPRA and 43 CFR 10.3.

Department Trust Responsibility

The Project is a component necessary to implement the Navajo Settlement Agreement authorized by Congress in P.L. 111-11. The Project will also assist the Jicarilla Apache Nation in implementation of the Jicarilla Settlement Act (P.L. 102-114, 106 Stat. 2237).

There is a potential negative effect on other Indian trust assets in the San Juan Basin. Due to endangered species concerns and other complexities associated with the "Law of the Colorado River," the Project may limit the amount of water available for use by other tribes.

Section 10602 of P.L. 111-11 states that the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450 et seq.) shall not apply to the design, construction, operation, maintenance, or replacement of the Project.

Navajo Settlement

The Project will allow the United States to resolve the Navajo Nation's water rights claims within the San Juan River Basin in New Mexico consistent with P.L. 111-11. P.L. 111-11 authorizes the Secretary, acting through the Commissioner of Reclamation, to design, construct, operate, and maintain the Project in substantial accordance with the preferred alternative in the draft EIS.

Sec. 10602 (d) of P.L. 111-11 conditions Project construction and states that the Secretary shall not commence construction of the facilities authorized until such time as:

a) the Secretary executes the Navajo Settlement Agreement and the Settlement Contract with the Navajo Nation (no later than December 31, 2010);
b) repayment contracts are executed with the City of Gallup, and Jicarilla Apache Nation; and
c) the Secretary has entered into an agreement with the State of New Mexico under which the State of New Mexico will provide a share of the construction costs of the Project of not less than $50,000,000, except that the State of New Mexico shall receive credit for funds the State has contributed to construct water conveyance facilities to the Project Participants to the extent that the facilities reduce the cost of the Project as estimated in the "Draft Impact Statement".

P.L. 111-11 also provides an exception if the Jicarilla Apache Nation elects not to enter into a Project contract. The Secretary, after consulting with the Navajo Nation, the City of Gallup, and the State of New Mexico acting through the Interstate Stream Commission, may make appropriate modifications to the scope of the Project and

proceed with Project construction if all other conditions for construction have been satisfied.

Sec. 10701 (d) provides nullification of the Navajo Settlement Agreement if the construction of all Project features is completed after December 31, 2024. This section also provides for an extension if the Navajo Nation, the Secretary, and the New Mexico Interstate Stream Commission agree that an extension is reasonably necessary.

Sec. 10603 (c) requires that Project water shall not be delivered for use by any community of the Navajo Nation located in the State of Arizona until:

a) The Nation and the State of Arizona have entered into a water rights settlement agreement approved by an Act of Congress that settles and waives the Nation's claims to water in the Lower Basin and the Little Colorado River Basin in the State of Arizona, including those of the United States on the Navajo Nation's behalf; and
b) The Secretary and the Navajo Nation have entered into a Navajo Reservoir water supply delivery contract for the physical delivery and diversion of water via the Project from the San Juan River system to supply uses in the State of Arizona.

SUMMARY OF COMMENTS ON PR/DEIS

Reclamation received 26 comment letters on the Planning Report/Draft Environmental Impact Statement (PR/DEIS) and held five public hearings during the public comment period. Reclamation identified 280 specific comments from the letters and public hearings, including 98 comments from tribes and tribal nations (73 of those were Navajo Nation), 90 comments from State and locals governments, 36 comments from power and water interests, 10 comments from other organizations, and 45 comments from individuals. Comments on the PR/DEIS and Reclamation's responses are included as Volume III of the PR/FEIS.

IMPLEMENTING THE DECISION AND ENVIRONMENTAL COMMITMENTS

The decision shall be implemented no sooner than 30 days after publication of the notice of availability in the *Federal Register*. The following mitigation, monitoring, enforcement commitments, and legal requirements will be implemented as integral parts of the decision as a means of avoiding or minimizing adverse effects.

Navajo Settlement Agreement (P.L. 111-11)

Subject to Public Law 111-11 as previously described, Reclamation will not commence construction of Project facilities authorized until such time as:

a) The Secretary executes the Navajo Settlement Agreement and the Settlement Contract with the Navajo Nation;
b) Repayment contracts are executed with the City of Gallup and Jicarilla Apache Nation; and
c) The Secretary has entered into an agreement with the State of New Mexico under which the State of New Mexico will provide a share of the construction costs of the Project of not less than $50,000,000, except that the State of New Mexico shall receive credit for funds the State has contributed to construct water conveyance facilities to the Project participants to the extent that the facilities reduce the cost of the Project as estimated in the Draft Impact Statement.

Project Construction Committee

Sec. 10604 (g) of P.L. 111-11) requires the Secretary to facilitate the formation of a project construction committee with Project participants and the State of New Mexico to:

a) Review cost factors and budgets for construction and operation and maintenance activities;
b) Improve construction management through enhanced communication; and
c) Seek additional ways to reduce overall Project costs.

Environmental Commitments

Reclamation has used all practical means to avoid impacts or minimize environmental harm that could occur due to implementation of the preferred alternative. The mitigation measures are discussed in Chapter V of the PR/FEIS. In addition to the conservation and reasonable and prudent measures in Appendix 1, environmental commitments are included as Appendix 3.

APPROVED:

Ken Salazar — Oct. 1, 2009

Ken Salazar
Secretary of the Interior

Date

APPENDIX 1
February 26, 2009 Final Biological Opinion

Conservation Measures

Conservation measures are actions that Reclamation agrees to implement to further the recovery of the species under review. The beneficial effects of conservation measures were taken into consideration for determining both jeopardy and incidental take analyses and all hydrology analyses considered in the Biological Opinion assume implementation of these conservation measures, including the implementation of the San Juan River Basin Recovery Implementation Program. Reclamation agrees that failure to implement the conservation measures will be grounds for reinitiation of consultation.

The following are the conservation measures incorporated in the Biological Opinion. More expanded descriptions can be found in the Biological Opinion in Volume 2 of the PR/FEIS.

Mesa Verde Cactus

1) Prior to completion of final design, Reclamation will complete an inventory of known populations and suitable Mesa Verde cacti habitat within 500 feet of the proposed pipeline alignment, pumping plant, and construction footprint.
2) Based on the inventory, Reclamation will develop a Mesa Verde Cactus Construction Plan to avoid and minimize disturbance to cacti and suitable habitat. The Plan will be submitted to the Service and Navajo Nation for review. Specific locations of cacti will be kept confidential.
3) Construction areas will be located in coordination with Project engineers and Reclamation resource specialists to avoid individual cactus and habitat identified during inventories. To the extent practicable, impacts to Mesa Verde cacti and/or suitable habitat will be minimized. Existing roads and previously disturbed areas will be utilized where possible, to minimize impacts. If temporary construction roads are needed that are closer than 50 feet from known cacti, these plants will be monitored during road use and the edges of the access road flagged in the field.
4) Temporary access roads and staging areas within suitable Mesa Verde habitat will be closed and hand-raked to remove tire tracks. No post-construction reseeding will be implemented in these areas.
5) Pre-construction surveys for Mesa Verde cacti will be conducted in the spring of the year preceding the initiation of construction activities to identify new cacti. Locations of any additional cacti identified in the pre-construction surveys will be incorporated into the Construction Plan and appropriate mitigation measures developed in consultation with the Service and Navajo Nation.
6) Reclamation will develop an education program for Reclamation field staff and all appropriate contractor employees regarding identification and conservation of the Mesa Verde cactus.

7) All sites where Mesa Verde cacti are present will be fenced or flagged as detailed in the Construction Plan and monitored daily. Fencing will extend 200 feet in both directions along access roads where cacti are present. Where possible, fencing will include a 50-buffer around any known cacti during construction. Any disturbed cacti will be reported immediately to Reclamation. A written account, including a map, extent of disturbance, the number of cacti, and the circumstances surrounding the disturbance, will be submitted to the Service and Navajo Nation within 48 hours.
8) To reduce the likelihood of noxious plants, cleaning of construction equipment will be required before entry into occupied or suitable Mesa Verde cactus habitat.
9) Additional surveys for Mesa Verde cacti in suitable habitat will be required prior to any ground-disturbing activity for maintenance. Survey results will be valid for 3 years.
10) Where features cannot be re-routed or moved to avoid impacts to an individual Mesa Verde cactus, the cactus will be transplanted in suitable habitat in cooperation with the Service and the Navajo Nation as described in the Construction Plan. Transplanted cacti will be monitored for a minimum of five years. Applicable permits from the Service and Navajo Nation will be obtained prior to transplanting Mesa Verde cactus.
11) Noxious weeds will be continually controlled within disturbed areas.

San Juan River and Other Water Crossings

12) Silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures will be used to prevent erosion from entering water bodies during construction.
13) Water quality parameters will be monitored before, during and after construction to ensure compliance with Navajo Nation Water Quality Standards. In-water work will stop if Navajo Nation Water Quality Standards are exceeded at or below the worksite due to construction activities.
14) Construction of the cofferdam will be scheduled during minimal flows to avoid and minimize direct and indirect effects to fish species. River flows upstream and downstream of construction areas will be maintained and fish passage around dewatered construction areas will be maintained at all times.
15) A fish net barrier will be installed upstream and downstream of the construction site during construction to exclude fish from the work area during periods of in-water work.
16) Reclamation will coordinate with the Service to have a biologist(s) onsite to rescue any fish species stranded as a result of construction activities.

Reasonable and Prudent Measures

The following Reasonable and Prudent Measures (RPMs) were included in the incidental take statement of the Biological Opinion for the Project dated February 26, 2009 (Cons. # 2-22-01-F-532).

1) Reclamation will continue to support and participate in the implementation of the San Juan River Basin Recovery Implementation Program (Recovery Program).
2) Through the Recovery Program, Reclamation shall implement measures to create and maintain habitat complexity and to minimize loss and long-term degradation of habitat for the endangered fishes within the San Juan River.
3) To protect future flow regimes in the San Juan River through the Recovery Program, Reclamation will be responsible for the maintenance and application of the San Juan Hydrology Model to evaluate proposed projects on the San Juan River.

Non-discretionary Terms and Conditions described in Biological Opinion are as follows:

1) Reclamation will continue to seek and provide funding, as authorized, for the implementation of the Recovery Program.
2) To create and maintain complex habitat, Reclamation, through the Recovery Program, will:
    a) Investigate the use of habitat manipulation such as non-native vegetation removal, mechanically opening the mouths of secondary channels, or reconnecting the river within the floodplain in appropriate sites to augment the function of high flows. Any resulting appropriate options should be implemented and funded through the Recovery Program.
    b) Continue to monitor habitat response to the San Juan River Flow Recommendations.
    c) Monitor the response of actions taken to increase habitat complexity.
3) To track potential climate changes and how these changes may affect the Colorado pikeminnow and razorback sucker and their designated critical habitats, Reclamation, in cooperation with the Recovery Program, will begin monitoring to:
    a) Determine changes in the timing of runoff.
    b) Determine if average annual runoff is decreasing and a timeframe in which a change may affect the ability of the Flow Recommendations to be met.
    c) If, from monitoring activities listed above, it is determined that climate change is affecting water availability in the San Juan River, this would be considered new information that may affect listed species or designated critical habitat. Reclamation would reinitiate consultation consistent with Section 7.0 D (2) of the "Principles for Conducting Endangered Species Act Section 7 Consultations on Water Development and Water Management Activities Affecting Endangered Fish Species in the San Juan River Basin". Reclamation, in consultation with the Service, would evaluate the changes in water availability and determine if the changes would have an adverse effect on listed species and if the Recovery Program is sufficient to serve as the Reasonable and Prudent Alternative or RPM.

4. To ensure the integrity, consistency, and scientific rigor in regards to water project depletions, Reclamation, working through the Recovery Program, will:
    a) Continue maintenance and upgrades of the San Juan Hydrology Model using the best available science.
    b) Conduct project analysis for water depletion projects on the San Juan River as needed.

APPENDIX 2
Selected Tables from the Navajo-Gallup Water Supply Project PR/FEIS

Table V-3—Baseline and current depletion summary in the Basin[1]

Depletion category	RiverWare baseline (acre-feet)	Estimated current (acre-feet)	Presently[2] unused (acre-feet)
New Mexico depletions			
Navajo lands irrigation depletion			
NIIP	[3]280,600	160,330	120,270
Hogback	12,100	9,535	2,565
Fruitland	7,898	6,147	1,751
Cudei[4]	900	715	185
Subtotal	**301,498**	**176,727**	**124,771**
Non-Navajo lands irrigation depletion			
Above Navajo Dam - private	738	575	163
Above Navajo Dam - Jicarilla	[5]2,190	350	1,840
Animas River	36,711	24,878	11,833
La Plata River	9,808	8,470	1,338
Upper San Juan	9,137	6,680	2,457
Hammond Area	10,268	7,507	2,761
Farmers Mutual Ditch	9,532	7,457	2,075
Jewett Valley	3,088	2,379	709
Westwater	110	110	0
Subtotal	**81,582**	**58,406**	**23,176**
Total New Mexico irrigation depletion	**383,080**	**235,133**	**147,949**
Non-irrigation depletions			
Navajo Reservoir evaporation	27,350	29,235	-1,885
Utah International[6]	39,000	31,388	7,612
San Juan Powerplant	16,200	16,200	0
Industrial diversions near Bloomfield	2,500	2,500	0
Municipal and industrial uses	8,453	7,443	1,010
Scattered rural domestic uses	[7]1,400	1,400	0
Scattered stock ponds and livestock uses	2,200	2,200	0
Fish and wildlife	1,400	1,400	0
Total New Mexico non-irrigation depletion	**98,503**	**91,766**	**6,735**
San Juan-Chama Project exportation	107,514	107,514	0
Unspecified minor depletions	[8]4,500	2,500	2,000
Jicarilla Apache Nation Navajo River Water Supply Project	[9]6,570	0	6,570
Total New Mexico depletions (excluding ALP)	**600,168**	**436,914**	**163,254**

Table V-3—Baseline and current depletion summary in the Basin[1] (continued)

Depletion category	RiverWare baseline (acre-feet)	Estimated current (acre-feet)	Presently[2] unused (acre-feet)
Colorado depletions – upstream of Navajo			
Upper San Juan	10,858	9,270	1,588
Navajo-Blanco	7,865	6,972	893
Piedra	8,098	6,892	1,206
Pine River	71,671	69,775	1,886
Subtotal	**98,492**	**92,909**	**5,583**
Colorado depletions – downstream of Navajo			
Florida	28,607	27,749	858
Animas	25,119	24,099	1,020
La Plata	13,245	13,049	196
Long Hollow	1,339	0	1,339
Mancos	19,532	15,516	4,016
Subtotal	**87,842**	**80,413**	**7,429**
Total Colorado depletions (excluding ALP)	**186,334**	**173,322**	**13,012**
Total Colorado and New Mexico combined depletions	**786,502**	**610,236**	**176,266**
ALP	[10]57,133	1,620	55,513
Subtotal	**843,635**	**611,856**	**231,779**
McElmo Basin imports	-11,769	-11,769	0
Utah depletions	[11]9,140	9,140	0
Arizona depletions	[7]10,010	10,010	0
Net New Mexico, Colorado, Utah, and Arizona depletions	**851,016**	**619,237**	**231,779**
New Mexico off-river depletions			
Chaco River	[7]2,832	2,832	0
Whiskey Creek	[7]523	523	0
GRAND TOTAL	**854,371**	**622,592**	**231,779**

[1] Baseline depletion values are from the Generation 2 San Juan River Basin Hydrology Model operated by the SJRBRIP and may change with new versions of the model or new basin hydrology. They are provided here as a reference point and would naturally be adjusted to match changes approved by the SJRBRIP.

[2] "Presently Unused" is water allocated to a specific project that is not currently developed but that is included in the baseline. Transfers of water rights within New Mexico under water subcontracts or leases are subject to State Engineer approval.

[3] Includes 10,600 acre-feet of annual groundwater storage. At equilibrium this drops to 270,000 acre-feet, based on irrigation of the full 110,630 acres every year. The proposed schedule of anticipated depletions prepared by the NMISC to reflect the Navajo Settlement Agreement includes an equilibrium depletion for NIIP of 256,500 acre-feet based on an average fallow acreage of 5 percent. While including fallow land in the depletion calculation is reasonable, the larger number is used here to be consistent with the NIIP section 7 consultation and the full capacity of the project.

[4] The Cudei diversion from the San Juan River has been removed and the Cudei area now receives water from the Hogback Project diversion.

[5] The Jicarilla Apache Nation recognizes this historic depletion as 2,195 acre-feet, but it was modeled as 2,190 acre-feet on average.

[6] The Utah International diversion/depletion is currently owned by BPH-Navajo Coal Company

[7] Indicates offstream depletion accounted for in calculated natural gains.

[8] 1,500 acre-feet of depletion from minor depletions approved of SJRBRIP in 1992. 3,000 acre-feet from 1999 intra-service consultation, a portion of which may be in Colorado.

[9] Biological opinion lists this depletion as 6,654 acre-feet, but model configuration shows 6,570. Model configuration used.

[10] Actual approved depletion is 57,100 acre-feet. Small changes in reservoir evaporation between runs results in small variation from actual project depletion. Exact match would require multiple iterations because of model limitations. The breakdown of the total project depletions between the States of Colorado and New Mexico is preliminary and approximate pending a final allocation of Nighthorse Reservoir evaporation to the States.

[11] 1,705 San Juan River depletion; 7,435 off-stream depletion.

Table V-5.—Summary of major existing and future Tribal uses of Basin water

Description	Diversion (AFY)	Depletion (AFY)	Included in environmental baseline[1] for recent ESA consultations
Existing uses – Navajo Nation[2]			
NIIP (Blocks 1–8)[3]		160,330	Yes
Hogback Project		12,100	Yes
Cudei Irrigation Project[4]		900	Yes
Fruitland		7,898	Yes
Existing uses – Navajo Nation (New Mexico State water rights)			
Shiprock Helium Plant (permit 2472)[5]		1,400	Yes
Kerr McGee (uranium processing) (permit 2875)[5]		700	Yes
Kerr McGee (permit 2807)[5]		500	Yes
Navajo Methodist School (Navajo Academy)		139.5	Yes
Existing uses – Jicarilla Apache Nation			
Decreed for historic and existing uses, 1880 priority date	5,683	2,195	Yes
Small third-party water service contracts	770	[6]770	Yes
PNM third-party water service contract (pursuant to the 1992 Jicarilla Settlement Act)	16,200	16,200	Yes
Evaporation – stock ponds and reservoirs		2,187	Yes
Existing uses – Ute Mountain Ute Tribe			
Dolores Project	25,100		N/A[7]
Existing uses – Southern Ute Indian Tribe			
Water allocated to the Tribe from the Florida Project	2,000		Yes
Pine River 181.7 cfs and 1/6 interest in Vallecito Reservoir			Yes
San Juan River, 5.64 cfs direct diversion rights, 1868 priority date	1,014		Yes
Piedra River, 2.0 cfs direct diversion, 1868 priority date	600		Yes

Table V-5.—Summary of major existing and future Tribal uses of Basin water (continued)

Description	Diversion (AFY)	Depletion (AFY)	Included in environmental baseline[1] for recent ESA Consultations
Future Uses – Navajo Nation[1]			
Navajo Nation Municipal Pipeline (ALP Project)	4,680	2,340	Yes
NIIP (Blocks 9–11)		120,270	Yes
Navajo-Gallup Water Supply Project (includes 7,500 AFY for the city of Gallup)	37,764	[2]27,193	No
Hogback Project restoration		16,420	No
Future Uses – Jicarilla Apache Nation		1,875	No
Jicarilla Settlement Act of 1992 (from San Juan-Chama Project)	6,500	6,500	Yes
Jicarilla Apache Nation Navajo River Water Supply Project (Navajo Gallup)	[8]12,000	6,654	Yes
Jicarilla Settlement Act of 1992 (Remaining from Navajo Reservoir or Navajo River) (Navajo Gallup)	[8]4,530	1,876	No
Future Uses – Ute Mountain Ute Tribe (see table I-1, ALP FSEIS for details on Colorado Ute Settlement)			
ALP Project		16,525	Yes
San Juan River, 10 cfs direct diversion rights, 1868 priority date	1,600		No
Mancos River direct diversion rights for 7,200 acres, priority date subordinated to 1985	21,000		No
Navajo Wash, 15 cfs direct diversion rights, priority date subordinated to 1985	4,800		No
Tributary groundwater, domestic and livestock wells		1,850	No

Table V-5.—Summary of major existing and future Tribal uses of Basin water (continued)

Description	Diversion (AFY)	Depletion (AFY)	Included in environmental baseline[1] for recent ESA consultations
Future uses – Southern Ute Indian Tribe (see table I-1, ALP FSEIS, p. 1-6 for details on Colorado Ute Settlement)			
ALP Project		16,525	Yes
Florida River, direct diversion rights, priority date subordinated to 1976	1,090		No
Florida River, Project water	563		Yes
Stollsteimer Creek, 1,850 AFY Pargin Reservoir storage, 5.5 cfs with 1868 priority and refill right with 1986 priority date	1,850+		Yes[9]
Piedra River, 8.9 cfs direct diversion, 1868 priority date	1,595		No
Devil Creek, direct flow right, 1868 priority date subordinated to 1976	183		No
San Juan River, direct diversion rights, 1868 priority date	516		No
Round Meadow Creek, direct diversion rights, 1868 priority date	975		No
Cat Creek, direct diversion, 1868 priority date	1,372		No
Tributary groundwater, domestic and livestock wells	2,000		No

Note: Blank spaces indicate information not readily available.

[1] The Service's biological opinions contain a baseline of depletions that are considered in recent ESA consultations. This table is not the same as the depletion table derived for this planning report and final environmental impact statement (table V-3).

[2] The Navajo Nation has existing unquantified uses in the Basin that are not listed in the table, including municipal water uses, irrigation on San Juan River tributaries, livestock uses, evaporation from reservoirs, and stock ponds, etc. These uses are included in the baseline table (table V-3).

[3] Includes 16,420 AFY from Hogback and Hogback extension.

[4] The Cudei diversion from the San Juan River has been removed and the Cudei area now receives water from the Hogback Project diversion

[5] Once the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement has been executed, and upon completion of the Joint Hydrographic Report and subsequent applicable paragraphs in the Supplemental Partial Final Judgment and Decree, the permits and licenses for the diversion and use of water pursuant to New Mexico State Engineer File Nos. 2472, 2807 and 2875 for uses of water at the Shiprock Helium Plant and Shiprock Mill shall be cancelled, and no water rights shall be adjudicated for said permits and licenses.

[6] This 770 acre-foot depletion is allowed under the 3,000 acre-foot minor depletion account allowed for through ESA (section 7) consultation under the SJRBRIP.

[7] This 25,100 acre-feet is imported from the Dolores River Basin and consumed in the Basin.

[8] The proposed diversion is a variable amount up to 12,000 AFY. The maximum new diversion will depend on the available water in that year. The Nation, as a member of the Hydrology Committee, will introduce for the Hydrology Committee's consideration, a method to calculate available water. The sum of this diversion and the remaining water Jicarilla Settlement Act water supply will not exceed 16,530 AFY.

[9] 530.6 acre-feet of the storage right and the 2 cfs and the 3.5 cfs are included in the environmental baseline for recent ESA consultations.

Table VI-1.—Summary depletions for full proposed project development

Water provider	Change in use of baseline depletion (changed used) (acre-feet)	New depletions (approved in excess of baseline) (acre-feet)	Met within total threshold depletion for Navajo Depletion Guarantee (acre-feet)	Total (acre-feet)
Scenario 1 – City of Gallup subcontract with the Jicarilla Apache Nation				
Jicarilla Apache Nation	[1]6,740	[2]1,960	0	8,700
Navajo Nation	0	6,411	20,782	27,193
Proposed Project total	6,740	8,371	20,782	35,893
Total reduced for 3,100 acre-feet NIIP returns		[3]5,271		
Scenario 2 – City of Gallup subcontract with the Navajo Nation				
Jicarilla Apache Nation	[4]1,200	0	0	1,200
Navajo Nation	[5]5,540	8,371	20,782	34,693
Proposed Project total	6,740	8,371	20,782	35,893
Total reduced for 3,100 acre-feet NIIP returns		[3]5,271		

[1] Includes forbearance by the Jicarilla Apache Nation of 6,750 AFY of consumptive use on the Jicarilla Apache Nation Navajo River Water Supply Project (JANNRWSP) and 170 acre-feet of consumptive use under Jicarilla water rights for historic uses.

[2] The Final Biological Opinion for the Navajo-Gallup Water Supply Project does not establish any right in the Jicarilla Apache Nation to retain approval for 1,960 AFY of new depletions in excess of the baseline depletions listed in table V-3 should this amount of Jicarilla water rights, over and above the change in use of 6,750 acre-feet of baseline depletion, not be required for the proposed Project due to the City of Gallup subcontracting with the Navajo Nation, as shown in scenario 2.

[3] By the time the Navajo Nation's water demands under the proposed Project reach the full 27,193 acre-feet of depletion, the return flows from the NIIP to the San Juan River are anticipated to have increased by approximately 3,100 AFY, on average, over and above the current rate of return flow from the NIIP. This increase in return flows from the NIIP offsets an equivalent amount of new depletion by the proposed Project and reduces the net new depletion from the river in the proposed Project's biological opinion from 8,371 AFY to 5,271 AFY.

[4] Includes a forbearance by the Jicarilla Apache Nation of 1,200 AFY of consumptive use on the JANNRWSP.

[5] Includes forbearance by the Navajo Nation of 5,540 AFY of consumptive use on the NIIP or other Navajo projects for which depletions are in the baseline.

APPENDIX 3
ENVIRONMENTAL COMMITMENTS

Record of Decision
Navajo-Gallup Water Supply Project

This appendix summarizes the environmental commitments that have been made by Reclamation during the development of the Preferred (SJRPNM) Alternative. Reclamation will have responsibility for implementing measures that will avoid or reduce potential environmental impacts of the Navajo-Gallup Water Supply Project.

Commitments for pre-construction activities will generally be completed by Reclamation or by contractors during the final design process and prior to construction activities. Wildlife, wetland, cultural resources and other mitigation will be completed by Reclamation as described in the following paragraphs. Some commitments, such as monitoring or additional studies, would continue beyond completion of construction of Project facilities.

General Commitments

1. Reclamation will prepare and implement an Environmental Commitment Plan for the Project to document and track the completion of the environmental commitments.

Water Uses and Resources Commitments

1. Until depletions in the San Juan River Basin reach the baseline depletion (Table V-3 in Volume I of Navajo-Gallup Water Supply PR/FEIS, Appendix 2 of this ROD) plus 5,270 afy added to the baseline for this Project, no specific, detailed accounting of depletions will be required.
2. If the depletion threshold of 752,127 afy of depletions is reached in the future, the Navajo Nation will reduce its total depletions in the Basin so that its consumptive uses under the Project do not cause the total depletions in the Basin to exceed the threshold depletions. The Navajo Nation could accomplish the required reductions in use by changes in the operation of any of the Navajo Nation's projects that deplete water from the San Juan River. The maximum Navajo Depletion Guarantee requirement in any year is a reduction in Navajo Nation depletions of 20,782 acre-feet.
3. Reclamation will identify the point at which ALP and NIIP annual depletions reach 290,000 afy.
4. If that target depletion is reached, Reclamation will initiate reporting of depletions for the categories listed in the hydrologic baseline for the Project (Table V-5 in the PR/FEIS) on a five-year cycle as part of the consumptive use and loss reporting procedure.

5. As a result of monitoring, Reclamation will identify the point at which the sum of actual depletions reach the depletion threshold, Reclamation will limit deliveries to Navajo projects, as directed by the Navajo Nation, to levels required by implementation of the Navajo Depletion Guarantee.
6. The Navajo Nation will limit uses as specified in the Navajo Depletion Guarantee if the conditions stated above are reached and provide to the Recovery Program and Reclamation the projects it wishes limited to reduce depletions.

Indian Trust Assets Commitments

1. There is no mitigation measure proposed for Indian Trust Assets. However, one of the goals of the Recovery Program is to "...proceed with water development in the Basin in compliance with federal and state water law, interstate compacts, Supreme Court decrees, and federal trust responsibilities to the Southern Utes, Ute Mountain Utes, Jicarillas, and the Navajos".

Water Quality Commitments

1. Reclamation will develop and implement a program to reduce, minimize, or eliminate temporary, short-term increase in suspended sediment loading or other water quality constituents potentially caused by Project construction through the incorporation of permits, best management practices (BMPs), and sediment control structures.

Vegetation Commitments

1. Reclamation will ensure that Project construction contractors limit ground disturbance to the smallest feasible areas and that they implement BMPs along with planting or reseeding of areas disturbed by the Project using native plants to assist in the re-establishment of native vegetation.
2. Reclamation will use accepted erosion control measures during Project construction, supplement grass seeding with native shrub seed in upland areas where shrub cover is diminished due to pipeline disturbance, monitor planting to ensure establishment, and control noxious weeds in areas disturbed by the Project.
3. Reclamation will comply with Section 404 of the Clean Water Act and request and obtain authorizations for discharge of dredge and fill for the Project prior to construction.
4. Reclamation will develop and implement a plan to replace riparian and wetland habitat. The plan will include acre-per-acre replacement or enhancement of 3 acres for each acre lost. It is anticipated that compensatory mitigation will require the revegetation of 17 acres of non-native riparian (Russian olive and tamarisk), and 3.6 acres of wetlands temporarily removed during pipeline construction. Approximately 0.9 acres of non-native riparian and 1.1 acres of wetlands will be permanently removed for Project features.

Wildlife Commitments

1. Reclamation will minimize disturbance to raptors by restricting major construction activities along the Nutria and Defiance Monoclines, Cutter Canyon, Blanco Canyon, and the corridor from Cutter to Largo Canyons during the nesting season (January 15 to August 15). If that is not possible, extensive nest searches will be made up to three-quarters of a mile from the proposed activities immediately prior to construction and active nests avoided.
2. Reclamation will conduct extensive nest searches within one-quarter mile of the proposed activities immediately prior to construction and avoid active nests if construction activities could not be scheduled outside the January 15 to July 15 timeframe.
3. Reclamation will incorporate raptor perch guards or raptor safe configurations on all new transmission structures.
4. Reclamation will avoid removal of riparian and wetland vegetation between March 15 and August 15 to avoid potential impacts to migratory bird nesting.
5. Reclamation will trench and bury pipeline concurrently to minimize trapping of small wildlife to the extent possible. Reclamation will construct escape ramps for trenches left open overnight.

Aquatic Resources Commitments

1. The Navajo Depletion Guarantee will be implemented as previously described under Water Uses and Resources Commitments.
2. Reclamation will incorporate BMPs in construction contracts as previously described in the Water Quality Commitments.

Special Status Species Commitments

1. Reclamation will conduct surveys for ferruginous hawk and bald eagle in Project construction areas one year in advance of construction for pipeline routes and construction sites not adjacent to highways, well-traveled roads, or areas of regular human activity.
2. Reclamation will implement appropriate protective measures to avoid or minimize nest disturbance if active nests are found.
3. Reclamation will conduct surveys for Southwestern willow flycatcher in riparian and wetland habitat prior to construction within one-quarter mile of disturbed areas and avoid construction activities during the nesting season (March 15 to August 15) if active nesting is found.
4. Reclamation will delineate and avoid beautiful gila plants where possible.
5. Reclamation will implement Conservation Measures and Reasonable and Prudent Measures (RPMs) as described in Appendix 1.

Recreation Commitments

There are no environmental commitments for recreation resources.

Land Use Commitments

1. Reclamation will ensure that revegetated areas are fenced to prevent grazing activities until disturbed areas become re-established.
2. Reclamation will work with the Navajo Nation to provide temporary relocation assistance to affected livestock owners along the pipeline corridor.
3. Reclamation will provide relocation assistance to affected residences displaced by construction of the San Juan water treatment facility.

Hazardous Materials Commitments

1. Reclamation will contact pipeline and gas well companies prior to construction activities to identify and avoid existing and new hazards. Pipeline alignments will be adjusted, as needed to avoid impacts to other pipelines and wells.

Soil Commitments

1. Reclamation will mandate that construction contractors use and implement measures contained in erosion control guidelines and BMPs to control soil erosion from Project construction areas.

Geology Commitments

There are no environmental commitments for geological resources.

Paleontological Commitments

1. During Project construction activities, Reclamation will monitor areas with exposed geological units or settings that indicate a high likelihood of yielding vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. In the event of discovery, Reclamation will evaluate the significance before construction activities in the affected area could continue.
2. Reclamation will manage, on a case-by-case basis, Project construction activities adjacent to the Lynbrook and Bentonnie Tsosie Fossil areas. Reclamation will conduct paleontological clearances prior to any surface-disturbing activities along the pipeline corridor in the Lynbrook and Betonnie Tsosie Fossil areas.

Air Quality and Noise Commitments

1. Reclamation will require Project construction contractors to implement measures to control fugitive dust during construction.
2. There are no environmental commitments for noise abatement.

Socioeconomic Commitments

1. Reclamation will implement Land Use Commitments previously described to reduce socioeconomic impacts to displaced residence and livestock operators.

Environmental Justice Commitments

There are no environmental commitments for environmental justice.

Cultural Resources Commitments

1. Reclamation will implement a program to compensate for losses of archaeological sites that will occur as a result of construction, operation and maintenance of the Project.
2. Reclamation will coordinate the program with the New Mexico State Historic Preservation Officer, Navajo Nation Tribal Historic Preservation Officer, Jicarilla Apache Nation, Hopi Cultural Preservation Office, Bureau of Land Management, Bureau of Indian Affairs, City of Gallup, and the Advisory Council on Historic Preservation.
3. Reclamation will ensure compliance with mitigation measures developed in accordance with the Native American Graves Protection and Repatriation Act and Executive Order 13007.

RECLAMATION

Managing Water in the West

Environmental Assessment

Reaches 22 and 21 of the Navajo–Gallup Water Supply Project

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January 2015

Mission Statements

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 Land Management is to be responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times.

Management is based upon the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation, rangelands, timber, minerals, watershed, fish and wildlife, wilderness, air and scenic, scientific and cultural values.

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.

The Bureau of Indian Affairs mission is to enhance quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian tribes, and Alaskan Natives.

LIST OF ACRONYMS

ACEC	Areas of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
BA	Biological Assessment
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second
CWA	Clean Water Act
DOT	Department of Transportation
DZ	Dzilth-Na-O-Dith-Hle
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMI	Ecosystem Management, Inc.
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FFO	Farmington Field Office
FLPMA	Federal Land Policy and Management Act
FWS	Fish and Wildlife Service
GHG	Greenhouse gases
HAP	Hazardous air pollutants
HUC	Hydrologic Unit Code
JMEC	Jemez Mountains Electric Cooperative, Inc.
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NATA	National Scale Air Toxics Assessments
NEPA	National Environmental Policy Act
NGWS	Navajo–Gallup Water Supply

NGWSP	Navajo–Gallup Water Supply Project
NHPD	Navajo Nation Historic Preservation Department
NM	New Mexico
NMGF	New Mexico Game and Fish
NMRPTC	New Mexico Rare Plant Technical Council
NIIP	Navajo Indian Irrigation Project
NMAAQS	New Mexico Ambient Air Quality Standards
NNDFW	Navajo Nation Department of Fish and Wildlife
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTUA	Navajo Tribal Utility Authority
OM	Organic Matter
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PCE	Primary Constituent Elements
PLS	Pure Live Seed
POD	Plan of Development
PR	Planning Report
RCP	Resource Land Clearance Policies and Procedures (Navajo)
RMP	Resource Management Plan
ROD	Record of Decision
ROW	Right-of-way
SAR	Sodium Absorption Ratio
SDA	Specially Designated Areas
SHPO	State Historic Preservation Office (New Mexico)
SMS	Special Management Species
SWPPP	Stormwater Pollution Prevention Plan
TCE	Temporary construction easement
TCP	Traditional Cultural Properties
THPO	Tribal Historic Preservation Officer (Navajo Nation)
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USC	United States Code
USDA	U.S. Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRI	Visual Resources Inventory
VRM	Visual Resource Management
WTP	Water Treatment Plant

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1. PURPOSE AND NEED FOR ACTION

1.1. Background

The Navajo–Gallup Water Supply Project (NGWSP) is a planned regional water supply system that will distribute surface waters from the San Juan River to the eastern portion of the Navajo Nation, the city of Gallup, New Mexico, and the southwestern portion of the Jicarilla Apache Nation. The Bureau of Reclamation (Reclamation) has developed the NGWSP to provide long-term municipal and industrial water to the Navajo Nation, the Jicarilla Apache Nation, and the city of Gallup, New Mexico. The NGWSP responds to the current underserved and ever increasing demand for water in these communities and addresses health and safety issues related to water quality. The existing groundwater supplies currently utilized by these communities are dwindling, are of poor quality, and have limited capacity (Reclamation 2009). More than 40 percent of Navajo households rely on water hauling to meet daily water needs (Reclamation 2009). The city of Gallup's groundwater levels have dropped approximately 200 feet over the past 10 years, and the supply is not expected to meet current water demands within the decade (Reclamation 2009). The Jicarilla Apache people are currently not able to live and work on the reservation outside of the town of Dulce, New Mexico, due to a lack of water supply (Reclamation 2009).

Reach 22, also called the Cutter Lateral, is a segment of the NGWSP project. Reach 22 would total approximately 24.5 miles that would be comprised of three separate construction projects from Cutter Dam to Huerfano, NM. Reach 22a from Cutter Dam to Navajo Allotted lands; Reach 22b from Navajo Allotted lands to the Dzilth-Na-O-Dith-Hle (DZ) Storage Tanks near the base of Huerfano Mesa; and Reach 21, the Cutter Lateral Water Treatment Plant, on BLM land adjacent to County Road 7575 about 3 miles east of U.S. Highway 550. These reaches would transport potable water to the Huerfano Chapter, as well as the remaining chapters along the Cutter Lateral Transmission Line.

The Reach 21 designation was necessary due to the planned relocation of the water treatment plant southeast of Huerfano Mesa. Reach 21 has been split into two phases or portions from the original Final Environmental Impact Statement—the connection to Cutter Dam and the Cutter Lateral water treatment plant.

The proposed Reach 22 water line alignment is located in San Juan County, NM, as shown in Figure 1. The proposed water line alignment would cross lands administered by the Navajo Nation, Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), State of New Mexico, and privately owned lands. The general legal description of the proposed NGWSP Reaches 21 and 22 includes:

Reach 22

Portions of Sections 4, 9, 16, 17, and 18 of Township 25 North, Range 9 West

Portions of Sections 1, 11, 12, 14, 23, 26, 27, 33, and 34 of Township 26 North, Range 9 West

Portions of Sections 1, 12, 13, 24, 25, and 36 of Township 27 North, Range 9 West

Portions of Sections 24, 25, and 36 of Township 28 North, Range 9 West

Portions of Sections 7, 8, 18, and 19 of Township 28 North, Range 8 West

Portions of Sections 31, 32, and 33 of Township 29 North, Range 8 West

Reach 21

Portions of Section 9 of Township 25 North, Range 9 West

Portions of Section 33 of Township 29 North, Range 8 West

Reclamation prepared a Planning Report and Final Environmental Impact Statement for the greater NGWSP (FEIS-NGWSP; Reclamation 2009), and the Record of Decision (ROD) for that document was signed by the Secretary of the Interior (Secretary) on October 1, 2009. Authorization to complete the NGWSP was included in the Omnibus Land Management Act of 2009, Title X, Part II (P.L. 11-11, March 30, 2009). The design, construction, operation and maintenance of the NGWSP as authorized by P.L. 111-11 are described in the preferred alternative in the FEIS-NGWSP. The FEIS-NGWSP is available for review at Reclamation's Western Colorado Area Office, Durango, Colorado or on the World Wide Web at

http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html. The site-specific analysis contained herein tiers to and incorporates by reference the information and analysis in the Reclamation FEIS-NGWSP.

This site-specific analysis also tiers to and incorporates by reference the information and analysis contained in the BLM Farmington Proposed Resource Management Plan/Final Environmental Impact Statement (FFO-FEIS) approved as per the September 29, 2003 ROD as the Farmington Resource Management Plan (FFO-RMP), pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21 (USDI/BLM 2003). The document is available for review at the BLM Farmington Field Office, Farmington, New Mexico, or on the World Wide Web at http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/farmington_rmp.html. This environmental assessment (EA) addresses the site-specific resources and effects of the Proposed Action that were not specifically covered within the FFO-FEIS, as required by the National Environmental Policy Act of 1969 (NEPA), as amended (Public Law 91-90, 42 United States Code [USC] 4321 et. seq.).

This EA also incorporates by reference the Environmental Assessment for Design Data Collection on Reach 22 Lands Administered by the BLM, dated December 2011, (EA#: DOI-BLM-NM-F010-2012-50-EA) prepared by SME Environmental Consultants for the BLM and Bureau of Reclamation.

1.2. Purpose and Need for Action

The purpose of the Proposed Action is to provide the proponent with access to BLM-managed lands and Navajo Nation Tribal Trust lands managed by the BIA Navajo Region for a right-of-way (ROW) for Reaches 21 and 22 of the NGWSP. As authorized by Title V of the Federal Land Policy and Management Act (FLPMA) of October 21, 1976 (43 USC 1761 et seq.) as amended, BLM will issue ROW grants for pipelines (other than oil and gas pipelines) and other facilities and systems which are in the public interest. It is the policy of the BLM to authorize all ROW applications at the discretion of the authorized office in the most efficient and economical manner possible while protecting the natural environment and providing for public safety (43 CFR 2800 and 2880). In addition, the BIA is to authorize all ROW applications that are within a reservation for the purpose of constructing, operating, or maintaining water conduits (40 CFR 169). Reclamation is the lead project sponsor with BLM and BIA as cooperating agencies.

An approved ROW grant issued by BLM would authorize the Reclamation to own and construct and the Navajo Tribal Utility Authority (NTUA) to operate and maintain Reaches 21 and 22, segment of the NGWSP. An approved ROW grant from BLM would further progress towards a suitable, long-term water supply for a number of underserviced communities in northwestern New Mexico.

An approved ROW grant issued by the BIA would authorize Reclamation to own and construct and NTUA to operate and maintain Reach 22 segments on tribal trust and allotted lands. An approved ROW grant from the BIA would further progress towards a suitable, long-term water supply for members of the Navajo Nation. The proposed project would also facilitate self-governance and sovereignty goals of the Navajo Nation.

1.3. Conformance with Applicable Land Use Plan(s)

The Proposed Action Alternatives are in conformance with the September 2003 Farmington Resource Management Plan with Record of Decision, as updated in December 2003 (USDI/BLM, 2003). The proposal is recognized as an appropriate use of public lands in the FFO planning area Resource Management Plan. The proposed action is in conformance with the Farmington RMP. Specifically the Proposed Action is in conformance with the objective of the FFO lands program to grant ROWs to qualified businesses and government entities for use of public lands (BLM 2003b, pages 2-5 and 2-6). Special Designated Areas (SDAs) and Areas of Critical Environmental Concern (ACECs) for the Proposed Action area were identified in each RMP/EIS under authority of the FLPMA allowing for multiple use of lands administered by the BLM. The pipelines and other improvements associated with Reaches 21 and 22 are not located within any ACECs. Portions of Reach 22 would cross under an Ephemeral Wash Riparian SDA (Largo Canon Reach #2).

The Proposed Action Alternatives are in compliance with the Land Use Plan for the Huerfano Chapter (ARC 2002).

1.4. Relationship to Statutes, Regulations or Other Plans

Reclamation would comply with all applicable federal and State of New Mexico laws and regulations. Non-point source pollution is an identified problem in the planning area that is directly associated with soil stability and water quality. Mandated by the Clean Water Act (CWA), efforts to reduce non-point source pollution through implementation of erosion control and management practices are an important part of BLM's management activities. Construction activities disturbing land may require permit coverage through a National Pollution Discharge Elimination System (NPDES) storm water discharge permit. Upon determination, a U.S. Army Corps of Engineers Section 404 CWA Permit for discharge of dredge and fill materials in Waters of the U.S. may also be required. Applicants are required to obtain all the necessary permits and approvals prior to any disturbance activities.

Consultation with the U.S. Fish and Wildlife Service (USFWS) as required by Section 7 of the Endangered Species Act was conducted as part of the Farmington PRMP/FEIS (Consultation No. 2-22-01-1-389) to address cumulative effects of the RMP implementation. The consultation was summarized in Appendix M of the RMP/EIS. Formal consultation with the USFWS was also conducted as part of the NGWSP PR/FEIS (Consultation No. 2-22-01-F-532). The consultation is summarized in Appendix C of the PR/FEIS. Review of current USFWS Federally Listed species and onsite evaluation of habitat for the Proposed Action indicate no need for additional Section 7 consultation (Ecosystem Management, Inc. 2014a).

Reclamation will file a ROW application with the Farmington Field Office of the Bureau of Land Management (BLM FFO) for proposed construction of Reach 22 of the NGWSP. Reclamation will also apply for a ROW application with the BIA for proposed construction of Reach 22 on Tribal Trust and allotted lands. BLM and BIA regulate ROW development so as to minimize environmental effects to public lands as required by numerous federal laws, including:

- The Endangered Species Act of 1973 (P.L. 94-325),
- The Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. 703-712),
- The Bald Eagle and Golden Eagle Protection Act of 1940 (BGEPA), as amended (16 U.S.C. 668-668d).
- The Federal Water Pollution Control Act of 1948 (Clean Water Act), as amended (33 U.S.C. Chapter 26),
- The Clean Water Act of 1963, as amended (P.L. 88-206),
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. Chapter 103),
- The Antiquities Act of 1906, as amended (P.L. 52-209),
- The National Historic Preservation Act of 1966, as amended (P.L. 89-665),
- National Trail System Act of 1968, as amended (16 U.S.C. 1241-1251),
- The Archaeological and Historic Preservation Act of 1974 (P.L. 86-253),
- The Archaeological Resources Protection Act of 1979, as amended (P.L. 96-95),
- The American Indian Religious Freedom Act of 1978, as amended (42 U.S.C. 1996), and
- The Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601).

The MBTA prohibits the taking, killing or possessing migratory birds. Executive Order (EO) 13186 was signed on January 10, 2001, directing executive departments and agencies of the federal government to take certain

actions to further implement the MBTA including developing and implementing a Memorandum of Understanding (MOU) with the USFWS that would promote the conservation of migratory bird populations. A MOU was developed and entered into by the BLM and USFWS on April 12, 2010 to accomplish EO 13186 and to ensure the successful implementation of BLM and USFWS migratory bird conservation responsibilities. The MOU *to Promote the Conservation of Migratory Birds* presents collaborative methods to promote the conservation of migratory bird populations by identifying and implementing strategies which avoid or minimize adverse impacts to migratory birds. The BLM and USFWS have agreed that implementation of the MOU will be in harmony with existing agency missions, and the MOU does not supersede any legal requirements or existing species conservation processes and procedures such as Endangered Species Act (ESA) recovery plans. Reclamation does not have an MOU in place with the USFWS for management of migratory birds; a MBTA Directives and Management document is in draft form only. Reclamation analyzes and documents effects to migratory birds during the NEPA process and avoids or mitigates those effects to the maximum extent feasible.

The MOU to *Promote the Conservation of Migratory Birds* entered into by the BLM and the USFWS was not completed during the development of the revised FFO RMP. Consultation on the Biological Assessment (BA) with the USFWS for the RMP was completed on October 2002, the Environmental Impact Statement (EIS) was completed in March 2003, and the Record of Decision (ROD) for the RMP was signed in September of 2003. There are no management constraints or mitigation measures pertaining to the MBTA listed within the RMP, BA, EIS, or ROD. Revision and/or adoption of some elements of the MOU into the RMP may be required. Currently, effects to migratory birds are addressed and mitigated at the project level as outlined in the Migratory Bird Treaty Act BLM/FFO Interim Management Policy (Instruction Memorandum No. NM-F00-2010-001, USDI/BLM 2010).

Until further guidance related to the MOU is issued, the BLM will continue to analyze impacts to migratory birds in NEPA documents, list the MBTA as a law the owner of any BLM permit must comply with, and utilize the best management practices and mitigation measures that minimize impacts to migratory birds as outlined in Instruction Memorandum No. NM-F00-2010-001.

The proposed project area is within BLM/FFO designated potential habitat areas for the BLM Special Management Species and State of New Mexico Endangered plants, the Brack's cactus (*Sclerocactus cloveriae* ssp. *Brackii*) and Aztec gilia (*Aliciella formosa*). Per the BLM/FFO Instruction Memorandum No. NM-200-2008-001, proposed projects within Brack's cactus and Aztec gilia habitat will require a biological survey. When individual plants or suitable habitat for these plants are found within designated potential habitat during a biological survey for a proposed project, every effort to relocate the proposed project will be explored to minimize disturbance.

The BIA works with the Navajo Fish and Wildlife Department through a Public Law 93-638 contract to regulate ROW development on the Navajo Nation to minimize environmental effects to the biological resources on the Navajo Nation as required by Navajo Nation laws and procedures including:

- Navajo Endangered Species Act
- Resource Land Clearance Policies and Procedures
- Bald and Golden Eagle Protection Act

As the lead agency for the entire NGWSP, Reclamation has developed a Programmatic Agreement for compliance with the National Historic Preservation Act between the project participants. Reclamation, BLM, the Navajo Nation Tribal Historic Preservation Officer (THPO), the Bureau of Indian Affairs (BIA), the New Mexico State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP) are signatories to the Programmatic Agreement. Consulting parties to the Programmatic Agreement include the governments and historic preservation officials of American Indian tribes and pueblos, local municipalities, state, and federal agencies with section 106 responsibilities to consider the potential effect of the project on historic or cultural properties. The Proposed Action compliance with Section 106 responsibilities of the National Historic Preservation Act will be adhered to by the following Programmatic Agreement for the entire NGWSP.

Additionally, the ROW Grant Holder, or their designated agents, shall:

- Comply with all applicable Federal, State of New Mexico, Navajo Nation, and local laws and regulations.
- Obtain the necessary permits for the construction of Reaches 21 and 22 including water rights appropriations, water discharge permits, and relevant air quality permits.
- Certify that a Surface Use Agreement has been reached with private landowners where required.
- Obtain permission to survey and written consent from the Navajo Nation prior to BIA approval.

This EA considers the requirements of these and other laws and regulations, as applicable. The Proposed Action, including environmentally protective mitigation measures, complies with the laws and regulations indicated above. ROW grant holders are required to obtain all necessary permits and approvals prior to any disturbance activities.

1.5. Scoping, Public Involvement, and Issues

Reclamation conducted extensive public involvement, scoping, and formal comment opportunity in the preparation of the EIS for the Navajo–Gallup Water Supply Project. Chapter 7 of the PR/FEIS describes five public scoping meetings held specifically for the project and its consultation with state and federal agencies, tribal governments, local governments, and interested organizations. Volume 3 of the EIS provides all the comments and responses on the draft EIS. In brief, the EIS identifies social issues surrounding the need for a stable water supply, the uses of the water, and water rights. In addition, previous scoping identified protection of special status species and cultural resources as issues for the project. In addition, previous scoping identified protection of special status species and cultural resources as issues for the project. Consultation with the Navajo Nation and BLM supported the conclusions from previous scoping and identified no new information not previously considered in the PR/FEIS.

More recently, Reclamation has contacted local infrastructure/utility providers who may have interests in the Reach 22 project area, including the BIA Roads Regional Office, Jemez Mountains Electric Cooperative, Navajo Transmission Utility Authority, City of Farmington Electric, Navajo Department of Transportation, and Sacred Wind Communications.

Reclamation also contacted local companies through the New Mexico One-Call process in order to provide project information that may have impacts on existing infrastructure. The following organizations responded: BP America; Energen Resources, Kelco, Inc.; West Largo; Enterprise Mid-American Pipeline; NM Gas Company; XTO, Incorporated; Enterprise Production; Western Refining; Kinder Morgan, Inc.; and Williams Field Services.

Reclamation has had extensive tribal contacts for the NGWSP, both during the scoping for the NGWSP EIS and for development of a Historic Properties Programmatic Agreement currently in draft.

Although a formal public scoping process is not required by the Council on Environmental Quality, Reclamation and the BLM notified interested parties and identified issues that would be analyzed in the EA documents being prepared to fulfill the NEPA requirements. This additional scoping process also provided BLM with an opportunity to inform the public about their actions under the proposed project to gauge the concerns of those who have a stake in the resources in the project area.

A number of meetings within and between the BLM and Reclamation have been conducted to evaluate Reaches 21 and 22, organize personnel and procedures, and to identify potential issues as generalized in Table 1.

Table 1. Summary of Internal Scoping Meetings

Date	Meeting Attendees and Topics
March 24, 2011	Initial meeting between Reclamation and BLM at FFO. An environmental assessment would be required for the portion of the project that crosses BLM administered lands.
April 06, 2011	Scott Hall (BLM) informed the Interdisciplinary Team of the upcoming workload that would be involved in this project.
April 08, 2011	Held a BLM/Reclamation partnering meeting.
May 12, 2011	A meeting to discuss initial internal BLM concerns. A copy of the comments was submitted to Reclamation.
June 07, 2011	NGWSP; Project Pre-Construction Committee Meeting No. 14 at the Reclamation, Four Corners Construction Office. There was a small break out meeting with Reclamation, BLM, Land Board, & Navajo Nation representatives.
July 18, 2011	Held a working group meeting at the BLM Office.
July 19, 2011	BLM/Reclamation/NEPA Contractor meeting at Reclamation's Durango office to brief the contractor on the project. Cultural and Natural Resource surveys had not been completed yet.
August 29, 2011	Held a Management Meeting at the BLM/FFO.
October 7, 2011	Held a Management Meeting at the BLM/FFO.
October 20, 2011	BLM Interdisciplinary Team meeting.
December 7,2012	Meeting between Reclamation and BLM at FFO to discuss environmental assessment for construction of Reach 22.

1.5.1. BLM Scoping Activities

In addition to internal agency discussions of the proposed Reach 22 project, BLM distributed information about Reach 22 at other public meetings. Table 2 summarizes the time and locations of these meetings.

Table 2. Summary of BLM meetings where information about Reach 22 was available to the public.

Date	Meeting Attendees and Topics
March 30, 2011	Scott Hall (BLM) attended a public meeting for San Juan County proposed relocation of the County Road 350/3720/3100 intersection.
April 28, 2011	Informative Public BLM Open House regarding major projects within the FFO.
July 06, 2011	Public Meeting for BLM Visual Resource Management Amendment.
August 5, 2011	Scott Hall (BLM) attended a scheduled meeting of the New Mexico Oil and Gas Association (NMOGA).
August 25, 2011	Public meeting for the BLM Glade Run Recreation Plan Amendment.

At some of these meetings, BLM displayed a poster with the proposed route of Reach 22 available for the public to observe. BLM engaged the public and in some instances, gave short briefing presentations about the Reach 22 project.

The public did not have specific comments about the project. General comments and questions typically concerned water rights, and it should be pointed out that public meetings on the Navajo water rights settlement were going on at about the same time. Public questions included: "when is Reach 22 going to be built?"; "where is the water coming from?"; and "where is the water going?"

Industry concerns were about the impact of the pipeline and construction to their infrastructure. Questions included: "how is Reach 22 going to impact our wells?"; "how will that affect our access roads?"; and "how is Reach 22 going to cross our pipelines?"

1.5.2. Issue Summary

Table 3 summarizes the range of relevant issues identified based on the results of public, agency, and tribal comments on the entire NGWSP and scoping conducted specifically for the Reach 22 Project.

Table 3. Issues identified in scoping for the Reach 22 Project

Issues Category	Issues Summarization
Water Rights	Reclamation has acknowledged the future use of unused water rights may be impacted by the NGWSP, but it is difficult to speculate on how an unused water right would be developed or impacted. The States will be responsible for administering the water rights to ensure compliance with State water law and the Colorado River Compact. However, holders of existing water rights may still want to know how Reach 22 will affect existing water rights and how those effects could be mitigated.
Cultural Resources	How will the handling and repatriation of any discovered Native American remains be addressed?
Threatened and Endangered Species	Will burrowing owls be affected and how will effects be mitigated?
Riparian Areas	Where and how will riparian areas along Cutter Canyon and Cañon Largo be affected and how can these effects be mitigated?
	What are the alternatives to locating the alignment in Cutter Canyon?
Range/Grazing	Have grazing allottees been contacted?
	Are mitigation measures in place to protect livestock, ensure containment of livestock, and preserve range improvements and access to those improvements?
	Are measures in place to control noxious weeds and their spread?
Wildlife	How will open trenches be mitigated to reduce the risk of injury and death to terrestrial animals and to reduce impediments to wildlife travel?
Paleontological Resources	Will fossils be affected? How will these effects be mitigated?
Infrastructure	How are intersections/crossings of existing infrastructures being addressed? What will be the effects to existing infrastructure?
	How will the Proposed Action affect 10 Mile Bridge, and how will these effects be mitigated?
	How will the proposed alignment affect the road surface of CR 4450 and how will these effects be mitigated?

1.5.3. Issues Dismissed from the Analysis

The following issues were considered, but dismissed from analysis because the Proposed Action and No Action alternatives do not affect the issues for the reasons stated below, and therefore is not discussed further in the EA.

Areas of Critical Environmental Concerns and Special Designated Areas—Special Designated Areas (SDAs) and Areas of Critical Environmental Concern (ACECs) for the proposed project area were identified in each RMP/EIS under authority of the FLPMA allowing for multiple uses of lands administered by the BLM. Portions of the proposed Reach 22 alignment would be adjacent to two FFO designated Areas of Critical Environmental Concern (ACEC)—the Dzil'na'oodlii (a.k.a. Huerfano Mesa) and Ashiih Naa'a (Salt Point), both Cultural ACECs. Both Dzil'na'oodlii and Ashiih Naa'a are specially designated Native American traditional

use/sacred area ACECs within the BLM/FFO planning area as described in the 2003 RMP (BLM 2003b, p. C-65). The area is of cultural importance to current occupants of the San Juan Basin and surrounding areas. See Section 3.9 for a description of the cultural properties associated with the ACECs adjacent to the proposed project area. The impacts to the ACECs would be negligible because the proposed actions would occur outside the ACECs and in previously disturbed areas. There could be minor, short-term impact on visual resources in the area surrounding the ACECs. These visual effects should not affect the cultural values of the ACECs given the low level of visual effects, the distance of the effects from the ACEC, and the prevalence of other human activities in the area associated with adjacent roads and oil/gas well locations.

Portions of Reach 22 would cross an Ephemeral Wash Riparian SDA (Largo Cañon Reach #2 and Carrizo Canyon). The Ephemeral Wash Riparian SDA was established to provide protection for the riparian systems and facilitate the maintenance and attainment of proper functioning condition. Reclamation would use horizontal directional drilling to install the water pipeline under Largo Cañon, avoiding any impacts that this riparian area. Impacts to the riparian habitat in Carrizo Canyon are discussed in section 3.5 Riparian Areas and Wetlands; therefore, a separate SDA section is not needed.

Visual Resources—The impacts to visual resources management would be negligible because all BLM-administered lands that would be crossed by proposed Reach 22 are located within Visual Resource Management (VRM) Class III and IV. The objective of Class III is to provide for management that partially retains the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract but should not dominate the view of the casual observer. Changes should mimic the basic elements found in the predominant natural features of the characteristic landscape. Changes may also dominate the view and be a major focus of the viewer's attention. The objective of Class IV is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. Management activities may dominate the view and may be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of line, form, color, texture. The visual resource impacts from vegetation removal, installing associated structures (water tanks, water treatment plant, pumping plants, power lines) are consistent with both VRM Classes III and IV objectives. To reduce color contrast of the new facilities, the proponent would paint the facilities on BLM-administered lands a color that is pre-approved by BLM and that blends with the adjacent vegetation. Tanks will be painted juniper green, with exception of the tanks at and near the Cutter Lateral water treatment plant, which will be painted as close as possible to BLM's Carlsbad Canyon. The pre-fabricated pump station will be constructed with light stone, which is close to BLM's Carlsbad Canyon. Surge tank building will be constructed of pre-tinted split-faced block, Driftwood (yellow-brown Sandstone) color, with 757 Buckwheat mortar between the blocks, which are close as possible to the Carlsbad Canyon on BLM's standard environmental colors chart.

Minerals—The impacts to minerals would be negligible because existing pipelines would be protected so that their operations would not be affected. Gas well access roads may be temporarily impacted from time to time, but proposed activities would not block access to gas wells or interfere with gas production activities.

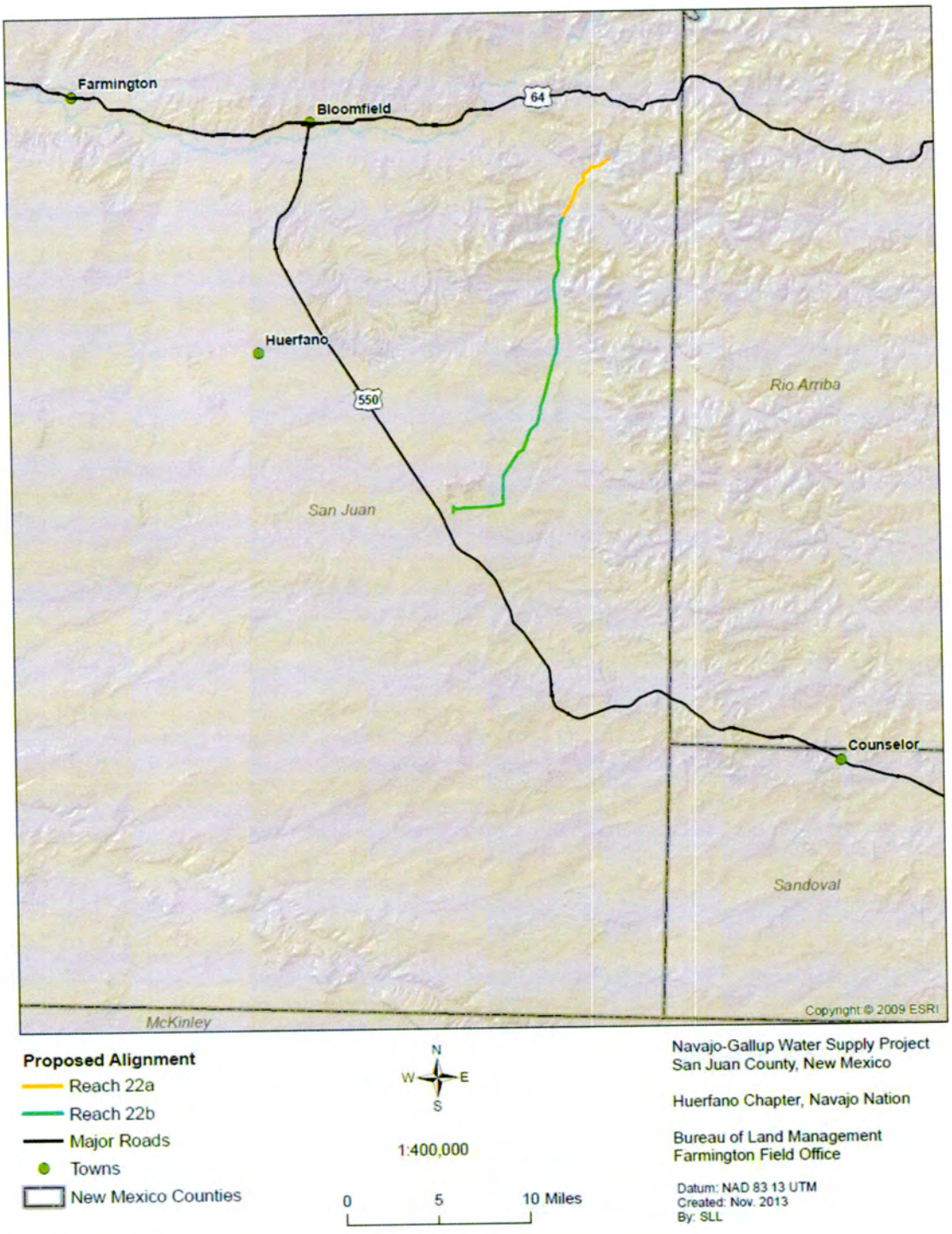

Figure 1 Vicinity map showing the project location in San Juan County

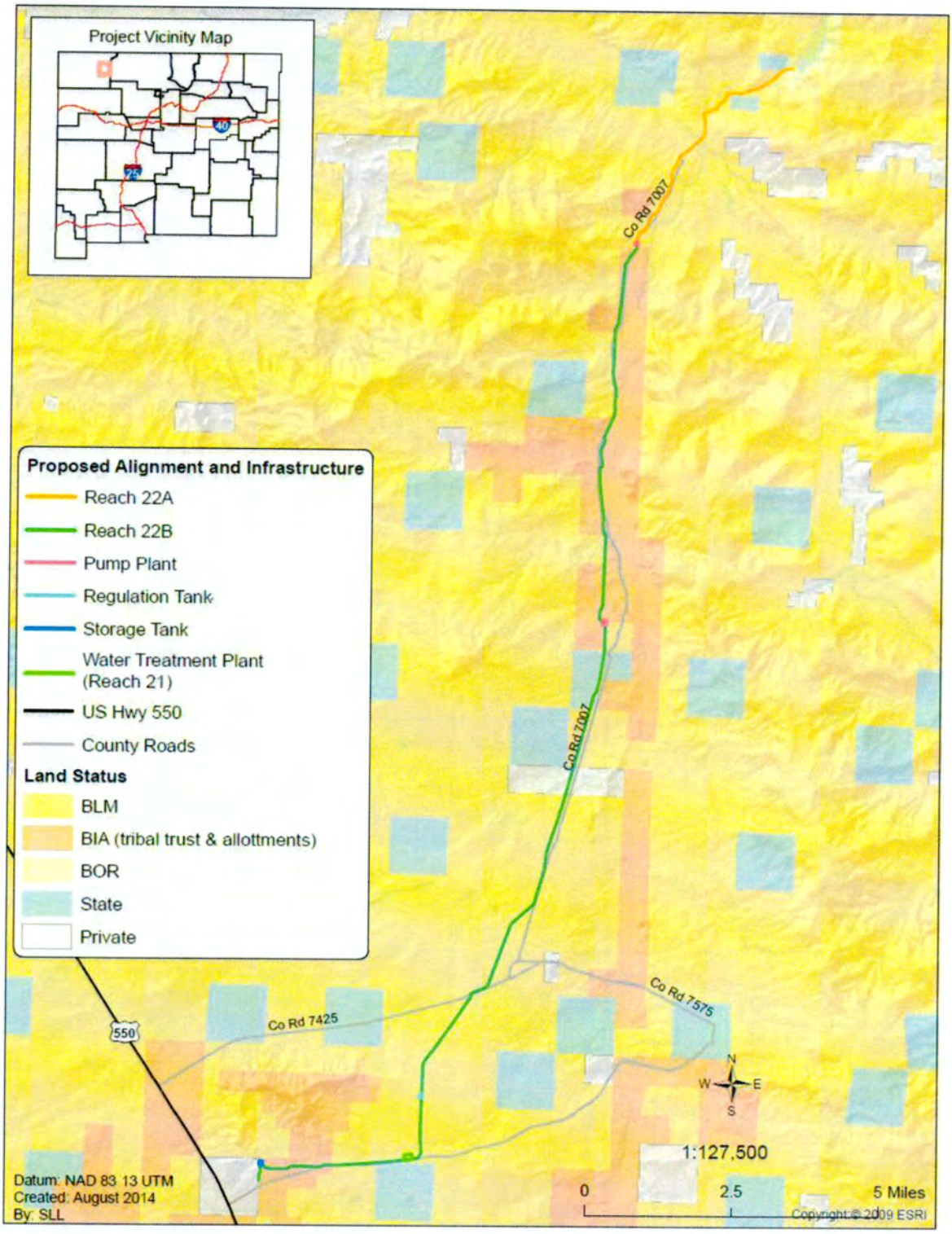

Figure 2. Location of Reach 22 showing land status

2. PROPOSED ACTION AND ALTERNATIVE(S)

2.1. Elements Common to All Action Alternatives

Reclamation proposes to fund and authorize the construction and operation of Reaches 21 and 22 of NGWSP. Construction would consist of disturbing lands along the proposed pipeline of approximately 24.5 miles in length and is anticipated to occur from 2015 to 2018. The approval would provide for the construction of three reaches of the project, designated as 21, 22a, and 22b, which includes the construction of two pumping plants and a water treatment plant. These reaches would transport untreated water from Cutter Dam to eh Cutter Lateral Water Treatment Plant near County Road 7575, and then potable water westward to the DZ Storage Tanks near the base of Huerfano Mesa and Phase 3 of the Eastern Navajo Water Pipeline. Pipeline construction would require a temporary construction easement totaling about 295 acres, which when construction is complete, would be reduced to a permanent ROW of about 175 acres. In addition, the associated pumping plants, water treatment plant, and storage tanks would require about 24 acres of new permanent easements. See Figure 2, which shows the route that is anticipated at this time for the pipeline. The pumping plants exact locations are subject to change as the design is finalized.

2.1.1. Reach Description

The following describes the reaches and the work associated with each. See Figure 2 for a map of the alignment and associated infrastructure, pump station, water treatment facility. About 24.5 miles of pipeline ROW would be required—16 miles on BLM land, 5.3 miles on Navajo Allotted lands, 1.4 miles on Tribal Trust lands, 1.3 miles on State Trust lands, and 0.5 miles on private lands.

Reach 22a
The Reach 22a portion of the alignment begins at the toe of Cutter Dam in the northwest quarter of sec. 33, T. 29 N., R. 8 W. and extends southwestward along the west edge of Cutter Canyon riparian corridor, BLM's Special Designated Area (SDA); mitigation measures are being developed for wetlands and riparian areas identified within the ROW. It then crosses Cutter Wash approximately two thousand feet upstream of the confluence with Largo Wash. The alignment continues across Cañon Largo about seven hundred feet downstream of the Navajo Indian Irrigation Project's (NIIP) Largo Siphon, which is located in the northeast quarter of sec. 18, T. 28 N., R. 8 W. The alignment then proceeds in a southerly direction along Blanco Canyon, paralleling on the west side of County Road 7007 to the southeast quarter of sec. 24, T. 28 N., R. 9 W., where it ends immediately north of the beginning of Navajo allotted lands. This reach would contain approximately 4.5 miles of 18- to 24-inch polyvinyl chloride (PVC) and high-density polyethylene pipe (HDPE); all on BLM managed lands.

Reach 22b
Reach 22b starts where Reach 22a ends in Blanco Canyon, paralleling County Road 7007, crossing Navajo allotted lands and Tribal Trust, BLM, State Trust, and private lands to the northeast quarter of sec. 23, T. 26 N., R. 9 W., before running cross-country in a southwesterly direction to the southeast quarter of sec. 27, T. 26 N., R. 9 W. The alignment then follows County Road 7425 westward for about 0.3 mile. The alignment then proceeds southwesterly and then southerly, paralleling an unnamed oil/gas service road for approximately 3.1 miles to the intersection with County Road 7575. At this junction, the Reach 22b pipeline proceeds west along the north side of County Road 7575 to the section line between sections 17 and 18, T. 25 N., R. 9 W., where it continues westward crossing Tribal Trust land to the proposed water storage tank in the northwest corner of sec. 18. After the proposed water storage tank, the alignment terminates into the existing Eastern Navajo Water Pipeline (ENWP) Phase 3 in the northwest corner of sec. 18. This portion of the reach would include 20 miles of 20- to 24-inch PVC and HDPE pipe.

Reach 21
Reach 21, the Cutter Lateral Water Treatment Plant (WTP), will be located on BLM land in the southeast quarter of sec. 9, T. 25 N., R. 9 W. The WTP will be located on the north side of County Road 7575 and the Reach 22b pipeline, immediately west of a gas well operated by Timbers Energy, LLC.

2.1.2. Right-of-Way Requirements

For safe and efficient pipeline construction, a permanent right-of-way easement (ROW) and temporary construction easement (TCE) would be obtained from various public, private, tribal, and non-tribal entities along the length of the proposed water pipeline (Table 4). The ROW and TCE for this project together would total 100 feet in width along the pipeline. This easement allows space for spoilage, fill material, stockpiling pipe, and a safe work area for heavy equipment during construction. During construction the contractor would meet Occupational Safety and Health Administration (OSHA) requirements, subpart, 29CFR 1926.650-652 for trench safety.

The permanent ROW is a 60-foot-wide tract centered on the centerline of the pipe. The permanent ROW for the pipeline requires less width since the work for operations, maintenance, and replacements (OM & R) on the pipeline is typically confined to short linear sections of excavation. These operations do not require the level of efficiency for utilization of equipment as is desired during initial construction and worker safety can be assured through alternative excavation and shoring methods.

The remaining 40-foot TCE is comprised of two 20-foot-wide tracts, one adjacent to each side of the ROW. This TCE allows for heavy equipment and workers to perform the job safely and efficiently. The TCE generally requires space on one or both sides of the excavation to accommodate construction vehicle access, materials storage, spoil piles from trenching, and staging and heavy construction equipment (e.g., excavators, cranes, dumps) access. In some cases, the TCE would be narrowed on one or both sides of the ROW, resulting in a reduced work area. The TCE is usually narrowed to avoid disturbance of nearby cultural or environmental sites or to avoid encroachment or other interference with adjacent ROWs, roads, or other facilities not part of the Proposed Action. The TCE would expire at final completion of the project when project operation and maintenance is transferred over to the NTUA.

The TCE and permanent pipeline ROW would total approximately 295 acres and, after construction activities are completed, the permanent ROW would be about 175 acres.

The associated NWGSP facilities (pump station, storage and regulation tanks, water treatment plant), would require a permanent easement for each site. However, the fenced area, driveways, and drains generally occupy a smaller area within this easement. The easement area outside each facility's fence would be graded for slope, drainage, and access depending on the terrain. The larger easement area allows enough area to safely maneuver the necessary heavy equipment and provide for the storage and staging of construction materials. It also allows for more flexibility when the need arises to expand facilities, for instance, allowing construction of additional storage tanks currently deferred under the present project scope. The total area required for permanent easements to accommodate the facilities totals approximately 24 acres.

Table 4. Pipeline ROW Surface Ownership Summary

Surface Ownership	TCE (acres)	ROW (acres)	Total (acres)
BLM	76.1	114.1	190.2
Navajo Tribal Trust	6.8	10.2	17.0
Navajo Allotted	27.0	40.4	67.4
State Trust	6.3	9.5	15.8
Private	2.5	3.7	6.2

2.1.3. Pipeline Construction

The pipeline ROW and TCE would be cleared of vegetation and topsoil as well as removal of some large boulders. The topsoil would be stockpiled separate and covered from general excavation material and would then be utilized during reseeding. The major portion of the excavation would be done using bulldozers, scrapers and track hoes, and possibly trenchers. A ripper would more than likely be used to break up sandstone, siltstone, and shale. Blasting will not be allowed.

The pipeline trench would reach a maximum depth of 15 feet in some areas (wash crossings) but would typically average around 6 feet in depth. The bottom width of the trench would be approximately three to four feet. The trench width for the pipeline may vary considerably depending on the depth of excavation, the type of bedding and embedment requirements for the various types of pipe, and the required side slopes of the trench excavation. In some locations, the contractor may lower side slopes resulting in a much wider trench at the top in order to meet OSHA trench safety requirements. The contractor would provide trench safety as required by OSHA either through the use of trench boxes or benching and/or reduction of the side slope. OSHA trench safety requirements prevent slope failures and endangering laborers during excavation and pipe installation operations and are dependent upon the types of native material encountered during excavation. Additional width is also required on one side of the excavation to accommodate the excavation material pile. However, all work related to construction would be conducted from within the combined 100-foot-wide ROW and TCE.

Reclamation would use horizontal directional drilling to install the water pipeline under Cañon Largo. Reclamation is currently performing geological exploration to determine the density and consistency of soils in the canyon wash, as well as determining the depth to bedrock.

It is anticipated that water would need to be pumped from trenches when encountered to off worksite areas. Water would be pumped to off worksite areas to minimize mud and rutting from heavy equipment and to dispose of excess water (dewatering) in the working trench. Contractors would be required to obtain all necessary permitting for dewatering disposal prior to commencing construction.

2.1.4. Construction of Storage Tank

Two different sites for a regulation tank and storage tanks are included within the scope of the project. These sites are located towards the southern end of Reach 22b.

The size of the permanent easement that will be acquired for each depends on:

- Presence and size of existing storage and chlorination facilities.
- Number and volume of proposed water tanks.
- Amount of site grading (cut and fill) needed to assure proper tank elevation, site drainage, and site access.
- Presence or absence of nearby cultural or environmental resources restricting site boundaries.

The permanent easement area is defined for each tank to allow for safe and efficient construction activities without causing unacceptable impacts to surrounding environmental or cultural resources. These activities include, but are not limited to, grading, sub-foundation earthwork, improvement or construction of driveways for access, fabrication of steel water storage tanks, placement and trenching of site piping, and storage of materials and equipment. Power to the site during construction could be provided through generators. A permanent power source is anticipated for construction in 2016 or 2017. The construction activities would be confined to the easement at all times during construction.

Tank sites without power would require the construction of single-phase power lines for which separate ROW and TCE would be acquired. All project power lines would be constructed and maintained by JMEC. Power lines on BLM managed land would have a 30-foot permanent ROW and ten feet of TCE; power lines on Navajo trust land would have a 20-foot ROW and an additional 20 feet of TCE. Permanent ROWs would be centered on the proposed power line alignment. The TCEs would be placed on each side of the permanent ROW. The TCE would expire after construction of each power line is complete. All power line construction activities would be confined within the ROW and TCE at all times during construction.

The storage tanks would be located on Navajo Tribal Trust land in the northwest corner of Section 18, Township 25 N., Range 9 W. at the end of Reach 22b. These tanks will provide water storage for the Cutter Lateral and Huerfano Chapter. There are no existing site facilities. Proposed new construction includes fabrication and placement of one 1,500,000-gallon storage tank. Surface water runoff as well as existing and

proposed drain lines from the tanks would all discharge to existing ditches/swales adjacent to the sites. Periodic discharges of chlorinated or non-chlorinated water from the tanks may occur when disinfecting, flushing, filling, or emptying the tanks and associated piping. Power to this site is anticipated to be constructed in 2017. The new facilities would require about 4 acres of proposed permanent easement.

The regulation tank would be located on BLM lands in the northeast corner of Section 9, Township 25 N., Range 9 W. The regulation tank is needed to mitigate potential water surges upstream of the proposed water treatment plant. There are no existing site facilities. Proposed new construction includes fabrication and placement of one 100,000-gallon regulation tank. The new tank would require about 2 acres of proposed permanent easement.

2.1.5. Pump Plants and Water Treatment Plant Construction

Two pumping plants and a water treatment plant are included within the scope of this project. Pumping plant 1 would be located at the downstream end of Reach 22a on BLM land in the southeast quarter of sec. 24,T. 28 N., R. 9 W. Pumping plant 2 would also be located on BLM land in the southeast quarter of sec. 25 of T. 27 N., R. 9 W. The Cutter Lateral WTP (Reach 21), which includes pumping plant 3 would also be located BLM in the southeast quarter of sec. 9 of T. 25 N., R. 9 W.

Each pumping plant would require a permanent easement up to approximately four acres. The permanent ROW would be large enough to allow for access roads and to perform construction activities in a safe and efficient manner. These activities would include, but are not limited to storage of materials and equipment, placement of jobsite trailers, fabrication areas, and placement and grading. Pumping Plants 1 and 2 would be constructed in conjunction with the Reach 22b pipeline, beginning in the early winter of 2015. Power to the site during construction could be from temporary utilities or generators. It is anticipated that permanent power would be available to Pumping Plant 1 by spring of 2016. The construction activities would be confined to the easement at all times during construction. The contractor would be required to submit both an erosion control plan and a seeding plan before beginning construction.

Site runoff and drain lines from buildings would be directed via culverts to discharge to an existing wash on the south side of the frontage road. Discharges of chlorinated or non-chlorinated water from the pump house, surge tanks, and site piping of the Cutter Lateral WTP may occur periodically from testing, disinfecting, flushing, filling or emptying surge tanks or pipeline and pump house piping.

The water treatment plant would require approximately eight acres of permanent easement in order to perform construction activities and for the facility itself, including permanent access roads. These activities would include, but are not limited to storage of materials and equipment, placement of jobsite trailers, fabrication areas, and placement and grading. Proposed new facilities include a pumping plant building, storage tanks, service yard, and permanent access roads. Additionally, a chlorination facility would be constructed on the water treatment plant site. Power to the site during construction would likely be through generators, until permanent power is supplied. Construction of the water treatment plant is anticipated to begin in the winter/early spring of 2016. The schedule is based on concurrent construction of Reach 22b and the water treatment plant, so that potable water is available from Cutter Dam to begin testing the facility in the early 2018.

To provide a permanent source of electricity to the water treatment plant, a new transmission line is proposed for construction for which a separate ROW and TCE would be acquired. All project power lines would be constructed and maintained by JMEC. All power line construction activities would be confined within the ROW and TCE at all times during construction.

2.1.6. Cutter Dam Outlet Works Modifications

The source water for Reach 22 is Cutter Reservoir at the beginning of Reach 22a. The dam was designed with four main components: dam embankment, canal outlet works, river outlet works, and overflow spillway. The canal outlet works functions as the main discharge point for the reservoir, providing irrigation water to Navajo Indian Irrigation Project and Navajo Agricultural Products Industry. The river outlet works was designed for emergency reservoir evacuation only. The engineering analysis for diverting Cutter Reservoir

water for NGWSP determined that pressurizing the river outlet works was the most economical from a capital and operations and maintenance standpoint, as well as posed the least risk to dam failure.

To modify the river outlet works for the connection to Reach 22, Reclamation is considering two alternatives. Proposed Action Alternative A, Reclamation's preferred and planned method, would make the modifications under full reservoir head. Proposed Action Alternative B would drain the reservoir and construct modifications without any water behind the dam. All modifications would be coordinated between BIA and Reclamation.

2.1.7. Design Features, Stipulations and Requirements

The FFO RMP and EIS for the Navajo–Gallup Water Supply include features designed to limit impacts to resources from management actions and externally proposed projects. The following design features, stipulations and requirements are those from these planning documents that apply to this proposal.

Visual Resource Management

- Above-ground structures are required to be painted in one of five colors designated to blend with the natural color of the landscape (USDI/BLM 2003b, page 2–20).
- Permit holders are required to coordinate with the Authorized Officer on the design and color of power poles and transmission lines to achieve minimal practicable visual impacts. USDI/BLM 2003b, page 2–20).

Soils and Water

- Disturbed areas will be reseeded following specifications using designated seed mixtures within one year of final construction (USDI/BLM 2003b, page 2–21).
- No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet to work (USDI/BLM 2003b, page 2–21).
- Any roads used exclusively for construction purposes shall be adequately closed to all vehicular travel and rehabilitated after completion of construction (USDI/BLM 2003b, page 2–21).
- Disturbed areas will be reclaimed as described in the Revegetation Plan (included as Appendix A) prepared in accordance with the Farmington Field Office Bare Soil Reclamation Procedures published January 2013 and available on the World Wide Web at http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html
- Reclamation would use accepted erosion control measures during construction, supplement grass seeding with native shrub seed in upland areas where shrub cover is diminished due to pipeline disturbance, monitor planting to ensure establishment, and control noxious weeds in disturbed areas (Reclamation 2009, page VI–4).

Air Quality

- All air pollutant emissions from future federally conducted or approved activities under the Farmington RMP shall comply with all applicable local, state, tribal, and federal air quality laws, statutes, regulations, standards, and implementation plans (BLM FFO RMP, page 2–22).
- Reclamation would require that construction contractors implement measures to control fugitive dust during construction (Reclamation 2009, page VI–7).

Invasive Weed Management

- For all actions on public lands that involve surface disturbance or rehabilitation, reasonable steps will be required to prevent the introduction or spread of noxious weeds, including requirements for using weed seed-free hay, mulch, and straw (USDI/BLM 2003b, page 2–22).

- It would be the operator's responsibility to monitor, control, and eradicate all invasive, non-native plant species within the proposed project area throughout the life of the proposed project (USDI/BLM 2003b, pages 2–25). The operator would contact the BLM-FFO regarding acceptable weed-control methods. If the operator does not hold a current Pesticide Use Permit, a Pesticide Use Permit would be submitted prior to pesticide application. Only pesticides authorized for use on BLM lands would be used. The use of pesticides would comply with federal and state laws. Pesticides would be used only in accordance with their registered use and limitations. The operator would contact the BLM-FFO prior to using these chemicals.

Trees

- Where tree cutting is required, usable trees shall be removed and left on the roadside for local residents to collect and use as firewood. Smaller woody plants not suitable for use as firewood shall be chipped and spread on the ROW during the revegetation process.

Wildlife/Special Status Species

- Species-specific surveys, avoidance measures, and mitigation, according to BLM FFO requirements, would be implemented if potential habitat for BLM Special Management Species Brack's cactus (*Sclerocactus cloverae* ssp. *brackii*) and/or Aztec gilia (*Aliciella formosa*) occur in the project area.

- Unless otherwise agreed to by the Authorized Officer in writing, power lines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Power lines" (Olendorff et al. 1981; USDI/BLM 2003b, page 2–26).

- Reclamation would ensure that construction contractors limit ground disturbance to the smallest feasible areas and that they implement BMPs along with the planning or re-seeding of disturbed areas using native plant species to assist in the reestablishment of native vegetation (Reclamation 2009, page VI–4).

- Reclamation would incorporate raptor perch guards or raptor safe configurations on all new transmission structures (Reclamation 2009, page VI–4). Transmission lines that pose a high collision risk could be marked with spiral vibration dampers or bird flight diverters.

- Reclamation would trench and bury pipeline concurrently to minimize trapping of small wildlife. Reclamation would construct escape ramps for trenches left open overnight (Reclamation 2009, page VI–4). Trenching should be conducted during cooler months (October–March).

- Minimize the amount of open trench ahead of pipe laying and backfilling. No More than ½ mile of trench or the amount of trench that can be worked in a day will be open at any given time. Backfilling operations would be performed within a reasonable amount of time of the lowering operation to ensure the trench is not left open for more than 24 hours. Trenches left open overnight will be fenced with a temporary fence or other methods approved by the Authorized Officer. The ends of the trench will be sloped (3:1) to allow animals to escape.

- Escape ramps/crossovers will be constructed every 1,320 feet. In areas where active grazing is taking place or in Wildlife Specially Designated Areas (SDA's) escape ramps/crossovers will be placed every 500 feet. On state trust lands, escape ramps/crossovers will be placed every 295 feet. The ends of the open trench will be sloped each night with a 3:1 slope.

- Established livestock and wildlife trails will be left in place as a cross over. Escape ramps/crossovers will be constructed with a minimum 3:1 slope at each end of the crossover. Crossovers will be a minimum of ten feet wide and not fenced.

- The end of the pipe will be plugged to prevent animals from crawling in.

- Before the trench is closed, inspect the trench for any animal that may be in the trench. Any trapped wildlife or livestock will be promptly removed and released at least 150 yards from the trench.

- Conduct surveys of the proposed construction areas for ferruginous hawk (*Buteo regalis*) and bald eagle (*Haliaeetus leucocephalus*) one year in advance of construction for pipeline routes and construction sites that are not adjacent to highways, well-traveled roads, or areas of regular human activities. If active nests are found as a result of the surveys, appropriate protective measures could be developed to avoid or minimize nest disturbance (Reclamation 2009, page V-88).

- To minimize disturbance to raptors, major construction activities along the Nutria and Defiance Monoclines, Cutter Canyon, Blanco Canyon, and the corridor from Cutter to Largo Canyons should be restricted during the nesting season (January 15 to August 15). If that is not possible, extensive nest searches should be made up to three-quarters of a mile of proposed activities immediately prior to construction and active nests will be avoided (Reclamation 2009, page VI–7).

- Construction could be managed to avoid intentional disturbance of dens for kit fox, as construction activities may discourage or disrupt denning activities (Reclamation 2009, page V-88).

- Delineate and avoid Aztec gilia plants where possible (Reclamation 2009, page V-88).

- No construction activities will be permitted from May 15 to July 31 for BLM FFO without a migratory bird nest survey. These surveys will be conducted by a BLM/FFO approved biologist using a survey protocol provided by a BLM/FFO biologist. If any active nests are located within the proposed project area on BLM land, project activities will not be permitted until written approval by a BLM/FFO biologist. The BLM/FFO will monitor any active nests located from a nest survey. On Navajo Nation lands no construction activities will be allowed from March 1–August 15 for NNDFW without first performing migratory bird nest surveys. NNDFW stipulates no disturbance within 165 feet (50 m) of active songbird nests during incubation to fledging (as determined by direct field observation or qualified literature source specific for nesting dates in the Southwestern U.S.; BLM MOU WO-230-2010-04, Navajo Natural Heritage Program 2008, page 125).

- Should active nests be observed, the contractor has determined that project activities cannot be avoided until after the birds have fledged (left the nest), and if no practicable or reasonable avoidance alternatives are identified then the contractor must contact the USFWS's Migratory Bird Permit Office in Albuquerque, NM at (505) 248-7882. The contractor may proceed with work on the affected project activities following receipt the approved permit from the USFWS (BLM MOU WO-230-2010-04).

- No construction activities will be permitted form May 1 to June 15 in suitable habitat areas for Mountain Plover without a preconstruction survey. If active nests are found a ¼ mile buffer will be established during incubation to fledging to prevent direct loss of the nest or indirect impacts.

Riparian Areas

- When riparian vegetation cannot be avoided during permitted project, the permittee is responsible to reestablish any riparian vegetation lost during construction. The seed mix selected for riparian and wetland areas in the revegetation plan will be used. Sediment barrier fences will be constructed to BLM specifications in designated riparian area active channels that may be destabilized due to construction activities, or as off-site mitigation to protect the integrity of designated riparian areas (USDI/BLM 2003b, page 2–33).

- Prior to ground disturbance the contractor will coordinate with the BLM FFO Noxious weed Coordinator to determine pre- and post-weed treatments.

- A biological monitor may be required during initial disturbance of wetland and riparian areas to ensure proper tallying of impacted willow clumps and cottonwoods; to ensure that 18 inches of topsoil within the delineated wetlands is properly stockpiled; and during post construction to oversee the proper return and respreading of topsoil.

- Dewatering discharge locations will be pre-approved by BLM FFO and Best Management Practices will be used to limit erosion.

Rangeland

- Prior to crossing, using, or paralleling any improvement on public land, the operator shall contact the owner of the improvement to obtain mitigating measures to prevent damage to the improvements (USDI/BLM 2003b, page 2–36).

- All cut fences are to be tied to H-braces prior to cutting. The opening will be protected as necessary during construction to prevent the escape of livestock (USDI/BLM 2003b, page 2–36).

- When construction activity in connection with a ROW breaks or destroys a natural barrier used for livestock control, gaps thus opened shall be fenced to prevent drift of livestock (USDI/BLM 2003b, page 2–36).

- The permit holder is responsible to contact the grazing lessee(s) prior to crossing any fence on public land or any fence between public and private land, and to offer the lessee(s) an opportunity to be present when the fence is cut to ensure the fence is adequately braced and secured (USDI/BLM 2003b, page 2–36).

- Cattle guards may be required when new roads cross existing fence lines (USDI/BLM 2003b page 2–36).

- Reclamation would ensure that construction contractors fenced re-vegetated areas to prevent grazing activities until disturbed areas became re-established, and Reclamation would work with the Navajo Nation to provide temporary relocation assistance to affected livestock owners along the pipeline corridor (Reclamation 2009, page VI–6).

Cultural Resources

- All BLM/Navajo Nation cultural resources stipulations will be followed. These stipulations may include, but are not limited to temporary or permanent fencing or other physical barriers, monitoring of earth disturbing construction, project area reduction and/or specific construction avoidance zones, and employee education. All employees, contractors, and sub-contractors of the project will be informed by the project proponent that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment, and that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm).

- If, in its operations, Reclamation employees, contractors, or sub-contractors of the project discover any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the appropriate agency—BLM Field Office Manager or Navajo Nation Historic Preservation Department (NHPD). The BLM or NHPD will then specify what action is to be taken in accordance with Section VIII of the cultural resources Programmatic Agreement.

Paleontology

- If in the conduct of any surface-disturbing operations, paleontological material is observed, the lessee or operator shall cease any operations that would result in the destruction of such objects and immediately contact the BLM. Further investigation will dictate site-specific stipulations for avoidance or salvage of any significant paleontological resources (USDI/BLM 2003b, page 2–39).

Hazardous Materials

- Reclamation would contact pipeline and gas well companies prior to construction activities to identify and avoid existing hazards. Pipeline alignments would be adjusted, as needed, to avoid impacts to pipelines and wells (Reclamation 2009, page VI–6).

2.2. Alternative A—Cutter Dam Outlet Modifications Maintaining Full Reservoir Head

Components for ROWs, pipeline construction, construction of storage tanks, water treatment plants, and pump plants would be the same to those described above as elements common to all action alternatives.

Under Alternative A, modifications to river outlet works for the connection to Reach 22 would be made under full reservoir head. This alternative potentially poses slightly more risk to dam safety, but would allow the modifications to take place during irrigation season and would not involve the need for a controlled reservoir release into Cutter Canyon, or the need to refill the reservoir prior to the irrigation season in early March. Constructing the river outlet works modifications without having to drain the reservoir is the preferred and planned method.

2.3. Alternative B—Cutter Dam Outlet Modifications Draining Cutter Reservoir

Components for ROWs, pipeline construction, construction of storage tanks, water treatment plants, and pump plants would be the same to those described above as elements common to all action alternatives.

Under Alternative B, modifications to river outlet works would be made without any water behind the dam. If the dam safety risk analysis deems it necessary to drain Cutter Reservoir to safely make the river outlet works modifications, then the BIA would drain Cutter Reservoir over an approximate 2.5-week period beginning in early November 2015; outside the irrigation season from mid-April to end of October. The controlled release of draining the reservoir is dictated by dam safety. Based on Reclamation's analysis, Cutter Reservoir cannot be drained nor filled faster than 2 feet per day. Based on this rate, the controlled release into Cutter Canyon would be a maximum of 30 cubic feet per second (cfs). Draining of the reservoir would take approximately 2.5-weeks; Cutter Wash would convey the controlled release over the 2.5-week period. Reclamation has estimated that the controlled release of 30 cfs, Cutter Wash would have an average velocity between 2.0–3.0 feet per second and average water depths from 0.5- to 0.7-feet deep. The controlled release would involve a stormwater pollution prevention plan to mitigate any erosive velocities and to provide sediment control at the outlet to Cutter Canyon. Sediment control measures may include a settling pond and temporary check structures in Cutter Wash, where erosive velocities have been modeled to occur.

2.4. No Action

The BLM NEPA Handbook (H-1 90-1) states that for Environmental Assessments (EAs) on externally initiated Proposed Actions, the No Action Alternative generally means that the proposed activity would not take place. This option is provided in 43 CFR 3162.3-1 (h) (2). This alternative would deny the approval of the proposed application, and the current land and resource uses would continue to occur in the proposed project area. No design features would be required. The No Action Alternative provides a baseline reference, enabling decision makers(s) to compare the magnitude of environmental effects of the Proposed Action.

2.5. Alternatives Considered but Eliminated from Detailed Study

Variations in alignment of Reach 22 were considered in the development of the project to address potential problems associated with ROW acquisition or protection of cultural and natural resource sensitive areas on BLM land.

NIIP Canal Route

The alignments for Reach 22a that were considered include a route that parallels the NIIP Main Canal immediately downstream of Cutter Reservoir. It would tie into the proposed pipeline route on the south side of Largo Canyon. This route was not as cost effective both from a capital expenditure standpoint, as well as from an operations, maintenance, and replacement (OM & R) viewpoint as it required an additional pumping plant at the base of Cutter Dam to lift the water in the pipeline up to the Main Canal elevation.

Salt Point ACEC Bypass Route

A second alternative for Reach 22a was a bypass route around the original Salt Point ACEC boundary. This alternative was originally necessary as formal permission from the BLM, which manages the ACEC, had not been obtained for the pipeline ROW through this culturally sensitive area in 2012. However, this alternative route is no longer needed, as BLM's Farmington Field Office in mid-March 2013 through an administrative adjustment of their RMP relocated the Salt Point ACEC boundary to the east side of Blanco Canyon. BLM determined in consultation with the Navajo Nation, that none of the protected Navajo culturally sensitive resources were west of the Blanco Wash. Therefore, this alternative alignment was dismissed from further consideration.

Blanco Canyon Route

The Blanco Canyon Alternate pipeline alignment was designed to avoid Navajo allotted lands along Blanco Canyon where feasibility to obtain ROW permission would be difficult as the parcels have over one hundred allottees with ownership stake. The Alternate Blanco Canyon pipeline alignment was rejected for several reasons, including both capital and OM & R costs. It also ran along geologically unstable areas on the west side of Blanco Wash in Reach 22a and in very steep and difficult remote terrain on the north portion of Reach 22b.

Allotment Bypass Route

The Allotment Bypass alignment avoids the two remaining allotments that Reclamation has not received consent for permission to survey as of early May 2013. This alternative route around the two allotments on the north quarter of Reach 22b required a reroute of the pipeline over an eighth of a mile west of the proposed pipeline alignment through steep, rocky, and difficult terrain and included a pipeline crossing within the ordinary high water line of the Blanco Wash. To protect the water pipeline where it would fall within Blanco Wash would increase the capital costs considerably, and would likely require wetland and riparian mitigation. Reclamation obtained permission to survey the remaining two allotments, thus this alternative was dismissed from further consideration.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the affected environment and environmental consequences within the project area as they relate to the implementation of the Proposed Action as described in Chapter 2.

The No Action Alternative reflects the current situation within the project area and will serve as the baseline for comparing the environmental impacts of the analyzed alternatives. Under the No Action Alternative, the proposed pipelines and other improvements would not be constructed. There would be no new effects from additional surface disturbances and activities to the resources. The No Action Alternative would result in the continuation of the current land and resource uses in the project area. This alternative will not be evaluated further in Chapter 3.

3.1. Methods

This chapter characterizes the resources and uses that have the potential to be affected by the Proposed Action (Section 3.1), followed by a comparative analysis of the direct, indirect and cumulative impacts of the alternatives (Section 3.2). Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions.

3.1.1. Related Past, Present and Reasonably Foreseeable Actions

As defined by NEPA regulations (40 CFR 1508.7), "Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

Human caused and natural events have had varying levels of impacts on the resources and values affected by the proposed water pipeline alignment and associated infrastructure. Past and present actions include livestock grazing, oil and gas exploration and development, and infrastructural development such as roads. The Blanco watershed where the project area is located contains approximately 163,658 acres with 68 grazing allotments that cover approximately 924,225 acres. Existing oil and gas development within the Blanco watershed has an estimated 1,041 oil and gas wells and 5,100 acres of long-term oil and gas surface disturbance (USDI/BLM 2003a).

Reasonably foreseeable actions include development of oil and gas wells and supporting infrastructure on public lands in the San Juan Basin, maintenance and repair of pipelines, invasive plant management plan that has been proposed on Navajo Nation lands in several New Mexico counties, including Sandoval, McKinley, and San Juan, and the future water pipeline reaches to be developed for the Navajo–Gallup Water Supply Project. Based on the reasonable foreseeable future oil and gas predictions in the 2003 RMP/FEIS, about 677 new well sites would be constructed, with 2,514 acres of surface disturbance. With the addition of these wells, approximately 55 miles of new access roads would be constructed, a 10 percent increase in the watershed. Although these actions may not account for all of the impacts that have or are likely to occur in the NGWSP project area, GIS analysis, agency records, and professional judgment suggest that they have contributed to the vast majority of cumulative impacts that have occurred in the assessment area.

3.2. Air Resources

3.2.1. Affected Environment

The Proposed Action is located in San Juan County, New Mexico. Additional general information on air quality in the area can be found in Chapter 3 of the Farmington RMP/EIS (USDI BLM 2003a). In addition, new information about greenhouse gases (GHGs), and their effects on national and global climate conditions has emerged since this document was prepared. Ongoing scientific research has identified the potential impacts

of GHG emissions such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), water vapor, and several trace gases on global climate. Through complex interactions on a global scale, GHG emissions may cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and burning of fossil carbon sources have caused GHG concentrations to increase measurably, and may contribute to overall climatic changes, typically referred to as global warming.

Much of the information referenced in this section is incorporated from the Air Resources Technical Report for BLM Oil and Gas Development in New Mexico, Kansas, Oklahoma, and Texas (herein referred to as Air Resources Technical Report; USDI/BLM 2014). This document summarizes the technical information related to air resources and climate change associated with oil and gas development and the methodology and assumptions used for analysis.

The Environmental Protection Agency (EPA) has the primary responsibility for regulating air quality, including six nationally regulated ambient air pollutants (criteria pollutants). These criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2) and lead (Pb). EPA has established National Ambient Air Quality Standards (NAAQS) for criteria air pollutants. The NAAQS are protective of human health and the environment. EPA has approved New Mexico's State Implementation Plan and the state enforces state and federal air quality regulations on all public and private lands within the state, except for tribal lands and within Bernalillo County. Air quality is determined by atmospheric pollutants and chemistry, dispersion meteorology and terrain, and also includes applications of noise, smoke management, and visibility. Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. EPA has proposed or completed actions recently to implement Clean Air Act requirements for greenhouse gas emissions. Climate has the potential to influence renewable and non-renewable resource management.

Air Quality

Criteria Air Pollutants

The Air Resources Technical Report describes the types of data used for description of the existing conditions of criteria pollutants, how the criteria pollutants are related to the activities involved in oil and gas development, and provides a table of current National and state standards. EPA's Green Book web page (U.S. Environmental Protection Agency, 2013) reports that all counties in the Farmington Field Office area are in attainment of all National Ambient Air Quality Standards (NAAQS) as defined by the Clean Air Act. The area is also in attainment of all state air quality standards (NMAAQS). The current status of criteria pollutant levels in the Farmington Field Office are described below. Total emissions of criteria pollutants from each source sector were calculated by adding together the emissions from the four counties that are located in FFO: San Juan, McKinley, Rio Arriba, and Sandoval.

"Design Concentrations" are the concentrations of air pollution at a specific monitoring site that can be compared to the NAAQS. The 2012 design concentrations of criteria pollutants are listed below in Table 2. There is no monitoring for CO and lead in San Juan County, but because the county is relatively rural, it is likely that these pollutants are not elevated. PM10 design concentrations are not available for San Juan County.

In 2005, the EPA estimates that there was less than 0.01 ton per square mile of lead emitted in FFO counties, which is less than 2 tons total (U.S. Environmental Protection Agency, 2012) . Lead emissions are not an issue in this area, and will not be discussed further.

Air quality in a given region can be measured by its Air Quality Index value. The air quality index (AQI) is reported according to a 500-point scale for each of the major criteria air pollutants, with the worst denominator determining the ranking. For example, if an area has a CO value of 132 on a given day and all other pollutants are below 50, the AQI for that day would be 132. The AQI scale breaks down into six categories: good (AQI<50), moderate (50-100), unhealthy for sensitive groups (100-150), unhealthy (>150), very unhealthy and hazardous. The AQI is a national index, the air quality rating and the associated level of health

concern is the same everywhere in the country. The AQI is an important indicator for populations sensitive to air quality changes.

Table 5. Criteria Pollutant Monitored Values in San Juan County

Pollutant	2012 Design Concentration	Averaging Time	NAAQS	NMAAQS
O_3	0.071 ppm	8-hour	0.075 ppm[1]	
NO_2	13 ppb	Annual	53 ppb[2]	50 ppb
NO_2	38 ppb	1-hour	100 ppb[3]	
$PM_{2.5}$	4.7 µg/m^3	Annual	12 µg/m^3[3,4]	60 µg/m^3[3,6]
$PM_{2.5}$	14 µg/m^3	24 hour	35 µg/m^3[3,5]	150 µg/m^3[3,6]
SO_2	19 ppb	1-hour	75 ppb[5]	

[1] Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
[2] Not to be exceeded during the year
[3] 98th percentile, averaged over 3 years
[4] Annual mean, averaged over 3 years
[5] 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
[6] The NMAAQS is for Total Suspended Particulate (TSP)
Source: (U.S. Environmental Protection Agency, 2014)

Mean AQI values for San Juan County were generally in the good range (AQI<50) in 2013 with 80% of the days in that range. The median AQI in 2013 was 42, which indicates "good" air quality. The maximum AQI in 2013 was 156, which is "unhealthy".

Although the AQI in the region has reached the level considered unhealthy for sensitive groups on several days almost every year in the last decade, there are no patterns or trends to the occurrences (Table 3). On 8 days in the past decade, air quality has reached the level of "unhealthy" and on two days, air quality reached the level of "very unhealthy". In 2009 and 2012, there were no days that were "unhealthy for sensitive groups" or worse in air quality. In 2005 and 2013, there was one day that was "unhealthy" during each year. In 2010, there were five "unhealthy" days and two "very unhealthy days".

Table 6. Criteria pollutant design value concentrations monitored in San Juan County.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Days	3	6	9	18	1	0	12	9	0	1

Source: US EPA 2013b

Hazardous Air Pollutants

The Air Quality Technical Report discusses the relevance of hazardous air pollutants (HAPs) to oil and gas development and the particular HAPs that are regulated in relation to these activities (USDI/BLM 2014). The EPA conducts a periodic National Air Toxics Assessment (NATA) that quantifies HAP emissions by county in the U.S. The purpose of the NATA is to identify areas where HAP emissions result in high health risks and further emissions reduction strategies are necessary. A review of the results of the 2005 NATA shows that cancer, neurological and respiratory risks in San Juan County are generally lower than statewide and national levels as well as those for Bernalillo County where urban sources are concentrated in the Albuquerque area (US EPA 2012).

Climate

The planning area is located in a semiarid climate regime typified by dry windy conditions and limited rainfall. Summer maximum temperatures are generally in the 80s or 90s degrees Fahrenheit (°F) and winter minimum temperatures are generally in the teens to 20s (Table 4). Temperatures occasionally reach above 100° F in June and July and have dipped below zero in December and January. Precipitation is divided between summer thunderstorms associated with the Southwest Monsoon and winter snowfall as Pacific weather systems drop south into New Mexico.

Table 7. 1981–2010 Climate Normals for Farmington Field Office Area.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Precip (inches)	0.68	0.63	0.62	0.63	0.48	0.51	1.37	1.36	1.15	0.81	0.71	0.67
Min. Temp. (F)	13.4	19.1	23.8	30.4	38.9	47.7	55.6	53.9	45.0	32.3	21.3	14.2
Avg. Temp. (F)	28.5	34.1	40.9	48.5	57.8	67.0	72.7	70.4	62.6	50.2	37.9	29.1
Max. Temp. (F)	43.6	49.1	58.0	66.7	76.7	86.3	89.8	86.9	80.3	68.1	54.5	44.0

The Air Resources Technical Report summarizes information about greenhouse gas emissions from oil and gas development and their effects on national and global climate conditions. While it is difficult to determine the spatial and temporal variability and change of climatic conditions; what is known is that increasing concentrations of GHGs are likely to accelerate the rate of climate change.

3.2.2. *Impacts Common to All Proposed Action Alternatives*

Direct and Indirect Impacts

Exhaust emissions and dust produced during construction activities would affect local air quality. This effect would be temporary and limited primarily to the area where activities would occur. Exhaust emissions and dust would be further diluted as they mix with the atmosphere in the larger area surrounding the project. Impacts to air quality attributable to the Proposed Action would be temporary and minor. Project activities that would produce emissions would continue for the three-year period from 2014–2017. Air pollution from the motorized excavation equipment and dust production would discontinue at the completion of the project. No impacts to climate change would be expected from the implementation of the Proposed Action. A relatively small amount of GHGs would be produced when considered on a global scale and would be spread over a three-year period. The very small increase in GHG emissions would not produce climate change impacts that differ from taking no action. This is because climate change is a global process that is impacted by the sum total of GHGs in the Earth's atmosphere. The incremental contribution to global GHGs from the Proposed Action cannot be translated into effects on climate change globally or locally. It is currently not feasible to predict with certainty the net impacts from the action alternatives on global or regional climate.

Cumulative Impacts

Reaches 21 and 22 are part of the NGWSP in New Mexico. As noted in the NGWSP EIS, the project lies within the Four Corners Interstate Air Quality Control Region. The EIS analysis of the entire NGWSP determined that effects on air quality would be localized and minor (USDI/BLM 2003a, pages v–124). Other factors that currently affect air quality in the area include dust from livestock herding activities, dust from potential recreational use, dust from use of roads for vehicular traffic, and emissions from oil and gas production. The Navajo Nation has proposed the development of a weed management plan (*Navajo Nation Integrated Weed Management Plan within Coconino, Navajo, and Apache Counties, Arizona; McKinley, San Juan, Sandoval, and Cibola Counties, NM; and San Juan County, UT*) that would occur in the project area, but would be unlikely to affect air quality or climate change.

The FFO manages Federal hydrocarbon resources in San Juan, Sandoval, Rio Arriba, and McKinley Counties. There are approximately 23,522 wells in the San Juan Basin. About 16,435 of the wells in these counties are federal wells. The primary activities that contribute to levels of air pollutant and GHG emissions in the Four Corners area are electricity generation stations, fossil fuel industries, and vehicle travel. The Air Quality Technical Report includes a description of the varied sources of national and regional emissions that are incorporated here to represent the past, present, and reasonably foreseeable impacts to air resources

(USDI/BLM 2014). It includes a summary of emissions on the national and regional scale by industry source. Analysis of cumulative impacts for reasonable development scenarios and RFDS of oil and gas wells on public lands in the FFO was presented in the 2003 RMP. The analysis determined that project emission sources in combination with reasonably foreseeable future emission sources, would likely produce potentially significant cumulative impacts to ambient 8-hour O_3 levels within the San Juan County project area (USDI/BLM 2003a, pages 4-124). A more detailed discussion of cumulative effects can be found in the Air Resources Technical Report (USDI/BLM 2014).

The proposed project could result in a very small direct and indirect increase in several criteria pollutants, HAPs, and GHGs as a result the short-term construction activity. The very small increase in emissions from short-term construction activity when added to other reasonably foreseeable future action would not be expected to result in exceeding the NAAQS for any criteria pollutants in the analysis area. With the increased water supply and distribution, less people would have to haul water, resulting in a decrease of emissions from vehicles.

The very small increase in GHG emissions that could result from implementing the proposed alternative would not produce climate change impacts that differ from the No Action Alternative. This is because climate change is a global process that is impacted by the sum total of GHGs in the Earth's atmosphere. The incremental contribution to global GHGs from the action alternatives cannot be translated into effects on climate change globally or in the area of this site-specific action. It is currently not feasible to predict with certainty the net impacts from the action alternatives on global or regional climate.

The Air Resources Technical Report (USDI/BLM 2014) discusses the relationship of past, present, and future predicted emissions to climate change and the limitations in predicting local and regional impacts related to emissions. It is currently not feasible to know with certainty the net impacts from particular emissions associated with activities on public lands.

3.3. Soil Resources

3.3.1. Affected Environment

The United States Department of Agriculture Natural Resources Conservation Service (NRCS) has surveyed the soils in the Proposed Action area. The NRCS's Web Soil Survey website (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) provides complete soil information. Table 8 presents the soils mapped in the proposed project area.

Table 8. Soil types in the analysis area, characteristics and management concerns

Map Unit/Symbol	Textures	Parental Materials	Drainage Class and Available Water Capacity
Badland–rock outcrop–Persayo complex, extremely steep BC	silt loam, gravelly clay loam, bedrock	shale, residuum weathered from shale	N/A Very low
Blancot–Notal association, gently sloping BT	loam, sandy clay loam, silty clay loam, clay	fan alluvium derived from sandstone and shale, stream alluvium derived from sandstone and shale	Well drained High to low
Doak–Sheppard–Shiprock association, rolling DS	loam, clay loam, loamy fine sand, fine sandy loam	alluvium derived from sandstone and shale, eolian deposits over mixed alluvium, eolian deposits over alluvium derived from sandstone	Well drained High to low
Farb–Persayo–Rock outcrop complex, moderately steep FA	fine sandy loam, sandy loam, clay loam, bedrock	residuum weathered from sandstone, residuum weathered from shale	Excessively drained Very low
Fruitland–Persayo–Sheppard complex, hilly FX	sandy loam, fine sandy loam, clay loam, loamy fine sand	slope alluvium derived from sandstone and shale, residuum weathered from shale, eolian deposits over mixed alluvium	Well drained Moderate to very low
Riverwash RA	sand, clay, gravelly sand	stream alluvium derived from igneous and sedimentary rock	Poorly drained Low to very low
Rock outcrop–Travessilla–Weskacomplex, extremely steep RT	bedrock, sandy loam, silt clay loam, clay loam	residuum weathered from sandstone, residuum weathered from shale	Well drained Very low

Source: U.S. Department of Agriculture Soil Conservation Service, Soil Survey Staff 2013.

3.3.2. Impacts from Proposed Alternative A

Direct and Indirect Impacts

Approximately 295 acres of soil disturbance would occur to construct the waterline and about 24 acres would be disturbed to construct pump plants, Cutter Lateral WTP, water storage and regulation tanks, and the transmission line. Soils that would be disturbed would be structurally mixed, displaced and exposed to potential wind and water erosion. In some areas, these soils would also be compacted. Once disturbed, these soils could be subject to increased erosion, dependent upon storm events of water and/or wind. Disturbed areas, especially steeper slopes, would be susceptible to wind and water erosion until reseeding has been established (one to two growing seasons). The amount of soils that would be lost to erosion is unknown, however it is assumed that it would be low based on the generally gentle slopes in the project area and the required design features (see Section 2.1.7). Topsoil will be conserved for reclamation (see section 2.1.7). Actions would not occur during inclement weather, structures would be established to limit movement of soil off-site, and disturbed areas would be reclaimed as appropriate. Reestablishment of permanent, perennial vegetation as outlined in the Revegetation Plan (see Appendix A) would decrease long-term soil erosion

effects. The proposed pipeline is co-located alongside existing roads as much as possible. To the extent possible, the pipeline is located on the uphill side of the road to minimize erosion over the pipeline. The contractor will be required to backfill trenches to at least 85% standard Proctor density (95% at road and wash crossings), which will minimize erosion of the backfill due to surface runoff. Additional measures would be achieved through BMPs detailed in the Stormwater Pollution Prevention Plan (SWPPP).Effects would be short-term until revegetation and stabilization actions are completed and new vegetation becomes established.

Cumulative Impacts

Under Proposed Alternative A, 295 acres of soil disturbance would cause soil compaction and displacement, which could temporarily affect soil porosity, water holding capacity, aeration, and productivity. Surface disturbances would continue to occur from oil and gas development and associated road and infrastructure and livestock grazing and range improvements. Additional residential growth could also occur from the installation of the waterline, leading to surface disturbance from construction of roads, power lines, and homes. The proposed project to control invasive plants on the Navajo Nation could temporarily increase soil erosion on treated areas until native vegetation becomes re-established. The cumulative impacts on soils from the past, present, and foreseeable future actions would comprise of short- and long-term surface disturbance (e.g., soil erosion, compaction). Cumulative effects of Proposed Alternative A in combination with the past, present, and reasonably foreseeable future would have a negligible contribution to adverse cumulative impacts due to the temporary and short-lived effects of surface disturbance from the proposed construction of Reach 22 and associated infrastructure with implementation of the design features and reclamation (see Appendix A). Reseeding and reclamation will help to stabilize soils.

3.3.3. Impacts from Proposed Alternative B

Direct and Indirect Impacts

Direct and Indirect impacts to soils from construction of the water pipeline and associated infrastructure would be the same as Alternative A. The controlled release of water to drain Cutter Reservoir to complete the outlet work modifications could cause a temporary increase in erosion and sedimentation. The predicted average water velocities range between 2.0–3.0 feet per second and average water depths from 0.5- to 0.7-feet deep (BOR 2014). Increased bank erosion to Cutter Reservoir could occur over the 2.5 weeks until the controlled release is completed. Increased erosion and sedimentation deposits would also occur in Cutter Canyon until the controlled release is completed. Sedimentation control measures, such as settling ponds and temporary check structures would be installed at the outlet to Cutter Canyon to reduce impacts from potential erosive velocities. Effects to soils are anticipated to be low to negligible due to the low velocity and depth of the water released over the 2.5-weeks. Impacts to soils in Cañon Largo are unlikely as water velocities from the controlled released would be less and not erosive due to the size of the wash and the channel gradient.

Cumulative Impacts

Cumulative impacts would be the same as Proposed Alternative A, but would include temporary increased bank erosion to Cutter Reservoir and increased erosion and sedimentation deposits in Cutter Canyon until the controlled release was completed.

3.4. Water Resources

3.4.1. Affected Environment

The BLM's watershed program emphasizes conservation and preventing and avoiding degradation of water resources by establishing site-specific BMPs to protect water resources. BLM management practices comply with the Federal Water Pollution Control Act of 1972 and the Clean Water Act of 1977 to ensure in-stream water-quality standards. Further water resources management information can be found in the Farmington Field Office Resource Management Plan and Rio Puerco Field Office Resource Management Plan.

Under the Clean Water Act, the US Army Corps of Engineers (USACE) has jurisdiction over "waters of the U.S." These jurisdictional waters include those that have a "significant nexus" to traditional navigable

waters. The BLM/FFO and USACE Durango Regulatory Division have determined that jurisdictional waters may include USGS watercourses (i.e., "blue line" on USGS 1:24,000 topographic maps). The proposed pipeline crosses ten USGS watercourses.

The local hydrology is dominated by Cañon Largo, Blanco Canyon, Cutter Canyon, Jaquez Canyon, Huerfano Canyon, and Reed Canyon. The watersheds within the proposed project area are Blanco Canyon–Cañon Largo (Hydrologic Unit Code (HUC) 140801030611), Jaquez Canyon–Blanco Canyon (HUC 140801030506), Jaquez Canyon (HUC 140801030505), Dufers Point–Blanco Wash (HUC 140801030504), Reed Canyon (HUC 140801030506), and Huerfano Trading Post–Gallegos Canyon (HUC 140801012001). The proposed project area is in the Blanco Canyon and Upper San Juan subbasins, Upper San Juan basin, San Juan subregion, and Upper Colorado region.

The proposed project area is underlain by the Unit-Animas aquifer, which is composed of Lower Tertiary rocks in the San Juan Basin. The aquifer thickness generally increases toward the central part of the basin. Water quality data is not available for the proposed project area, but the quality of groundwater in the San Juan Basin generally ranges from fair to poor. The Uinta-Animas aquifer provides fresh to moderately saline water. In general, areas recharged by precipitation or surface water provide fresh water.

3.4.2. Impacts from Proposed Alternative A

Direct and Indirect Impacts

The clearing of vegetation from TCEs for the pipeline, storage tanks, pump plants, and the Cutter Lateral WTP and trenching for the pipelines would create exposed soils. Soil movement, resulting from both wind and water action, could occur within the construction zones. The amount of soil movement and potential for sediment transport to stream courses would depend on wind and water events in relation to soil disturbance, the effectiveness of erosion control measures, and the timing and success of reclamation. About 295 acres would be disturbed within the combined pipeline TCEs and ROWs and about 24 acres would be disturbed for the NGWSP facilities. This disturbance would be spread over the anticipated life of the project, which is planned for 2015 through 2018. In relation to the size of the watersheds (approximately 150,000 acres) in which the improvements are located, this amount of disturbance represents a minor percentage (0.2%) of the total area. Due to the dispersed nature of the Proposed Alternative A and the relatively small area of disturbance, the effects to water quality from construction activities on upland sites would be widely distributed and difficult to detect.

Although the majority of disturbance would occur on upland sites, the pipeline would cross 10 USGS watercourses over the total length of about 24.5 miles. There would be the potential for construction-related disturbance to increase the amount of sediment that would be mobilized within the channel or enter the channel from directly-adjacent areas. This would be a temporary effect that would be limited with the implementation of erosion control measures. Short- and long-term effects to surface water quality and quantity are anticipated to be low to negligible under the Proposed Alternative A.

The implementation of the design features outlined for soil and water in section 2.1.7 would limit short-term and long-term effects to water quality. Reestablishment of permanent, perennial vegetation would decrease long-term soil-erosion effects and, consequently, effects to floodplains and surface and ground water resources. NPDES permit compliance would require the maintenance of a SWPPP and the design, implementation, and maintenance of BMPs, as needed, to protect water quality. Activities associated with the proposed pipeline that would impact U.S. jurisdictional waterways would be conducted under Nationwide Permit # 12 (Utility Line Activities) and # 13 (Bank Stabilization).

Cumulative Impacts

Under Proposed Alternative A, 295 acres (approximately 0.2% of the six watersheds) will be disturbed, which could temporarily increase sediment transportation to water bodies, and is anticipated to have low to negligible impacts on water quality. Surface disturbances would continue to occur from oil and gas development and associated road and infrastructure and livestock grazing and range improvements, which could increase sediment yield in water bodies. Additional residential growth could also occur from the

installation of the waterline, leading to surface disturbance and increased sedimentation from construction of roads, power lines, and homes. The proposed project to control invasive plants on the Navajo Nation could also temporarily increase soil erosion on treated areas until native vegetation becomes re-established. The cumulative impacts on water resources from the past, present, and foreseeable future actions would comprise of short- and long-term surface disturbance (e.g., soil erosion, increased sediment). Cumulative effects of Proposed Alternative A in combination with the past, present, and reasonably foreseeable future would have a negligible contribution to adverse cumulative impacts due to the temporary and short-lived effects of surface disturbance from the proposed construction of Reach 22 and associated infrastructure, and the implementation of the design features and reclamation (see Appendix A).

3.4.3. Impacts from Proposed Alternative B

Direct and Indirect Impacts

Direct and Indirect impacts to water resources from construction of the water pipeline and associated infrastructure would be the same as Alternative A. The controlled release of water to drain Cutter Reservoir to safely complete the outlet work modifications would cause a temporary increase in erosion and sedimentation mobilized into Cutter Canyon. This temporary effect would be limited with the implementation of sediment control measures at the outlet and within Cutter Canyon. The refilling of Cutter Reservoir at 2-feet per day is not anticipated to change the water quantity of the San Juan River, as the Navajo Reservoir would be used to meet the recommended water elevation. Short- and long-term effects to water quality and quantity are anticipated to be low to negligible under the Proposed Alternative B.

Cumulative Impacts

Cumulative impacts from Proposed Alternative B would similar to the cumulative effects from Proposed Alternative A.

3.5. Riparian Areas and Wetlands

3.5.1. Affected Environment

Riparian areas are defined by the BLM as a wetland transition between permanently saturated wetlands and upland areas. Typical riparian areas consist of lands along, adjacent to, or contiguous with perennial or intermittent streams, and the shores of lakes and reservoirs with stable water levels (Leonard et al 1992). Wetlands are defined under the Clean Water Act (CWA) as areas that are inundated or saturated by surface or ground water at a frequency or duration and under normal conditions support hydrophytic vegetation that is adapted for hydric soils. There are three environmental characteristics used to diagnose wetlands: dominance of hydrophytic vegetation, presence of hydric soils, and presence of wetland hydrology.

The northern portion of proposed Reach 22 will cross two riparian areas, Cutter Canyon SDA and Cañon Largo SDA. The Cutter Canyon riparian area is dominated by *Populus deltoids*, *Salix exigua*, and *Tamarix ramosissima* (EMI 2014b). The riparian area is fed by groundwater from the upstream Cutter Reservoir, approximately a half-mile north. The riparian community at the Cañon Largo crossing is dominated by salt cedar (*Tamarix ramosissima*), coyote willow (*Salix exigua*), rubber rabbitbrush, scattered eastern cottonwoods (*Populus deltoides*), and sand dropseed (EMI 2013).

Portions of the project area are mapped by the National Wetland Inventory (USFWS 2013). Ecosystem Management, Inc. performed wetland determination and delineation surveys where potential jurisdictional wetlands would be intersected by the 100-foot construction ROW for the proposed Reach 22 water pipeline. Two wetlands, totaling 0.69 acre, were determined and delineated (EMI 2014a; Figures 3–4), both within the Cutter Canyon SDA. The 0.33-acre wetland is predominantly classified as palustrine–emergent wetland–persistent–intermittently flooded–*Juncus arcticus*, with a smaller central portion dominated by willows classified as palustrine–scrub/shrub wetland–broad-leaved deciduous–intermittently flooded–*Salix exigua* (Cowardin et al. 1979; EMI 2013). The 0.36-acre wetland is classified as predominantly palustrine–emergent wetland–persistent–intermittently flooded–*Juncus arcticus*. The southwestern end is dominated by palustrine–scrub/shrub wetland–broad-leaved deciduous–intermittently flooded–*Salix exigua*. Between these two types,

in the wettest portion of the wetland, a palustrine–emergent wetland–persistent–semi-permanently flooded–*Typha domingensis* (Cowardin et al. 1979) occurs. The wetlands are on land managed by BLM FFO and also fall under the regulatory division of the USACE (EMI 2013).

Figure 3. Northwestern wetland on proposed Reach 22 in Cutter Canyon

Figure 4. Southwestern wetland on proposed Reach 22 in Cutter Canyon

3.5.2. Impacts from Proposed Alternative A

Direct and Indirect Impacts

Proposed Alternative A would temporarily impact 0.66 acre of jurisdictional wetlands within the Cutter Canyon SDA from removal of vegetation during construction of the pipeline. Wetland impacts would exceed 0.1 acre; thus, the wetlands in the proposed project area would fall under the jurisdiction of the USACE under Section 404 of the Clean Water Act. In addition, a cottonwood grove in upper Cutter Canyon SDA would be impacted. This is a small grove with an understory of tamarisk. Impacts to the wetlands and the cottonwood grove will be temporary and minor with implementation of the design measures and mitigation measures. Stipulations for wetland/riparian areas stated in the FFO-RMP (USDI/BLM 2003b) and mitigation measures stated in the FEIS-NGWSP (BOR 2009) would also be utilized to keep impacts to wetlands temporary.

Cañon Largo will not be impacted by Proposed Alternative A, as this riparian area will be bored under to avoid impacts. Potential for construction-related disturbance to increase the amount of sediment into riparian areas and wetlands is the same as discussed under Section 3.4.2, Water Resources.

Cumulative Impacts

Under Proposed Alternative A, 0.66 acres of wetlands and a cottonwood grove will be temporarily disturbed, which could temporarily increase sediment transportation to water bodies, and is anticipated to have low to negligible impacts on water quality. Surface disturbances would continue to occur from oil and gas development and associated road and infrastructure and livestock grazing and range improvements, which could increase sediment yield in riparian and wetland areas. However, cumulative impacts from these actions would be limited by the 2003 RMP/FEIS limits to oil and gas development in active floodplains and in the 100-year floodplain and the required growing season deferment for livestock grazing in designated riparian areas from May 1 through September 30 annually. Additional residential growth on non-BLM lands surrounding the riparian areas and wetlands could also occur from the installation of the waterline, leading to surface disturbance and increased sedimentation from construction of roads, power lines, and homes. The proposed project to control invasive plants on the Navajo Nation could also temporarily increase soil erosion on treated areas until native vegetation becomes re-established. The cumulative impacts on water resources from the past, present, and foreseeable future actions would comprise of short- and long-term surface disturbance (e.g., soil erosion, increased sediment). Cumulative effects of Proposed Alternative A in combination with the

past, present, and reasonably foreseeable future would have a negligible contribution to adverse cumulative impacts due to the temporary and short-lived effects of surface disturbance from the proposed construction of Reach 22 and associated infrastructure, and the implementation of the design features and mitigation measures.

Mitigation Measures and Residual Impacts

A draft wetland and riparian mitigation and monitoring plan have been developed with minimization and mitigation measures to keep impacts to wetlands and riparian areas temporary (EMI 2014b). The first 18 inches of soil removed from herbaceous wetlands will be stockpiled to preserve the seed bank. The stockpiled soil will be returned after construction is completed. In wooded wetlands (palustrine–scrub/shrub wetland–broad-leaved deciduous–intermittently flooded) if the water table is suitable, cottonwood sand willows will be replaced with regionally adapted native species and monitored for a minimum of five years and every fifth year after ecological performance standards have been met. Mowing/seeding the adjacent sagebrush flat to reduce erosion may suffice as the riparian mitigation if the water table is not high enough (within 5 feet of the surface). Alternatively, woody plants could be planted in the vicinity of the restoration sites. All minimization and mitigation measures selected would: 1. Function to reduce impacts to wetland and riparian areas; 2. Maximize restoration potential; and 3. Serve to keep all wetland impacts temporary as defined under the Clean Water Act (CWA) Section 404 Nationwide Permit 12, for which the NGWSP Reach 22 project will be operating (along with Nationwide Permit 13).

3.5.3. Impacts from Proposed Alternative B

Direct and Indirect Impacts

Impacts under Proposed Alternative B to riparian areas and wetlands would be the same as Proposed Alternative A. The riparian/wetland plant communities within Cutter Canyon may benefit from the 2.5-week increase of water resources. The short-term increase of water resources could enhance growth and seed production of willows and cottonwoods and hamper tamarisk development; however, inundation would occur during the dormant season, and impacts may not be detectable.

Cumulative Impacts

Cumulative impacts from Proposed Alternative B would similar to the cumulative effects from Proposed Alternative A.

3.6. Upland Vegetation

3.6.1. Affected Environment

The description of the Arizona/New Mexico Plateau ecoregion is summarized from the EPA's level III ecoregion's of the United Sates narration (http://www.epa.gov/wed/pages/ecoregions/level_iii.htm.). The Arizona/New Mexico Plateau occurs primarily in Arizona, Colorado, and New Mexico, with a small portion in Nevada. This ecoregion is approximately 45,870,500 acres, and the elevation ranges from 2,165 to 11,949 feet. The ecoregion's landscapes include low mountains, hills, mesas, foothills, irregular plains, alkaline basins, some sand dunes, and wetlands. This ecoregion is a large transitional region between the semiarid grasslands to the east, the drier shrublands and woodlands to the north, and the lower, hotter, less vegetated areas to the west and south. Vegetation communities include shrublands with big sagebrush (*Artemisia tridentata*), rabbitbrush (*Ericameria* sp., *Chrysothamnus* sp., etc.), winterfat (*Krascheninnikovia lanata*), shadscale saltbush (*Atriplex confertilfolia*), and greasewood (*Sarcobatus vermiculatus*), and grasslands of blue grama (*Bouteloua gracilis*), western wheatgrass (*Pascopyrum smithii*), and needle-and-thread grass (*Hesperostipa comata*). Higher elevations may support piñon pine (*Pinus edulis*) and juniper (*Juniperus* sp.) forests. The ecoregion includes the urban areas of Santa Fe and Albuquerque. Important land uses include irrigated farming, recreation, rangeland, wildlife habitat, and some natural gas production.

The vegetation communities within Reach 22 were mapped as plains and Great Basin grassland and Great Basin conifer woodland (Brown 1994). The local vegetation communities consist of big sagebrush, greasewood, piñon–juniper (mostly just *Juniperus* spp.), and riparian (see section 3.5).

The plant communities along the proposed alignment and ROWs from Huerfano Mountain in the south to just north of Reed Canyon is best described as big sagebrush community, with greasewood along Reed Canyon Wash. The dominant vegetation includes big sagebrush, rubber rabbitbrush (*Ericameria nauseosa*), broom snakeweed (*Gutierrezia sarothrae*), tumbleweed (*Salsola tragus*), Indian ricegrass (*Achnatherum hymenoides*), blue grama (*Bouteloua gracilis*), cheatgrass (*Bromus tectorum*), galleta (*Pleuraphis jamesii*), needle-and-thread grass, ring muhly (*Muhlenbergia torreyi*), and six-weeks fescue (*Vulpia octoflora*).

The plant community from just north of Reed Canyon to where it intersects with Blanco Canyon consists of sandhills and piñon–juniper community. The dominant vegetation consists of one-seeded juniper (*Juniperus monosperma*), Utah juniper (*Juniperus osteosperma*), big sagebrush, rubber rabbitbrush, Green's rabbitbrush (*Chrysothamnus greenei*), southwestern rabbitbrush (*Lorandersonia pulchella*), prickly-pear (*Opuntia* spp.), hairy goldenaster (*Heterotheca villosa*), sandhill muhly (*Muhlenbergia pungens*), Indian ricegrass, needle-and-thread grass, sand dropseed (*Sporobolus cryptandrus*), spike dropseed (*Sporobolus contractus*), purple threeawn (*Aristida purpurea*), blue grama, and galleta.

The plant community in Blanco Canyon is dominated by greasewood community with big sagebrush and scattered junipers. The dominant vegetation is greasewood, big sagebrush, budsage (*Artemisia spinescens*), rubber rabbitbrush, Green's rabbitbrush, spiny horsebrush (*Tetradymia spinosa*), New Mexico saltbush (*Atriplex obovata*), wolfberry (*Lycium pallidum*), prickly-pear, club-cholla (*Grusonia* spp.), Brack's cactus (*Sclerocactus cloverae* subsp. *brackii*), wild buckwheat (*Eriogonum* spp.), sand dropseed, blue grama, galleta, and Indian ricegrass.

Greasewood dominates the northern side of Cañon Largo. The dominant plants include greasewood, big sagebrush, scattered juniper, rubber rabbitbrush, buckwheat (*Eriogonum corymbosum*), purple threeawn, and Indian ricegrass.

The vegetation in Cutter Canyon is a mix of greasewood, big sagebrush, piñon–juniper, and riparian communities. The dominant vegetation includes greasewood, big sagebrush, scattered junipers in the southern end with juniper and piñon pine (*Pinus edulis*) becoming dominant at the northern end, salt cedar, eastern cottonwood, coyote willow, rubber rabbitbrush, sand dropseed, and spike dropseed. Most of the project area parallels the road in Cutter Canyon through upland vegetation, but portions of the ROW overlap with the riparian/wetland community that occurs in the canyon (see section 3.5).

3.6.2. Impacts from Proposed Alternative A

Direct and Indirect Impacts

Direct impacts on plant communities and habitats would be expected to occur in the approximately 295 acres of ROWs for pipelines, transmission lines, and the other improvements to be constructed. Vegetation would be cleared for all construction activities (see Figure 5 for an example). Plant communities and habitats affected by direct or indirect impacts from project activities could incur short- or long-term changes in species composition, abundance, and distribution. Some impacts would also continue after the project construction activities are complete. The plant communities that become established on any area disturbed during ROW construction would depend on the restoration practices that are implemented, including the species selected, the species present in adjacent habitats, the degree of disturbance to vegetation and substrates, and the vegetation management practices selected for implementation. The BLM FFO Reduced Palatability seed mix (for sagebrush and pinyon–juniper communities and the greasewood communities south of Cañon Largo where grazing pressure is the heaviest), selected from the Bare Soil Reclamation Procedures (BLM FFO 2013), would be used for reseeding the ROW (see Appendix A Revegetation Plan).

Removal of trees within or along woodland areas in small areas would potentially result in an indirect disturbance to woodland interior areas through changes in light and moisture conditions. Clearing for pipeline construction would remove existing vegetation. Revegetation would be done after the pipeline construction is

completed; grass species would dominate the revegetated areas. This would result in some conversion of shrub-dominated vegetation to grass along the linear ROWs. Some small woodland areas around the northern most portion of Reach 22 would also be converted to grass.

In some areas, restoration may potentially include species that are not locally native or plant communities different from local native communities. Although the replanting of disturbed soils may successfully establish vegetation in some locations (i.e., with a biomass and species richness similar to those of local native communities), the resulting plant community may be quite different from native communities in terms of species composition and representation of particular vegetation types, such as shrubs. The community composition of replanted areas would likely be greatly influenced by the species that are initially seeded, and colonization by species from nearby native communities may be slow. The establishment of mature native plant communities may require decades, and some community types may never fully recover from disturbance. Successful reestablishment of some habitat types, such as some shrubland communities, may be difficult and may require considerably greater periods of time. Restoration of plant communities in areas with arid climates (e.g., averaging less than nine inches of annual precipitation) would be especially difficult (Monsen et al. 2004).

Indirect impacts on terrestrial habitats on or off the project site could result from land clearing and exposed soil; soil compaction; and changes in topography, surface drainage, and infiltration characteristics. Indirect impacts could include the degradation of habitat from construction activities occurring in adjacent areas or, in the case of wetlands, activities occurring within the watershed or groundwater recharge area.

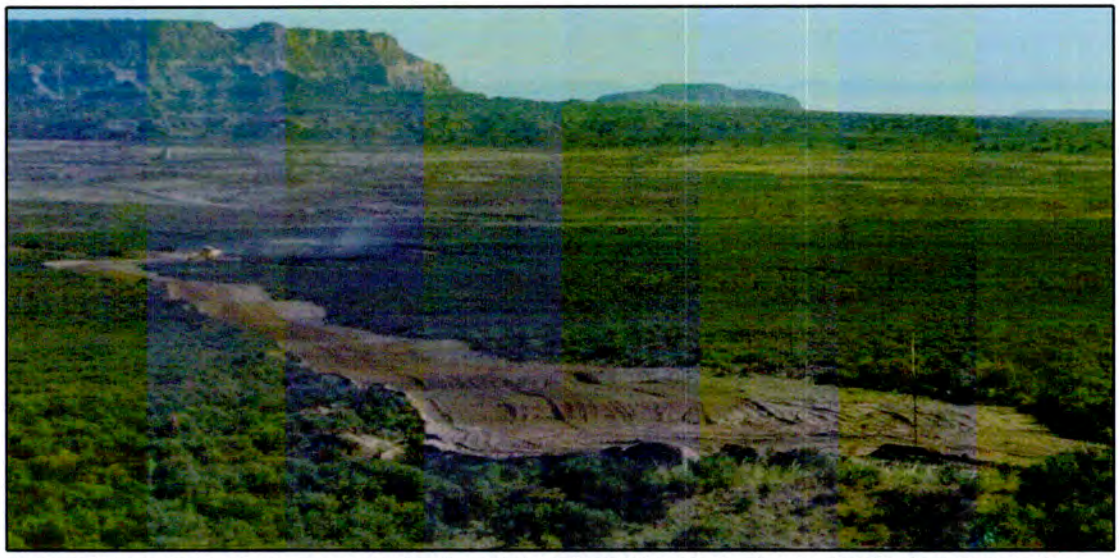

Figure 5. Example of clearing of pipeline right-of-way through shrub-dominated vegetation

In addition to habitat removal, the operation of heavy equipment on the project ROWs may result in injury or destruction of existing vegetation and biological (microbiological) soil crusts and the compaction and disturbance of soils (Barger et al. 2006). Soil aeration, infiltration rates, and moisture content could be impacted. Biological soil crusts occur in deserts and other sparsely vegetated arid habitats and are important for soil stability, nutrient cycling, and water infiltration; their disturbance may affect the development of plant communities (Fleischner 1994; Belnap et al. 2001; Gelbard and Belnap 2003). All these factors could affect the rate or success of vegetation reestablishment.

Habitats adjacent to the project may become fragmented or isolated as a result of construction. Biodiversity may subsequently be reduced in fragmented or isolated habitats. The fragmentation of large, undisturbed habitats of high quality by construction would be considered a greater impact than construction through previously disturbed or fragmented habitat.

The deposition of fugitive dust (including associated salts) generated during clearing and grading activities and/or during the construction and use of access roads, or deposition that results from wind erosion of exposed soils, could reduce photosynthesis and productivity (Thompson et al. 1984; Hirano et al. 1995), increase water loss (Eveling and Bataille 1984) in plants near project areas, and result in injury to leaves. Plant community composition could subsequently be altered, resulting in habitat degradation. In addition, pollinator species could be affected by fugitive dust, potentially reducing pollinator populations in the vicinity. Localized impacts on plant populations and communities could occur if seed production in some plant species is reduced.

Cumulative Impacts

For both proposed alternatives, construction of the pipeline would remove plant communities and habitats in the approximately 295 acres of ROWs. Surface disturbance from oil and gas development and associated infrastructure and livestock would continue. The Great Basin Desert Scrub and piñon juniper woodlands were the plant communities to be most affected from oil and gas development (USDI/BLM 2003a). Additional residential growth could also occur from the installation of the waterline, leading to surface disturbance and vegetation removal from construction of roads, power lines, and homes. The proposed project to control invasive plants on the Navajo Nation lands in several New Mexico counties, including McKinley and San Juan could change plant community composition and structure over the long-term by restoring native plant communities. The Proposed Action would not be converting piñon-juniper woodlands to grass-dominated communities, as only scattered one-seed juniper are present in the northern portion of Reach 22a and along Reed Canyon. In combination with the past, present, and reasonably foreseeable future actions, Proposed Alternative A would have a negligible contribution to adverse cumulative impacts due to the temporary and short-lived effects of surface disturbance from the proposed construction of Reach 22 and associated infrastructure and revegetation of TCEs (see Appendix A).

3.6.3. Impacts from Proposed Alternative B

Direct and Indirect Impacts

Direct and Indirect impacts to water resources from construction of the water pipeline and associated infrastructure would be the same as Alternative A. Upland vegetation does not typically occur near water channels; however, some areas near Cutter Reservoir are dominated by upland vegetation (e.g., grasses, rabbitbrush) bordering shallow channels. Water flow could impact upland vegetation in these areas depending on the response of dormant plants.

Cumulative Impacts

The cumulative impacts for Proposed Alternative B would be the same as Proposed Alternative A.

3.7. Noxious Weeds and Invasive Species

3.7.1. Affected Environment

Specific plants have been designated as noxious weeds by New Mexico State law due to their potential to harm the state economy. The BLM weed management program emphasizes conservation of the native plant community by monitoring, controlling and preventing noxious weeds and invasive species. Development of weed management programs is required by Executive Order 11312 Invasive Species 1999, the Federal Noxious Weed Act of 1974, the New Mexico Noxious Weed Management Act of 1978, and the Federal Plant Protection Act of 2000 (USDI/BLM 2003a). The FFO weed management plan dictates that for all actions of public lands that involve surface disturbance or rehabilitation, reasonable steps would be required to prevent the introduction or spread of noxious weeds, including requirements for using weed seed-free hay, mulch, and straw. These measures also include washing all vehicles and equipment prior to moving on site to remove noxious weed seed and propaglues.

Salt cedar, a New Mexico Class C noxious weed, is common in riparian areas in Cutter Canyon, Cañon Largo, Blanco Canyon, and large side washes. Russian olive (*Elaeagnus angustifolia*), also a Class C

noxious weed, occurs occasionally throughout these areas but is not a dominant species. One small patch of Russian knapweed (*Acroptilon repens*), a New Mexico Class B noxious weed, is found on the roadside in the south-central project area. The coordinates of this infestation are 253014 E, 4040429 N (NAD 83 Zone 13N). Two New Mexico noxious weeds were observed in the wetland areas in Cutter Canyon: musk thistle (*Carduus nutans*; Class B) and Canada thistle (*Cirsium arvense*; Class A). Japanese brome (*Bromus japonicus*) occurs sporadically in the project area south of Reed Canyon. Class C species are wide-spread in the state. Class B species are limited to portions of the state. Management decisions for these species should be determined at the local level, based on feasibility of control and level of infestation. Class A species have a limited distribution or currently do not occur within the state (NMDA 2009). Class A and B species will be treated within the project corridor prior to start of work. A pesticide use proposal (PUP) will be inititated for the use of herbicides and the BLM Noxious Weed Coordinator will be contacted to assure the use of appropriate herbicides and timing of plant treatment or removal.

3.7.2. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

Indirect effects of increased vehicle traffic in the area, especially traffic that comes from outside the local area, may result in establishment of invasive/noxious weeds. Invasive/noxious plants generally out-compete native species where bare ground is created. Some construction activities would occur near known locations of noxious weeds—Russian olive, salt cedar, musk and Canada thistle, Russian knapweed. These plants occur primarily along riparian areas. Given the small, discrete areas of proposed disturbance and successful mitigation measures, effects from invasive, nonnative species are expected to be low for both the short and long term for the proposed project area. Class A and Class B species will be treated with appropriates control measures within the project area prior to start of work to avoid spread along the project corridor to reduce the potential for direct impacts.

Cumulative Impacts

Other management activities occurring in the area, grazing management, oil and gas development, and recreation, as well as construction of proposed Reach 22 and auxiliary facilities, present the potential for new invasive plant infestations. Constructing Reach 22 could lead to construction of more homes and associated infrastructure, which could also have the potential for spreading existing noxious weeds and establishing new noxious weed infestations. The BLM has active invasive plant management programs, including providing for prevention and control in project-level decisions. In addition, the Navajo Nation has initiated analysis of its proposed noxious weed management program, which includes areas near this project. These activities, along with the design measures would reduce the potential for the introduction and spread of invasive plants.

Mitigation Measures and Residual Impacts

The draft wetland and riparian mitigation and monitoring plan has been developed with minimization and mitigation measures to keep impacts to wetlands and riparian areas temporary (EMI 2014b). In wetland and riparian areas, weeds should be treated with the appropriate treatment before ground disturbance. Removal of tamarisk and Russian olive within 300 feet of impacted wetland/riparian habitat per the FEIS-NGWSP will be left to the discrepancy of BLM FFO (EMI 2014b).

3.8. Fish and Wildlife

3.8.1. Affected Environment

Migratory Birds

Executive Order 13186 dated January 17, 2001 calls for increased efforts to more fully implement the Migratory Bird Treaty Act of 1918. In keeping with this mandate, the BLM/FFO has issued an interim policy to minimize unintentional take as defined by the EO 13186 and to better optimize migratory bird efforts related to BLM/FFO activities (USDI/BLM 2010). In keeping with this policy, a list of priority birds of conservation concern which occur in similar ecoregions as the proposed project area was compiled through a review of existing bird conservation plans including:

- USFWS Birds of Conservation Concern (BCC)
- New Mexico Partners in Flight (NMPIF) New Mexico Bird Conservation Plan
- Comprehensive Wildlife Conservation Strategy for New Mexico (CWCS)
- Gray Vireo Recovery Plan
- The North American Waterbird Conservation Plan
- Recovery plans and conservation plans/strategies prepared for federally listed candidate species.

There were 59 bird species and ten mammal species observed in the project area. A complete list of birds observed within the project area can be found in the Natural Resources Survey Report (Ecosystem Management, Inc. 2014a).

The selected species have a known distribution in the FFO area and may be affected by various types of perturbations. These species and a brief assessment of their habitat are identified in Table 9.

Table 9. Migratory Birds with Potential to Occur in the Project Area

Species Name	Habitat Associations	Potential to Occur in the Project Area
Scaled quail (*Callipepla squamata*)	Brushy arroyos, cactus flats, sagebrush or mesquite plains, desert grasslands, Plains grasslands, and agricultural areas. Good breeding habitat has a diverse grass composition, with varied forbs and scattered shrubs.	Desert scrub in the analysis area could provide suitable habitat for the species. Not detected in project area.
Swainson's hawk (*Buteo swainsoni*)	A mixture of grassland, cropland, and shrub vegetation; nests on utility poles and in isolated trees in rangeland. Nest densities higher in agricultural areas.	Desert scrub in the analysis area could provide foraging habitat for the species.
Mourning dove (*Zenaida macroura*)	Open country, scattered trees, and woodland edges. Feeds on ground in grasslands and agricultural fields. Roost in woodlands in the winter. Nests in trees or on ground.	Observed in the project area. Desert scrub in the analysis area could provide suitable habitat for the species.
Gray vireo (*Vireo vicinior*)	In northern NM, stands of piñon pine and juniper 5800–7200 ft., open with a shrub component and mostly bare ground; antelope bitterbrush, mountain mahogany, Utah serviceberry and big sagebrush often present. Broad, flat or gently sloped canyons, in areas with rock outcroppings, or near ridge-tops.	Common in piñon–juniper-dominated portions of the project area.
Loggerhead shrike (*Lanius ludovicianus*)	Open country interspersed with improved pastures, grasslands, and hayfields. Nests in sagebrush areas, desert scrub, and woodland edges.	Observed in the project area. Desert scrub in the analysis area could provide suitable habitat for the species, although significant grassy areas are lacking.
Mountain bluebird (*Sialia currucoides*)	Open piñon-juniper woodlands, mountain meadows, and sagebrush shrublands; requires larger trees and snags for cavity nesting.	Observed in the project area. Large shrubs and trees with cavities provide nesting habitat.
Bendire's thrasher	On the Colorado Plateau, inhabits open sagebrush with scattered junipers; sparse or degraded	One bird observed in the project area singing on territory.

Species Name	Habitat Associations	Potential to Occur in the Project Area
(*Toxostoma bendirei*)	understory, lower elevations. Avoids riparian areas and arroyos with dense shrub cover.	
Sage thrasher (*Oreoscoptes montanus*)	Shrub-steppe dominated by big sagebrush.	Several birds observed singing in project area.
Black-throated sparrow (*Amphispiza bilineata*)	Xeric habitats dominated by open shrubs with areas of bare ground.	Common in greasewood-dominated portions of the project area.
Brewer's sparrow (*Spizella breweri*)	Closely associated with sagebrush, preferring dense stands broken up with grassy areas.	Common throughout the project area.
Sage sparrow (*Amphispiza belli*)	Large and contiguous areas of tall and dense sagebrush. Negatively associated with seral mosaics and patchy shrublands and abundance of greasewood.	Common throughout project area. Two active nests were located.
Vesper sparrow (*Pooecetes gramineus*)	Dry montane meadows, grasslands, prairie, and sagebrush steppe with grass component; nests on ground at base of grass clumps.	Desert scrub in the analysis area could provide suitable habitat for the species. Not detected in project area.
Lark sparrow (*Calamospiza melanocorys*)	Open scrub-shrub	Common in project area. One active nest found.

General Wildlife

Field surveys of the proposed project area were made from May through November 2013. The variety of biotic communities and topography within the proposed alignments provides habitat for diverse wildlife species. Wildlife species observed within the proposed project area includes numerous bird species (Table 9), reptiles, amphibians, small mammals, and larger mammals such as American badger (*Taxidea taxus*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*).

The project area is classified by the NNDFW as an Area 3 (low sensitivity wildlife resources) according to the Biological Resource Land Clearance Policies and Procedures (RCP). There are no wildlife-related BLM FFO special designated areas (SDAs) in or near the project area. The northern portions of the Reach 22 approaches two BLM FFO special designated areas (see Figure 6). The SDAs are Cutter Canyon and Cañon Largo Reach #2, which are riparian resources. The proposed pipeline would traverse Cañon Largo Reach #2 SDA and skirt along the northern edge of the Cutter Canyon SDA.

Fish that occur in Cutter Reservoir include stocked rainbow trout (*Oncorhynchus mykiss*), and kokanee salmon (*Oncorhynchus nerka*), white suckers (*Catostomus commersonii*), and carp (*Cyprinus* spp.) that come from water piped in from Navajo Lake.

3.8.2. Impacts Common for All Proposed Action Alternatives

Direct and Indirect Impacts

Migratory Birds

The proposed project could affect up to about 320 acres, including areas cleared for pipelines, pump plants, and other improvements, although the impact area may be less because some of the 100-foot temporary construction easement for the pipelines may not be disturbed. Most of the disturbance would involve the removal of woody and ground vegetation. Sage-nesting species would be the most impacted, e.g., sage thrasher, lark sparrow, sage sparrow, Brewer's sparrow, and black-throated sparrow. Direct impacts would be incidental destruction of active bird nests, including eggs and hatchlings, and the temporary breeding territories of individual birds because of noise and human presence during construction. Indirect impacts could result from noise following installation of the three pump plants. Noise from gas infrastructure has been shown to affect birds in northwestern New Mexico (Francis et al. 2012). The area is already subjected to constant noise from compressors, and the addition of three pump plants is not likely to significantly change the audio landscape beyond the immediate areas where they are located. At the completion of construction activities, revegetation of disturbed areas would reduce the impacts of the Proposed Action. Some sage habitat would be converted to grass-dominated habitat within the permanent ROW. The amount of projected habitat conversion is small compared to the total amount of available sage habitat in the surrounding area.

Due to the staged nature of the Proposed Action, the relatively small, discrete areas of disturbance, and the availability of adjacent suitable habitat, the anticipated effects on migratory bird populations and species as a whole would be low to negligible in the short term and long term. Seasonal restriction on construction activities would further reduce the potential for disturbance on nesting migratory birds.

General Wildlife

Wildlife habitat may suffer short-term degradation due to loss of vegetation, which may provide forage and cover. No major or long-term effects on non-avian wildlife are anticipated. Incidental mortality or displacement among small animals may occur on the site during clearing and preparation of the site. The plant community, however, is widespread, and those animals are expected to move into adjacent habitats.

Cumulative Impacts

Surface disturbance and removal of vegetation from oil and gas development and livestock grazing would continue. Wildlife inhabiting the Great Basin Desert Scrub and piñon juniper woodlands would be most affected from oil and gas development (USDI/BLM 2003a). The Proposed Action would not impact Great Basin Desert Scrub biotic community and piñon juniper woodlands at the northern portion of Reach 22 would not be converted to grasslands. Depending on the intensity of grazing, available forage for wildlife (e.g., ungulates), nesting habitat for grassland birds, and escape cover for small mammals and birds could be affected.

The proposed project to control invasive plants on the Navajo Nation lands in several New Mexico counties, including McKinley and San Juan could change plant community composition and structure over the long-term by restoring native plant communities. This could improve wildlife habitat quality with restoring/increasing native plant habitats.

Installation of the waterline could lead to the growth of residential areas, which would increase the human population in the area and lead to more roads, power lines, and other development, fragmenting wildlife habitat. The impacts would likely not be substantial in the foreseeable future due to the fact that the project area is rural and sparsely populated. The Proposed Action Alternatives would have a negligible contribution to cumulative adverse impacts on fish and wildlife local populations and habitat.

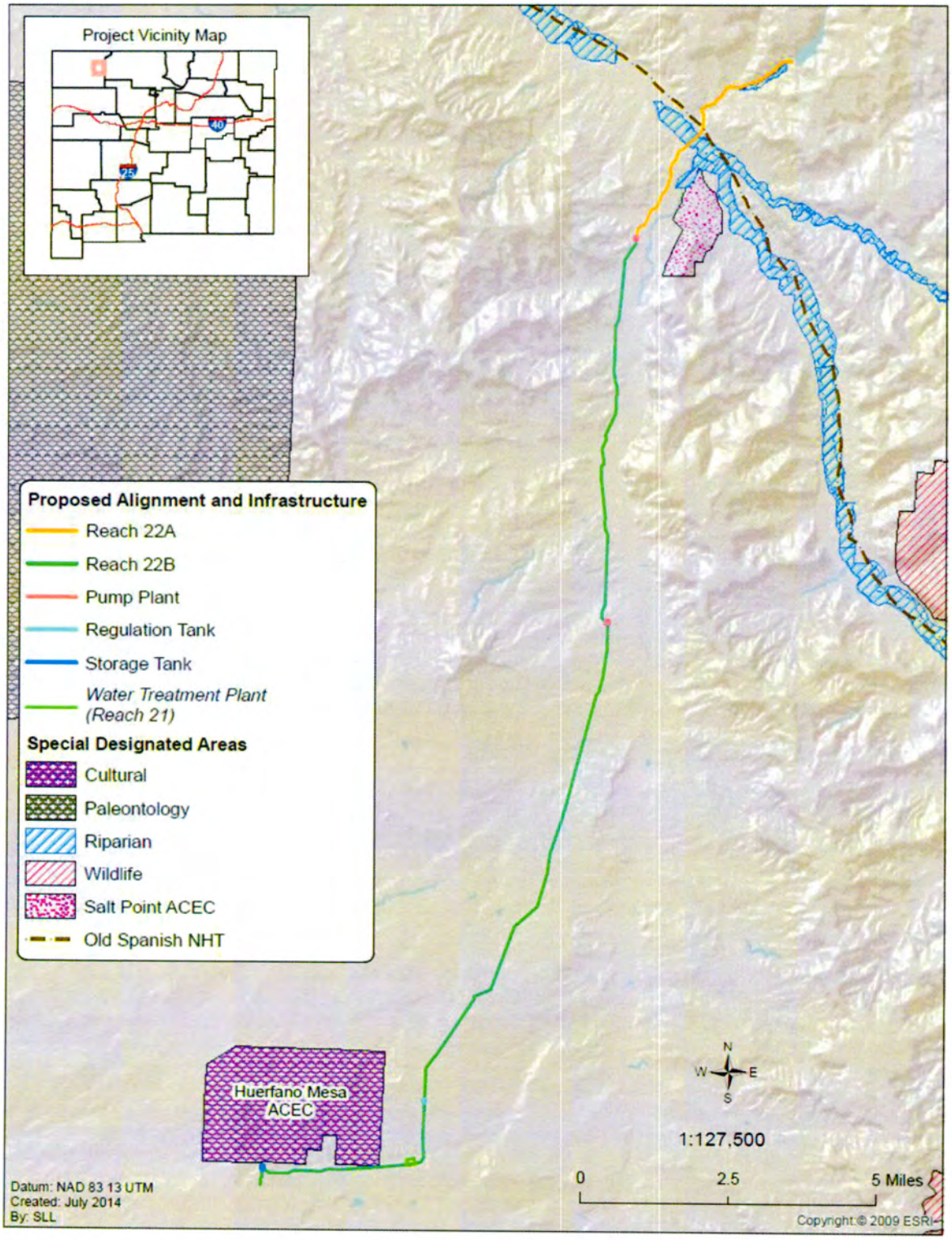

Figure 6. BLM Special Designated Areas on the Reach 22 project

3.9. Special Status Species

Affected Environment

Endangered Species Act of 1973

The ESA of 1973 requires all federal departments and agencies to conserve threatened and endangered species and their critical habitats on which they depend, and to consult with the USFWS on all actions authorized, funded, or carried out by the agency to ensure that the action will not likely jeopardize the continued existence of any threatened and endangered species or adversely modify critical habitat. Consultation with the USFWS, as required by Section 7 of the ESA, was conducted as part of the Farmington RMP/FEIS (Consultation No. 2-22-01-I-389) to address cumulative effects of RMP implementation. The consultation is summarized in Appendix M of the RMP/FEIS. Farmington Field Office staff reviewed the action alternatives and determined they would be in compliance with threatened and endangered species management guidelines outlined in the September 2002 Biological Assessment (Consultation No. 2-22-01-I-389). No further consultation with the USFWS is required. Federally listed species with potential to occur in the project area are listed in Table 10.

Navajo Endangered Species Act

The Navajo Endangered Species Act (No. RCS-41-08) groups species of concern on Navajo Nation into four groups: Group 1: Those species or subspecies that no longer occur on the Navajo Nation. Group 2 and 3: "Endangered"—Any species or subspecies whose prospects of survival or recruitment within the Navajo Nation are in jeopardy or are likely within the foreseeable future to become so. Group 2 is species or subspecies whose prospects of survival or recruitment are in jeopardy. Group 3 is species or subspecies whose prospects of survival or recruitment are likely to be in jeopardy in the foreseeable future. Group 4 is any species or subspecies for which the NNDFW does not currently have sufficient information to support their being listed in Group 2 or Group 3 but has reason to consider them. The NNDFW will actively seek information on these species to determine if they warrant inclusion in a different group or removal from the list. The NNDFW shall determine the appropriate group for listing a species or subspecies due to any of the following factors:

1. The present or threatened destruction, modification, or curtailment of its habitat;

2. Over-utilization for commercial, sporting, or scientific purposes;

3. The effect of disease or predation;

4. Other natural or man-made factors affecting its prospects of survival or recruitment within the Navajo Nation; or

5. Any combination of the foregoing factors

Navajo-listed species with potential to occur in the project area are listed in Tables 10 and 11.

Special Management Species

In accordance with BLM Manual 6840, the Farmington Field Office of the Bureau of Land Management (FFO) has prepared a list of special management species to focus species management efforts toward maintaining habitats under a multiple use mandate, called FFO Special Management Species (SMS; Table 11). The BLM manages certain sensitive species not federally listed as threatened or endangered in order to prevent or reduce the need to list them as threatened or endangered in the future. The authority for this policy and guidance is established by the Endangered Species Act of 1973, as amended; Title II of the Sikes Act, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; and Department of Interior Manual 235.1.1A.

The State of New Mexico, under authority of the Wildlife Conservation Act (17-2-37 through 17-2-46 NMSA 1978) also maintains a list of species endangered or threatened within the state. A species is endangered if it is in jeopardy of extinction or extirpation from the state; a species is threatened if it is likely to become endangered within the foreseeable future throughout all or a significant portion of its range in New Mexico. Species or subspecies of mammals, birds, reptiles, amphibians, fishes, mollusks, and crustaceans native to New Mexico may be listed as threatened or endangered under the Wildlife Conservation Act.

Table 11 provides an evaluation of potential for SMS and sensitive, State of New Mexico endangered and threatened species, federally protected, and Navajo-listed species to occur in the action area (Ecosystem Management, Inc. 2014a). The evaluation of presence potential is based on the known habitat for the species and the assessment of the potential project during field assessments.

Table 10. Federally and Navajo Group 2-listed species. Table continued on following pages.

Species Name	Conservation Status*	Habitat Associations	Potential to Occur in Analysis Area
Birds			
Least tern (*Sternula antillarum athalassos*)	FWS E	Highly dependent on rivers, lakes and streams for diet and nesting habitat.	There are no perennial waters within the project area except deep Cutter Reservoir. BMPs would be used to reduce impacts to ephemeral washes that connect to the San Juan River.
Western yellow-billed cuckoo (*Coccyzus americanus*)	FWS T	Occurs in well-vegetated riparian areas.	There is no dense riparian vegetation within or near the project area that would support this bird.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FWS E, N G2	This species inhabits dense riparian areas dominated by cottonwoods, willows, and tamarisk.	Suitable riparian habitat for this bird does not occur in the area. The riparian areas also lack substantial standing or flowing water.
Mexican spotted owl (*Strix occidentalis lucida*)	FWS T	Occurs in mature ponderosa pine and mixed-conifer forests and is typically associated with steep slopes and cliff/canyon complexes.	The project area lacks appropriate habitat for this species. The canyons in the project area are wide and lack the cool, forested microclimate preferred by lower-elevation canyon-nesting owls.
Mammals			
Black-footed ferret (*Mustela nigripes*)	FWS E, N G2	This species is dependent on large prairie dog towns over 198 acres or with over 20 burrows per hectare (0.4 acre = 1 ha)	There were no active prairie dog towns observed within or near the project area.
Canada lynx (*Lynx canadensis*)	FWS C	This species occurs in high-elevation mountainous areas where snowshoe hare (*Lepus americanus*) are abundant.	There is no suitable habitat in the project area.

Species Name	Conservation Status*	Habitat Associations	Potential to Occur in Analysis Area
NM Meadow jumping mouse (*Zapus hudsonius luteus*)	FWS E	Occurs in montane riparian habitats and in tall sedges, thick grasses and willow–alder riparian habitats.	Suitable habitat occurs in wetland areas in Cutter Canyon along Cañon Largo.
Reptiles and Amphibians			
Jemez Mountains salamander (*Plethodon neomexicanus)*	FWS E	Endemic to the Jemez mountains and occurs in mixed-conifer forests with loose rocky soils.	The project area lacks habitat for this species and is outside its range.
Northern leopard frog (*Lithobetes pipiens*)	N G2	Occurs around streams, rivers, lakes, marshes, and irrigation ditches from 3,670–10,000 feet.	There is no suitable habitat in the project area. The wetlands do not have standing water.
Fishes			
Zuni bluehead sucker (*Catostomus discobolus yarrow*)	FWS C	This fish occurs in the Zuni River and its tributaries.	The project area does not occur within the watershed where this species occurs.
Roundtail chub (*Gila robusta*)	FWS C	This fish occurs in the Colorado River Basin.	The project area is within the Colorado Basin.
Rio Grande silvery minnow (*Hybognathus amarus*)	FWS E	This fish occurs in the Rio Grande.	The project area does not occur within the Rio Grande watershed where this species occurs.
Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*)	FWS C	This fish occurs in the Rio Grande.	The project area does not occur within the Rio Grande watershed where this species occurs.
Colorado pikeminnow (*Ptychocheilus lucius*)*	FWS E	This fish occurs in the Colorado River Basin.	There are no perennial streams in the project area. The Cañon Largo crossing is approximately seven river/wash miles from the confluence with the San Juan River.
Razorback sucker (*Xyrauchen texanus*)*	FWS E	This fish occurs in the Colorado River Basin and has been reintroduced to the San Juan River.	There are no perennial streams in the project area. The Cañon Largo crossing is approximately seven river/wash miles from the confluence with the San Juan River.
Plants			
Mancos milkvetch (*Astragalus humillimus*)	FWS E	Found in cracks or eroded depressions on sandstone rimrock ledges and mesa tops in Point Lookout sandstone from 5,000–6,000 feet.	Area lacks appropriate geology.

Species Name	Conservation Status*	Habitat Associations	Potential to Occur in Analysis Area
Zuni fleabane (*Erigeron rhizomatus*)	FWS T	Occurs in nearly barren detrital clay hillsides with soils derived from shales of the Chinle or Baca Formations most often on north- or east-facing slopes in open piñon–juniper woodlands from 7,300–8,000 feet.	Area lacks appropriate geology and vegetation community.
Knowlton cactus (*Pediocactus knowltonii*)	FWS E	Known only from the type locality in San Juan County, NM. It occurs on rolling, gravelly hills in piñon–juniper and sagebrush at about 6,200–6,300 feet.	Area lacks vegetation community and gravelly substrate. Area is far outside the only known locality.
Mesa Verde cactus (*Sclerocactus mesae-verdae*)	FWS T	Requires highly alkaline, gypsiferous soils in sparsely vegetated low, rolling clay hills formed from the Mancos or Fruitland Shale Formations at 4,900–5,500 feet.	Area lacks appropriate geology and vegetation community.

FWS T, E, and C = Fish and Wildlife Service Threatened, Endangered, and Candidate. N G1 and G2 = Navajo Endangered Species List rankings: G2 = endangered. All birds on list are protected under the Migratory Bird Treaty Act.
*Species with designated critical habitat on portions of the San Juan River in San Juan County, NM.

Table 11. Fish and Wildlife Service Species of Concern, BLM FFO Special Management and Sensitive species, New Mexico State threatened and endangered species, Navajo economic and cultural significant species and Group 3 and 4 species, and eagles, with potential to occur in Sandoval County. Table continued on following pages.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Birds			
Baird's sparrow (*Ammodramus bairdii*)	NM T	Nests in dense grasslands with low shrubs.	**Unlikely:** The proposed project area is outside the known breeding and wintering ranges. Occurrence is unlikely except for migrating individuals.
Golden eagle (*Aquila chrysaetos*)	BLM SMS, N G3, BGEPA	Occurs in a variety of open habitats and nests mainly on large cliffs.	**Moderate:** The closest documented nests are approximately 0.7 miles from the project area on the west-facing Blanco Canyon wall.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Burrowing owl (*Athene cunicularia*)	BLM SMS, BLM S, FWS SOC, N G4	Nests in ground cavities in open scrub and desert. Associated with prairie dog towns.	**High:** Burrowing owl muting and a few cases bones were observed in the inactive prairie dog town.
Ferruginous hawk (*Buteo regalis*)	BLM SMS, BLM S, N G3	Frequently associated with prairie dog towns. Nests in badlands, desert scrub and grasslands on isolated elevated substrates.	**Low:** The project lacks potential nesting habitat.
Common black-hawk (*Buteogallus anthracinus anthracinus*)	NM T	Nests in riparian forests.	**Unlikely:** The proposed project area is north of this hawk's geographic range and lacks potential nesting habitat.
Chestnut-collared longspur (*Calcarius ornatus*)	BLM S	Occurs in short- or mixed-grass prairies and prefers grazed or recently burned areas.	**Moderate:** This species could occur during winter.
Mountain plover (*Charadrius montanus*)	BLM SMS, N G4	Occupies arid, short grassland habitat including heavily grazed areas. Microhabitat variables important for nesting often include large patches of bare ground (> 30% total cover), grass, and proximity to prairie dog towns	**Low:** Project area contains suitable habitat; however, there are no known nest sites as far north as the project area.
Broad-billed hummingbird (*Cynanthus latirostris*)	NM T	Typically occurs along riparian areas characterized by Sycamore (*Platanus* spp.) and mesquite (*Prosopis* spp.) in arid canyons.	**Unlikely:** The proposed project area is outside the geographic range. Occurrences would be by vagrant individuals, and it is highly unlikely to occur in the project area.
Yellow-billed cuckoo (*Coccyzus americanus*)	BLM SMS	Occurs in well-vegetated riparian areas.	**Unlikely:** There is no riparian vegetation within the project area.
Prairie falcon (*Falco mexicanus*)	BLM SMS	Occurs in open habitats and nests on cliff walls.	**Moderate:** Suitable cliff nesting sites adjacent to the project area on Huerfano Mountain, Blanco Canyon, and Cutter Canyon.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Peregrine falcon (*Falco peregrine*)	BLM SMS, NM T, N G4	Occurs in a wide variety of habitat types and nests on cliff walls.	**Moderate:** Suitable cliff nesting sites adjacent to the project area on Huerfano Mountain, Blanco Canyon, and Cutter Canyon.
Pinyon jay (*Gymnorhinus cyanocephalus*)	BLM S	Occurs in piñon–juniper woodlands of the foothills and lower mountain slopes. Nests on the south side of conifers. Habitat exists at the south end of the water line in piñon–juniper habitat.	**High:** This species was observed in the project area where piñon–juniper woodlands are dominant.
Bald eagle (*Haliaeetus leucocephalus*)	BLM SMS, NM T, BGEPA	Occurs around large bodies of water with fresh fish.	**High:** Winter foraging habitat occurs at Cutter Reservoir.
Brown pelican (*Pelecanus occidentalis carolinensis*)	NM E	Occurs around large bodies of water with fish.	**Unlikely:** Outside known geographic range. This bird could occur on Cutter Reservoir, but is highly unlikely.
Least tern (*Sternula antillarum athalassos*)	NM E	Nests on bare or sparsely vegetated sand or dried mudflats along river banks and similar sandy areas near water bodies with fish.	**Unlikely:** Could occur around Cutter Reservoir.
Bendire's thrasher (*Toxostoma bendirei*)	BLM S	Occurs in sparsely vegetated desert habitats and nests in shrubs, trees, and cacti.	**Moderate:** This bird was observed in the project area.
Gray vireo (*Vireo vicinior*)	NM T	Occurs in open piñon–juniper, chaparral–juniper, scrub oak, and dwarf conifer habitats.	**High:** This bird was observed in the project area where piñon–juniper woodlands were dominant.
Mammals			
Pronghorn (*Antilocapra americana*)	N G3	Occurs in grassy areas with no to low shrub cover.	**Unlikely:** Majority of the project area is too shrubby to provide the preferred habitat for pronghorn.
Townsend's big-eared bat (*Corynorhinus townsendii*)	BLM S	Occurs in mines and caves and is closely associated with coniferous forests, desert, native prairies, riparian areas and agricultural areas.	**Low:** The project area could provide foraging habitat.
Gunnison's prairie dog (*Cynomys gunnisoni*)	BLM S	Occurs in mostly level, open grassy areas with soil that's suitable for burrowing.	**Low:** No active prairie dog towns were observed in the project area.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Spotted bat (*Euderma maculatum*)	BLM S, NM T	Occurs in piñon–juniper, desert scrub, arid desert, ponderosa pine, mixed conifer forests, canyon bottoms, rims of cliffs, riparian areas, fields, and open pasture habitat. It usually roosts in caves and crevices in high cliffs.	**Low:** Potential roosting habitats near small cliffs.
Cebolleta pocket gopher (*Thomomys bottae paguatae*)	BLM S	Occurs in mixed scrub, sagebrush, juniper piñon–juniper, and agricultural lands.	**Moderate:** This species could occur throughout the project area.
Kit fox (*Vulpes microtis*)	N G4	Occurs in open grassland and desert scrub.	**Low:** This fox could occur within the project area; however, no den sites were observed during field surveys.
NM Meadow jumping mouse *(Zapus hudsonius luteus)*	BLM S	Occurs in montane riparian habitats and in tall sedges, thick grasses and willow–alder riparian habitats.	**Moderate:** Suitable habitat occurs in wetland areas in Cutter Canyon along Cañon Largo.
Rocky Mountain elk (*Cervus elaphus nelsoni*)	N Economic Value	Typically occurs in mountainous areas in summer and moves to lower elevations in winter.	**Low:** Unlikely that elk occur within the project area due to distance from montane habitat.
Mule deer (*Odocoileus hemionus*)	N Economic & Cultural	Occurs in a variety of open area habitats.	**Moderate:** The project area provides suitable habitat.
Fish			
Mexican tetra (*Astyanax mexicanus*)	NM T	Occurs in the Pecos River drainage.	**Unlikely:** The proposed project area is not within the watershed where this species occurs.
Roundtail chub (*Gila robusta*)	NM E	This subspecies occurs in the Rio Grande.	**Unlikely:** The proposed project area is not within the watershed where this species occurs.
Colorado pikeminnow (*Ptychocheilus lucius*)	NM E	This fish occurs in the Colorado River Basin.	**Unlikely:** There are no perennial streams in the project area. The Cañon Largo crossing is approximately seven river/wash miles from the confluence with the San Juan River.

Plants			
Aztec gilia (*Aliciella formosa*)	BLM SMS, BLM S, NM E, N G4	Arid and sparsely vegetated Badland/Salt desert scrub communities in soils of the Nacimiento Formation. 5,000–6,000 feet.	**High:** A cluster of plants were observed just outside the project area along a Cutter Canal access road and suitable habitat is on southern end of Reach 22.
Godding's onion (*Allium gooddingii*)	NM E, N G3	Occurs in spruce–fir and mixed conifer forests communities from 5,000–6,400 feet of elevation.	**Unlikely:** The proposed project area lacks suitable habitat.
San Juan milkweed (*Asclepias sanjuanensis*)	BLM S, FWS SOC, N G4	Occurs in sandy or sandy loam soils in piñon–juniper woodlands and Great Basin desert scrub from 5,000–6,200 feet elevation.	**High:** This species was observed in the project area.
Acoma fleabane (*Erigeron acomanus*)	BLM S, N G3	Found on sandy slopes and benches beneath sandstone cliffs of the Entrada Sandstone Formation in piñon–juniper woodlands at 6,900–7,100 feet.	**Unlikely:** The project area lacks the geological substrate on which this species is known to occur.
Mancos saltbush (*Proatriplex pleiantha*)	BLM S	Occurs in San Juan County, NM, in badlands on saline clay soils of the Mancos and Fruitland Shale Formations at 5,000–5,500 feet.	**Unlikely:** The project area lacks the appropriate geology and vegetation community on which this species occurs.
Parish's alkaligrass (*Puccinellia parishii*)	BLM S, NM E, N G 4	This grass occurs near alkaline springs, seeps, and seasonally wet areas at 2,600–7,200 feet.	**Moderate:** Habitat for this species occurs in sections of Cutter Canyon, Cañon Largo, and Blanco Canyon. The bulk of habitat is at the Cañon Largo crossing.
Brack's hardwall cactus (*Sclerocactus cloverae* ssp. *brackii*)	BLM SMS, BLM S, NM E, N G4	Sandy clay slopes of the Nacimiento Formation in sparse semi desert, piñon–juniper grasslands and open arid areas of badland habitat from 5,000–6,000 feet.	**High:** Five clusters traversed by ROW totaling estimated 195 individuals. Estimated 40 individuals inside ROW.
Grama grass cactus (*Sclerocactus papyracanthus*)	BLM S	Occurs in open flats of grasslands and woodlands, often with grama grass.	**Moderate:** Suitable habitat occurs within the project area, but none have been observed.

FWS SOC = Fish and Wildlife Species of Concern. BLM S and SMS = Bureau of Land Management Sensitive and Special Management Species. BGEPA = Bald and Golden Eagle Protection Act. N G3 and G4 = Navajo Endangered Species List rankings: G3 = threatened, G4 = candidate—they are not protected under Tribal Code but should be considered in project planning. NM T and E = New Mexico State Threatened and Endangered. All birds on list are protected under the Migratory Bird Treaty Act.

3.9.1. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

There would be *no effects* on the following species because of lack of habitat based on field surveys, because the project area is outside the principal range of the species, or because, in the case of fishes, there is no watershed connection, all of which make occurrence in the project area or impacts from the proposed project unlikely: Baird's sparrow, common black-hawk, western yellow-billed cuckoo, broad-billed hummingbird, brown pelican, pronghorn, Canada lynx, Jemez Mountains salamander, Mexican tetra, Zuni bluehead sucker, Rio Grande cutthroat trout, Goodding's onion, Acoma fleabane, and Mancos saltbush.

Golden eagle—The Proposed Action would have *no effect* on the Golden Eagle because of the distance of the project area from nesting sites and because wildlife- and environmental-protection measures in the 2009 EIS (BOR 2009) would be followed to avoid disturbing any active nests.

Burrowing owl—The Proposed Action would have *no effect* on the Burrowing Owl because preconstruction nest surveys would be required during the nesting season, and if owls are detected, no disturbance would occur within 164 feet of active nests as specified by BLM FFO regulations or no disturbance within 265 feet of active nest on state trust lands as specified by NMDGF guidelines. The proposed project would impact a small portion of the large prairie dog town.

Ferruginous hawk—The Proposed Action would have *no effect* on the Ferruginous Hawk because the project area is not located near any nesting centers and because wildlife- and environmental-protection measures in the EIS (BOR 2009) would be followed.

Chestnut-collared longspur—The Proposed Action would have *no effect* on the Chestnut-collard Longspur because construction activities within the narrow disturbance ROW would not impact wintering, non-breeding longspurs or their habitat.

Mountain plover—The Proposed Action would have *no effect* on the Mountain Plover because all documented occurrences are south of the project area and breeding is not likely to occur in the area. Furthermore, this species was not detected during breeding-season surveys and preconstruction nest surveys will be conducted in suitable habitat to avoid disturbing active nests.

Prairie and peregrine falcons—The Proposed Action would have *no effect* on the Prairie and Peregrine Falcons because most construction activities would occur near a heavily used road, and wildlife- and environmental-protection measures in the EIS (BOR 2009) would be followed to avoid disturbing active nests.

Pinyon jay—The Proposed Action would have *no effect* on the Pinyon Jay because preconstruction nest surveys would be required during the breeding season (April 1 to July 31), or disturbance of piñon–juniper vegetation would be restricted to the nonbreeding season.

Bald eagle—The Proposed Action would have *no effect* on the Bald Eagle because habitat is limited in the project area, and no riparian vegetation would be disturbed without preconstruction nest surveys as stipulated in the EIS (BOR 2009).

Bendire's thrasher—The Proposed Action would have *no effect* on Bendire's Thrasher because preconstruction nest surveys would be required during the breeding season or, vegetation disturbance would restricted to the nonbreeding season. Furthermore, this species is not abundant in the area based on field observations.

Gray vireo—The Proposed Action would have *no effect* on the Gray Vireo because preconstruction nest surveys would be required during the breeding season, or disturbance of piñon–juniper vegetation would be restricted to the nonbreeding season.

Least tern—There would be no direct or indirect impacts to least tern habitat because none exists in the project area. Best Management Practices (BMPs) would be used to reduce impacts to ephemeral washes that

connect to the San Juan River. Therefore, the proposed project would have *no effect* on the least tern because BMPs would reduce potential impacts to ephemeral washes that connect to the San Juan River.

Rocky Mountain elk—The Proposed Action would have *no effect* on the Rocky Mountain elk because the nature of the activities would not impact this mobile, wide-ranging species. Furthermore, Rocky Mountain elk would not be likely to occur in the project area because of the distance from montane habitat. Suitable habitat is north of the proposed project area in Cutter Dam and the surrounding mountainous areas.

Townsend's big-eared bat—The Proposed Action would have *no effect* on Townsend's big-eared bat because potential roosting habitat in the project area is very limited or nonexistent.

Gunnison's prairie dog—The Proposed Action would have *no effect* on Gunnison's prairie dog because the towns within the ROW are currently inactive. If towns are active during construction, there could be impacts to burrows and individual animals. These impacts are not likely to jeopardize the Gunnison's prairie dog population because of the widespread distribution of prairie dogs throughout northwest New Mexico and southwest Colorado.

Spotted Bat—The Proposed Action would have *no effect* on the spotted bat because potential roosting habitat in the project area is very limited.

Mule Deer—The Proposed Action would have *no effect* on the mule deer because the nature of the activities would not impact this mobile, wide-ranging species. Furthermore, suitable habitat is north of the proposed project area in Cutter Dam and the surrounding mountainous areas.

Cebolleta pocket gopher—The Proposed Action *may affect and is likely to negatively affect* pocket gophers if they occur within the construction ROW. Impacts would be to individuals and habitat but would not likely cause a trend toward federal listing or loss of species viability because the population center of this species is two counties south of the project area.

Kit fox—The Proposed Action would have *no effect* on the kit fox because efforts would be made to active dens would be avoided during construction.

New Mexico meadow jumping mouse—The Proposed Action would have *no effect* on the New Mexico meadow jumping mouse. Potential habitat for this species in and around the project area would be limited to wetland areas in Cutter Canyon and along Cañon Largo (EMI 2014a). This species has not been documented in the BLM FFO and surrounding areas and should not be a concern in the project area (J. Kendall, BLM FFO wildlife biologist, pers. communication).

Black-footed ferret—A large and currently inactive prairie dog complex exists near the project area, and one of the edges of these towns enters the ROW by about 25 feet. The nearest town encompasses over 100 acres, and there are at least six towns, although many may be inactive, within four miles. Thus, there is potential ferret habitat if the towns are active. There should not be any direct impacts to the black-footed ferret because disturbance to prairie dog towns would consist of only a few mounds. The only active town observed near the project area is small and isolated and would not offer habitat to black-footed ferrets.

The proposed project would be *no effect* to the black-footed ferret because disturbance to prairie dog towns would consist of only a few mounds.

Northern leopard frog—The Proposed Action would have *no effect* on the northern leopard frog because no suitable habitat would be directly disturbed and because water-quality control measures would be followed during construction.

Roundtail chub—The Proposed Action is *not likely to jeopardize* the proposed Roundtail chub or contribute to its being listed under the ESA. Any potential impacts to this fish or its watershed should be negated by the river distance between Cañon Largo, the San Juan River, and the Colorado River.

Colorado pikeminnow—The proposed project would have *no effect* on the Colorado pikeminnow based on the conclusions of the Final Biological Opinion, which found that the NGWSP is not likely to jeopardize the continued existence of the Colorado pikeminnow (USFWS 2009).

Potential indirect effects could occur if erosion or chemical/fuel leaks/spills from construction activities in Cañon Largo were allowed to reach the San Juan River affecting water quality. The San Juan River is not naturally turbid, and sedimentation should be a concern. Potential indirect effects would be minimized or negated by the use of environmental-protection measures in Section 2.1.5, which include erosion control and BMPs for water quality, and those required by the U.S. Army Corps of Engineers and the New Mexico Environment Department Surface Water Quality Bureau.

Another potential indirect effect is the take of water from the San Juan River to supply the Navajo–Gallup Water Supply. A reduction in river flow could have numerous potential negative effects on fishes because high flows, particularly in spring, are responsible for maintaining spawning and nursery habitats and food production (Roehm 2004). Indirect effects from the construction of the NGWSP could also include the entrainment of fishes at intake points once the waterlines are operational as discussed in the 2009 EIS (BOR 2009). Impacts resulting from water take and entrainment at water intake points are discussed in the 2009 EIS (BOR 2009) and the associated Final Biological Opinion (USFWS 2009), which found that water flow rates would not be impacted but some entrainment of fishes in intake pumps could occur. The Final Biological Opinion found that the NGWSP is not likely to jeopardize the continued existence of the Colorado pikeminnow (USFWS 2009).

Razorback sucker—The proposed project would have *no effect* on the razorback sucker based on the conclusions of the Final Biological Opinion, which found that the NGWSP is not likely to jeopardize the continued existence of the razorback sucker (USFWS 2009).

Potential indirect effects could occur if erosion or chemical/fuel leaks/spills from construction activities in Cañon Largo were allowed to reach the San Juan River affecting water quality. The San Juan River is not naturally turbid, and sedimentation should be a concern. Potential indirect effects would be minimized or negated by the use of environmental-protection measures listed in Section 2.1.5, which include erosion control and BMPs for water quality, and those required by the U.S. Army Corps of Engineers and the New Mexico Environment Department Surface Water Quality Bureau.

Another potential indirect effect is the take of water from the San Juan River to supply the Navajo–Gallup Water Supply. A reduction in river flow could have numerous potential negative effects on fishes and their habitat because high flow help maintain seasonal habitat preferences. Indirect effects from the construction of the NGWS also include the entrainment of fishes at intake points once the waterlines are operational as discussed in the 2009 EIS (BOR 2009). Impacts resulting from water take and entrainment at water intake points are discussed in the 2009 EIS (BOR 2009) and the associated Final Biological Opinion (USFWS 2009), which found that water flow rates would not be impacted but some entrainment of fishes in intake pumps could occur. The Final Biological Opinion found that the NGWSP is not likely to jeopardize the continued existence of the razorback sucker (USFWS 2009).

Colorado Pikeminnow and Razorback Sucker Critical Habitat and Potential Impacts

Fish critical habitats include the 100-year floodplain where portions of the floodplain contain the primary constituent elements (PCE). The PCE for the Colorado pikeminnow and razorback sucker critical habitats are: 1) water—a quantity of water of sufficient quality (i.e., temperature, dissolved oxygen, lack of contaminants, nutrients, turbidity, etc.) that is delivered to a specific location in accordance with a hydrologic regime that is required for the particular life stage for each species; 2) physical habitat—areas of the Colorado River system that are inhabited or potentially habitable by fish for use in spawning, nursery, feeding, and rearing, or corridors between these areas. This also includes bottom lands, side channels, secondary channels, oxbows, backwaters, and other areas that when inundated provide spawning, nursery, feeding and rearing habitats, or access to these habitats; and 3) biological environment—food supply, which is a function of nutrient supply, productivity, and availability to each life stage of the species, and predation and competition, which may be out of balance due to introduced nonnative fishes (USFWS 1994, USFWS 1998). Special consideration was

given to habitats required for reproduction and recruitment in the establishment of razorback sucker critical habitat because of the lack of recruitment for this species (USFWS 1994).

There could be potential indirect effects on Colorado pikeminnow and razorback sucker critical habitats if erosion or chemical/fuel leaks/spills from construction activities in Cañon Largo were allowed to reach the San Juan River affecting water quality. The San Juan River is not naturally turbid, and sedimentation should be a concern. Potential indirect effects would be minimized or negated by the use of wildlife- and environmental-protection measures mentioned in Section 2.1.5, which include erosion control and BMPs for water quality, and those required by the U.S. Army Corps of Engineers and the New Mexico Environment Department Surface Water Quality Bureau.

Another potential indirect effect is the take of water from the San Juan River to supply the Navajo–Gallup Water Supply. A reduction in river flow could have numerous potential negative effects on fish critical habitat because lower river flow could impact river dynamics, the floodplain, and the structure of the riverbed, which translate to impacts on the physical habitat and biological environment critical habitat PCEs. Impacts resulting from water take and entrainment at water intake points are discussed in the 2009 EIS (BOR 2009) and the associated Final Biological Opinion (USFWS 2009), which found that water flow rates would not be impacted. The Final Biological Opinion found that the NGWS project is not likely to adversely modify the designated critical habitat of the Colorado pikeminnow or the razorback sucker (USFWS 2009).

The proposed project would have *no effect* on fish critical habitat because the Final Biological Opinion for the NGWS project (USFWS 2009) determine that flow rates in the San Juan would not be impacted, and BMPs would be used to reduce impacts to the San Juan and Cañon Largo. Furthermore, Cañon Largo would be bored under.

Aztec gilia—The Proposed Action would have *no effect* on the Aztec gilia located on the NIIP Canal if measures are taken to avoid disturbance to plants by controlling dust during construction and noxious weeds post construction. Noxious weed control should insure that herbicide drift does not impact Aztec gilia.

San Juan milkweed—The Proposed Action *may affect but is not likely to negatively affect* the San Juan milkweed because only one individual was located during surveys, and this plant was outside the construction ROW. Impacts from dust or weeds may impact individual plants but would not impact the population as a whole.

Parish's alkaligrass—The Proposed Action would have *no effect* on Parish's alkali grass habitat if horizontal directional drilling is used at the Cañon Largo crossing to avoid the suitable Parish's alkali grass habitat in the project area.

Five clusters traversed by ROW totaling estimated 195 individuals. Estimated 40 individuals inside ROW.

Brack's hardwall cactus—Five cactus clusters are traversed by the proposed ROW between the south end of Blanco Canyon and the north end of Cutter Canyon. These clusters total an estimated 195 cacti. An estimated 40 individual cacti are located within the proposed ROW. Direct effects could include the loss of plants during construction activities and impacts from dust generated by construction activities, which could affect pollination, photosynthesis, or both. Indirect effects could result from increased competition from weeds following disturbance. Indirect impacts would be minimized by post-disturbance revegetation measures (Section 2.1.5) and on BLM lands by the bare soil reclamation procedures (BLM FFO 2013). Cacti around and north of Cañon Largo will be transplanted (EMI 2014c). The proposed action *may affect and is likely to negatively affect* multiple cacti within the project right-of-way south of Cañon Largo in Blanco Canyon via disturbance or destruction (EMI 2014a).

Grama grass cactus—The Proposed Action *may affect but is not likely to negatively affect* grama grass cacti because none was observed in the project area. Direct impacts would be to individuals and habitat but would not likely cause a trend toward federal listing or loss of species viability because of the widespread distribution of the species and because this species was not detected during surveys, suggesting that it is not abundant in the area.

Knowlton cactus—The project area contains rolling gravelly topped hills in piñon–juniper and sagebrush from between Jaquez Canyon to Reed Canyon and in Cutter Canyon. The project area also contains soils derived from alluvial deposits. No cacti resembling Knowlton cactus were detected during pedestrian surveys. This species is unlikely to occur in the area because of its restricted distribution, which is roughly 28 miles (45 km) north of the project area. Therefore, the proposed project would have *no effect* on the Knowlton cactus because this species is unlikely to occur in the project area, and no cacti were observed during pedestrian surveys.

Cumulative Impacts

Disturbance from oil and gas development and associated infrastructure and livestock grazing would continue. Wildlife inhabiting the Great Basin Desert Scrub and piñon juniper woodlands would be most affected from oil and gas development (USDI/BLM 2003a). The Proposed Action would not impact Great Basin Desert Scrub biotic community and piñon juniper woodlands at the northern portion of Reach 22 would not be converted to grasslands. Installation of a waterline could lead to the growth of residential areas, which would increase the human population in the area and lead to more roads, power lines, and other development. The impacts would likely not be substantial in the foreseeable future due to the fact that the project area is rural and sparsely populated.

The proposed project to control invasive plants on the Navajo Nation lands in several New Mexico counties, including McKinley and San Juan could change plant community composition and structure over the long-term by restoring native plant communities. This could improve wildlife habitat quality with restoring/increasing native plant habitats.

Only individual plants and animals have the potential to be impacted by the construction activities, and the analysis indicates that there would be no effect at the population level for these species, thus, there would be no cumulative effects from this project and other activities in the area.

Mitigation Measures and Residual Impacts

A draft mitigation and monitoring plan has been developed for Brack's cactus to minimize impacts from the Proposed Action (EMI 2014c). This plan would establish permanent monitoring plots and transplant all individual Brack's cacti located within the ROW on BLM-managed lands. Survival and recruitment of the transplants will be monitored and compared to a control plot for a 5-year period.

3.10. Cultural Resources

3.10.1. Affected Environment

The proposed project is located within the archaeologically rich San Juan Basin of northwest New Mexico. In general, the history of the San Juan Basin can be divided into five major periods: PaleoIndian (ca. 10000 B.C. to 5500 B.C.), Archaic (ca. 5500 B.C. to A.D. 400), Basketmaker II–III and Pueblo I–IV periods (aka Anasazi; A.D. 1-1540), and the historic (A.D. 1540 to present), which includes Native American as well as later Hispanic and Euro-American settlers. Detailed descriptions of these various periods are provided in the BLM FFO Final Environmental Impact Statement (2003) and will not be reiterated here. Additional information can also be found in an associated documented, Cultural Resources Technical Report (SAIC 2002).

Effects to cultural resources must be taken into consideration under every NEPA-governed Proposed Action. The term "cultural resources" refers to any historic or prehistoric resource. This encompasses a wide range of material remains that have the potential to provide information about the human use and occupation of the project area.

Cultural sites vary considerably, and can include but are not limited to simple artifact scatters, domiciles of various types with a myriad of associated features, rock art and inscriptions, ceremonial/religious features, and roads and trails.

The National Register of Historic Places (36 CFR Part 60) is the basic benchmark by which the significance of cultural resources are evaluated by a federal agency when considering what effects its actions may have on cultural resources. To summarize, to be considered eligible for the National Register a cultural resource must meet one or more seven aspects of integrity including location, design, setting, materials, workmanship, feeling, and association, *and* meet one or more of the following criteria: *a*) are associated with events that have significantly contributed to the broad patterns of our history; or *b*) are associated with the lives of persons significant in our past; or *c*) embody distinctive characteristics of the type, period, or method of construction, or represents the work of a master, or possesses high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; or *d*) have yielded, or maybe likely to yield, information is important in a pre-history or history. If a site, regardless of age, meets these standards it is referred to as a "historic property."

Pursuant to Reclamation's *Programmatic Agreement Regarding the Consideration and Management of Effects On Historic Properties Arising from Construction of the Navajo-Gallup Water Supply Project, New Mexico* (PA), the Proposed Action's Area of Potential Effect (APE) for direct physical effects on historic properties includes all lands within 125 feet of the planned 150 foot construction ROW for a total width of 400 feet as depicted in the FEIS. All lands within the APE for the Proposed Action were surveyed for cultural sites by PaleoWest Archaeology. The report documenting the identification of 72 cultural sites is in preparation by Reclamation's contractor PaleoWest. Preliminary recommendations by PaleoWest on the eligibility of sites documented within the APE includes 49 cultural resources sites (22 on Navajo Nation lands, 24 on BLM lands, 2 jointly owned between BLM and Navajo and 1 jointly owned by Navajo Nation and State of New Mexico) that are recommended as eligible for the NRHP under criterion D. Of the remaining sites, 11 require more information to make an eligibility determination (undetermined) and 12 are recommended as not eligible for listing on the NRHP under any criteria. Twenty-six (26) of the sites that are listed as either eligible or undetermined have been identified as being located all or partially within the ROW.

Native American Religious Concerns

TCP's are a separate class of cultural resources and are places that have cultural values that transcend, for instance, the values of scientific importance that are normally ascribed to cultural resources such as archaeological sites, and may or may not coincide with archaeological sites (Parker and King 1998).

A TCP is defined as a historic property that is listed on, or is eligible for inclusion on the NRHP because of its association with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of the community (National Register Bulletin #38). Native American communities are most likely to identify TCPs, although TCPs are not restricted to those associations. Some TCPs are well known, while others may only be known to a small group of traditional practitioners, or otherwise only vaguely known. Native American tribal perspectives and tribal policies on what is considered a TCP are not limited by a places age or its National Register eligibility or lack thereof.

TCPs cover a wide range of locales and use areas. Properties may include sacred landforms (e.g., mountains, rivers, lakes, outcrops, or naturally discolored rocks), places associated with deities, plant gathering areas, places mentioned in traditional histories, habitation sites, and ceremonial/offering places (e.g. Martin 2011).

Navajo Nation Historic Preservation Department (NHPD) policy requires on Navajo lands that a good faith effort must be made to identify and evaluate all TCPs and sacred sites that may be affected by project related activities. For the Proposed Action, identification of TCPs consisted of reviewing existing published and unpublished literature (e.g., Van Valkenburgh 1941, 1974; Brugge 1993; Kelly et al 2006; Gilpin 2013) in addition to the NHPD's TCP database.

NNHPD defines a class of TCP on lands within their jurisdiction as Jischaa'. Jischaa' is defined as human remains, associated funerary items, and unassociated funerary items, all things associated with death. Guidelines for the protection of grave sites, funerary items and human remains are outlined in the Navajo

Nation Policy for the Protection of Jischaa': Gravesites, Human Remains and Funerary Items (Jischaa' Policy) (http://www.hpd.navajo-nsn.gov/images/hpd/crcs/permitpkg/7.0_Jishchaa_Policy.pdf).

The proposed Reach 22 alignment is adjacent to *Dzil'na'oodlii* and *Ashiih Naa'a* TCPs. Both *Dzil'na'oodlii* (Huerfano Mesa) and *Ashiih Naa'a* (Salt Point) are designated Areas of Critical Enviromental Concern (ACEC) by the BLM FFO RMP. The designations are based on the importance of these places to the people of the Navajo Nation as sacred sites and areas of traditional use.

Dzil'na'oodii is associated with the Navajo Emergence history and individuals known as First Man, First Woman, Changing Woman, and the Hero Twins (a.k.a. Twin War Gods). It is one of the sacred mountains of the Navajo. A review of published and unpublished literature regarding *Dzil'na'oodii* indicates the top of the mesa has many places of traditional and sacred values and ritual use. For instance, the mesa top is used to gather plants/herb medicine (Van Valkenburgh 1974:31) and water for ritual purposes from natural potholes (Brugge 1967:10), and that "Navajos frown upon efforts to climb it and only their medicine men climb to the top" (Van Valkenburgh 1941:76). "All of the plants that grow on the mesa are considered sacred... for this reason they [Navajos] are concerned about the destruction of vegetation both on the mesa and on its slopes" (Brugge 1967:15). The mesa top is also used for prayers and shrines/offerings (Van Valkenburgh 1938). Brugge (1967:16) notes that "old camp sites" used by those who came from distant places and ascended the top of the mesa could be found along the base of the mesa.

Ashiih Naa'a is also associated with the Navajo Emergence history and said to be associated with the *Ashiihí dine'e* (Salt clan; Kelly et al 2006). The progenitors of the clan may be linked with Jemez Pueblo. Also reportedly a former home of Holy Person Salt Woman (Van Valkenburgh 1974) and a place on her route of travel from the Jemez Mountains through Largo Canyon. A place for collecting salt for ceremonial and possibly secular use before the trading posts arrived (Van Valkenburgh 1938, 1941, 1974). The "point" itself also encompass much of the high rocky projection of the northern end of Blanco Mesa.

The proposed Reach 22 alignment also appears to intersect with an area known as *Ahidiidlini*, described as a "sacred zone at junction of Largo and Blanco Washes" (Kelly et al. 2006). The Navajo name means Junction and is mentioned in origin story of Nightway ceremony, including petroglyphs/pictographs of deities.

Dinétahdóó Cultural Resources Management conducted an ethnographic survey of Reach 22 by reviewing records and talking to local residents and knowledgeable persons. The report is in preparation though preliminary findings indicate that in addition to the three TCP's discussed above, two Jischaa' (burials, funerary items) were also identified within the APE.

Old Spanish National Historic Trail

On November 6, 1829 Santa Fe merchant Antonio Armijo led 30-60 men and pack mules on an 86 day journey from Abiquiu to San Gabriel Mission. Armijo's journal (Hafen and Armijo 1947) indicates that he passed through this area November 13-14. He left San Gabriel Mission on March 1, 1830 following the same route, arriving home on April 25, 1830, having completed the first round trip trade caravan between New Mexico and California. Armijo apparently used this route only once, and subsequently routes farther to the north took precedence. The OST is a term used largely after the period of significant use and the name Spanish Trail is attributed to John C. Fremont in 1845 and presumably takes its name from the Spanish colonies in northern New Mexico and southern California that were economically linked by this rugged route. During the period of significance (1829-1847) the trail went by the name El Camino de California and El Camino de Nuevo Mexico (Merlin, Marshall, Roney 2011:6).

The Old Spanish Trail (OST) was designated in 2002 as a National Historic Trail and is jointly managed by the BLM and NPS. At the moment a comprehensive BLM/NPS management plan for the trail has not been completed and current BLM management is guided by BLM Manuals 6250 and 6280. The National Park Service has informally indicated that Largo Canyon will likely be identified as a high potential trail segment.

Reach 22 intersects with the designated "Armijo Route" of the OST in Largo Canyon as it (Reach 22) crosses north to south into Blanco Canyon (Figure 6). Physical evidence, such as trail traces or cultural sites and

artifacts related to the period of significance (1829-1847) within Largo Canyon have not been found (Provenzali 2011; PaleoWest in preperation). The route's location is co-located with an area of long historic activity such as ranching and energy development thus any trail segments, if present in this area are likely heavily affected or obscured by modern activity. The terrain characteristics of Largo Canyon are not favorable for the preservation of evidence of the historical trail. The regional topography is composed of sandstone-capped mesas dissected by deep, narrow canyons and arroyos. Weathering of shale and sandstone has resulted in a highly erodible landscape and an abundant sediment supply.

3.10.2. Impacts from Proposed Alternative A

Direct and Indirect Impacts

Direct impacts normally include alterations to the physical integrity of a cultural site. If a cultural site is significant for other than its scientific information, direct impacts may also include the introduction of audible, atmospheric, or visual elements that are out of character for the cultural site. A potential indirect impact from the proposed action is the increase in human activity or access to the area with the increased potential of unauthorized removal or other alteration to cultural sites in the area.

Section III of Reclamation's PA regarding consultation on cultural resource National Register eligibility determinations have not been completed. This requirement will be met, prior to construction, through implementation of the PA governing the NHPA Section 106 process on the NGWSP. The PA allows for a phased approach to Section 106 on the NGWSP to allow varying components of the project to progress at different rates while ensuring Section 106 requirements are met for varying components prior to construction.

Twenty-six eligible and undetermined cultural resource sites have been identified within the construction ROW. Following stipulations in Sections IV and V of Reclamation's PA historic properties/TCPS will be to the extent possible, avoided with the implementation of design features such as but not limited to reduction of construction areas, temporary barriers, and site monitoring (USDI BOR 2012, page 9). If historic properties/TCPS cannot be avoided and will be adversely affected, Reclamation or its contractors will prepare, in consultation with Parties to the PA, a treatment plan for all properties it determines are subject to adverse direct and indirect effects by the Project and treatment will be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and with the ACHP's guidelines.

Native American Religious Concerns

Pending the completion of the ethnographic report by Dinétahdóó Cultural Resources Management the proposed action is not currently known to physically threaten the integrity of any sacred places/TCPs, prevent access to sacred sites, prevent the possession of sacred objects, or interfere or otherwise hinder the performance of traditional ceremonies and rituals pursuant to AIRFA or EO 13007. Two Jischaa' sites that fall within the purview of the NNHPD Jischaa' Policy and NAGPRA are located within the Reach 22 APE. Both Jischaa' sites will be avoided by construction.

Old Spanish National Historic Trail

The designated trail intersects with Reach 22 in Largo Canyon. The NGWSP is a congressionally designated action and denying approval of the action or avoidance of the trail are not viable options.

The BLM is required to evaluate whether the proposed action would substantially interfere, or be incompatible with the nature and purposes of the National Trail (Manual 6280, Section 1.6.A.2.i-ii).

- Will the BLM's ability to effectively manage the nature and purposes of the trail, trail resources, qualities, values, uses (including public access and enjoyment) and associated settings be affected?
    - No. Public access and enjoyment of the Armijo Route of the OST in this area of Largo Canyon will not be affected.
- Will it require a major relocation of the National Trail Management Corridor in order to provide for the conservation and enjoyment of the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, or the primary use or uses of the trail?
    - No. The National Trail Management Corridor has not yet been designated.

- Are the characteristics that made the trail worthy of designation, including Federal Protection Components, including high-potential historic sites or high potential route segments located on public land, are affected?
    - No. Based on a viewshed analysis, portions of the Cutter Lateral rights of way will be visible from within 0-5 miles (e.g. foreground-middle ground) of the OST. However, due to the level of existing development in this area (power lines, pipelines, improved roads, natural gas wells, irrigation canal, etc.) the impact will not be adverse. In addition there are no known high potential historic sites related to the period of significance for the OST in this area.
- Are designated National Historic Trail properties, including remnants and artifacts from the associated period of use that may be eligible or listed on the National Register and/or determined by the National Trail administering agency to qualify as possible high potential historic sites or high potential route segments affected?
    - No. Intensive cultural resources survey for the proposed action has not identified any physical evidence of this route within this area of Largo Canyon (Provenzali 2011; PaleoWest in preperation).
- Is the agency's ability to manage the trail for the purpose of identifying and protecting the historic route and its historic remnants and artifacts for public use and enjoyment, including interpretation, education, appreciation, and vicarious experiences affected?
    - No. Public use and enjoyment, including opportunities for interpretation, education, appreciation, and vicarious experiences along 30+ miles of Largo Canyon are not affected.

Since it has been determined that the proposed action does not have the potential to substantially interfere with the nature and purposes, or constitute an incompatible activity, to the level that may cause significant adverse impact to the nature and purposes, no notification to the Deputy State Director and the NLCS Division Chief is required pursuant to BLM Manual 6280, Section 5.3.C.

Cumulative Impacts

Oil and gas development and associated infrastructure (e.g., access roads) would cause surface disturbance that could direct damage to cultural resources and could result in increased vandalism when considered in combination with other potential urban development in the San Juan Basin. Livestock grazing could also cause direct damage to cultural resources, such as breakage of artifacts or bones, displacement of cultural resources, or increased erosion from removal of protective vegetation. Installation of a waterline could lead to the growth of residential areas, which would increase the human population in the area and lead to more roads, power lines, and other development. This development may impact cultural resources in the area. The impacts would likely not be substantial in the foreseeable future due to the project area's location on federal and tribal lands which are governed by environmental and cultural resource legislation that requires cultural resource surveys prior to residential development and supporting infrastructure installation.

3.10.3. Impacts from Proposed Alternative B

Direct and Indirect Impacts

The potential impact from erosion on cultural resources depends on the ability of Cutter Canyon to handle the volume of water released. Any cultural resources that occur within the active stream channel will be minimal and most likely lack sufficient integrity to be considered eligible for the NRHP. Cultural resources are often identified in the erosion of cut banks. The primary impacts to cultural resources downstream of the dam would be from increased undercutting and stream bank erosion near archaeological sites that are in a primary context. In the event Alternative B is selected a Class III cultural resources survey of the APE downstream of the dam should be conducted.

Unrelated to this undertaking, a Class III pedestrian cultural resources survey of portions of Cutter Canyon was conducted by La Plata Archaeological Consultants in 1994, though most of the canyon remains un-surveyed. One archaeological site (LA107725) was recorded in the flood plain of the canyon below the dam. Site LA 107725 is located in an area that was noted as susceptible to alluvial erosion. The site was determined eligible for the NRHP in 1995. Should the site be found susceptible to impacts from increased erosion as a result of Alternative B, steps should be taken to mitigate those impacts to the site.

Native American Religious Concerns

Same as Proposed Alternative A.

Old Spanish National Historic Trail

Same as Proposed Alternative A.

Cumulative Impacts

Same as Proposed Alternative A.

3.11. Land Use

3.11.1. Affected Environment

The proposed project would be located on land belonging to BLM, State of New Mexico, Navajo lands held in trust by the BIA, allotted lands, and private individuals. (Reclamation 2009). Further general information regarding land use authorizations can be found in Chapter V of the 2007 Navajo–Gallup Water Supply Project Planning Report and Draft Environmental Impact Statement.

Land use on Reach 22 consists of mostly rural activities with scattered infrastructure, including existing natural gas pipeline ROWs and associated tanks, compressors, and roads, and power lines. Residences within a quarter mile of the waterline are scattered throughout Reach 22. The predominant land use across all reaches is open-range grazing of cattle, horses, and sheep. Occasional barbed-wire fences cross the reaches and some small impoundments or reservoirs have been developed along washes. The roads that parallel Reaches 22a and 22b (County Roads 7007, 7425, and 7575) receive traffic from large tankers and big-rig trucks because of the gas exploration in the area.

3.11.2. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

Impacts to land use are measured in terms of whether the changes to land use caused by the Proposed Alternative A are consistent with present land use regulations and if these land use changes would prevent or alter the types of future land use that would be feasible. The lands where the improvements would be placed are primarily managed for habitat and livestock grazing. Although grazing would be temporarily affected during project construction, this would be a temporary effect. After completion of construction and reclamation of the pipeline ROWs, they would again provide habitat and grazing opportunity. Small areas associated with pump stations and water treatment plant, totaling about 20 acres would not be available for other land uses. Should future oil or gas development occur in the area, these activities would not be incompatible with the pipeline or other improvements because they could be placed away from existing improvements.

Cumulative Impacts

Oil and gas development and associated infrastructure would continue, which could cause conflicts with residential, community, and some commercial uses from potential noise sources. However, local zoning plans and regulations provide the basis for development and should eliminate incompatible land uses. Based on the temporary and short-lived effects of surface disturbance from the proposed construction of Reach 22, cumulative effects of the Proposed Action would not contribute to fragmentation of land holdings or bisecting land use patterns, thus would have negligible contributions to cumulative impacts.

3.12. Transportation and Travel Management

3.12.1. Affected Environment

Portions of the reaches of the project area follow or are crossed by dirt roads. Much of the proposed pipeline ROW and other improvements would be located along existing San Juan County Road 7007, County Road

7425, and County Road 7525, roads that receive 18 wheeler and large tanker traffic because of the gas exploration in the area (Figure 2). The proposed project includes both a 60 ft. wide permanent waterline right-of-way and a 40 ft. temporary construction easement. The contractor will either construct berms to prevent public access to the ROWs and temporary construction easements from existing roadways or install signs restricting public access. No new roads will be created. After construction is completed, the temporary construction easement shall revert to BLM. However, NTUA will continue to use the permanent ROW for access to the pipeline for operation and maintenance purposes.

3.12.2. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

Public roads are likely to be disturbed as part of the Proposed Action. Traffic control would be required on County Roads 7007, 7425, and 7575 during construction. In addition, some activities may require operating equipment on the edge or shoulder of some roads, especially during excavation of pipelines. Such activities may interfere with traffic, but the effects are anticipated to be low due to low traffic volumes on the road and mitigation measures. Construction activity would increase traffic on roads within the project area; this increase would be spread over a 3-year period as construction would last from 2014 through 2017. Figure 8 provides an example of disturbance during construction along a road open to public travel and Figure 9 shows the area following the completion of construction.

Reclamation or Reclamation's contractor will use adequate traffic control devices and warning signs to alert drivers of equipment and activities in or near roadways. Measures would be implemented to assure that County Roads 7007, 7425, and 7575 would remain available for public use during construction activities. These measures would ensure that county roads would remain open for public access and use, although delays may be likely at times.

Figure 7. Typical trench and pipeline construction adjacent to public roads

Figure 8. Typical worksite after placement of pipe

Cumulative Impacts

Existing oil and gas pipeline ROWs, access roads, power lines, and associated facilities cross or are within the general vicinity of Reach 22; totaling approximately 10,000 acres of past disturbance. There are eight proposed oil and gas pipeline ROWs and two proposed transmission lines; totaling about 5 acres. No other activities are known to be occurring or are planned to occur in the project area that would affect transportation and travel management. The proposed construction of Reach 22 would have negligible contributions to cumulative impacts for transportation and travel management.

3.13. Recreation

3.13.1. Affected Environment

The BLM provides for multiple recreation uses of the public lands. The objective of the FFO outdoor recreation program is to ensure the continued availability of public land for a diverse array of quality resource-dependent outdoor recreation opportunities. Recreation use is managed to protect the health and safety of visitors; to protect natural, cultural, and other resource values; to stimulate enjoyment of public lands; and to resolve user conflicts (USDI/BLM, 2003b, page 2–14). Further general information on recreation in the area can be found in the 2003 Farmington RMP/EIS.

No notable signs of off-highway vehicle use were observed during field surveys. A small picnic area is located at the base of Cutter Dam near the proposed Reach 22 alignment. The picnic area showed little evidence of regular use during field surveys. Hunting in the proposed project area is likely minimal given the limited habitat for large game in the majority of the proposed project area. Some dispersed recreation may occur around residences.

Hiking may occur along the "Armijo Route" of the OST in Largo Canyon as it crosses north to south into Blanco Canyon (Figure 6). Additional information on the OST can be found in the Cultural Resources Section.

Year-round fishing occurs at Cutter Reservoir and is managed by the NNDFW Management and Research Section. Cutter Reservoir is stocked annually with 12,000 fish; stocking occurs in spring (March and April) and fall (October). Last year NNDFW stocked 14,000 rainbow trout with 9,000 in spring and 5,000 in fall (personal communication Glen Selby, NNDFW fisheries biologist).

3.13.2. Impacts from Proposed Alternative A

Direct and Indirect Impacts

The proposed Reach 22 alignment is located in a partially remote area removed from any notable recreation developments. Construction work may affect potential recreation activities and the general recreational experience of the public through increased noise, dust, and a general increase in human activity in the area. The general public may encounter equipment and personnel operating within the immediate project area. The proposed activities would likely not noticeably affect the recreating public as there is little sign of recreation in the project area and given the limited extent of the proposed activities. Noise and activity in close proximity (within ¼ mile) of residences may affect residents. Impacts to the OST are the same as discussed under the Cultural Resources Section.

The recreational user may observe new surface disturbances and construction activities. However, Proposed Alternative A would be consistent with the existing environment, which contains extensive disturbances associated with utility and energy development infrastructure and transportation infrastructure. Work would occur during normal business hours in order to minimize disturbing residents and overnight recreationists. When construction is complete, disturbed areas would be re-contoured, reclaimed, and seeded to decrease the visual effects to the recreating public.

The NGWSP EIS analyzed the potential for general recreation effects on Navajo Nation lands. Because no campgrounds, hiking trails, or established recreation areas exist on Navajo Nation lands in the proposed project area, there would be no effect on these activities. The EIS disclosed that hunting activities are limited in the area due to the types of habitat that exist. Some tribal members hunt small game or elk and construction could temporarily displace wildlife, which could reduce hunting success (NGWSP EIS, pages V-98 to 99). When project activities are complete, hunting opportunities would return to pre-construction levels.

Cumulative Impacts

Oil and gas development would continue, which could have cumulative impacts on dispersed recreation areas. Oil and gas development would add to the level of modification, mainly visual and sound, that would detract from high quality dispersed recreation. The proposed project to control invasive plants on the Navajo Nation could also temporarily increase noise and reduce visual quality of treated areas until native vegetation becomes re-established.

Additional residential growth could occur from the installation of the waterline, leading to surface disturbance from construction of roads, power lines, and homes, which could detract from dispersed recreation opportunities. There would be no cumulative impacts from Proposed Alternative A on campgrounds, hiking trails, or established recreation areas, as they do not exist within or near the proposed project area.

3.13.3. Impacts from Proposed Alternative B

Direct and Indirect Impacts

Direct and indirect impacts to recreation use from construction of the water pipeline and associated infrastructure would be the same as Alternative A. Fishing at Cutter Reservoir would be temporarily unavailable from November to January while outlet modifications to connect the proposed water pipeline were completed. Fish would be stocked in April/March, but not in October to reduce potential number of fish killed from draining of the reservoir. Reclamation would consult with NNDFW to develop an agreement for compensation of the rainbow trout lost from draining the reservoir. Kokanee salmon, white suckers, and carp may also be lost from draining the reservoir, but NNDFW does not want compensation for these species as these species are not desired on the Navajo Nation. The public will be notified of the temporary fishing closure at Cutter Reservoir. Once the outlet work is completed, the reservoir would be refilled over 2.5 weeks and NNDFW would stock Cutter Reservoir with rainbow trout in the spring. Once outlet work modifications are completed, fishing opportunities would return to pre-construction levels.

Cumulative Impacts

Cumulative impacts would be the same as Proposed Alternative A.

3.14. Livestock Grazing

3.14.1. Affected Environment

The livestock grazing program is principally authorized by FLPMA, the Taylor Grazing Act of 1937, and the Public Rangelands Improvement Act of 1978. The principal objective of the rangeland program is "to promote healthy sustainable rangeland ecosystem to accelerate restoration and improvement of public rangeland to properly functioning condition; to promote the orderly use, improvement and development of the public lands; to efficiently and effectively administer domestic livestock grazing; and to provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands." Further general information on rangeland management in the area can be found in Chapters 2 and 3 of the Farmington Resource Management Plan/Environmental Impact Statement (USDI/BLM 2003a).

The proposed project crosses seven grazing allotments with six and one managed by FFO and BIA, respectively (Figure 9). The allotments are summarized in table 12.

Table 12. Grazing allotments in the proposed project area

Allotment Name and Number	Annual Operating Period	Maximum Permitted (head)		Available AUM	Public land portion
		Cattle	Sheep		
Cutter Canyon—5051	11/01–1/31	51	—	145	94%
Jacquez Community—5073	year-round	14	99	407	100%
	10/1–4/30		17	24	100%
	6/1–11/30	12	—	72	100%
Huerfanito Peak—5075	11/1–5/30	50	—	201	58%
Dufers Point AMP—5076	year-round	273	—	2215	93%
Huerfano—5077	year-round	163	—	1682	86%
Chavez—5137	year-round	56	—	327	84%
	10/1–1/20	20	—	74	100%
Huerfano Community—6007*	year-round	—	856	2055	100%

*Managed by BIA

No permanent livestock water sources are within the immediate project area. A number of fences would be crossed by the proposed Reach 22 alignment. Livestock may be present during project operations.

3.14.2. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

The Proposed Action Alternatives would result in the temporary loss of forage as a result of the construction activities within the grazing allotments. The disturbed area along the proposed pipeline ROW would be reseeded with BLM-approved seed mixes, which is composed of palatable grasses and shrubs (Appendix A). The disturbed area would be expected to revegetate within 1 to 2 years following reclamation and may result in an increase in available forage within the proposed project area. There would no long-term loss of available forage or water resources. Construction of the pipelines could also temporarily restrict livestock movement and access to water due to the open trenches. In areas where active grazing is taking place escape ramps/crossovers would be placed every 500 feet along an open trench to reduce potential hazards to livestock; crossovers would be a minimum of ten feet wide and not fenced. Established livestock and grazing trails would also be left in place to serve as a cross over. Grazing permittees would be contacted prior to any construction operations on their respective portions of the proposed reaches. All construction activities would be confined to the permitted areas only. Effects to range and grazing livestock are anticipated to be minor in both the short and long term if design features are followed.

Cumulative Impacts

Oil and gas development and off-highway vehicle traffic could introduce noxious and invasive weeds and disturb the surface, reducing forage available for livestock. However, the overall effect of removing rangeland acreage from production from oil and gas surface disturbance when compared to urban development would still be minimal when compared to the acreage of available forage (USDI/BLM 2003a, pages 4-126 to 4-127). The Proposed Action Alternatives would not contribute to cumulative impacts on the carrying capacity or available AUMs of the allotments.

3.15. Environmental Justice/Socio-Economics

3.15.1. Affected Environment

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, requires that federal agencies identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

Environmental justice refers to the fair treatment and meaningful involvement of people of all races, cultures, and incomes with respect to the development, implementation, and enforcement of environmental laws, regulations, programs, and policies. It focuses on environmental hazards and human health to avoid disproportionately high and adverse human health or environmental effects on minority and low-income populations.

Guidance on environmental justice terminology developed by the President's Council on Environmental Quality (CEQ 1997) is discussed below.

- Low-income population. A low-income population is determined based on annual statistical poverty thresholds developed by the US Census Bureau. In 2012, poverty level is based on total income of $11,720 for an individual and $23,283 for a family of four (US Census Bureau 2012d). A low-income community may include either a group of individuals living in geographic proximity to one another or dispersed individuals, such as migrant workers or Native Americans.
- Minority. Minorities are individuals who are members of the following population groups: American Indian, Alaskan Native, Asian, Pacific Islander, Black, or Hispanic.
- Minority population area. A minority population area is so defined if either the aggregate population of all minority groups combined exceeds 50 percent of the total population in the area or if the percentage of the population in the area comprising all minority groups is meaningfully greater than the minority population percentage in the broader region. Like a low-income population, a minority population may include either individuals living in geographic proximity to one another or dispersed individuals.

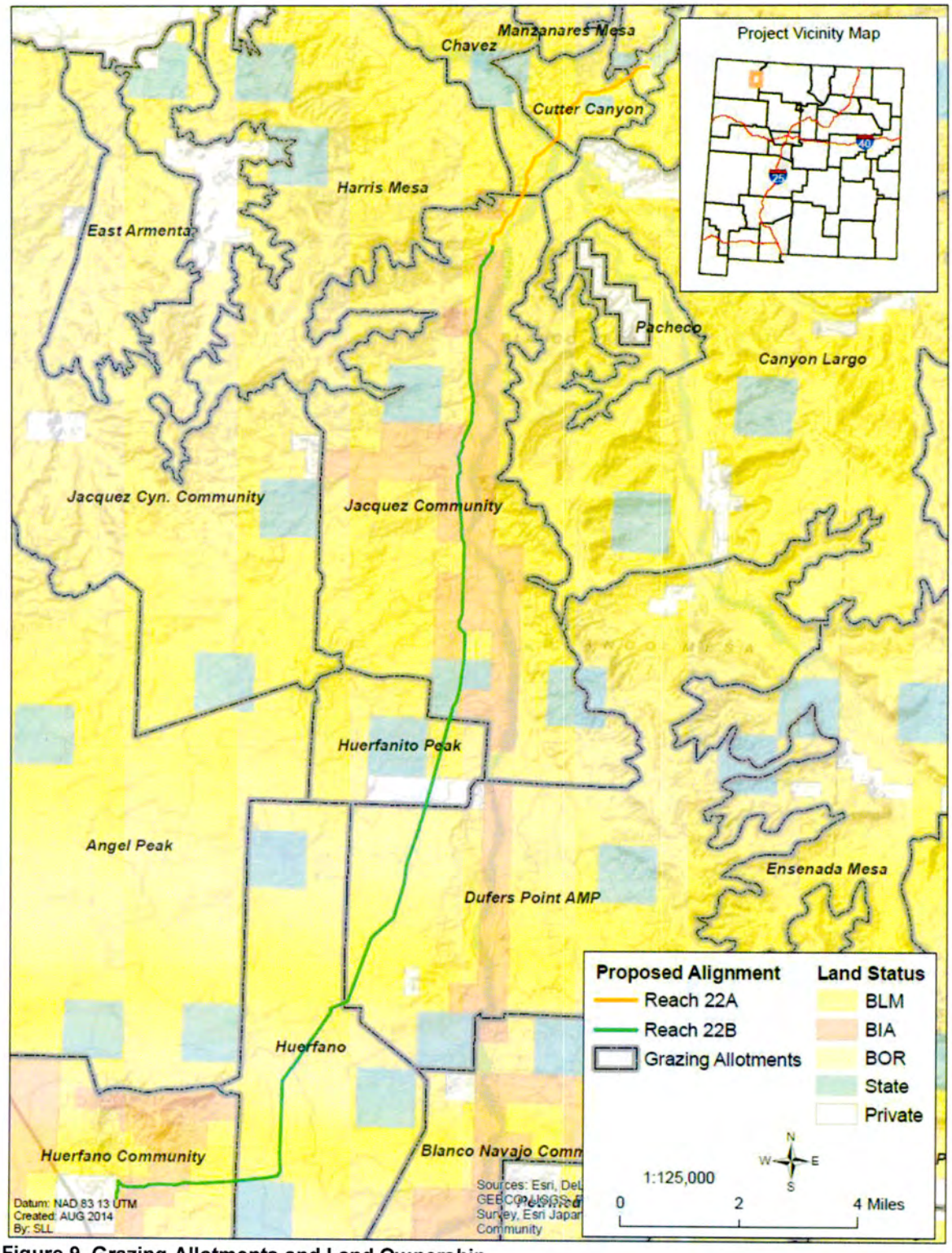

Figure 9. Grazing Allotments and Land Ownership

- Comparison population. For the purpose of identifying a minority population or a low-income population concentration, the comparison population used in this study is the state of New Mexico as a whole

Low-income Populations

Income and poverty data estimates for the region surrounding the project area from the US Census Small Area Poverty Estimates model indicate that the percent of the population living below the poverty level in the socioeconomic study area as a whole is slightly above that of the state (21.3 percent and 20.6 percent), but it is much higher than the national average of 12.1 percent (Table 13). Poverty levels ranged from 37.7 percent in McKinley County to 13.7 percent in Sandoval County. Only Sandoval County was below the state average.

Table 13. Project Area County Population in Poverty (2002–2012).

	McKinley County	Rio Arriba County	Sandoval County	San Juan County	Study Area Total	New Mexico	United States
Percent of Population in Poverty 2002	21,766	7,165	19,934	22,152	71,017	421,123	34,569,951
	30.2%	17.7%	11.1%	18.2%	21.3%	20.6%	12.1%
Percent of Population in Poverty 2012	27,296	8,806	18,502	25,802	80,406	327,444	48,760,123
	37.7%	22.0%	13.7%	20.3%	21.5%	17.7%	15.9%
Median Household Income 2002	$25,197	$30,557	$45,213	$34,329	N/A	$34,827	$45,409
Median Household Income 2012	$29,821	$36,900	$57,376	$45,901	N/ A	$42,828	$51,371
Classified as Low Income Population in 2012 based on CEQ guidelines?	No	No	No	No	No	NA	NA

Source: US Census Bureau 2013b

Similarly, estimates from 2012 indicate that Sandoval County had household median incomes ($57,376) that were above the state level of $42,828. McKinley County ($29,821) was below that of the state in 2012. While no area communities meet the CEQ definition of a low-income population area (50 percent or higher), the highest poverty rates were seen in Bloomfield (29 percent), Espanola (26.3 percent), and Bernalillo (24.1 percent; Table 14).

Table 14. Project Area Key Community Race/Ethnicity and Poverty Data.

Community	% Population Racial or Ethnic Minority	Classified as Minority Population based on CEQ?	% of Individuals Below Poverty	Classified as Low-income Population based on CEQ?
Aztec	36.4%	N	14.4%	N
Bernalillo	78.8%	Y	24.1%	N
Bloomfield	55.8%	Y	29.0%	N
Espanola	91.6%	Y	26.3%	N
Farmington	48.8%	N	15.5%	N
Gallup	76.9%	Y	20.9%	N
Rio Rancho	46.7%	N	9.8%	N

Source: US Census Bureau 2012b
Note: American Community Survey estimates are based on data collected over a 5-year time period. The estimates represent the average characteristics of populations between January 2008 and December 2012 and do not represent a single point in time.

Census Tracts are geographic regions within the United States that are defined by the US Census Bureau in order to track changes in a population over time. Census Tracts are based on population sizes and not geographic areas. The average population of a Census Tracts is about 4,000 people, so rural areas that are

sparsely populated may have very large Census Tracts while densely populated urban areas may have very small Census Tracts.

When broken down by Census Tract, 3 out of 87 tracts in the socioeconomic study area have greater than 50 percent of individuals living below the poverty line: Census Track 9440 in eastern McKinley County had an individual poverty rate of 54.6 percent; Census Tract 9405 in southwestern McKinley County had an individual poverty rate of 59.4 percent; and Census Tract 9409 in northwestern Sandoval County had an individual poverty rate of 51.9 percent (US Census Bureau 2012b). These 3 Census Tracts are all relatively large, indicating a sparsely populated, rural area.

Minority Populations

The BLM, USFS, and USBR are responsible for coordinating with Native American Tribes and the BIA to develop and maintain long-range resource management plans (USDI/BLM 2003a). Executive Order 12898 directs that federal programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations (Reclamation 2009). The region surrounding the proposed project area contains significant populations belonging to minority and/or low-income groups (Table 15). Based on 2008–2012 data, minorities made up 59.5 percent of the population in New Mexico, compared to 36.3 percent in the United States as a whole (Table 13). The proportion of minorities in the socioeconomic study area (65.3 percent) substantially exceeded the United States and is slightly higher than the state average. At the county level, the population ranged from 89.7 percent minority in McKinley County to 52.8 percent in Sandoval County. Within relevant tribal nations, Native Americans represented the vast majority of the population. The largest minority groups were Hispanics/Latinos in Rio Arriba and Sandoval Counties and Native Americans in McKinley and San Juan Counties.

Table 15.Project Area County Population by Race/Ethnicity (2008–2012)

Population	McKinley County	Rio Arriba County	Sandoval County	San Juan County	Study Area	New Mexico	United States	Jicarilla Apache Nation	Navaho Nation	Ute Mountain Nation
Hispanic or Latino ethnicity of any race	9,744	28,714	46,334	24,496	109,288	952,569	50,545,275	382	2,958	99
	13.6%	71.4%	35.3%	19%	29%	46.3%	16.4%	11.6%	1.7%	6.0%
White alone	7,413	5,370	61,977	54,218	128,978	831,543	196,903,968	74	3,762	47
	10.3%	28.6%	47.2%	42.2%	34.67%	40.5%	63.7%	2.3%	2.2%	2.9%
Black or African American alone	353	149	2,704	794	4,000	35,586	37,786,591	0	250	5
	0.5%	0.4%	2.1%	0.6%	1.08%	1.7%	12.2%	0%	0.1%	0.3%
American Indian or Alaskan Native alone	52,358	5,629	15,964	46,676	120,627	176,766	2,050,766	2,692	162,920	1,429
	72.8%	14.0%	12.2%	36.3%	32.43%	8.6%	0.7%	82.0%	94.3%	87.0%
Asian alone	506	173	1,685	464	2,828	25,411	14,692,794	73	834	14
	0.7%	0.4%	1.3%	0.4%	0.76%	1.2%	4.8%	2.2%	0.5%	0.9%
Native Hawaiian and Other Pacific Islander alone	38	7	100	72	217	989	480,063	0	209	0
	0.1%	0%	0.1%	0.1%	0.06%	<.01%	0.2%	0%	0.1%	0%
Some Other Race	7	22	437	84	550	3,623	616,191	0	102	0
	<.01%	0.1%	0.3%	0.1%	0.15%	0.2%	0.2%	0%	0.1%	0%
Two or	1,469	137	2,101	1,796	5,503	28,800	6,063,063	62	1,660	49

Population	McKinley County	Rio Arriba County	Sandoval County	San Juan County	Study Area	New Mexico	United States	Jicarilla Apache Nation	Navaho Nation	Ute Mountain Nation
more Races	2.0%	0.3%	1.6%	1.4%	1.48%	1.4%	2.0%	1.9%	1.0%	3.0%
Classified as Minority Population based on CEQ guidelines?	Yes	Yes	Yes	Yes		Yes	NA	Yes	Yes	Yes

Source: US Census Bureau 2012b
Note: American Community Survey estimates are based on data collected over a 5-year time period. The estimates represent the average characteristics of populations between January 2008 and December 2012 and do not represent a single point in time

Based on the CEQ definition of a minority population area (minority residents exceed 50 percent of all residents), Bernalillo, Bloomfield, Espanola, and Gallup all are considered minority communities.

When examined at the Census Tract level, there are 24 out of 87 tracts that have a minority population greater than 50 percent. These range from Census Tract 6.1 located just north of the city of Aztec with a minority population of 80.5 percent to Census Tract 107.17 located north of the city of Rio Rancho with a minority population of 50.2 percent (US Census Bureau 2012b). These Census Tracts are relatively small and are based around the city of Rio Rancho and the Aztec/Farmington/Bloomfield area.

Native American Populations

Data in Table 15, Project Area County Population by Race/Ethnicity (2008–2012), account for a substantial portion of the project area population, McKinley and Sandoval Counties, where the population is 72.8 and 12.2 percent American Indian respectively. One tribal government occurs within the project area: the Navajo Nation. The Navajo Nation maintains a general concern for protection of and access to areas of traditional and religious importance, and the welfare of plants, animals, air, landforms, and water on reservation and public lands. Policies established in 2006 by the BLM and US Forest Service, in coordination with federal tribes, ensure access by traditional native practitioners to area plants. The policy also ensures that management of these plants promotes ecosystem health for public lands. The BLM is encouraged to support and incorporate into their planning traditional native and native practitioner plant-gathering for traditional use (Boshell 2010).

3.15.2. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

The construction could impede access to multiple use resources on BLM lands such as hunting, gathering, or wood cutting. This would be temporary during construction activities in any local area. Upon completion of construction, the reclamation activities would re-establish access where pipelines cross existing roads open to the public. There would be no displacement of communities or displacement of lands for other uses. Indirect effects could include minimal positive effects to employment opportunities related to project contractor support industries in the region as well as the economic benefits to state and county governments related to taxes. Other effects could include a small increase in activity and noise disturbance in areas adjacent to construction activities. Development of the proposed waterline and associated improvements would not result in disproportionate negative effects to minority or low-income populations. Residents of the area would obtain improved access to potable water.

As noted in the EIS for the NGWSP "the beneficial effects of providing water to those who would otherwise have to haul water would accrue primarily to the minority and low-income populations. This access-to-water benefit and related health improvements are discussed in earlier sections of this report. These important positive project impacts would assist rather than harm minority and low-income populations (Reclamation 2009, page V-131).

Cumulative Impacts

Oil and gas development production could double over current levels (USDI/BLM 2003a, page 4-129), which could provide an increase in jobs, expenditures, and public revenues. San Juan County has a disproportionately minority population that could benefit from resource development of federal and non-federal interests, through job development. Construction of Reach 22 would provide a safe water supply to many households that do not have access otherwise on the Navajo Nation and should stimulate the local economy for both the construction and operation phases.

3.16. Public Health and Safety

3.16.1. Affected Environment

OSHA laws regulate worker safety. The Proposed Action would include use of heavy equipment and open trenches during the course of construction and would comply with OSHA regulations. Additional potential hazards to the general public include hazards associated with vehicle traffic.

The Environmental Protection Agency (EPA) and Department of Transportation (DOT) regulate hazardous materials under the Resource Conservation and Recovery Act (1976). The BLM manages public health and safety by complying with federal and state hazardous materials laws and regulations. The associated management goal of the BLM is to maintain the health of ecosystems through assessment, cleanup, and restoration of contaminated sites (USDI/BLM 2003a). Petroleum products that are transported in pipelines within the proposed project area are the primary hazardous material of concern. Accidental pipeline failure is a potential hazard associated with producing oil and gas fields (Reclamation 2009). Further general information on public health and safety in the project area and potential hazards can be found in Chapter 5 of the 2009 Navajo–Gallup Water Supply Project Planning Report and Environmental Impact Statement.

3.16.2. Impacts Common to All Proposed Action Alternatives

Direct and Indirect Impacts

The primary activities that could pose a risk to public health and safety from the Proposed Action Alternatives are related to construction traffic and the operation of heavy equipment near public roadways. Health and safety risks for construction workers are related to the operation of heavy equipment, working around heavy equipment, and working in the vicinity of utilities (primarily gas gathering pipelines). These activities pose a risk of physical injury associated with auto accidents, contacting moving equipment, or explosion or fire from a punctured gas line. Direct and indirect effects to public health and safety would be minor and short term with the implementation of design features and adherence to OSHA regulations and BLM ROW grant stipulations.

Cumulative Impacts

There are no other known projects that, when considered with the Proposed Action Alternatives, would contribute to cumulative effects on public health and safety.

4. SUPPORTING INFORMATION

4.1. Tribes, Individuals, Organizations, or Agencies Consulted

Public scoping in this EA is tiered to the Reclamation FEIS-NGWSP, for which Reclamation conducted five public scoping meetings held specifically for the project and consulted with state and federal agencies, tribal governments, local governments, and interested organizations. The following individuals, agencies, or groups were consulted or sent copies of this document for review and comment:

Bureau of Indian Affairs—Navajo Regional Office

Navajo Nation Historic Preservation Department

Navajo Nation Department of Fish and Wildlife

New Mexico State Historic Preservation Office

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

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APPENDIX A. REVEGETATION PLAN

A.1. Site Description

Pre-disturbance site photos are presented below.

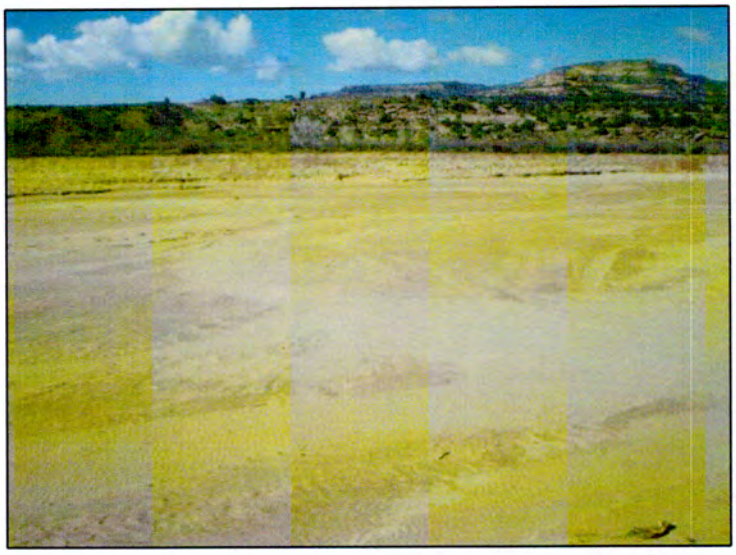

Photo 1. Cañon Largo crossing facing south.

Photo 2. Southern end of Cutter Canyon.

Photo 3. Piñon–juniper in Cutter Canyon.

Photo 4. Blanco Canyon facing northeast.

Photo 5. Blanco Canyon facing south.

Photo 6. Greasewood flat in Blanco Canyon.

Photo 7. South end of Blanco Canyon near Jaquez Canyon.

Photo 8. Sand hills between Jaquez Canyon and Reed Canyon.

Photo 9. South-central project area facing southwest toward Huerfano Mountain.

Photo 10. Project area on west side of Huerfano Mountain.

Photo 11. Wetland along the Cutter Canyon.

A.1.1. Vegetation Community

The vegetation communities across the project area are mapped as plains and Great Basin grassland and Great Basin conifer woodland (Brown 1994). Specifically, the local vegetation communities consist of big sage brush (*Artemisia tridentata*), greasewood (*Sarcobatus vermiculatus*), piñon–juniper (mostly just *Juniperus* spp.), and riparian.

Sagebrush Community—The habitat along the waterline ROW from Huerfano Mountain in the south to just north of Reed Canyon is best described as big sagebrush community, with greasewood along Reed Canyon Wash (Figure 1–Figure 2). The dominant vegetation includes big sagebrush, rubber rabbitbrush (*Ericameria nauseosa*), broom snakeweed (*Gutierrezia sarothrae*), tumbleweed (*Salsola tragus*), Indian ricegrass (*Achnatherum hymenoides*), blue grama (*Bouteloua gracilis*), cheatgrass (*Bromus tectorum*), galleta (*Pleuraphis jamesii*), needle-and-thread grass (*Hesperostipa comata*), ring muhly (*Muhlenbergia torreyi*), and six-weeks fescue (*Vulpia octoflora*).

Pinyon–Juniper Community (wooded shrubland)—The habitat from just north of Reed Canyon to where it intersects with Blanco Canyon consists of sandhills and piñon–juniper community (Figure 1–Figure 2). The dominant vegetation consists of one-seeded juniper (*Juniperus monosperma*), Utah juniper (*Juniperus osteosperma*), big sagebrush, rubber rabbitbrush, Green's rabbitbrush (*Chrysothamnus greenei*), southwestern rabbitbrush (*Lorandersonia pulchella*), prickly-pear (*Opuntia* spp.), hairy goldenaster (*Heterotheca villosa*), sandhill muhly (*Muhlenbergia pungens*), Indian ricegrass, needle-and-thread grass, sand dropseed (*Sporobolus cryptandrus*), spike dropseed (*Sporobolus contractus*), purple threeawn (*Aristida purpurea*), blue grama, and galleta.

The vegetation in Cutter Canyon is a mix of greasewood, big sagebrush, piñon–juniper, and riparian communities (Figure 2). The dominant vegetation includes greasewood, big sagebrush, scattered junipers in the southern end with juniper and piñon pine (*Pinus edulis*) becoming dominant at the northern end, salt cedar, eastern cottonwood, coyote willow, rubber rabbitbrush, sand dropseed, and spike dropseed.

Greasewood Community—The habitat in Blanco Canyon is dominated by greasewood community with big sagebrush and scattered junipers (Figure 2). The dominant vegetation is greasewood, big sagebrush, budsage (*Artemisia spinescens*), rubber rabbitbrush, Green's rabbitbrush, spiny horsebrush (*Tetradymia spinosa*), New Mexico saltbush (*Atriplex obovata*), wolfberry (*Lycium pallidum*), prickly-pear, club-cholla (*Grusonia* spp.), Brack's cactus (*Sclerocactus cloverae* subsp. *brackii*), wild buckwheat (*Eriogonum* spp.), sand dropseed, blue grama, galleta, and Indian ricegrass.

Greasewood habitat dominates the northern side of Cañon Largo (Figure 2). The dominant plants include greasewood, big sagebrush, scattered juniper, rubber rabbitbrush, buckwheat (*Eriogonum corymbosum*), purple threeawn, and Indian ricegrass.

The southern portion of Cutter Canyon best fits the greasewood community type (Figure 2). Greasewood is dominant along Reed Canyon (Figure 1).

Riparian–The riparian habitat at the Cañon Largo crossing is dominated by salt cedar (*Tamarix ramosissima*), coyote willow (*Salix exigua*), rubber rabbitbrush, scattered eastern cottonwoods (*Populus deltoides*), and sand dropseed (Figure 2). Riparian also occurs in Cutter Canyon. Most of the project area follows the road up Cutter Canyon through upland vegetation, but portions of the ROW overlap with the riparian/wetland habitat that runs through the canyon (Figure 2).

Two wetlands were delineated in the project ROW (EMI 2013). The restoration of these areas, along with cottonwood and willow stands, is addressed in detail in the Wetland and Riparian Mitigation and Monitoring Plan for Navajo–Gallup Water Supply Reach 22 Project (EMI 2014b). Dominant vegetation in wetland areas includes arctic or Baltic rush (*Juncus arcticus*), scratch muhly (*Muhlenbergia asperifolia*), white clover (*Melilotus albus*), and an unidentified, non-flowering clover (*Trifolium/Melilotus* sp.) There is one stand of cattail (*Typha domingensis*) in the southwestern wetland area and several area in each wetland dominated by coyote willow. There is one large, isolated willow (*Salix* sp.) in the northeastern wetland area. Two New Mexico noxious weeds have infested one wetland: musk thistle (*Carduus nutans*; Class B) and Canada thistle (*Cirsium arvense*; Class A).

If Reclamation bores under Cañon Largo, impacts to riparian would be limited to the Cutter Canyon crossing, several places in Cutter Canyon where the right-of-way overlaps with some cottonwood riparian, and the two potential wetlands in Cutter Canyon.

Seed Mix

We recommend using the reduced-palatability seed mix for the widespread sagebrush community and the greasewood communities south of Cañon Largo where grazing pressure is the heaviest. Most of the area is subject to grazing by cattle, horses, and sheep. It is unrealistic to fence off such a large disturbance area. Furthermore, fencing would interrupt current open ranges. Seed mixes for the community types are presented in Table 1. The use of a nurse crop, as discussed at the end of Section A.2.2, should be considered.

For wetland and active floodplain areas, Baltic rush, Inland saltgrass (*Distichlis spicata*), and alkali sacaton (*Sporobolus airoides*) are appropriate. Indian ricegrass (*Achnatherum hymenoides*) and sand dropseed (*Sporobolus cryptandrus*) can be planted outside and around the active floodplain.

Table 1. Seed mixes for community types. Species in bold are known to grow in the project area. VNS = Variety not specified. NA = Not applicable. Table continued on following page.

Common Name	Scientific Name	Variety	Season	Form	PLS lbs./acre*
Reduced Palatability seed mix (for Sagebrush and Greasewood Communities south of Cañon Largo)					
Rubber rabbitbrush	*Ericameria nauseosa*	VNS	NA	Shrub	2.00
Fourwing saltbush	*Atriplex canescens*	VNS	NA	Shrub	2.00
Fringed sage	*Artemisia frigida*	VNS	NA	Sub-shrub	2.00
Purple threeawn	*Aristida purpurea*	VNS	Warm	Bunch	3.00
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Warm	Bunch	3.50
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod	2.00
Sand dropseed	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.25
Scarlet globemallow	*Sphaeralcea coccinea*	VNS	Warm	Forb	0.25
Rocky Mountain beeplant	*Cleome serrulata*	VNS	Warm	Forb	0.25
Hairy false goldenaster	*Heterotheca villosa*	VNS	Warm	Forb	0.25
Pinyon–Juniper wooded shrubland seed mix					
Antelope bitterbrush	*Purshia tridentata*	VNS	Cool	Shrub	2.00
Western wheatgrass	*Pascopyrum smithii*	Arriba	Cool	Sod	2.00
Needle-and-thread grass	*Hesperostipa comata*	VNS	Cool	Bunch	3.00
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Warm	Bunch	3.50
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod	2.00
Sand dropseed	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.25
Scarlet globemallow	*Sphaeralcea coccinea*	VNS	Warm	Forb	0.25
Greasewood seed mix					
Fourwing saltbush	*Atriplex canescens*	VNS	NA	Shrub	4.00
Shadscale saltbush	*Atriplex confertifolia*	VNS	Cool	Shrub	2.00
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Warm	Bunch	3.00
Sand dropseed	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.50
Slender wheatgrass	*Elymus trachycaulum*	VNS or Tusas	Cool	Bunch	3.00
Western wheatgrass	*Pascopyrum smithii*	Arriba	Cool	Sod	3.00
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod	2.00
Galleta	*Pleuraphis jamesii*	Viva or florets	Warm	Bunch/Sod	3.00
Riparian–Wetland active floodplain and surrounding area seed mix					
Inland saltgrass	*Distichlis spicata*	LK517f	Warm	Sod	6.00
Sand dropseed	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.50

Common Name	Scientific Name	Variety	Season	Form	PLS lbs./acre*
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Warm	Bunch	4.00
Alkali sacaton	*Sporobolus airoides*	VNS	Warm	Bunch	0.25
Baltic rush†	*Juncus arcticus*	NA	Cool	Sod	4.00
Woody Plants					**Replacement Ratio/Planting Grid**
Cottonwood	*Populus deltoides ssp. wislizeni*	Native pole	NA	Tree	3 to 1/20-ft. grid
Coyote willow	*Salix exigua*	Native whip	NA	Shrub/small tree	10 to 1/2.5-ft. grid
Tree-size willow‡	*Salix* sp.	Native whip	NA	Shrub/small tree	10 to 1/2.5-ft. grid

*Based on 60 pure live seeds (PLS) per square foot, drill seeded. Double this rate (120 PLS/ft.2) if broadcast or hydroseeded.
†mmhos/cm = Millimhos per centimeter. Millimhos is an electrical conductivity measurement used to determine the total concentration of soluble salts in soil.

A.1.2. Reclamation Techniques

Provided below are some procedures and methods that may to help achieve more effective reclamation success (taken from the Bureau of Land Management Farmington Field Office (BLM FFO) community and seed-mix descriptions). See Wetland and Riparian Mitigation and Monitoring Plan for Navajo–Gallup Water Supply Reach 22 (EMI 2014b) for more information on restoration of wetlands, cottonwoods, and willows.

Soil Testing: Development of a soil-testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation may prove beneficial. Suggested soil testing may include some or all of the following: pH, electrical conductivity (EC), texture, topsoil depth and overall soil depth, carbonates (reactivity), organic matter (OM), and Sodium Absorption Ratio (SAR).

Topsoil Stripping, Storage, and Replacement: At a minimum, the upper six inches of topsoil should be stripped, following the removal of vegetation during construction. The stripped topsoil should be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.

Seedbed Preparation: For cut-and-fill slopes, initial seedbed preparation should consist of backfilling and recontouring to achieve the configuration specified in the reclamation plan. Seedbed preparation for compacted areas should be ripped to a minimum depth of 18 inches, with a maximum furrow spacing of two feet. Where practicable, ripping should be conducted in two passes at perpendicular directions. Avoid leaving large clumps or clods. If this exists, disking should be conducted. Disking and seed drills should run perpendicular to slopes to provide terracing and prevent rapid runoff and erosion. Seedbed preparation is one of the most important steps for reclamation success. Following final contouring, the backfilled or ripped surfaces should be covered evenly with topsoil. Final seedbed preparation should consist of raking or harrowing to spread topsoil prior to seeding to promote a firm seedbed. A loose seedbed makes it impossible to control the depth of seeding because the tires and the planter sink into the soil. Seedbed preparation may not be necessary for topsoil storage piles or other areas of temporary seeding.

Planting Depth: Improper planting depth, particularly the planting of some species too deeply in "fluffy" soils, is one of the major impediments to reseeding success. The Truax™ seed drill or modified rangeland drills that allow for seeding species from different seed boxes at different planting depths have been used by other BLM offices to address this issue. Efforts should be taken to ensure that perennial grasses and shrubs are planted at the appropriate depth. Intermediate-sized seeds such as wheatgrasses and shrubs should be planted at a depth of 0.5 inch, larger seeds, such as *Achnatherum hymenoides* at one to two inches, and small seeds such as *Sporobolus airoides* and *S. cryptandrus*, should be planted at a depth of 0.25 inch. In situations where differing planting depths are not practicable with the equipment being used, the entire mix should be planted no deeper than 0.25 inch. Planting too shallow is generally better than planting too deep. A review of current research methods is recommended (e.g., USDA PLANTS, USDA Plant Materials Centers and Service Areas, and native seed companies).

Soil Amendments: Amending a soil is not the same thing as mulching, although many types of mulch also are used as amendments. A "soil amendment" is any material added to a soil to improve its physical properties, such as water retention, permeability, water infiltration, drainage, aeration, nutrition, and structure. Organic amendments include sphagnum peat, humate, wood chips, grass clippings, straw, compost, manure, biosolids, sawdust, and wood ash. Inorganic amendments include vermiculite, perlite, lime, gypsum, tire chunks, pea gravel, and sand.

Mulching: Mulch may increase the success of seed germination and provide protection against erosion. Mulch should be applied within 24 hours following completion of seeding. In areas of interim reclamation that used drill-seeding or broadcast-seeding/raking, mulch should consists of crimping certified weed-free straw or certified weed-free native grass hay into the soil. Hydromulching may be used in areas of interim reclamation where crimping is impracticable, in areas of interim reclamation that were hydroseeded, and in areas of temporary seeding regardless of seeding method. Mulch applications in extremely clayey soils should be evaluated carefully to avoid developing an adobe mixture. In these cases, a soil amendment may prove more beneficial.

Timing of Seeding: Precipitation is the principal input controlling biological processes in arid and semiarid regions. The pattern of soil moisture will have a great impact on the fate of seeding. Many grasses species will germinate following significant moisture events that allow for deeper infiltration of soil moisture (4–12 inches deep). This moisture generally persists for several weeks and is available for seedling root growth and establishment. Grass species belong to one of two basic physiological types: cool season or warm season. Cool-season grasses have optimum growth temperatures of 70–75°F, with growth halting at around 40°F. Warm-season optimum temperatures occur at 85–95°F, with growth ceasing at about 55°F. The best time for seeding grass is at the beginning of the growing season. For cool-season grasses, there are two growing cycles: fall and spring. The best time to plant cool-season grasses is in late summer or early fall. For warm-season grasses, there is one growing season: summer. The best time to plant warm-season grass species is early spring or summer, with the onset of the monsoons, which typically begin early to mid-July.

The paragraph above provides the optimal timings of seeding for cool- and warm-season species that make up the seed mixes for of the eight desired plant communities for reclaiming disturbed areas. Experience in Farmington Field Office has shown that with adequate winter moisture, cool-season seeds planted in the late fall or early winter (before the ground is frozen) will germinate the following spring, setting the stage for germination of warm-season species in the mix later in the season.

Additional Seeding Rates or Species: While minimum seed requirements have been provided by the BLM, it does not exclude proposals for increased seeding rates or additional species/varieties of plants to BLM for approval to achieve reclamation standards. Industry attaining an understanding of soil types, precipitation patterns, the climate, and vegetation/environment relationships could be very valuable.

Sterile Cover Crop Option: Sterile cover crops can be useful in temporary site stabilization in the case where bare soil is exposed. It also can be used with the perennial mix in reclamation for a non-persistent "nurse" crop. A nurse crop is an annual crop used to assist in establishment of a perennial crop. Nurse crops reduce the incidence of weeds, prevent erosion, and shelter tender seedlings from sun and wind. Other advantages are:

- Sterile annual plant and rapid germination (sprout rapidly, establish quickly)
- Plant will not persists past one growing season
- Cold tolerant, able to grow under cool conditions
- Larger root mass and more efficient use of soil nutrients than wheat; holds soil and builds soil organic matter
- Superior tolerance to disease, salt, and drought compared to wheat
- Able to adapt to a wide range of soil and moisture conditions
- Adapts either fall or spring plantings; has fair to excellent winter survival

An example of a cool-season sterile grass cover is *Triticum aestivum* X *Secale cereale*, the Quickguard™ or similar sterile hybrid variety. This can be planted at a rate of 7–10 lbs./acre based on 60 pure live seeds (PLS) per square foot, drill seeded. Double this rate (120 PLS per square foot) if broadcast or hydroseeded. It can be mixed with the perennial mix and seeded at the same time.

BLM Consultation: BLM is available provide consultations concerning fencing options to help minimize industry costs, should fencing be necessary to achieve reclamation success.

A.1.3. Challenges

Grazing Pressures

A challenge to successful revegetation of the project area is grazing pressure. Current BLM and Bureau of Indian Affairs grazing-allotment rates may not reflect the actual level of grazing pressure in the area. Feral

horses are abundant in some places; sheep and cattle are also common. Fences are few across the project area. Moreover, it is impractical to fence off approximately 26 miles of right-of-way. For this reason, we have recommended the reduced-palatability seed mix for most of the area.

Noxious Weeds

Eliminating and preventing further invasion of noxious weeds is another challenge for revegetation. A pre-disturbance site visit and noxious weed assessment was conducted by Ecosystem Management, Inc. biologist Matt Brooks and a representative from BLM FFO on July 11, 2013. The New Mexico Class C and BIA Navajo Region Class C noxious weed *Tamarix ramosissima* was found in the Cañon Largo and Cutter Canyon crossings. It was also found occasionally in several larger washes crossed by the right-of-way. Russian olive (*Elaeagnus angustifolia*), also a Class C noxious weed, occurred occasionally throughout these areas but was not a dominant species. These plants are normally restricted to washes and may be a problem when reclaiming disturbed riparian wetland areas. Japanese brome (*Bromus japonicus*), a New Mexico Class C noxious weed occurs sporadically in the project area south of Reed Canyon. One small patch of Russian knapweed (*Acroptilon repens*), a New Mexico Class B noxious weed, was found on the roadside in the south-central project area. The coordinates of this infestation are 253014 E, 4040429 N (NAD 83 Zone 13N). Two New Mexico noxious weeds have infested wetland areas in Cutter Canyon: musk thistle (*Carduus nutans*; Class B) and Canada thistle (*Cirsium arvense*; Class A). Field bindweed (*Convolvulus arvensis*), a formally listed New Mexico noxious weed occurs sporadically along roadsides throughout the project area. This plant thrives in disturbed areas and could present a problem during reclamation of disturbed ROWS.

Following the protocol in the Bare Soil Reclamation Procedures Appendix D. Surface Use Plan of Operations Weed Management, the BLM FFO weed coordinator will review the noxious weed issues in the project area and submit onsite, specific requirements and instructions for weed treatments. The requirements and instructions will include the time frame of treatment, approved herbicides that may be used, required documentation to be submitted to the FFO after treatment, and any other site-specific instructions that may be applicable. Due to the seasonal nature of effective weed-treatment techniques, the operator may be required to treat the weeds before ground disturbance or may be required to treat the weeds after ground disturbance to avoid unreasonable delays.

A.2. Monitoring and Reporting

Post-revegetation monitoring requirements for Vegetation Reclamation Procedure B are presented below and can be found in Section 4 of the Bare Soil Reclamation Procedures (BLM FFO 2013). It is available online: http://www.blm.gov/pgdata/etc/medialib/blm/nm/field_offices/farmington/farmington_planning/surface_use_plan_of.Par.69026.File.dat/FFO%20Bare%20Soil%20Reclamation%20Procedures%202-1-13.pdf.

Monitoring Responsibilities

The holder is responsible for the following:

- Preparation of a Revegetation Plan to be included in the ROW Plan of Development (POD).

- Construction of project in accordance with approved ROW POD.

- Filing of Proof of Construction or schedule a final construction inspection within 90 days of project completion.

- Seeding the ROW within 90 days of completion of construction. If the holder is unable to reseed within this timeframe the holder will confer with the FFO to establish an approved time frame for seeding.

- Maintaining the integrity of the vegetation and the condition of the site for the life of the ROW or until the FFO approves a relinquishment request.

- Collaborating with FFO to prepare remedy plans (when necessary).

• Completion of components assigned to the holder by the remedy plan.

• All areas authorized by the ROW until the holder assigns the ROW, or relinquishes the project through established policy. The percent vegetation cover standards must be attained or an exception used prior to relinquishment.

The FFO is responsible for the following:

• Establishing monitoring sites after reclamation and seeding has been completed. The holder may participate in the process and participation is voluntary.

• Conducting initial surface compliance inspection of the ROW after submittal of the Proof of Construction (90 days after construction) and complete monitoring forms within 60 days.

• Conducting annual surface compliance inspections starting two calendar years and continuing until the vegetation percent cover standards have been attained. The FFO monitoring form will be completed with 60 days of the inspection.

• Preparation of documentation that vegetation percent cover standards have been attained.

• Requesting a conference to analyze the issues that may have contributed to vegetation reclamation failure, or lack of meaningful progress If the FFO identifies negative impacts within the vegetation reclamation area.

• Developing remedial actions in collaboration with the holder if vegetation percent cover standards are not being attained.

• Conducting long-term monitoring (photo points) every five years after vegetation percent cover standards have been attained. These annual inspections will continue till relinquishment of the ROW.

Monitoring Components

The following monitoring components are required for the Vegetation Reclamation Procedure B:

- Establish monitoring sites after seeding is completed.
- Conduct annual monitoring starting two calendar years after seeding is completed.
- Evaluate monitoring reports.
- Compile and present documentation that percent vegetation cover standards have been attained.
- FFO will provide concurrence (or not) that percent vegetation cover standards have been attained.
- Develop remedial plans to correct impacts to revegetation that may prevent the revegetated area from attaining per cent vegetation cover standards.
- Conduct long-term monitoring after percent vegetation cover standards have been attained.

Monitoring Reporting

The FFO annual monitoring form within 60 days after monitoring.

A.3. Standards

Reclamation Goals

The following are the reclamation goals for each community type.

Sagebrush Community: ≥ 35% foliar cover of trees/shrubs/grasses/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35%.

Pinyon–Juniper (Wooded Shrubland) Community: ≥ 20% foliar cover of trees/shrubs/grasses/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35%.

Greasewood Community: ≥ 25% foliar cover of trees/shrubs/grasses/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35%.

Riparian (Active Floodplain) Community: ≥ 40% foliar cover of trees/shrubs/graminoids/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35%.

BLM FFO specifies that when riparian vegetation cannot be avoided during the permitted project, the permittee is responsible to reestablish any riparian vegetation lost during construction. Cottonwoods will be replaced on a 10-to-1 ratio and willows on a 3-to-1 ratio (BLM FFO 2013). However, BLM and Reclamation are working collaboratively, utilizing adaptive management, to develop alternative mitigation measures that are more appropriate for site conditions.

A.4. Final Abandonment and Relinquishment

Requirements for the abandonment or relinquishment of revegetation monitoring for Vegetation Reclamation Procedure B are described below and can be found in Section 4 of the Bare Soil Reclamation Procedures (BLM FFO 2013). It is available online:http://www.blm.gov/pgdata/etc/medialib/blm/nm/field_offices/farmington/farmington_planning/surface_use_plan_of.Par.69026.File.dat/FFO%20Bare%20Soil%20Reclamation%20Procedures%202-1-13.pdf.

Monitoring requirements remain in effect as long as the permit, grant, or authorization remains in force, and until all associated facilities or infrastructure is abandoned by established BLM procedure and a final abandonment notice (FAN) or relinquishment is issued by the FFO. If ownership of any portion of the permit, grant, or authorization is transferred to another entity, the revegetation and monitoring requirements for the portion transferred will be assumed by the acquiring entity.

Lack of Progress in the Attainment of the Reclamation Standards

When monitoring reports indicate that bare soil reclamation is not successful, or the FFO identifies negative impacts within the reclamation area, the FFO or the permit holder/grantee may request a conference to analyze the issues that may have contributed to reclamation failure, or lack of meaningful progress. FFO will facilitate the conference and invite potential affected parties such as the permit holder, grantee, FFO surface staff, range staff, realty staff, recreation staff, grazing permittee, or other authorized users that may be operating in the vicinity. The members of the conference will discuss the potential causes that may have contributed to the nonattainment of the reclamation standards. The conference may result in the development of a remedial plan to address the lack of revegetation success, or to repair and reseed damage to reclaimed areas. In cases where the permit holder/grantee can demonstrate that the site does not have the biological potential to attain the standards, the conference may result in the initiation of the exception process (see Section 4 in the Bare Soil Reclamation Procedures (BLM FFO 2013).

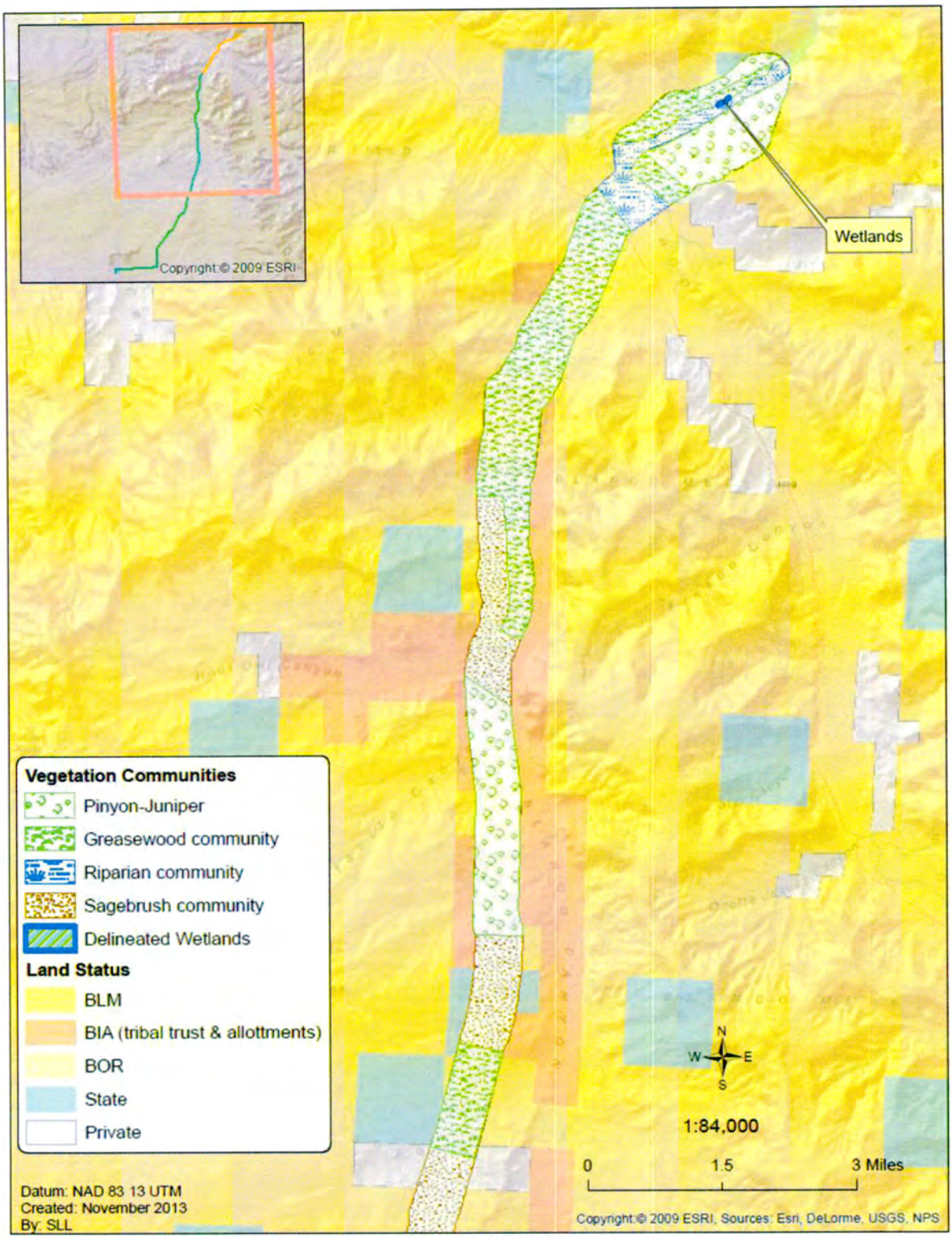

Figure 1. Vegetation communities for northern half of Reach 22

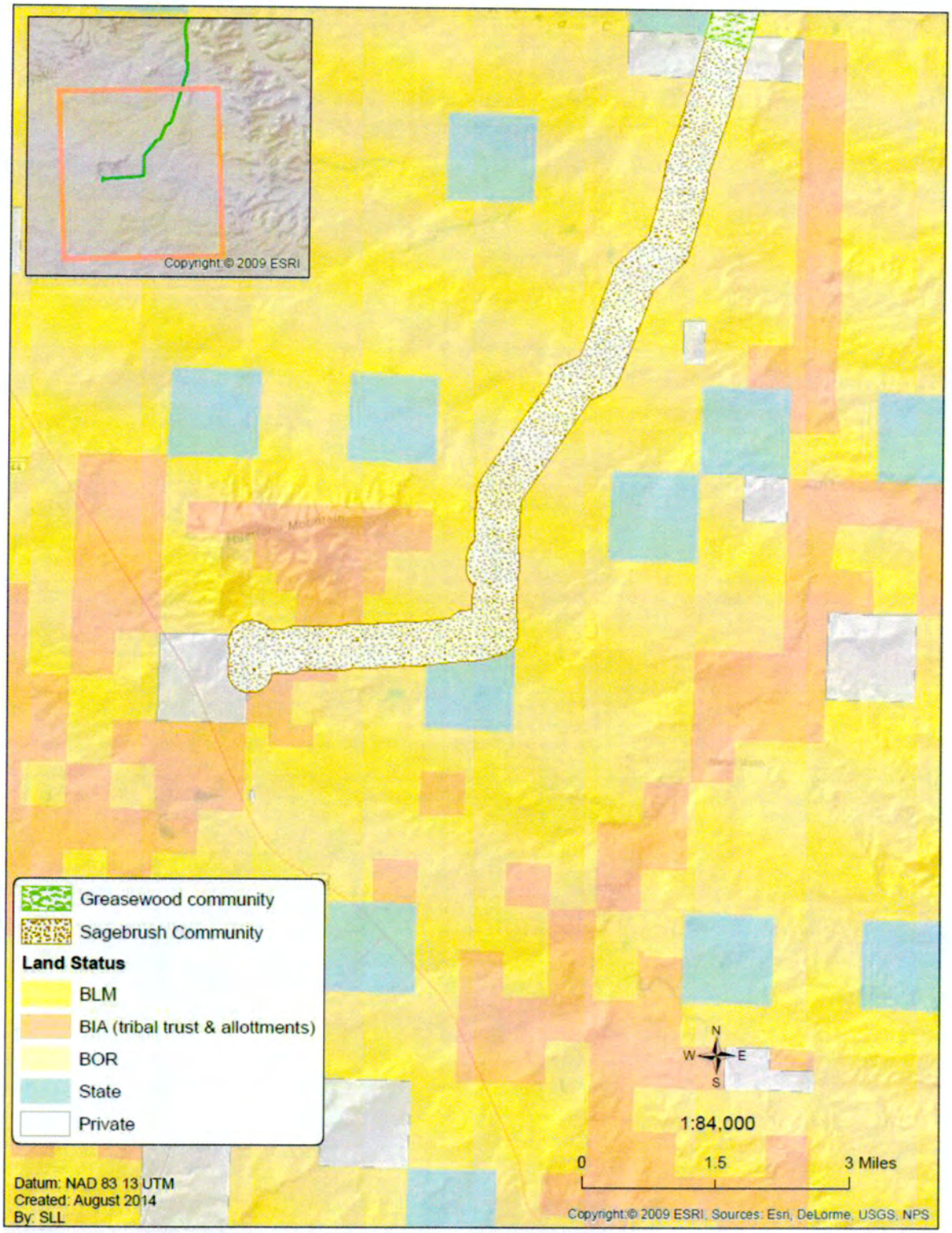

Figure 2. Vegetation communities for southern half of Reach 22

APPENDIX B. PUBLIC COMMENTS ON DRAFT EA

GOVERNOR
Susana Martinez

DIRECTOR AND SECRETARY TO THE COMMISSION
Alexandra Sandoval

DEPUTY DIRECTOR
Daniel E. Brooks

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Cimarron

THOMAS "DICK" SALOPEK
Las Cruces

November 24, 2014

Ms. Darlene Baker, Project Manager
BLM Farmington Office
6251 College Blvd. Suite A
Farmington, NM 87402

RE: Reaches 21 and 22 of the Navajo-Gallup Water Supply Project, NMDGF No. 16422

Dear Ms. Baker,

The Department of Game and Fish (Department) has reviewed the Environmental Assessment (EA) for the above referenced project. This project would provide access to Bureau of Land Management and Navajo Nation Tribal Trust lands to for a right-of-way for reaches 21 and 22 of the Navajo-Gallup Water Supply Project. In order to minimize impacts to wildlife, we recommend you follow the attached guidelines regarding trenching, and for Burrowing Owl surveys and mitigation.

The EA states that the project would preclude effects to Bald Eagle, Gray Vireo, and Pinyon Jay through preconstruction nest surveys that would occur if any disturbances to habitat occur during the breeding season. However, the EA does not indicate how the survey results would be used to prevent impacts to these species. If any of these species are detected within the action area during preconstruction nest surveys, we request that you coordinate with the Department for avoidance or mitigation of impacts to these species. Any future preconstruction surveys should also include Mountain Plover, which has potential to occur within the project area even though the EA indicates that the project area lacks documented occurrences of Mountain Plover during the period of April 1-July 31.

The EA also indicates that Bald Eagle has not been documented within the project area during the breeding season. However, presence of either of these species during March could indicate early breeding season activities. If Bald Eagles are observed in the vicinity of Cutter Reservoir during March, we recommend that preconstruction nest surveys of the project vicinity be conducted to ensure that there will be no disturbance for breeding Bald Eagles.

Thank you for the opportunity to comment on your project. If you have any questions, please contact Chuck Schultz, Northwest Regional Habitat Biologist, at (505) 222-4708 or charels.schultz@state.nm.us.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

cc: USFWS NMES Field Office
Chuck Schultz, Northwest Regional Habitat Biologist

The comments received from NMDGF during the public review of the environmental assessment resulted in text changes, which are described below. The comments received did not result in any changes to the results of the impact analysis. Text to be added or changed in the environmental assessment is in bold.

Comments and Resolutions

Comment: The EA states that the project would preclude effects to Bald Eagle, Gray Vireo, and Pinyon Jay through preconstruction nest surveys that would occur if any disturbances to habitat occur during the breeding season. However, the EA does not indicate how the survey results would be used to prevent impacts to these species.

Section 2.1.7 Design Features, Stipulations, Requirements, Wildlife/Special Status Species states: "*... If any active nests are located within the proposed project area on BLM land, project activities will not be permitted until written approval by a BLM/FFO biologist. The BLM/FFO will monitor any active nests located from a nest survey....NNDFW stipulates no disturbance within 165 feet (50 m) of active songbird nests during incubation to fledging (as determined by direct field observation or qualified literature source specific for nesting dates in the Southwestern U.S."*

"To minimize disturbance to raptors, major construction activities along the Nutria and Defiance Monoclines, Cutter Canyon, Blanco Canyon, and the corridor from Cutter to Largo Canyons should be restricted during the nesting season (January 15 to August 15). If that is not possible, extensive nest searches should be made up to three-quarters of a mile of proposed activities immediately prior to construction and active nests will be avoided (Reclamation 2009, page VI–7)."

Comment: Any future preconstruction surveys should also include Mountain Plover, which has the potential to occur within the project area even though the EA indicates that the project area lacks documented occurrences of Mountain Plover during the period of April 1–July 31.

Added Stipulation to Section 2.1.7, Design Features, Stipulations, Requirements: **No construction activities will be permitted form May 1 to June 15 in suitable habitat areas for Mountain Plover without a preconstruction survey. If active nests are found a ¼ mile buffer will be established during incubation to fledging to prevent direct loss of the nest or indirect impacts.**

3.9.1 Special Status Species, Impacts Section added: Furthermore, this species was not detected during breeding-season surveys **and preconstruction nest surveys will be conducted in suitable habitat to avoid disturbing active nests**.

Comment: We recommend you follow the attached guidelines regarding trenching and for Burrowing Owl surveys and mitigation.

Section 2.1.7 Design Features, Stipulations, Requirements, Wildlife/Special Status Species states:

- Reclamation would trench and bury pipeline concurrently to minimize trapping of small wildlife. Reclamation would construct escape ramps for trenches left open overnight (Reclamation 2009, page VI–4). **Trenching should be conducted during cooler months (October–March).**
- Minimize the amount of open trench ahead of pipe laying and backfilling. No More than ½ mile of trench or the amount of trench that can be worked in a day will be open at any given time. Backfilling operations would be performed within a reasonable amount of time of the lowering operation to ensure the trench is not left open for more than 24 hours. Trenches left open overnight will be fenced with a temporary fence or other methods approved by the Authorized Officer. The ends of the trench will be sloped (3:1) to allow animals to escape.
- Escape ramps/crossovers will be constructed every 1,320 feet. In areas where active grazing is taking place or in Wildlife Specially Designated Areas (SDA's) escape ramps/crossovers will be placed every 500 feet. **On state trust lands, escape ramps/crossovers will be placed every 295 feet.** The ends of the open trench will be sloped each night with a 3:1 slope.

- Established livestock and wildlife trails will be left in place as a cross over. Escape ramps/crossovers will be constructed with a minimum 3:1 slope at each end of the crossover. Crossovers will be a minimum of ten feet wide and not fenced.

- The end of the pipe will be plugged to prevent animals from crawling in.

- Before the trench is closed, inspect the trench for any animal that may be in the trench. Any trapped wildlife or livestock will be promptly removed and released at least 150 yards from the trench.

3.9.1 Special Status Species, Impacts Section: Burrowing owl—The Proposed Action would have *no effect* on the Burrowing Owl because preconstruction nest surveys would be required during the nesting season, and if owls are detected, no disturbance would occur within 164 feet of active nests as specified by BLM FFO regulations **or no disturbance within 265 feet of active nest on state trust lands as specified by NMDGF guidelines**. The proposed project would impact a small portion of the large prairie dog town.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington District
Farmington Field Office
6251 N College Blvd., Ste. A
Farmington, NM 87402

Finding of No Significant Impact

Environmental Assessment Reaches 22 and 21 of the Navajo-Gallup Water Supply Project

NEPA No. DOI-BLM-NM-FO10-2014-0181-EA

FINDING OF NO SIGNIFICANT IMPACT

I have determined that the proposed action, as described in Environmental Assessment (EA) DOI-BLM-NM-FO10-2014-0181-EA will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an Environmental Impact Statement is not required.

In making this determination, I considered the following factors:

Context

The Farmington Field Office (FFO) is located in northwestern New Mexico. The field office boundaries include approximately 7,800,000 acres; 1.4 million surface acres and an additional 1 million acres of mineral estate are managed by the BLM. The distribution of BLM-managed lands is fairly well consolidated in the north and becomes increasingly mingled with Tribal lands to the south. BLM-managed lands abut the Navajo Reservation to the west and south, Jicarilla Apache Nation Reservation to the east, and the Ute Mountain Reservation and Southern Ute Indian Reservation to the north. Aztec Ruins National Monument and Chaco Culture National Historical Park, managed by the National Park Service, lie within the field office boundaries. The BLM manages approximately 18% of lands within a 10 mile radius of Chaco Culture National Historical Park.

The FFO encompasses the New Mexico portion of the San Juan Basin. The San Juan Basin and surrounding areas have been occupied by varied cultures since the Paleo Indian period (circa 10,000 BC). The San Juan Basin and Four Corners area have one of the most extensive prehistoric and protohistoric occupations in the United States. The most commonly known archaeological resources are the Anasazi structures at Chaco Culture National Historical Park, Mesa Verde National Park, and other National Park Service sites. Scattered across BLM-managed lands are similar, but smaller structures, which were probably related to these larger sites. Twenty-three Chacoan outliers are known to exist within the FFO. Each contains at least one Chacoan structure and most have associated communities, prehistoric roads, and great kivas along with features such as herraduras and special use areas. The FFO contains an extensive system of finely engineered roads radiating out form Chaco Canyon and extending a considerable distance to outlying sites through the San Juan Basin and beyond. These roads are remarkably straight and carefully constructed. The most notable is the Great North Road, which starts at Chaco Canyon and run north to the Aztec Ruins.

Located within the boundary of the FFO is much of Dinétah, the ancestral homeland to the Navajo. Here the Navajo constructed forked-stick hogans, shades, sweat lodges, and other structures over a several hundred year span. During a short period between 1680 and the mid-1700s, pueblitos were constructed, often associated with other structures. Although not firmly dated, extensive Navajo pictograph and petroglyph sites were painted, etched, pecked, or ground onto the sandstone cliffs of the canyons of

Dinétah. Most are believed to be ceremonial art which is no longer traditionally executed in a permanent form.

Native American Traditional and Sacred Areas are known to exist across the FFO. Many are associated with narrative accounts of origin or other traditional stories. Most of the identified sacred areas are associated with the Navajo culture. These places are still important in Navajo ceremonies and daily activities.

Historic Hispanic or Spanish and Anglo sites within the San Juan Basin primarily date from the late 1800s to the present. Although there are some early Spanish land grants in the southern portion of the FFO, most historic sites located on public lands are either Hispanic or Anglo homesteads with associated structures from the late 1800s and early 1900s. Associated with many clusters of homesteads were a school house and often a church which was visited every few months by a priest.

Cultural resource inventories have been conducted throughout the FFO for project undertakings, management studies, and scientific inquiries. As of April 2014, approximately 760,000 acres of the 7,800,000 acres in the FFO boundaries have been inventoried. Over 46,000 sites have been identified ranging from small artifacts to the 800-room structures in Chaco Canyon. Many of these sites are listed on the National Register of Historic Places and Chaco Culture National Historical Park along with several of the Chacoan sites which have been placed on the World Heritage List. The FFO manages 79 Areas of Critical Environmental Concern (ACECs) for relevant and important cultural values, including five World Heritage Sites.

The San Juan Basin is an important area for mammalian and reptilian fossils. A variety of paleontological resources exist in the FFO including animal fossils, fossil leaves, palynomorphs, petrified wood, and trace fossils occurring in the Triassic, Jurassic, Cretaceous, and Tertiary rocks. Dinosaur and other fossils have made significant contribution to the scientific record have been found and excavated in the FFO. Paleontolgical resources are present in the Bisti De-Na-Zin Wilderness Area, Ah-Shi-Sle-Pa Wilderness Study Area, Fossil Forrest Research Natural Area, and seven fossil areas identified in the 2003 Farmington Resource Management Plan.

The San Juan Basin is one of the largest natural gas fields in the nation and has been under development for more than 60 years. Oil was discovered by accident in the Seven Lakes area of McKinley County in 1911. Natural gas was discovered near Aztec, New Mexico, in 1920-1921 with oil of commercial quantity discovered near the Hogback in 1922 (Barnes 1951). Several small pipelines were built to carry the oil and gas from these discoveries to Aztec and Farmington, respectively. Development began in earnest in the late 1940s and early 1950s as the demand for natural gas increased. The FFO manages 2,765 active oil and gas leases in the San Juan Basin consisting of 2.1 million acres. Leasing began in the mid-1930s and accelerated in the late 1940s. By 1950, over 1 million acres were under lease.

In 1951, El Paso Natural Gas completed the first interstate pipeline out of the San Juan Basin to California. That same year, oil was discovered in the Mancos Shale in Dogie Canyon (Barnes 1951). Since that time, over 30,000 oil and gas wells have been drilled in the San Juan Basin with approximately 16,000 associated rights-of-way. Approximately 23,000 wells are currently producing. Since Stanolind Oil introduced hydraulic fracturing in 1949, nearly every well in the San Juan Basin has been fracture stimulated.

1. This EA is tiered to an EIS (FEIS-NGWSP; Reclamation 2009) that has disclosed significant impacts, both adverse and beneficial. The activities described in this EA for the proposed action and alternatives do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). Per 40 CFR 1500.1(b), the EA concentrated on issues that are truly significant to the action in question, rather than amassing needless detail. Issues have a cause and effect relationship with the proposed action or alternatives; are within the scope of the analysis; have not been decided by law, regulation, or previous decision; and are amendable to scientific analysis rather than conjecture (BLM 2008, page 40). The following issues were identified related to the proposed action and alternatives:

Issues Category	Issues Summarization
Water Rights	Reclamation has acknowledged the future use of unused water rights may be impacted by the NGWSP, but it is difficult to speculate on how an unused water right would be developed or impacted. The States will be responsible for administering the water rights to ensure compliance with State water law and the Colorado River Compact. However, holders of existing water rights may still want to know how Reach 22 will affect existing water rights and how those effects could be mitigated.
Cultural Resources	How will the handling and repatriation of any discovered Native American remains be addressed?
Threatened and Endangered Species	Will burrowing owls be affected and how will effects be mitigated?
Riparian Areas	Where and how will riparian areas along Cutter Canyon and Cañon Largo be affected and how can these effects be mitigated?
	What are the alternatives to locating the alignment in Cutter Canyon?
Range/Grazing	Have grazing allottees been contacted?
	Are mitigation measures in place to protect livestock, ensure containment of livestock, and preserve range improvements and access to those improvements?
	Are measures in place to control noxious weeds and their spread?
Wildlife	How will open trenches be mitigated to reduce the risk of injury and death to terrestrial animals and to reduce impediments to wildlife travel?
Paleontological Resources	Will fossils be affected? How will these effects be mitigated?
Infrastructure	How are intersections/crossings of existing infrastructures being addressed? What will be the effects to existing infrastructure?
	How will the Proposed Action affect 10 Mile Bridge, and how will these effects be mitigated?
	How will the proposed alignment affect the road surface of CR 4450 and how will these effects be mitigated?

The EA includes a description of the expected environmental consequences of the proposed activities for those issues in Chapter 3.

2. The activities included in the proposed action and alternatives would not significantly affect public health or safety (40 CFR 1508.27(b)(2)). The following design features have been included in the proposed action to address any impacts to public health and safety: The primary activities that could pose a risk to public health and safety from the Proposed Action Alternatives are related to construction traffic and the operation of heavy equipment near public roadways. Health and safety risks for construction workers are related to the operation of heavy equipment, working around heavy equipment, and working in the vicinity of utilities (primarily gas gathering pipelines). These activities pose a risk of physical injury associated with auto accidents, contacting moving equipment, or explosion or fire from a punctured gas line. Direct and indirect effects to public health and safety would be minor and short term with the implementation of design features and adherence to OSHA regulations and BLM ROW grant stipulations.

3. The proposed activities would not significantly affect any 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 (40 CFR 1508.27(b)(3)). Unique characteristics are generally limited to those that have been identified through the land use planning process or other legislative, regulatory or planning processes (BLM 2008, page 71). The FFO does not contain any prime and unique farmlands, suitable or designated wild and scenic rivers, or designated caves. Table 1 discloses the distance of the proposed activities to identified wetlands. Table 2 discloses the distance of the proposed activities to

National Park Service units and Congressionally designated areas. Impacts to Areas of Critical Environmental Concerns are disclosed in the Section 3. Impacts to historic or cultural resources are described in the Cultural Resources section of the EA and discussed further under item 8.

Table 1. Distance of the Proposed Activities from Identified Wetlands

Identified Wetlands	Distance from Proposed Activities
Bancos	23.8 miles
Blanco	8.3 miles
Bloomfield	19.4 miles
Cutter Canyon	Within ACEC
Carrizo Oxbow	1.8 miles
Desert Hills	18.9 miles
Valdez	13.8 miles

Table 2. Distance of the Proposed Activities from Park Lands and Ecologically Critical Areas

Park Land or Ecologically Critical Area	Distance from Proposed Activities
Ah-Shi-Sle-Pah Wilderness Study Area	15.0 miles
Aztec Ruins National Monument	19.5 miles
Bisti De-Na-Zin Wilderness Area	7.7 miles
Chaco Culture National Historical Park	22.0 miles
Fossil Forest Research Natural Area	16.7 miles

4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)). Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives (BLM 2008, page 71). The impacts of the proposed activities are described in Chapter 3 of the EA.

5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)). The field office has permitted over 18,000 rights-of-way since 1950. As such, the FFO has decades of experience and is knowledgeable about the impacts and risks associated with the proposed activities.

6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)). Approval of these activities in no way assures approval of any future activities.

7. The effects of the proposed activities would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR 1508.27(b)(7)). Direct, indirect, and cumulative impacts are described in Chapter 3 of the EA.

8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). The proposed activities are not located in an ACEC containing relevant and important cultural values. Cultural resource surveys were completed.

All BLM/Navajo Nation cultural resources stipulations will be followed. These stipulations may include, but are not limited to temporary or permanent fencing or other physical barriers, monitoring of earth disturbing construction, project area reduction and/or specific construction avoidance zones, and employee education. All employees, contractors, and sub-contractors of the project will be informed by the project proponent that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment, and that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm).

If, in its operations, Reclamation employees, contractors, or sub-contractors of the project discover any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the appropriate agency—BLM Field Office Manager or Navajo Nation Historic Preservation Department (NHPD). The BLM or NHPD will then specify what action is to be taken in accordance with Section VIII of the cultural resources Programmatic Agreement. (DOI-BLM-NM-F010-2014-0181-EA, page 18)

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)). The Proposed Action would have *no effect* on the Burrowing Owl because preconstruction nest surveys would be required during the nesting season, and if owls are detected, no disturbance would occur within 164 feet of active nests as specified by BLM FFO regulations or no disturbance within 265 feet of active nest on state trust lands as specified by NMDGF guidelines. The proposed project would impact a small portion of the large prairie dog town. There are no other known populations of critical habitat. (DOI-BLM-NM-F010-2014-0181-EA, page 48)

10. The proposed activities will not threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). Sections 1.3 and 1.4 of the EA describe the relationship of the proposed activities to relevant laws, policies, regulations, and plans.

REFERENCES

Barnes, Frank C., 1951. History of development and production of oil and gas in the San Juan Basin. In *The south and west sides of the San Juan Basin, New Mexico and Arizona*, Smith, C.T.; Silver, C. ed(s), New Mexico Geological Society, Guidebook, 2nd Field Conference, pp. 155-160.

BLM. 2008. *National Environmental Policy Handbook. H-1790-1.* Bureau of Land Management. National Environmental Policy Act Program.

APPROVED:

7-17-2015

Timothy Wakefield
Field Manager (Acting)
BLM Farmington Field Office

Date

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Farmington District
Farmington Field Office
6251 N College Blvd., Ste. A
Farmington, NM 87402

DECISION RECORD
for the

Reaches 22 and 21 of the Navajo-Gallup Water Supply Project
NEPA No. DOI-BLM-NM-FO10-2014-0181-EA

I. Decision

I have decided to select the Proposed Action Alternative for implementation as described in the June 2015 Reaches 22 and 21 of the Navajo-Gallup Water Supply Project (NGWSP). Based on my review of the Environmental Assessment (EA) and project record, I have concluded that the proposed action was analyzed in sufficient detail to allow me to make an informed decision. I have selected this alternative because the proposed action will provide a reliable municipal and industrial water supply for future population needs of approximately 250,000 people in the 43 Navajo chapters, the City of Gallup, and the TeePee Junction area of the Jicarilla Apache Nation a long-term sustainable water supply as authorized by the Omnibus Public Land Management Act of 2009, Title X Part III (Public Law 111-11). Reach 22, also called the Cutter Lateral, would be comprised of three separate construction projects from Cutter Dam to Huerfano, NM. Reach 21 designation was necessary due to the relocation of the water treatment plant southeast of Huerfano Mesa. The proposed water line alignment would cross lands administered by the Navajo Nation, Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), State of New Mexico, and privately owned lands.

II. Conformance and Compliance

The Proposed Action Alternatives are in conformance with the September 2003 Farmington Resource Management Plan with Record of Decision, as updated in December 2003 (USDI/BLM, 2003). The proposal is recognized as an appropriate use of public lands in the FFO planning area Resource Management Plan. The proposed action is in conformance with the Farmington RMP. Specifically the Proposed Action is in conformance with the objective of the FFO lands program to grant ROWs to qualified businesses and government entities for use of public lands (BLM 2003b, pages 2-5 and 2-6). Special Designated Areas (SDAs) and Areas of Critical Environmental Concern (ACECs) for the Proposed Action area were identified in each RMP/EIS under authority of the FLPMA allowing for multiple use of lands administered by the BLM. The pipelines and other improvements associated with Reaches 21 and 22 are not located within any ACECs. Portions of Reach 22 would pass through two Ephemeral Wash Riparian SDAs (Largo Canon Reach #2 and Carizo Canyon). A Wetland Mitigation Plan has been approved and will be included as a Condition of Approval (COA) for the right-of-way.

The Proposed Action Alternatives are in compliance with the Land Use Plan for the Huerfano Chapter (ARC 2002).

Reclamation would comply with all applicable federal and State of New Mexico laws and regulations. Non-point source pollution is an identified problem in the planning area that is directly associated with soil stability and water quality. Mandated by the Clean Water Act (CWA), efforts

to reduce non-point source pollution through implementation of erosion control and management practices are an important part of BLM's management activities. Construction activities disturbing land may require permit coverage through a National Pollution Discharge Elimination System (NPDES) storm water discharge permit. Upon determination, a U.S. Army Corps of Engineers Section 404 CWA Permit for discharge of dredge and fill materials in Waters of the U.S. may also be required. Applicants are required to obtain all the necessary permits and approvals prior to any disturbance activities.

Consultation with the U.S. Fish and Wildlife Service (USFWS) as required by Section 7 of the Endangered Species Act was conducted as part of the Farmington PRMP/FEIS (Consultation No. 2-22-01-1-389) to address cumulative effects of the RMP implementation. The consultation was summarized in Appendix M of the RMP/EIS. Formal consultation with the USFWS was also conducted as part of the NGWSP PR/FEIS (Consultation No. 2-22-01-F-532). The consultation is summarized in Appendix C of the PR/FEIS. Review of current USFWS Federally Listed species and onsite evaluation of habitat for the Proposed Action indicate no need for additional Section 7 consultation (Ecosystem Management, Inc. 2014a).

Reclamation will file a ROW application with the Farmington Field Office of the Bureau of Land Management (BLM FFO) for proposed construction of Reach 22 of the NGWSP. Reclamation will also apply for a ROW application with the BIA for proposed construction of Reach 22 on Tribal Trust and allotted lands. BLM and BIA regulate ROW development so as to minimize environmental effects to public lands as required by numerous federal laws, including:

- The Endangered Species Act of 1973 (P.L. 94-325),
- The Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. 703-712),
- The Bald Eagle and Golden Eagle Protection Act of 1940 (BGEPA), as amended (16 U.S.C. 668-668d).
- The Federal Water Pollution Control Act of 1948 (Clean Water Act), as amended (33 U.S.C. Chapter 26),
- The Clean Water Act of 1963, as amended (P.L. 88-206),
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. Chapter 103),
- The Antiquities Act of 1906, as amended (P.L. 52-209),
- The National Historic Preservation Act of 1966, as amended (P.L. 89-665),
- National Trail System Act of 1968, as amended (16 U.S.C. 1241-1251),
- The Archaeological and Historic Preservation Act of 1974 (P.L. 86-253),
- The Archaeological Resources Protection Act of 1979, as amended (P.L. 96-95),
- The American Indian Religious Freedom Act of 1978, as amended (42 U.S.C. 1996), and
- The Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601).

The MBTA prohibits the taking, killing or possessing migratory birds. Executive Order (EO) 13186 was signed on January 10, 2001, directing executive departments and agencies of the federal government to take certain actions to further implement the MBTA including developing and implementing a Memorandum of Understanding (MOU) with the USFWS that would promote the conservation of migratory bird populations. A MOU was developed and entered into by the BLM

and USFWS on April 12, 2010 to accomplish EO 13186 and to ensure the successful implementation of BLM and USFWS migratory bird conservation responsibilities. The MOU *to Promote the Conservation of Migratory Birds* presents collaborative methods to promote the conservation of migratory bird populations by identifying and implementing strategies which avoid or minimize adverse impacts to migratory birds. The BLM and USFWS have agreed that implementation of the MOU will be in harmony with existing agency missions, and the MOU does not supersede any legal requirements or existing species conservation processes and procedures such as Endangered Species Act (ESA) recovery plans. Reclamation does not have an MOU in place with the USFWS for management of migratory birds; a MBTA Directives and Management document is in draft form only. Reclamation analyzes and documents effects to migratory birds during the NEPA process and avoids or mitigates those effects to the maximum extent feasible.

The MOU to *Promote the Conservation of Migratory Birds* entered into by the BLM and the USFWS was not completed during the development of the revised FFO RMP. Consultation on the Biological Assessment (BA) with the USFWS for the RMP was completed on October 2002, the Environmental Impact Statement (EIS) was completed in March 2003, and the Record of Decision (ROD) for the RMP was signed in September of 2003. There are no management constraints or mitigation measures pertaining to the MBTA listed within the RMP, BA, EIS, or ROD. Revision and/or adoption of some elements of the MOU into the RMP may be required. Currently, effects to migratory birds are addressed and mitigated at the project level as outlined in the Migratory Bird Treaty Act BLM/FFO Interim Management Policy (Instruction Memorandum No. NM-F00-2010-001, USDI/BLM 2010).

Until further guidance related to the MOU is issued, the BLM will continue to analyze impacts to migratory birds in NEPA documents, list the MBTA as a law the owner of any BLM permit must comply with, and utilize the best management practices and mitigation measures that minimize impacts to migratory birds as outlined in Instruction Memorandum No. NM-F00-2010-001.

The proposed project area is within BLM/FFO designated potential habitat areas for the BLM Special Management Species and State of New Mexico Endangered plants, the Brack's cactus (*Sclerocactus cloveriae* ssp. *Brackii*) and Aztec gilia (*Aliciella formosa*). Per the BLM/FFO Instruction Memorandum No. NM-200-2008-001, proposed projects within Brack's cactus and Aztec gilia habitat will require a biological survey. When individual plants or suitable habitat for these plants are found within designated potential habitat during a biological survey for a proposed project, every effort to relocate the proposed project will be explored to minimize disturbance.

The BIA works with the Navajo Fish and Wildlife Department through a Public Law 93-638 contract to regulate ROW development on the Navajo Nation to minimize environmental effects to the biological resources on the Navajo Nation as required by Navajo Nation laws and procedures including:

- Navajo Endangered Species Act
- Resource Land Clearance Policies and Procedures
- Bald and Golden Eagle Protection Act

As the lead agency for the entire NGWSP, Reclamation has developed a Programmatic Agreement for compliance with the National Historic Preservation Act between the project participants. Reclamation, BLM, the Navajo Nation Tribal Historic Preservation Officer (THPO), the Bureau of Indian Affairs (BIA), the New Mexico State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP) are signatories to the Programmatic Agreement. Consulting parties to the Programmatic Agreement include the governments and historic preservation officials of American Indian tribes and pueblos, local municipalities, state, and federal agencies with section 106 responsibilities to consider the potential effect of the

project on historic or cultural properties. The Proposed Action compliance with Section 106 responsibilities of the National Historic Preservation Act will be adhered to by the following Programmatic Agreement for the entire NGWSP.

Additionally, the ROW Grant Holder, or their designated agents, shall:

- Comply with all applicable Federal, State of New Mexico, Navajo Nation, and local laws and regulations.
- Obtain the necessary permits for the construction of Reaches 21 and 22 including water rights appropriations, water discharge permits, and relevant air quality permits.
- Certify that a Surface Use Agreement has been reached with private landowners where required.
- Obtain permission to survey and written consent from the Navajo Nation prior to BIA approval.

This EA considers the requirements of these and other laws and regulations, as applicable. The Proposed Action, including environmentally protective mitigation measures, complies with the laws and regulations indicated above. ROW grant holders are required to obtain all necessary permits and approvals prior to any disturbance activities.

III. Finding of No Significant Impact

I have reviewed the direct, indirect and cumulative effects of the proposed activities documented in the EA for the Reaches 22 and 21 of the Navajo-Gallup Water Supply Project. I have also reviewed the project record for this analysis. The effects of the proposed action and alternatives are disclosed in the Alternatives and Environmental Consequences sections of the EA. I have determined that the proposed action to construct Reaches 22 and 21 of the Navajo-Gallup Water Supply Project would further progress towards a suitable, long-term water supply for a number of underserviced communities in northwestern New Mexico as described in the EA will not significantly affect the quality of the human environment. Accordingly, I have determined that the preparation of an Environmental Impact Statement is not necessary.

IV. Other Alternatives Considered

Alternative B: Under Alternative B, modifications to river outlet works would be made without any water behind the dam. If the dam safety risk analysis deems it necessary to drain Cutter Reservoir to safely make the river outlet works modifications, then the BIA would drain Cutter Reservoir over an approximate 2.5-week period beginning in early November 2015; outside the irrigation season from mid-April to end of October. The controlled release of draining the reservoir is dictated by dam safety. Based on Reclamation's analysis, Cutter Reservoir cannot be drained nor filled faster than 2 feet per day. Based on this rate, the controlled release into Cutter Canyon would be a maximum of 30 cubic feet per second (cfs). Draining of the reservoir would take approximately 2.5-weeks; Cutter Wash would convey the controlled release over the 2.5-week period. Reclamation has estimated that the controlled release of 30 cfs, Cutter Wash would have an average velocity between 2.0–3.0 feet per second and average water depths from 0.5- to 0.7-feet deep. The controlled release would involve a stormwater pollution prevention plan to mitigate any erosive velocities and to provide sediment control at the outlet to Cutter Canyon. Sediment control measures may include a settling pond and temporary check structures in Cutter Wash, where erosive velocities have been modeled to occur.

Alternatives Considered but Elimnated from Detailed Study: Variations in alignment of Reach 22 were considered in the development of the project to address potential problems associated with ROW acquisition or protection of cultural and natural resource sensitive areas on BLM land.

NIIP Canal Route:

The alignments for Reach 22a that were considered include a route that parallels the NIIP Main Canal immediately downstream of Cutter Reservoir. It would tie into the proposed pipeline route on the south side of Largo Canyon. This route was not as cost effective both from a capital expenditure standpoint, as well as from an operations, maintenance, and replacement (OM & R) viewpoint as it required an additional pumping plant at the base of Cutter Dam to lift the water in the pipeline up to the Main Canal elevation.

Salt Point ACEC Bypass Route:

A second alternative for Reach 22a was a bypass route around the original Salt Point ACEC boundary. This alternative was originally necessary as formal permission from the BLM, which manages the ACEC, had not been obtained for the pipeline ROW through this culturally sensitive area in 2012. However, this alternative route is no longer needed, as BLM's Farmington Field Office in mid-March 2013 through an administrative adjustment of their RMP relocated the Salt Point ACEC boundary to the east side of Blanco Canyon. BLM determined in consultation with the Navajo Nation, that none of the protected Navajo culturally sensitive resources were west of the Blanco Wash. Therefore, this alternative alignment was dismissed from further consideration.

Blanco Canyon Route:

The Blanco Canyon Alternate pipeline alignment was designed to avoid Navajo allotted lands along Blanco Canyon where feasibility to obtain ROW permission would be difficult as the parcels have over one hundred allottees with ownership stake. The Alternate Blanco Canyon pipeline alignment was rejected for several reasons, including both capital and OM & R costs. It also ran along geologically unstable areas on the west side of Blanco Wash in Reach 22a and in very steep and difficult remote terrain on the north portion of Reach 22b.

Allotment Bypass Route:

The Allotment Bypass alignment avoids the two remaining allotments that Reclamation has not received consent for permission to survey as of early May 2013. This alternative route around the two allotments on the north quarter of Reach 22b required a reroute of the pipeline over an eighth of a mile west of the proposed pipeline alignment through steep, rocky, and difficult terrain and included a pipeline crossing within the ordinary high water line of the Blanco Wash. To protect the water pipeline where it would fall within Blanco Wash would increase the capital costs considerably, and would likely require wetland and riparian mitigation. Reclamation obtained permission to survey the remaining two allotments, thus this alternative was dismissed from further consideration.

V. Rationale for the Decision

The purpose of the Proposed Action is to provide the proponent with access to BLM-managed lands and Navajo Nation Tribal Trust lands managed by the BIA Navajo Region. The project is intended to provide potable drinking water to Reaches 21 and 22 of the NGWSP. As authorized by Title V of the Federal Land Policy and Management Act (FLPMA) of October 21, 1976 (43 USC 1761 et seq.) as amended, BLM will issue ROW grants for pipelines (other than oil and gas pipelines) and other facilities and systems which are in the public interest. It is the policy of the BLM to authorize all ROW applications at the discretion of the authorized office in the most efficient and economical manner possible while protecting the natural environment and providing for public safety (43 CFR 2800 and 2880). In addition, the BIA is to authorize all ROW applications that are within a reservation for the purpose of constructing, operating, or maintaining water conduits (40 CFR 169). Reclamation is the lead project sponsor with BLM and BIA as cooperating agencies.

Reclamation prepared a Planning Report and Final Environmental Impact Statement for the greater NGWSP (FEIS-NGWSP; Reclamation 2009), and the Record of Decision (ROD) for that document signed by the Secretary of the Interior (Secretary) on October 1, 2009. Authorization to complete the NGWSP was included in the Omnibus Land Management Act of 2009, Title X, Part II (P.L. 11-11, March 30, 2009). The site-specific analysis contained herein tiers to and incorporates by reference the information and analysis in the Reclamation FEIS-NGWSP.

This site-specific analysis also tiers into and incorporates by reference the information and analysis contained in the BLM Farmington Proposed Resource Management Plan/Final Environmental Impact Statement (FFO-FEIS) approved as per the September 29, 2003 ROD as the Farmington Resource Management Plan (FFO-RMP), pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21 (USDI/BLM 2003).

I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). The proposed activities are not located in an ACEC containing relevant and important cultural values. Cultural resource surveys were completed.

All BLM/Navajo Nation cultural resources stipulations will be followed. These stipulations may include, but are not limited to temporary or permanent fencing or other physical barriers, monitoring of earth disturbing construction, project area reduction and/or specific construction avoidance zones, and employee education. All employees, contractors, and sub-contractors of the project will be informed by the project proponent that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment, and that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm).

If, in its operations, Reclamation employees, contractors, or sub-contractors of the project discover any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the appropriate agency—BLM Field Office Manager or Navajo Nation Historic Preservation Department (NHPD). The BLM or NHPD will then specify what action is to be taken in accordance with Section VIII of the cultural resources Programmatic Agreement. (DOI-BLM-NM-F010-2014-0181-EA, page 18)

VI. Public Involvement

Reclamation conducted extensive public involvement, scoping, and formal comment opportunity in the preparation of the EIS for the Navajo–Gallup Water Supply Project. Chapter 7 of the PR/FEIS describes five public scoping meetings held specifically for the project and its consultation with state and federal agencies, tribal governments, local governments, and interested organizations. Volume 3 of the EIS provides all comments and responses on the draft EIS. In brief, the EIS identifies social issues surrounding the need for a stable water supply, the uses of the water, and water rights. In addition, previous scoping identified protection of special status species and cultural resources as issues for the project. Consultation with the Navajo Nation and BLM supported the conclusions from previous scoping and identified no new information not previously considered in the PR/FEIS.

More recently, Reclamation has contacted local infrastructure/utility providers who may have interests in Reaches 21 and 22 project areas, including the BIA Roads Regional Office, Jemez Mountains Electric Cooperative, Navajo Transmission Utility Authority, City of Farmington Electric, Navajo Department of Transportation, and Sacred Wind Communications.

Reclamation also contacted local companies through the New Mexico One-Call process in order to provide project information that may have impacts on existing infrastructure. The following organizations responded: BP America; Energen Resources, Kelco, Inc.; West Largo; Enterprise

Mid-American Pipeline; NM Gas Company; XTO, Incorporated; Enterprise Production; Western Refining; Kinder Morgan, Inc.; and Williams Field Services.

Reclamation has had extensive tribal contacts for the NGWSP, both during the scoping for the NGWSP EIS and for development of a Historic Properties Programmatic Agreement currently in draft. BLM engaged the public and in some instances, gave short briefing presentations about the Reach 22 project.

The public did not have specific comments about the project. General comments and questions typically concerned water rights, and it should be pointed out that public meetings on the Navajo water rights settlement were going on at about the same time. (DOI-BLM-NM-F010-2014-0181-EA, pages 5-6).

The EA was made available by certified mail, notification letters and on the BLM Farmington Field Office homepage at http://www.blm.gov/gov/nm/st/en/fo/Farmington_Field_Office.html on October 27, 2014 for a 30-day public review. One comment was received during this review period and was addressed in the EA.

VII. Administrative Review and Appeal

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR Part 4. Any appeal must be filed within 30 days of this decision. Any notice of appeal must be filed with Field Manager, Farmington Field Office, 6251 College Boulevard, Suite A, Farmington, NM 87402. The appellant shall serve a copy of the notice of appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the decision, not later than 15 days after filing such document (see 43 CFR 4.413(a)). Failure to serve within the time required will subject the appeal to summary dismissal (see 43 CFR 4.413(b)). If a statement of reasons for the appeal is not included with the notice, it must be filed with the IBLA, Office of Hearings and Appeals, U. S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with Farmington Field Office Manager.

Notwithstanding the provisions of 43 CFR 4.21(a)(1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision. This decision can be implemented immediately and remains in effect pending appeal according to 43 CFR 2881.10 (b). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal.

A petition for a stay is required to show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied;
(2) The likelihood of the appellant's success on the merits;
(3) The likelihood of immediate and irreparable harm if the stay is not granted; and
(4) Whether the public interest favors granting the stay.

In the event a request for stay or an appeal is filed, the person/party requesting the stay or filing the appeal must serve a copy of the appeal on the Office of the Field Solicitor: United States Dept. of the Interior, Office of the Solicitor, Southwest Regional Office, 505 Marquette Avenue NW, Suite 1800, Albuquerque, NM 87102.

Timothy Wakefield
Field Manager (Acting)
Farmington Field Office

1-20-15
Date

U.S. Department of the Interior
Bureau of Reclamation
Western Colorado Area Office

FINDING OF NO NEW SIGNIFICANT IMPACTS

For The
Tiered Environmental Assessment
Of
Reaches 21 and 22 of the
Navajo-Gallup Water Supply Project

Approvals:

09-30-2015
Date

Prepared By: PHILLIP W. RIEGER
Bureau of Reclamation
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Durango, CO

9/30/15
Date

Reviewed By: ROBERT WALDMAN
Bureau of Reclamation, Environmental Planning Group Chief
Western Colorado Area Office
Durango, CO

10-7-15
Date

Approved By: ED WARNER
Bureau of Reclamation
Western Colorado Area Office Manager
Grand Junction, CO

In compliance with the National Environmental Policy Act of 1969 (NEPA), as amended, the U.S. Bureau of Reclamation (Reclamation), Western Colorado Area Office (WCAO), has conducted a tiered environmental assessment (EA) of a proposed action to determine if the action would have any new potentially significant impacts not already discussed and considered in previous NEPA documentation. The proposed action is part of the Reclamation-managed Navajo-Gallup Water Supply Project (NGWSP), for which an Environmental Impact Statement (EIS) was completed in 2009.

This tiered Environmental Assessment (EA) was prepared by Reclamation for the segment of the NGWSP designated as Reaches 21 and 22, which is located largely on Bureau of Land Management (BLM) managed lands. Small portions of this segment also occur on Navajo Nation lands managed by the Bureau of Indian Affairs (BIA). Although all three Bureau Offices (Reclamation, BIA and BLM) have NEPA compliance responsibilities for this segment of the NGWSP, because of its larger role as the major land manager for the area crossed by these reaches, the BLM Farmington Field Office has been the lead agency for NEPA compliance with this EA. Cooperating agencies include Reclamation WCAO, and BIA Eastern Navajo Agency Office. Each of these agencies will prepare separate Findings of No New Significant Impacts (FONNSIs) for the EA as appropriate for their agencies' NEPA compliance as required for their granting of Right of Way (ROW) within the boundaries of the Reaches addressed by this EA.

The EA was prepared by a consulting firm, Environmental Management Incorporated, to address the impacts of construction for the proposed action reaches of the pipeline in accordance with NEPA guidelines. The Draft EA was posted at BLM and Reclamation websites, and over fifty letters of notification were mailed to potential reviewers and commenters. This public notice process elicited only one comment – NM Dept. of Fish and Game provided some guidance on measures to reduce impacts to wildlife affected by the project. These measures would be employed during the construction process.

The Proposed Action and Alternatives

The EA analyzed the no action alternative and the proposed action alternative of construction for Reaches 21 and 22 of the NGWSP, as well as an alternative route through Cutter Canyon to access water withdrawl at Cutter Reservoir, as described in the EA. Construction would consist of disturbing a 100 foot-wide corridor through lands along the proposed pipeline alignment of approximately 24.5 miles in length and is anticipated to occur from 2015 to 2018. These Reaches transfer water from the existing Cutter Reservoir, which receives water from Navajo Reservoir, to the other Reaches of the NGWSP.

The proposed alignment chosen for the pipeline route has been derived from various alternative route considerations – the originally proposed alignment was modified in several locations to avoid impacts to cultural resources, special status species, and wetland habitats. The Cutter Canyon alternative route was eliminated for economic reasons, as it incurred no less nor greater environmental impacts than the selected route.

Related NEPA Documents

This EA is tiered from the NGWSP Planning Report and Final EIS (PR/FEIS), dated July 2009 found at http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html.; and from the BLM Farmington Proposed Resource Management Plan/Final EIS found at http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/farmington_rmp.html..

Summary of Impacts

Amoung several impact issues, the following were the most significant: impacts to wetlands below Cutter Reservoir; impacts to Brack's cactus, a NM and BLM designated special status species; impacts to the landscape and ecology from devegetation; and, impacts to cultural resources. Site specific mitigation for all of the above impacts has been developed in coordination with BLM and other relevant agencies. Mitigation plans for wetlands and Brack's cactus have been developed and would be implemented prior to the beginning of construction. Re-vegetation of the construction corridor and other soil stabilization techniques would be employed following construction to mitigate landscape ecology impacts. Cultural resources impacts have been either avoided through minor adjustments to the route, or would be mitigated prior to construction in accordance with a Programmatic Agreement (PA) between Reclamation and several relevant cultural resource entities, including the State and Tribal Historic Preservation Offices (SHPO and THPO) for this area. None of these impacts would be significantly greater than those as described in the NGWSP PR/FEIS.

Determination of Impact Significance

After weighing economic, social, and technical considerations, as well as the potentially significant environmental effects analyzed in this EA and the 2009 FEIS, Reclamation has determined that this proposed action would not produce any new significant effects on the quality of the human environment as defined by 40 CFR 1508.2; and, thus neither a Supplemental Environmental Impact Statement nor further NEPA documentation is needed. This finding is based on consideration of the context and intensity of impacts for these reaches as summarized here:

Context

The project (Reaches 21 and 22 of NGWSP) involves about 24.5 miles of ROW on BLM and BIA administered lands in northern NM as shown on figures 1 and 2 of the EA, which in this location does not have national, regional, or state-wide importance.

Intensity

The following analysis is organized around the 10 significance criteria described in the Council on Environmental Quality NEPA regulation at 40 CFR 1508.27. These criteria were considered in determining whether the project might induce new significant impacts not already described in the PR/FEIS.

1. Impacts may be both beneficial and adverse.
The proposed action would incur both beneficial and adverse impacts as described in the EA. None of the environmental effects, either beneficial or adverse, discussed in detail in the EA are considered independently significant, nor do the effects exceed those described in the FEIS.

2. The degree to which the selected alternative will affect public health or safety or a minority or low-income population.
The proposal will have no known negative significant impacts on public health or safety. Minority or low income communities would be affected, both beneficially and negatively, by the proposed action. Minority and/or low income communities adjacent to the areas of construction would experience short-term construction-related impacts to the landscape and resources such as grazing. This effect is, however, not disproportionate because the main purpose of the project construction is to provide the primary beneficial effect of increasing potable water for this region of the Navajo Nation and the Jicarilla Apache Nation.

3. Unique characteristics of the geographic area.
There are no park lands, prime farmlands, wild and scenic rivers, or ecologically critical areas that would be affected by the proposal. Wetlands in Cutter Canyon, just below the intake at Cutter Reservoir, would be affected by the project; however, a wetlands mitigation plan developed in accordance with Corps of Engineers Clean Water Act regulations and BLM requirements would avoid significance of such impacts as described in the PR/FEIS and this EA.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
Reclamation contacted representatives of other federal agencies, state government agencies, Indian tribes, and individuals, and its effects on resources during the NGWSP PR/FEIS coordination process. Coordination with these entities for this specific action was also conducted prior to issuance of the EA. In addition, this EA was released for a 30-day public review and no controversial comments were received. Based on these responses received, the effects on this portion of the NGWSP on the quality of the human environment are not likely to be of greater controversy than as described in the PR/FEIS.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
There are no predicted effects on the human environment that are considered highly uncertain or that involve unique or unknown risks. There is no new technology involved in planning or design, nor proposed construction methods which are not established in the industry.

6. The 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.
There are no foreseen future actions or considerations likely to occur from any precedent set by this action if environmental commitments provided in the EIS are followed. However, the Revegetation Plan proposed for these reaches, which is attached to the EA, notes that fencing of revegetated areas is "unrealistic." If fencing is not to be provided, as required in the EIS,

these reaches should follow the project-wide Revegetation Plan currently being developed by WCAO in coordination with BIA and BLM. This plan outlines criteria to determine the need for fencing on a site specific basis. As such Reclamation will ensure this Revegetation Plan is followed to avoid a potentially new significant impact of poor revegetation due to post construction grazing within the areas to be revegetated; and, to avoid setting a precedent which could result in a new NGWSP Project-Wide significant impact, not intended according to the EIS.

7. Whether the action is related to other actions which are individually insignificant but cumulatively significant.
Cumulative impacts of the NGWSP project were described in the PR/FEIS. The proposed action does not create any new significant site-specific effects, nor contribute to cumulative significant effects not already described in the FEIS. Again, as noted above in #6 however, to avoid a new significant impact of poor revegetation because of grazing, fencing of the areas to be revegetated would be determined as necessary according to the Reclamation WCAO NGWSP Revegetation Plan. The fencing requirements of the Revegetation Plan, if followed, are designed to comply with the EIS-required fencing of revegetated areas.

8. The degree to which the action may adversely affect sites, districts, buildings, structures, and objects listed in or eligible for listing in the National Register of Historic Places.
The SHPO and THPO have agreed upon ways to accommodate historic preservation concerns as the NGWSP project proceeds. The process resulted in a Programmatic Agreement (PA) with all affected interests which reflect these issues. This proposed action has no new effects not considered in the PA, nor does it violate any conditions of the PA.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
Other reaches of the NGWSP and water withdrawls from the San Juan River are expected to affect endangered species, and these issues have been considered through coordination with the FWS through Section 7 of the Endangered Species Act. The particular reaches addressed in this EA were not found to contribute to endangered species effects. No new ESA-listed species are found in the area of this specific action since completion of the FEIS. Brack's cactus, a State of NM and BLM species of special concern, though not listed by FWS as a threatened or endangered species, would be affected by the project in reach 22. Avoidance of Brack's cactus found near the proposed pipeline route was done with minor re-routes of the pipeline during preparation of this EA; and, transplanting of cactus in accordance with the Brack's cactus mitigation plan, as noted above, would reduce impacts to this species, and thus not increase the overall significance of the project in this reach to formally listed species.

10. Whether the action threatens a violation of Federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment.
The project does not violate any federal, state, local, or tribal law, regulation, or policy imposed for the protection of the environment. In addition, this project is consistent with applicable land management plans, policies, and programs. Federal, State, and Local and tribal interests participated in the environmental analysis process. The BLM and BIA

participated in scoping and review of this EA, and have expressed no concerns over laws or regulations imposed to protect the environment.

United States Department of the Interior

Navajo Region
P.O. Box 1060
Gallup, NM 87305

TAKE PRIDE IN AMERICA

MC 620/Branch of Environmental Quality Act Compliance & Review OCT 0 8 2015

U.S. Department of the Interior
Bureau of Reclamation
Four Corners Construction Office
2200 Bloomfield Highway
Farmington, NM 87401

RE: Navajo-Gallup Water Supply Project – Reaches 22 & 21, San Juan County, New Mexico
EA-15-10939

Dear Mr. Rieger:

The Tiered Environmental Assessment for the Bureau of Reclamation's proposed Reaches 22 & 21 of the Navajo-Gallup Water Supply Project, McKinley and Sandoval County, New Mexico, impacts a proposed 84.4 acres of Navajo Tribal Trust and Navajo Indian Allotted lands, San Juan County, New Mexico has been reviewed in the Branch of Environmental Quality Act Compliance and Review, Navajo Regional Office. The Bureau of Reclamation proposes to construct three reaches designated as 21, 22a, and 22b, including the construction of two pumping plants and a water treatment plant. A Finding of No New Significant Impact (FONNSI) has been determined for the proposed action because there are no significant impacts that were not already disclosed in the *Navajo-Gallup Water Supply Project – July 2009* [A finding of no significant impact other than those already disclosed and analyzed in the environmental impact statement to which the environmental assessment is tiered may also be called a "finding of no new significant impact." 43 CFR §46.140 (c)]. The proposed action will not have any new significant impacts on the quality of the natural and human environment.

Should you require additional information, you may contact Ms. Harrilene J. Yazzie, Supervisory Environmental Protection Specialist, at (505) 863-8287.

Sincerely,

Acting Regional Director, Navajo Region

Enclosure

FINDING OF NO NEW SIGNIFICANT IMPACT
FOR THE TIERED ENVIRONMENTAL ASSESSMENT OF
REACHES 22 & 21 OF THE NAVAJO GALLUP WATER SUPPLY PROJECT
EA-15-10939

Location: Section 5, T27N, R12W, NMPM
Huerfano Chapter, San Juan County, New Mexico

The Navajo Region, BIA, is issuing a Finding of No New Significant Impact (FONNS), in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), Department of Interior's Implementation of the National Environmental Policy Act of 1969 (43 CFR Part 46), and BIA policy and standards set forth in 59 Indian Affairs Manual (IAM).

The decision is based on the information contained in the Tiered Environmental Assessment (EA) that was prepared to evaluate and document potential environmental effects associated with the Proposed Action and alternatives. This site-specific analysis tiers to and incorporates by reference information, analysis, and mitigation outlined in the *Navajo-Gallup Water Supply Project (NGWSP) Planning Report and Final Environmental Impact Statement (PR/FEIS)*; as well as the associated *Record of Decision (ROD)*. The ROD includes, but is not limited to, the Environmental Commitments outlined in Appendix 3 addressing Vegetation and Land Use Commitments (i.e., revegetated areas are fenced to prevent grazing activities until disturbed areas become re-established).

Name of Action
[Tiered] Environmental Assessment – Reaches 22 and 21 of the Navajo-Gallup Water Supply Project

Description of the Proposed Action and No-Action Alternative
An approved ROW grant issued by the BIA would authorize Reclamation to own and construct and Navajo Tribal Utility Authority to operate and maintain Reach 22 segments on tribal trust and allotted lands.

Proposed Action
Reclamation proposes to fund and authorize the construction and operation of Reaches 21 and 22 of the NGWSP. Construction would result in disturbance along the proposed pipeline approximately 24.5 miles in length with anticipated construction to occur from 2015 to 2018. The approval would provide construction of three reaches designated as 21, 22a, and 22b, which includes the construction of two pumping plants and a water treatment plant. These reaches would transport untreated water from Cutter Dam to the Cutter Lateral Water Treatment Plant near Country Road 7575, and then potable water westward to the DZ Storage Tanks near the base of the Huerfano Mesa and Phase 3 of the Eastern Navajo Water Pipeline. Pipeline construction would require a temporary construction easement totaling about 295 acres, when construction is complete, would be reduced to a permanent ROW of about 175 acres. The associated pumping plants, water treatment plant, and the storage tanks would require about 24 acres of

new permanent easements. The pumping plants exact locations are subject to change as design is finalized.

The Proposed Action also includes Design Features, Stipulations, and Requirements outlined in Section 2.1.7 of the Tiered Environmental Assessment. These were derived from the Farmington Field Office and the PF/EIS (and associated ROD) to limit impacts to the resources. The design features, stipulations and requirements are those from these planning documents and apply to this proposal.

No Action Alternative
This alternative would deny the approval of the proposed application, and the current land and resources uses would continue to occur in the proposed area. No design features would be required. The No Action Alternative provides a baseline reference, enabling decision makers to compare the magnitude of environmental effects of the Proposed Action

In addition to the Proposed Action and the No Action Alternative there was also an Alternative A – Cutter Dam Outlet Modifications Maintaining Full Reservoir Head, Alternative B – Cutter Dam Outlet Modifications Draining Cutter Reservoir, and four (4) Alternatives Considered but Eliminated from Detailed Study (EA, Section 2.0).

Public and Agency Involvement
Reclamation conducted extensive public scoping during the development of the PR/FEIS as outlined in Chapter 7. Reclamation also contacted local infrastructure/utility providers who may have interest in Reach 22. There were 11 internal (between BLM and Reclamation) scoping meetings and 5 public scoping with the public.

Issues identified include: Water Rights, Cultural Resources, Threatened and Endangered Species, Riparian Areas, Range/Grazing/ Wildlife, Paleontological Resources, and Infrastructure.

Decision and Rationale
Based on the EA, and considering public and agency comments, the BIA has determined that the Proposed Action will have no significant impact on the quality of the human environment. In accordance with Section 102 (2) (c) of the National Environmental Policy Act of 1969, as amended, an Environmental Impact Statement will not be required.

The significance of impacts has been considered in terms of context and intensity. Context refers to the affected environment where the actions occur, and intensity considers the severity of the actions, based off of then factors and their expected impacts (40 CFR 1508.27).

Impacts may be both beneficial and adverse
No significant beneficial or adverse effects would result from the Proposed Action. As discussed in detail in the EA, none of the environmental effects, are considered independently significant, nor do the effects exceed those described in the PR/FEIS.

The degree in which the proposed action affects public health or safety

Implementation of the Proposed Action would result in direct and indirect effects to public health and safety would minor and short term. There are no known projects that would contribute to cumulative effects on public health and safety; however, the Proposed Action will increase accessibility to water resulting in health improvements.

The 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.
Impacts to Areas of Critical Environmental Concerns are disclosed in Section 3. Impacts to historic or cultural resources are described in the Cultural Resources section of the EA.

The degree to which the effects on the quality of human environment are likely to be highly controversial.
There have been no highly controversial comments expressed with the actions and activities as proposed.

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks
Implementation of the Proposed Action would not have highly uncertain or unique environmental effects.

The degree to which the action may establish a precedent for future actions with significant effects, or represents a decision in principles about a future consideration.
Implementation of the Proposed Action would not have highly uncertain or unique environmental effects. The actions proposed are minor in nature and similar actions have been completed on similar neighboring lands, such that no highly uncertain or unique environmental effects are anticipated.

Whether the action is related to other actions which individually insignificant, but cumulatively significant impacts.
No significant cumulative effects are anticipated as found through the analysis for this project. The Proposed Action represents no, negligible, or minor direct, indirect, and cumulative negative effect for each resource. No other past, present or reasonably foreseeable actions or possible connected actions are anticipated to have significant effects.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed or eligible for listing, in the National Register of Historic Places or may cause a loss or destruction of significant scientific, cultural, or historical resources.
Pursuant to Reclamation's *Programmatic Agreement Regarding the Consideration and Management of Effects on Historic Properties Arising from Construction of the Navajo-Gallup Water Supply Project, New Mexico (PA)*, the Proposed Action's Area of Potential Affect was surveyed for cultural sites. Section 3.0.2 outlines direct, indirect, and cumulative impacts to cultural resources.

Discovery Clause (26 CFR Part 800.7) Should any archaeological or historical resources be discovered during project operations, all work must cease in the immediate area of the exposed resource. The Navajo Tribal Archaeologist and the BIA Navajo Area Archeologist shall be notified to arrange an on-site inspection for the purpose of determining the significance and disposition of the remains. Such discoveries may be subject to the provision and prohibitions of the Archaeological Resource Protection Act (P.L. 93-95, Title 43 CFR, Part 7).

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
The Proposed Action direct, indirect, and cumulative impacts addressed in Section 3.8 and 3.9, which includes species protected under the Navajo Endangered Species Act.

Whether the action threatens to violate Federal, State, or local law or requirements imposed for the protection of the environment.
The actions associated with the Proposed Action will not violate Federal, Tribal, or local laws, or requirements for the protection of the environment. Applicable laws have been considered in the development of the environmental assessment.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared. In accordance with 25 Code of Federal Regulations 2.6, this decision may be appealed within 30 days of this notice being posted. An appeal to this decision should be made in writing to the Regional Director, BIA – Navajo Region, PO Box 1060, Gallup, New Mexico 87301.

Regional NEPA Coordinator

10/8/2015
Date

United States Department of the Interior

BUREAU OF RECLAMATION
Western Colorado Area Office
Durango Field Division
185 Suttle Street, Suite 2
Durango, Colorado 81303-7911

IN REPLY REFER TO:

WCD-ERheaume
ENV-3.00

NOV 2 1 2014

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. Ron Maldonado
Tribal Historic Preservation Officer
Cultural Resources Compliance Section
Navajo Nation Historic Preservation Department
P.O. Box 4950
Window Rock, AZ 86515

Subject: A Class III Cultural Resources Inventory for Navajo Gallup Water Supply Project (NGWSP) Reach 22, San Juan County, New Mexico

Dear Mr. Maldonado:

Enclosed for your review and comment is PaleoWest's Class III Inventory Report of NGWSP Reach 22 pipeline alignment areas. The purpose of this report is to locate and document archaeological resources that have the potential to be affected by NGWSP construction activities. Reach 22 is comprised of 26.2 miles of linear water pipeline segments, two water storage tanks, and two pumping plants. Reach 22 contains two sub-reaches, designated Reach 22A and Reach 22B, both of which are covered in this report. The Class III survey encompassed 1,250 acres on Bureau of Reclamation, Bureau of Land Management-Farmington Field Office (BLM-FFO), New Mexico State Trust, Navajo Nation, and private land. The survey was conducted under the authority of General Archaeological Investigation Permit NM-13-210-S, BLM Cultural Resource Use Permit 247-2920-12-D, and Navajo Nation Cultural Resources Permit B13543. Reclamation is submitting this report to your office for consultation regarding concurrence of the eligibility determinations. This report is also being consulted upon with all NGWSP signatory and consulting parties in compliance with the programmatic agreement (PA) for this project.

This survey resulted in the location of seventy four archaeological sites within the project area: thirty one previously recorded sites and forty three newly recorded sites. Sixty one isolated occurrences were identified in the project area. Isolated occurrences are not considered eligible for listing on the National Register of Historic Places (NRHP) or State Register of Cultural Properties.

The twenty nine sites located on BLM land in the project area are:

Site Number	Site Description	NRHP Eligibility Determination
LA147736	A protohistoric (A.D. 1680-1775) artifact scatter with culturally modified trees.	Eligible under criterion D

LA156093	A multi-component Anasazi (A.D. 700-900) and protohistoric Navajo (A.D. 1700-1800) artifact scatter with a feature.	Prehistoric and Protohistoric component eligible under criterion D
LA156094	A Basketmaker III (A.D. 650-750) habitation site.	Eligible under criterion D
LA171407	An Anasazi (A.D. 600-1100) artifact scatter with a feature.	Eligible under criterion D
LA171409	A protohistoric Navajo (A.D. 1680-1753) artifact scatter with a feature.	Eligible under criterion D
LA171411	An Anasazi (A.D. 700-1300) artifact scatter with a feature.	Not Eligible
LA171412	A multi-component Anasazi (A.D. 700-900) and historic Navajo (A.D. 1945-recent) artifact scatter with features.	Prehistoric and historic components eligible under criterion D
LA178228	A Basketmaker III – Pueblo I (A.D. 500-900) artifact scatter with a feature.	Eligible under criterion D
LA178229	A historic to modern Navajo (A.D. 1930-1980) homesite.	Eligible under criterion D
LA 178230	A protohistoric Navajo (A.D. 1350-1750) artifact scatter with a feature.	Eligible under criterion D
LA178231	A protohistoric Navajo (A.D. 1500-1620) artifact scatter with features.	Eligible under criterion D
LA178232	A protohistoric Navajo (A.D. 1500-1630) artifact scatter.	Not Eligible
LA178233	A small cave with evidence of cultural use; cultural and temporal affiliation unknown.	Undetermined/Needs data
LA45756	A Basketmaker III – Pueblo I (A.D. 500-900) artifact scatter with a feature.	Eligible under criterion D
LA45759	An Anasazi (A.D. 550-900) artifact scatter with features.	Eligible under criterion D
LA70336	A multi-component Pueblo I (A.D. 500-900) habitation site and a Historic (A.D. 1955-1975) artifact scatter.	Prehistoric and historic components eligible under criterion D
LA79042	A multi-component Anasazi (A.D. 700-1050) and protohistoric Navajo (A.D. 1500-1620) artifact scatter with features.	Prehistoric and protohistoric components eligible under criterion D
LA128600	A multi-component unknown prehistoric (8000 B.C. – A.D. 1540) and historic Navajo (A.D. 1880-1960) artifact scatter with features.	Prehistoric and historic components eligible under criterion D
LA156932	A protohistoric Navajo (A.D. 1500-1680) artifact scatter with features.	Eligible under criterion D
LA171416	A large historic Navajo (A.D. 1915-1960s) camp with a small scatter of Anasazi (A.D. 500-1300) ceramics.	Prehistoric and historic components eligible under criterion D
LA179185	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter with a feature.	Eligible under criterion D
LA179186	A protohistoric Navajo (A.D. 1350-1750) artifact scatter with features.	Eligible under criterion D

LA179187	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter with features.	Eligible under criterion D
LA179191	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter.	Undetermined/Needs data
LA179192	A multi-component Anasazi (A.D. 700-900) and Historic (A.D. 1945-Present) artifact scatter with features.	Prehistoric and historic components eligible under criterion D
LA179193	An unknown prehistoric (5000 B.C. – A.D. 1100) artifact scatter.	Not Eligible
LA179194	A multi-component unknown prehistoric (1500 B.C. – A.D. 1100) and Historic artifact scatter.	Historic component not eligible; Prehistoric component undetermined/needs data
LA179196	A historic Navajo (A.D. 1950-1965) camp.	Eligible under criterion D
LA179197	A historic to modern (A.D. 1960-1980) trash dump.	Not Eligible

The thirty six sites located on Navajo Nation land in the project area are:

Site Number	**Site Description**	**NRHP Eligibility Determination**
NM-G-30-38	A multi-component Anasazi (A.D. 750-900) and Historic (A.D. 1930-1960s) artifact scatter with features.	Prehistoric and historic components eligible under criterion D
NM-G-30-39	A multi-component Archaic (5000 B.C. – A.D. 500) and historic Navajo (A.D. 1900-1960) artifact scatter with features.	Prehistoric and historic components eligible under criterion D
NM-G-30-42	A multi-component Anasazi (A.D. 200-550) and modern Navajo (A.D. 1980-2010) artifact scatter with features.	Prehistoric component eligible under criterion D; Historic component not eligible
NM-G-30-44	An Anasazi (A.D. 700-1050) artifact scatter with a feature.	Eligible under criterion D
NM-G-30-45	A historic Navajo (A.D. 1962-1965) trash scatter	Not eligible
NM-G-30-46	A protohistoric Navajo (A.D. 1350-1750) artifact scatter with a feature.	Eligible under criterion D
NM-G-30-47	An Anasazi (A.D. 700-900) artifact scatter.	Undetermined/Needs data
NM-G-30-48	A protohistoric Navajo (A.D. 1350-1750) artifact scatter.	Not Eligible
NM-G-30-49	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter.	Not Eligible
NM-G-30-51	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter.	Undetermined/Needs data
NM-G-30-52	A historic Navajo (A.D. 1965-1985) trash scatter.	Not Eligible
NM-G-30-53	A historic to modern Navajo (A.D. 1960s-2000s) artifact scatter.	Not Eligible
NM-G-30-54	A multi-component Archaic (1800 B.C. – A.D. 500), Anasazi/Navajo (A.D. 500-1765), and historic Navajo (A.D. 1945-1990) artifact scatter with features.	Prehistoric/protohistoric and historic components eligible under criterion D

NM-G-30-55	An Anasazi (A.D. 900-1050) artifact scatter with features.	Eligible under criterion D
NM-G-30-56	A multi-component unknown prehistoric (5500 B.C. – A.D. 1753) and historic Navajo (A.D. 1945-1965) artifact scatter with features)	Prehistoric and historic components eligible under criterion D
NM-G-30-57	A historic Navajo (A.D. 1920s-1960s) artifact scatter with features.	Eligible under criterion D
NM-G-30-58	An Anasazi (A.D. 500-900) artifact scatter with features.	Eligible under criterion D
NM-G-30-59	A historic Navajo (1960s-1970s) homesite.	Eligible under criterion D
NM-G-30-60	A protohistoric Navajo (A.D. 1620-1750) artifact scatter.	Undetermined/Needs data
NM-G-30-61	A multi-component protohistoric Navajo (A.D. 1692-1765) artifact scatter and historic Navajo (A.D. 1940-1965) homesite.	Protohistoric and historic components eligible under criterion D
NM-G-30-62	A multi-component protohistoric Navajo (A.D. 1300-1750) and historic Navajo (A.D. 1960s-2000s) artifact scatter with a feature.	Undetermined/Needs data
NM-G-30-63	A multi-component Anasazi (A.D. 700-1100) and historic Navajo (A.D. 1912-Present) artifact scatter.	Prehistoric and historic components eligible under criterion D
NM-G-30-65	A protohistoric Navajo (A.D. 1692-1868) artifact scatter with features.	Eligible under criterion D
NM-G-34-47	A historic Navajo (A.D. 1900-1970) habitation site.	Eligible under criterion D
NM-G-34-48	A multi-component Archaic (1800 B.C. – A.D. 500) and protohistoric Navajo (A.D. 1500-1863) artifact scatter with features.	Undetermined/Needs data
NM-G-34-49	A multi-component Archaic (4500-1500 B.C.) artifact scatter and historic Navajo (A.D. 1955-1985) habitation site.	Prehistoric and historic components eligible under criterion D
NM-G-34-50	A historic Navajo (A.D. 1930-1960) homesite.	Eligible under criterion D
NM-G-34-51	A historic (A.D. 1930-1935; A.D. 1950-1960) campsite.	Not Eligible
NM-G-34-52	A historic Navajo (A.D. 1945-Present) campsite.	Not Eligible
NM-G-34-53	A historic Navajo (A.D. 1945-1970) feature of unknown use.	Not Eligible
NM-G-34-54	A multi-component Archaic (3200-1800 B.C.) artifact scatter and historic Navajo (A.D. 1880-1920) habitation site.	Prehistoric and historic components eligible under criterion D
NM-G-34-55	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter.	Undetermined/Needs data
NM-G-34-56	A multi-component unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter and historic Navajo (A.D. 1950-1975) habitation site.	Prehistoric and historic components eligible under criterion D
NM-G-34-57	An Anasazi (A.D. 1100-1300) artifact scatter.	Undetermined/Needs data
NM-G-34-58	A multi-component Anasazi (A.D. 200-550) and modern Navajo (A.D. 1986-2000s) artifact scatter	Prehistoric component eligible under criterion D; Historic

	with features.	component not eligible
NM-G-30-66	A historic to modern Navajo (A.D. 1950s-2000s) homesite. It is currently occupied and is also recorded as In-Use Site R22B-04.	Not Eligible

The two sites located on BLM / Navajo Nation land in the project area are:

Site Number	Site Description	NRHP Eligibility Determination
NM-G-30-41 / LA179190	An Archaic (5000 B.C. – A.D. 500) artifact scatter with a feature.	Undetermined/Needs data
NM-G-30-43 / LA179195	An Anasazi (A.D. 900-1050) artifact scatter with a feature.	Undetermined/Needs data
NM-G-30-50 / LA171422	An Archaic (5000 B.C. – A.D. 500) artifact scatter with a feature.	Eligible under criterion D
LA36578 / NM-G-30-19	A multi-component Archaic (2000 B.C. – A.D. 500) and Anasazi/Protohistoric Navajo (A.D. 700-1800) artifact scatter with a feature.	Eligible under criterion D
LA45824 / NM-G-30-64	A multi-component historic Navajo (A.D. 1920s-1930s) homesite with a sparse Anasazi (A.D. 700-1000) artifact scatter.	Prehistoric and historic components eligible under criterion D

The three sites located on New Mexico State Trust Land in the project area are:

Site Number	Site Description	NRHP Eligibility Determination
LA179188	An unknown prehistoric (8000 B.C. – A.D. 1540) artifact scatter.	Undetermined/Needs data
LA179189	A multi-component Archaic (2000 B.C. – A.D. 200) and historic Navajo (A.D. 1900-1950) artifact scatter with a feature.	Undetermined/Needs data
LA45828	A Late Archaic (1500 B.C. – A.D. 500) campsite and lithic scatter.	Eligible under criterion D

The one site located on Private / Navajo Nation land in the project area is:

Site Number	Site Description	NRHP Eligibility Determination
LA164283 / NM-G-34-46	An unknown prehistoric (8000 B.C. – A.D. 1550) artifact scatter.	Undetermined/Needs data

In addition, six sites identified in the Class I literature search were not relocated during the Reach 22 survey. They are:

Site Number	Site Description	Status
LA38946	A pre-Gobernador Phase Navajo habitation site.	Excavated and then destroyed by CO2 pipeline
LA38947	Unknown	Not located/Likely misplotted

LA47140	A fire cracked rock concentration and lithic scatter	Excavated and then destroyed by CO2 pipeline
LA66266	Unknown	Not located/Likely misplotted
LA68609	Unknown	Located outside of Reach 22 APE
LA171427	Unknown	Located outside of Reach 22 APE

After reviewing the report and PaleoWest's recommendations, Reclamation has determined that sites LA147736, LA156093, LA156094, LA171407, LA171409, LA171412, LA178228, LA178229, LA178230, LA178231, LA45756, LA45759, LA70336, LA79042, LA128660, LA156932, LA171416, LA179185, LA179186, LA179187, LA179192, LA179196, NM-G-30-38, NM-G-30-39, NM-G-30-42, NM-G-30-44, NM-G-30-46, NM-G-30-54, NM-G-30-55, NM-G-30-56, NM-G-30-57, NM-G-30-58, NM-G-30-59, NM-G-30-61, NM-G-30-63, NM-G-30-65, NM-G-34-47, NM-G-34-49, NM-G-34-50, NM-G-34-54, NM-G-34-56, NM-G-34-58, NM-G-30-50/LA171422, NM-G-30-19/LA36578, NM-G-30-64/LA45824, and LA45828 are eligible to the NRHP.

Reclamation has determined that sites LA171411, LA178232, LA179193, LA179197, NM-G-30-45, NM-G-30-48, NM-G-30-49, NM-G-30-52, NM-G-30-53, NM-G-30-66, NM-G-34-51, NM-G-34-52, and NM-G-34-53 are not eligible to the NRHP.

Reclamation has determined that sites LA178233, LA179191, LA179194, NM-G-30-47, NM-G-30-51, NM-G-30-60, NM-G-30-62, NM-G-34-48, NM-G-34-55, NM-G-34-57, NM-G-30-41/LA179190, NM-G-30-43/LA179195, LA179188, LA179189, and NM-G-34-46/LA164283 have undetermined eligibility to the NRHP.

In addition to the above archaeological sites, the Reach 22 survey identified eight in-use sites located on Navajo Nation and BLM land. The in-use sites are:

Site Number	Site Description	Land Status	NRHP Eligibility Determination
IUS 22A-1	Blanco Canyon Word of Faith Church	BLM	Not Eligible
IUS 22B-1	Residential and corral complex	Navajo Nation	Not Eligible
IUS 22B-2	Stock tank	Navajo Nation	Not Eligible
IUS 22B-3	Residential complex	Navajo Nation	Not Eligible
IUS 22B-4/ NM-G-30-66/ LA45817	Modular home and outbuildings.	Navajo Nation	Undetermined/Needs data
IUS 22B-5	Corral complex	Navajo Nation	Not Eligible
IUS 22B-6	Stock tank	Navajo Nation	Not Eligible
IUS 22B-7	Residential complex and wire corral	Navajo Nation	Not Eligible

PaleoWest conducted ethnographic research for the Reach 22 survey, which included interviewing the current owners of the in-use sites and making NRHP eligibility recommendations. Reclamation agrees with PaleoWest's recommendations, and has determined that in-use sites IUS 22A-1, IUS 22B-2, IUS 22B-2, IUS 22B-3, IUS 22B-5, IUS 22B-6, and IUS 22B-7 are not eligible to the NRHP. IUS 22B-4 was previously recorded as historic site NM-G-30-66/LA45817 and it has since been reoccupied. Reclamation has determined that site IUS 22B-4/ NM-G-30-66/LA45817 has undetermined eligibility to the NRHP.

The ethnographic research conducted by PaleoWest also identified three Traditional Cultural Properties (TCPs) and two places of Jishchaa'. The TCPs/Jishchaa' sites are:

Site Number	Site Description	Land Status	NRHP Eligibility Determination
TCP R22A-1	Salt Point Sacred Zone	BLM	Eligible under criterion A, B, and D
TCP R22B-1	Huerfano Mesa Sacred Zone	BLM / Navajo Nation	Eligible under criterion A, B, and D
TCP R22B-2	Ceremonial Site	Navajo Nation	Eligible under criterion A and B
J22B-01	Place where a death occurred; no burial present	Navajo Nation	Not Eligible
J22B-02	Place where a death occurred; no burial present	Navajo Nation	Not Eligible

Reclamation agrees with PaleoWest's recommendations, and has determined that TCP R22A-1, TCP R22B-1, and TCP R22B-2 are eligible to the NRHP. Jishchaa' sites J22B-01 and J22B-02 have been determined not eligible to the NRHP, but they may be protectable under the Navajo Nation Jishchaa' Policy.

The Armijo Route of the Old Spanish National Historical Trail is historically documented within the northern portion of the Reach 22 project area. The Armijo Route was established in 1829 as a trading route between Abiquiu, New Mexico and the San Gabriel Mission in California. PaleoWest made attempts to locate and evaluate physical evidence of the Armijo Route in the vicinity of Reach 22. Their examination of the Armijo Route, through archival resources and class III survey, is presented as an appendix to the Reach 22 report. Although PaleoWest failed to locate physical evidence of the Armijo Route within the Reach 22 pipeline corridor, their research presents the history of travel through Largo Canyon and how the Armijo Route fits within that context. Reclamation cannot make a NRHP eligibility determination for the Armijo Route as no identifiable segments are located in the Reach 22 APE. However, we recognize that the trail setting is just as important as physical manifestations of the trail. Our next phase of consultation will consider direct and indirect effects of the project on the integrity of the trail setting.

Reach 22 construction will have adverse effects on NRHP eligible resources located in the project area. Reclamation proposes the development of an archaeological data recovery sampling strategy to mitigate the adverse effects of Reach 22. The sampling strategy will be developed in conjunction with the NGWSP PA Workgroup, which will take place in early 2015. The eligibility determinations presented in this report are the first step in our Reach 22 consultation. Once we have concurrence

from all parties on the eligibility of Reach 22 cultural resources, we can move forward in assessing project effects and developing an appropriate sampling strategy.

We are requesting your acceptance of the Reach 22 class III survey and concurrence on our NRHP eligibility determinations for sites NM-G-30-38, NM-G-30-39, NM-G-30-42, NM-G-30-44, NM-G-30-45, NM-G-30-46, NM-G-30-47, NM-G-30-48, NM-G-30-49, NM-G-30-51, NM-G-30-52, NM-G-30-53, NM-G-30-54, NM-G-30-55, NM-G-30-56, NM-G-30-57, NM-G-30-58, NM-G-30-59, NM-G-30-60, NM-G-30-61, NM-G-30-62, NM-G-30-63, NM-G-30-65, NM-G-34-47, NM-G-34-48, NM-G-34-49, NM-G-34-50, NM-G-34-51, NM-G-34-52, NM-G-34-53, NM-G-34-54, NM-G-34-55, NM-G-34-56, NM-G-34-57, NM-G-34-58, NM-G-30-66, NM-G-30-41/LA179190, NM-G-30-43/LA179195, NM-G-30-50/LA171422, NM-G-30-19/LA36578, NM-G-30-64/LA45824, NM-G-34-46/LA164283, IUS 22B-1, IUS 22B-2, IUS 22B-3, IUS 22B-4/NM-G-30-66/LA45817, IUS 22B-5, IUS 22B-6, IUS 22B-7, TCP R22B-1, TCP R22B-2, J22B-01 and J22B-02. If you concur, please sign in the space provided below and return the letter to me. I would appreciate receiving your concurrence and/or comments by December 29, 2014.

If you have any further questions or concerns, please feel free to contact our archaeologist Ernie Rheaume at 970-385-6521 or by email at erheaume@usbr.gov, or our Environmental Group Chief Rob Waldman at 970-385-6567 or by email at rwaldman@usbr.gov.

Sincerely,

E. Ted Warner II

For Ed Warner
Area Manager

Enclosure

I Concur

4/17/15

Mr. ~~Ron Maldonado~~
Navajo Nation Tribal Historic Preservation Officer

United States Department of the Interior

Bureau of Indian Affairs
Navajo Region
P. O. Box 1060
Gallup, New Mexico 87305

TAKE PRIDE IN AMERICA

MC 620: Branch of Environmental Quality Act Compliance and Review

OCT 2 9 2015

MEMORANDUM

To: Supervisory Civil Engineer, Engineering & Technical Support Division

Through: Deputy Director, Trust Services

From: Supervisory Environmental Protection Specialist, Branch of Environmental Quality Act Compliance & Review

Subject: National Environmental Policy Act and National Historic Preservation Act Compliance Documents - Navajo Gallup Water Supply Project

This memo provides guidance to the Division, as the Regional lead for the Navajo-Gallup Water Supply Project, concerning the various compliance documents for the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA).

For NEPA, the following documents would be considered acceptable:

- Sufficiency Analysis (see attachment);
- "Finding of No New Significant Impact" per 43 CFR § 46.140 (e); or
- "Finding of No Significant Impact" per 40 CRF §1508.13.

As for compliance with the NHPA, the NGWSP does have an executed Programmatic Agreement (PA) concerning historic properties between federal, tribal, and state entities regarding effects on historic and cultural properties. The PA allows for the construction activities to proceed efficiently. In addition, there may be Reach-by-Reach compliance documents considered acceptable provided that the compliance document is signed by the Navajo Tribal Historic Preservation Officer:

- Cultural Resources Compliance Form (CRCF);
- A Bureau of Reclamation letter; or
- A letter from NNHPD.

Should you have questions regarding the NHPA, please contact Mr. Terry McClung, Regional Archaeologist at ext. 8349, or Ms. Harrilene Yazzie, Supervisory Environmental Protection Specialist, at ext. 8287, regarding questions related to the NEPA.

United States Department of the Interior

BUREAU OF RECLAMATION
Western Colorado Area Office
Durango Field Division
185 Suttle Street, Suite 2
Durango, Colorado 81303-7911

IN REPLY REFER TO

LETTER OF AGREEMENT
Between
THE U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
And
BUREAU OF INDIAN AFFAIRS

The U.S. Department of the Interior, Bureau of Reclamation and Bureau of Indian Affairs (BIA) are entering into this Agreement to provide an established process for National Environmental Policy Act (NEPA) compliance in support of the Navajo Gallup Water Supply Project (NGWSP). The NGWSP is a municipal and industrial water pipeline with associated infrastructure being built to provide water to the Navajo Nation, Jicarilla Apache Nation and the City of Gallup, NM.

The NGWSP is described and analyzed in the NGWSP Project Planning Report and Final Environmental Impact Statement (PR/FEIS) dated July 2009, and the subsequent Record of Decision dated October 1, 2009.

Reclamation and BIA officials in the project area offices have determined that National Environmental Policy Act (NEPA) compliance for updated project planning will be determined for independent sections of the pipeline as more refined information of the pipeline route and associated environmental studies are available. This information will be organized into the NGWSP NEPA Sufficiency Review Process (NEPA SRP) Environmental Analysis Form as found in Attachment A to this document. Development of this Form was the result of a collaborative effort between BIA and Reclamation as described in Attachment B (Development of a NEPA Sufficiency Review Process for Long-Term Implementation of the NGWSP.

The outcome of the NEPA SRP, collaboratively completed and signed by both agencies, will determine whether the existing PR/FEIS sufficiently addresses environmental impacts for a particular section of pipeline; or, if it doesn't, that further NEPA action is warranted (e.g., a tiered Environmental Assessment). The results of the NEPA SRP will be signed by appropriate representatives of both agencies with responsibility for determining the need for, and type of, further NEPA action.

If a additional NEPA action is required, Reclamation and BIA will provide joint oversight of the process, with Reclamation designated as the Lead Agency, and BIA designated as a Cooperating Agency according to Department of Interior NEPA guidelines at 43 CRF Part 46.

This Letter of Agreement becomes effective upon signature by authorized officials of Reclamation and BIA.

5-23-13
Ed Warner (Date)
Manager
Western Colorado Area Office
Bureau of Reclamation

6/10/13
Sharon A. Pinto (Date)
Director
Navajo Regional Office
Bureau of Indian Affairs

NNDFW Review No. 13EM-02

BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH AND WILDLIFE
P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish and Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: Navajo Gallup Water Supply Project - Reach 22

DESCRIPTION: USBR proposes the construction of a 24.5-mile (39.4 km) waterline extending from Cutter Reservoir through Blanco Canyon to Huerfano, NM. The waterline would require a 60-ft. permanent ROW and an additional 40-ft TCE with ROW totaling 100 ft. The permanent ROW (175 acres) and TCE would total approximately 295 acres. The project would include a water treatment plant, two pumping plants, a regulation tank, a water storage tank. Total permanent easement for the associated facilities would be approximately 24 acres. Two existing dirt roads would be improved to provide access to the project area. The access roads are approximately 0.4 mi. and 0.3 mi.

LOCATION: Huerfano Chapter, San Juan County, New Mexico

REPRESENTATIVE: Matt Brooks, Ecosystem Management, Inc. for USBR

ACTION AGENCY: U.S. Department of the Interior Bureau of Reclamation (USBR) - Upper Colorado Region

B.R. REPORT TITLE / DATE / PREPARER: Natural Resources Survey Report for Proposed Navajo-Gallup Water Supply Reach 22/OCT 2014/Ecosystem Management, Inc.

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3.

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED: NA

FEDERALLY-LISTED SPECIES AFFECTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES: [1] Wildlife and environmental protection measures in the EIS (BOR 2009) would be followed for target species with potential habitat in and near the project area; [2] Avoid leaving the trench open during non-working hours and overnight to prevent injury to large ungulates and other mammals. The trench will be sloped to allow smaller species of wildlife to exit the trench safely.

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: Pamela A. Kyselka/18 JAN 2015

COPIES TO: (add categories as necessary)

☐ _____ ☐ _____

2 NTC § 164 Recommendation: Signature [signature] Date 1/20/15

☒ Approval
☐ Conditional Approval (with memo)
☐ Disapproval (with memo) Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife
☐ Categorical Exclusion (with request letter)
☐ None (with memo)

*I understand and accept the conditions of compliance, and acknowledge that lack of signature may be grounds for the Department not recommending the above described project for approval to the Tribal Decision-maker.

Representative's signature Date

THE NAVAJO NATION

BEN SHELLY PRESIDENT
REX LEE JIM VICE PRESIDENT

MEMORANDUM

TO : Jeffrey Cole, Wildlife Manager
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

FROM :
For Gloria M. Tom, Department Manager II
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

DATE : January 20, 2015

SUBJECT : **DELEGATION OF AUTHORITY**

I will be on travel and I am hereby delegating you to act in the capacity of the Director, Department of Fish and Wildlife, effective 8:00 pam on Tuesday, January 20, 2015. This delegation shall end at 5:00 p.m. on Tuesday, January 20, 2015.

Your authority will cover the review and signing off of all routine documents pertaining to the Department of Fish and Wildlife, except for issues that you feel should have the attention of the Director.

ACKNOWLEDGEMENT:

Jeffrey Cole, Wildlife Manager
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

xc: Sharilene Jeff, Executive Director, DNR

EXECUTIVE ORDER NO. 03-2012

NAVAJO-GALLUP WATER SUPPLY PROJECT IS A NAVAJO NATION PRIORITY PROJECT; THE SUCCESS OF THIS HIGH-PROFILE PROJECT WILL SHOWCASE THE NAVAJO NATION AND ITS DIVISIONS AND PROGRAMS; AND WILL PROVIDE THE OPPORTUNITY FOR ACCESSIBLE WATER TO THE EASTERN NAVAJO NATION

January 3, 2012

WHEREAS:

The Navajo Gallup Water Supply Project (Project) is one of only fourteen projects selected nationwide to be a priority of President Obama and his administration to create jobs. Bureau of Reclamation is the lead federal agency tasked to construct the Project with the assistance of the Navajo Nation, Jicarilla Apache Nation and City of Gallup. This project is an enormous challenge for the Navajo Nation and its programs. However, it is also an excellent opportunity for the Navajo Nation to showcase its programs and their coordination in order to successfully complete this high profile project to President Obama and the rest of the United States.

The Project will provide a reliable long-term water supply to much of the Navajo Nation within New Mexico. The Project has an estimated construction cost of almost $1 billion. In addition to the proposed United States' Presidential budget, the Bureau of Reclamation will receive up to $60 million in mandatory appropriations during FY2012, FY2013 and FY2014 for a total of $180 million that may be used for Project construction if all requirements to construction are met.

This Project continues to be a high priority for my administration as well. I would like to express my continued support for its expedited implementation and urge cooperation among all Navajo Nation programs to make this Project a reality. This Project is an example of the success brought about by years of hard work by staff and representatives of the Navajo Nation, State of New Mexico and United States.

Over the next several years the Project will be constructed in Reaches (phases). Construction may occur concurrently on several Reaches over the next several years. It is important that the Navajo Nation programs align themselves properly to coordinate information and permitting of the various Reaches of the Project. Navajo Nation Water Management Branch (NNWMB) of the Navajo Nation Department of Water Resources serves as the coordinator of

information within the Navajo Nation executive branch and the reviewer of public information, including all press releases, for the Navajo-Gallup Water Supply Project on behalf of the entire Navajo Nation. NNWMB may be reached at (928) 729-4004.

IT IS ORDERED THAT:

The Navajo Gallup Water Supply Project is a priority project of the Navajo Nation.

The programs within the Executive Branch are hereby directed to promptly process all necessary permits, contracts, any related matters to this Project for its successful coordination, implementation and construction. The programs and personnel are hereby directed to review and streamline their SAS review process.

THEREFORE BE IT RESOLVED, THAT:

I, Ben Shelly, President f the Navajo Nation, by the authority vested in the Office of the President pursuant to 2 N.N.C. §§ 1005 (A) and (C)(14), hereby direct this Executive Order shall become effective immediately and remain in effect until rescinded, to be binding upon Navajo Nation Executive Branch Directors, employees, and agents, and to be subjected to enforcement under the Navajo Nation Personnel Polices Manual.

Executed this 31st day of January 2012.

Ben Shelly, President
THE NAVAJO NATION

ATTEST:

Harrison Tsosie, Attorney General
Navajo Nation Department of Justice

HUERFANO CHAPTER # 91

P.O. BOX 968 * BLOOMFIELD, NEW MEXICO 87413 * (505) 960-1400 * FAX (505) 960-3044

RESOLUTION OF HUERFANO CHAPTER
RESOLUTION # HUE-149-11

SUPPORTING THE DESIGN AND CONSTRUCTION OF THE NAVAJO GALLUP WATER SUPPLY PROJECT

WHEREAS:

1. Huerfano Chapter is a certified Chapter Government pursuant to the Navajo Nation, is delegated governmental authority with respect to local matters consisted with Navajo Law, including custom, traditional and fiscal matters; and

2. Huerfano Chapter is empowered by the Navajo Nation Council to review all matters affecting the community and to make favorable decision in the best interest of the community membership; and

3. Public Law 111-11, Section 10601, authorized the Secretary of the Interior, acting through the Commissioner of Reclamation to design and construct the Navajo Gallup Water Supple Project; and

4. The Navajo Gallup Water Supply Project will provide reliable and sustainable municipal, industrial, and domestic water supplies from the San Juan River to 43 chapters of the Navajo Nation, the city of Gallup and the southwest portion of the Jicarilla Apache Reservation; and

5. The Bureau of Reclamation is currently designing and preparing to begin construction of the Navajo Gallup Water Supply Project; and

6. One of the Project phases includes conveying project water from Cutter Reservoir to chapters along the eastern edge of the Navajo Nation which are in need of water; and

7. **To include the eight (08) sub-communities of Adobe, Bisti, Blanco, Carson, Gallegos, Jacquez, Huerfano, and Otis within the ninety (90) square miles boundary of Huerfano Chapter.**

BEN WOODY JR.
CHAPTER PRESIDENT

PAULINE McCAULEY
CHAPTER VICE PRESIDENT

IRENE L. HARVEY
SECRETARY & TREASURER

DANNY SIMPSON
COUNCIL DELEGATE

LARRY J. BONNEY
LAND BOARD

VERONICA TSO
LAND BOARD

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Huerfano Chapter fully supports the design, construction and implementation of the Navajo Gallup Water Supply Project; and the project is in the best interest of the Chapter and the Navajo Nation; and
2. The chapter recognizes that the Project Participants, including the Navajo Nation, shall provide all land or interest in land, as appropriate, at no cost P.L. 111-11 Section 10601 (C) (2); and
3. The chapter will work cooperatively with the Navajo Nation, the Bureau of Reclamation and its agents to obtain any an all required approvals.

C-E-R-T-I-F-I-C-A-T-I-O-N

We, the undersigned hereby certify that the foregoing resolution was duly presented and considered at a duly called Chapter meeting, at which a quorum was present and that the same was approved by a vote of **23** in favor, **00** oppose, and **02** abstentions on this **03rd** day of **April 2011.**

Motion: **Larry J. Bonney**
Second: **Lois Werito**

Ben Woody Jr., Chapter President

Pauline McCauley, Vice-President

Irene L. Harvey, Secretary/Treasurer

Danny Simpson, Council Delegate

THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT
JONATHAN NEZ VICE PRESIDENT

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EXECUTIVE DIRECTOR/ADMINISTRATION
OFFICE OF ENVIRONMENTAL REVIEW
PO BOX 339 WINDOW ROCK ARIZONA 86515 Office: 928/871-7188 Fax: 928/871-7996
Website: www.navajonationepa.org

M E M O R A N D U M

TO: Howard Draper, Program & Project Specialist
Project Review Office
Navajo Land Department
Division of Natural Resources

FROM: Rita Whitehorse-Larsen, Senior Environmental Specialist
Office of Executive Director/Administration
Office of Environmental Review
NNEPA

DATE: June 13, 2016

SUBJECT: **164 EOR 005371 Bureau of Reclamation Right-of-way (ROW) and Temporary Construction Easement (TCE) Reach 21 NGWSP**

The Navajo Nation Environmental Protection Agency (NNEPA) reviewed[1, 2] and recommends ***conditional approval*** for the proposed ROW and TCE to construct, operate and maintain the Reach 21 Cutter Lateral Water Supply Projects located on, over and across Navajo Nation Trust Lands in the Huerfano vicinity, San Juan County, New Mexico. The proposed ROW is 6,839 feet in length and 60 feet wide consisting of approximately 9.42 acres, more or less and TCE consists of 4.09 acres, more or less, of Navajo Nation Trust Lands in San Juan County, New Mexico.

If the following recommendations from NNEPA are adhered to, the proposed project will not have a significant effect (direct, indirect, or cumulative) on the quality of the human environment considering the context and intensity of impacts.

1. ***Navajo Nation Clean Water Act:***
   a. §Section 401 is required if any drainage with discernable ordinary high water mark will be crossed and/or disturbed.

1 USBOR. Record of Decision for the Navajo Gallup Water Supply Project Planning Report and Final Environmental Impact Statement. September 2009.
2 USBOR. Environmental Assessment Reaches 22 and 21 of the Navajo Gallup Water Supply Project. January 2015.

b. §Section 402 – Land surface disturbance in excess of 1.0 acre will require compliance with the federal General Construction Permit requirements for storm water discharges. Best Management Practices is highly recommended to be implemented to control sediment runoff.

2. ***Navajo Nation Safe Drinking Water Act:***
   a. Ensure there are no existing drinking waterlines and/or domestic waste waterlines located within the premises of the proposed site to avoid significant impacts to the communities' safe drinking water resources before trenching and/or digging.
3. ***Navajo Nation Air Pollution Prevention and Control Act:***
   a. Suppress dust to lessen air impacts to community members and public located in or near the proposed action.
4. ***Navajo Nation Pesticide Act:***
   a. The project proponent is required to monitor and prevent invasive and noxious weeds either by manual or chemical control.
   b. Before applying any chemicals, contact the NNEPA Pesticide Program at 928/871-7815 to ensure the product is in compliance and appropriately applied by a certified and licensed applicator.
   c. Pesticide staff will also may need to be onsite to monitor during pesticide/herbicide application.
5. ***Navajo Nation Solid Waste Act:***
   a. Solid waste generated from the construction and operation activities will be collected and transported by project proponent to a designated trash bins to minimize significant impacts to human and wildlife resources.
   b. If a sub-contractor will be hired to transport waste, ensure the contractors are certified and licensed with the Navajo Nation Business Regulatory Office.
   c. The contractor must submit a copy of the landfill receipt/ticket to guarantee the construction waste has been properly disposed.
   d. Do not allow public to take construction and operation waste. Cumulatively NNEPA gets complaints and reports on illegal trash dumpings on rural areas and in the waters of the US and Navajo Nation.
   e. All illegal waste currently on the proposed site is the responsibility of the lease/permit applicant.
6. ***Navajo Nation Comprehensive Environmental Response, Compensation and Liability Act (NNCERCLA)***
   a. Approved by the Navajo Nation Council, CF-07-08, February 26, 2008, the NN CERCLA includes petroleum (including crude oil or any fraction thereof, natural gas, natural gas liquids, liquefied natural gas or synthetic gas usable for fuel (or mixtures of natural gas and synthetic gas)) unlike the US CERCLA or the Superfund Law and mandates petroleum, operator and guarantor to report petroleum release $\geq$ 25 gallons at the site and/or during transport immediately to the Navajo Nation Department of Emergency Management within the Navajo Nation Division of Public Safety.
7. ***Navajo Nation Storage Tank Act:***
   a. Amended and approved by the Navajo Nation Council, CJA-09-12, February 2012, the aboveground tanks are included to be regulated.
   b. No aboveground and/or underground storage tanks are expected to be installed at the proposed site.

If there are any questions, you may contact me at 928/871-7188. Thank you.

Draft 10-9-2012

RIGHT-OF-WAY CHECK LIST

Doc ~~SAS~~ NO. 005371

1. Terms & Conditions: (a) General
   (b) BIA Roads
   (c) IHS/PHS

Check to see if ROW terms and conditions form contains standard provisions.

EXAMPLES:
(a) compliance with Navajo and federal laws
(b) no waiver of sovereign immunity
(c) consent to Navajo Nation jurisdiction

Note! NTUA rights-of-way do not generally require compensation to the Navajo Nation unless it serves a commercial purpose. If the terms and conditions provide for compensation make sure that the grantee provides the BIA with a copy (proof) of any payment to the Navajo Nation within at least five days of payment.

2. Term -- twenty (20) years or less.

EXCEPTIONS:

(a) IHS P.L. 86-121 projects can be perpetual
(b) BIA roads 75 years
(c) N.M./AZ State roads can be perpetual ie. as long as it is used for state highway
(d) If an applicant is seeking longer than a twenty (20) year term, the applicant must explain why in writing in order that the Navajo Nation can make an informed decision whether to recommend it, unless a longer term is preauthorized.

3. Variation on standard terms and conditions.

(a) other roads
(b) electric transmission
(c) gas pipeline
(d) other — Water Supply Project

4. Resources and Development Committee Resolution.

Resources and Development Committee has final approval authority -- Naa bik iyati

Resolution not necessary where right-of-way is sought by another governmental entity.

EXCEPTIONS:

(a) IHS P.L. 86-121 rights-of way do not need a Resources and Development Committee Resolution - see Resolution RCF-41-95. NLD can give consent if terms similar to approved form

(b) NTUA rights-of-way do not need Resources and Development Committee approval The NLD has been delegated the authority to consent on behalf of the Navajo Nation provided that the right-of-way terms and conditions are consistent with the approved **standard form** and the application is supported by:

1. Letter of application
2. Legal description
3. Right-of-way location maps
4. Biological Resources Compliance Form
5. Cultural Resources Compliance form
6. Field Clearance Documents
7. Chapter Resolution
8. Environmental Assessment (EA) and/or Addendum
9. Other pertinent documents if required

See RCD-104-10

☐ 5. Check exhibits for land user/permittee consent X the Navajo Nation is the only affected land user and has consented through District Land Board member. See Ex "C".

(a) trust land needs grazing permittees' consents
(b) fee land does not
(c) If some permittees consent and others do not then this must be explained in the resolution/legislation
(d) check to see if surface damages, if sought, has been placed in an escrow account
(e) grazing official sign off if trust land
(f) NAPI consent if the proposed right-of-way is within NAPI lands.

☐ 6. Check to see if all required Divisions, Departments, etc., have reviewed and surnamed the SAS package.

YES (a) Project Review Office/Navajo Land Department
(b) Fish & Wildlife Department
(c) Historic Preservation Department
(d) Navajo Environmental Protection Agency
(e) Minerals

YES — (F) Division of Natural Resources

7. If additional terms and conditions are suggested by NNEPA, Fish & Wildlife Department or others, try to determine if they are necessary. The concerns may already be covered by the general terms and conditions, BIA required stipulations or 25 C.F.R. § 169.

— None

8. Check the content of proposed resolution or legislation to ensure it expressly incorporates in a Resolved Clause the right-of-way terms and conditions.

— Yes, for both PON & TCE

9. Check to see if there is a legal description and whether it appears to be accurate.

10. Check to see if all documents are attached:

- [x] (a) Environmental Assessment (EA) unless categorical exclusion applies (IHS projects) & Finding of No Significant Impact (FONSI)
- [ ] (b) Archaeological Clearance
- [x] (c) Cultural Resources Compliance Form / Inventory
- [ ] (d) Threatened and Endangered Species/Biological Survey
- [ ] (e) Letter from the Fish & Wildlife Department or an EA indicating that a biological survey is not necessary i.e. (the project will not have a significant impact).
- [x] (F) Final Environmental Impact Statement
- [ ] (G) Biological Resources Compliance Form

6-20-16
Date

Reviewed by

AA/10-9-2012

United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Four Corners Construction Office
1235 La Plata Highway
Farmington, NM 87401

IN REPLY REFER TO:

FCCO-202
LND-3.00

DEC 10 2015

Mr. Howard P. Draper
Program and Projects Specialist
Navajo Land Department
Project Review Section
Navajo Nation Division of Natural Resources
P.O. Box 2249
Window Rock, AZ 86515

Subject: Application for Consent to a Grant of Right-of-Way (ROW) - Tribal Trust Land – Reach 21– Cutter Lateral - Navajo-Gallup Water Supply Project, San Juan County, New Mexico

Dear Mr. Draper:

The Bureau of Reclamation hereby requests tribal consent to a grant of ROW over, across and through the subject Navajo Nation Tribal Trust Land that is located in the area of Huerfano Chapter in San Juan County, New Mexico. The Bureau of Indian Affairs (BIA) requires that said consent be obtained by Reclamation and that it be submitted with an application for ROW. Enclosed is the application for said consent, and pertinent documents on CD format that are respectfully submitted for your review and processing.

Reclamation requests that all customary fees be waived as allowed by the Omnibus Public Land Management Act of 2009, Title X, Part III (Public Law 111-11).

Also, in order to allow for additional processing by the BIA, Reclamation requests that consent to the grant of this ROW be received on or before May 15, 2016.

If you have any questions, please contact Mike Braman at 505-324-5024.

Sincerely,

ACTING FOR Rick Reese
Barry Longwell
Construction Engineer

Subject: Application for Consent to a Grant of Right-of-Way (ROW) - Tribal Trust Land

cc: Ms. Bidtha Becker, Executive Director
Navajo Nation Division of Natural Resources
P.O. Box 9000
Window Rock, AZ 86515

Mr. Ray Benally, Director
Navajo Nation Department of Water Resources
P.O. Box 678
Ft. Defiance, AZ 86504

Mr. Jason John, Branch Director
Navajo Nation Department of Water Resources
Water Management Branch
P.O. Box 678
Ft. Defiance, AZ 86504
(w/o encls to ea)

bc: FCCO-100, FCCO-110, FCCO-120, FCCO-150, FCCO-152, FCCO-230, FCCO-232
(w/o encls to ea)

Navajo Gallup Water Supply Project-Reach 21

Right-of-Way and Temporary Construction Easesment Summary-Tribal Trust Land

Reach Number	Description	County	Township	Range	Section	Quarter Section	Length (ft)	Right-of-Way		Temp. Const. Easment		Total ROW +TCE
								Width (ft)	Acreage	Width (ft)	Acreage	Acreage
Reach 21	Tank Yard	San Juan	25 N	09 W	18	NW 1/4	230	300	1.58	350	0.37	1.95
Reach 21	Pipeline & Access Road	San Juan	25 N	09 W	18	N 1/2	5263	60	8.14	100	2.3	10.44
Reach 21	Pipeline	San Juan	25 N	09 W	18	NW 1/4	1576	60	2.17	100	1.42	3.59
						TOTALS:	7069	420	11.89	550	4.09	15.98