

**RESOLUTION OF THE
RESOURCES AND DEVELOPMENT COMMITTEE
Of the 23rd Navajo Nation Council---Third Year 2017**

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT; APPROVING THE GRANT OF RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENT TO NAVAJO NATION WATER MANAGEMENT BRANCH TO CONSTRUCT, OPERATE AND MAINTAIN THE 16 INCH OR LESS INNER DIAMETER NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 LOCATED ON NAVAJO NATION TRUST LANDS IN THE OJO ENCINO CHAPTER AND TORREON CHAPTER VICINITIES, NAVAJO NATION (MCKINLEY AND SANDOVAL COUNTIES, 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 grant final approval for all land withdrawals, non-mineral leases, permits, licenses, rights-of-way, surface easements and bonding requirements on Navajo Nation lands and unrestricted (fee) land. This authority shall include subleases, modifications, assignments, leasehold encumbrances, transfers, renewals, and terminations.

SECTION TWO. FINDINGS

A. Navajo Nation Water Management Branch, P.O. Box 678, Fort Defiance, Arizona 86504, has submitted a right-of-way (ROW) application for to construct, operate and maintain the 16-inch or less inner diameter water line known as the Navajo Gallup Water Supply Project Reach 26.3 on, over and across Navajo Nation Trust Lands in Ojo Encino Chapter and Torreon Chapter vicinities, McKinley and Sandoval Counties, New Mexico. The application request is attached hereto and incorporated herein as Exhibit "A."

B. The proposed right-of-way is 4,304.08 feet long, 40 feet wide, consisting of 3.95 acres, more or less, and located in Navajo Nation Trust Lands in Township 21 North, Range 6 West, Section 24, NW $\frac{1}{4}$, Sandoval County, New Mexico; and, Township 20 North, Range 5 West, Section 4, SW $\frac{1}{4}$, McKinley County, New Mexico. Maps are attached hereto and incorporated herein as Exhibit "B."

C. The Project Review Section with the Navajo Land Department identified two land users. The Project Review Section memorandum dated June 11, 2013 and the land user consents are attached hereto as Exhibit "C."

D. A waiver of consideration is requested. The right-of-way project would serve a public purpose because the project will benefit Navajo residents.

E. The environmental and archaeological studies has been completed and attached hereto and made a part hereof.

SECTION THREE. APPROVAL

A. The Resources and Development Committee of the Navajo Nation Council hereby approves the Grant of Right-of-Way and Temporary Construction Easement to Navajo Nation Water Management Branch on, over and across Navajo Nation Trust Lands in Ojo Encino Chapter and Torreon Chapter vicinities, McKinley and Sandoval Counties, New Mexico. The location is more particularly described on the survey map attached hereto as Exhibit "B."

B. The Resources and Development Committee of the Navajo Nation Council hereby waives consideration for the right-of-way project because the project will benefit Navajo residents.

C. The Resources and Development Committee of the Navajo Nation Council hereby approves the right-of-way subject to, but not limited to, the following terms and conditions incorporated herein and attached as Exhibit "D".

D. The Resources and Development Committee of the Navajo Nation Council hereby approves the temporary construction easement subject to, but not limited to, the following terms and conditions incorporated herein and attached as Exhibit "E".

E. 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 10th day of January 2017.

A handwritten signature in black ink, appearing to read 'Benjamin Bennett', with a horizontal line extending to the right.

**Benjamin Bennett, Vice-Chairperson
Resources and Development Committee
Of the 23rd Navajo Nation Council**

Motion: · Honorable Alton Joe Shepherd
Second: Honorable Walter Phelps

Document No. 003158Date Issued: 12/04/2014**EXECUTIVE OFFICIAL REVIEW**Title of Document: RoW 4-Frmgtn Const.CutterLat.OjoEncino Contact Name: DRAPER, HOWARDProgram/Division: DIVISION OF NATURAL RESOURCESEmail: 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: _____ | □ | □ |

DIVISION OF
NATURAL RESOURCES
JAN 16 2015

☐ **Land Withdrawal or Relinquishment for Commercial Purposes**

Sufficient Insufficient

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: 08/11/17 ~~_____~~

2. F&W Date: 12/11/14

3. HPD Paul M. Kelly Date: 12-5-11 ☒ ☐

4. Minerals Date: 1-16-14

5. NNEPA Date: 1-13-2015

6. DNR Robert O. Allen Date: 11/16/15 ☒

7. DOJ (ic) Date: 6/3/15

8. OPVP Date: 10-3-15

Signature	Date	Initials
	08/16/14	<input checked="" type="checkbox"/>
	12/11/14	<input checked="" type="checkbox"/>
	12/15/14	<input checked="" type="checkbox"/>
	1-16-14	<input checked="" type="checkbox"/>
	1-13-2015	<input checked="" type="checkbox"/>
	1/16/15	<input checked="" type="checkbox"/>
	6/13/15	<input checked="" type="checkbox"/>
	10-3/15	<input checked="" type="checkbox"/>
	4/22/16	<input checked="" type="checkbox"/>

☐ **OTHER:**

1. _____ Date:

2. _____ Date:

3. _____ Date:

4. _____ Date:

5. _____ Date:



NAVAJO NATION DEPARTMENT OF JUSTICE

DOCUMENT REVIEW REQUEST FORM



☒ RESUBMITTAL
Jan 2015

DOJ	
9/20/16	1312
DATE / TIME	
<input type="checkbox"/> 7 Day Deadline	
DOC #:	003158#2
SAS #:	
UNIT:	NM

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

CLIENT TO COMPLETE			
DATE OF REQUEST:	9/20/2016	DIVISION:	Of Natural Resources
CONTACT NAME:	Howard Draper	DEPARTMENT:	Project Review
PHONE NUMBER:	871-6447	E-MAIL:	howarddraper@frontiernet.net
TITLE OF DOCUMENT: RESUB: Approving right of way & temporary construction easement to Bureau of Reclamation (Farmington Office) to construct, operate and maintain the 26.3 cutter lateral water supply project in the vicinity of Ojo Encino, McKinley County, NM			
DOJ SECRETARY TO COMPLETE			
9.20.16 2:15pm		REVIEWING ATTORNEY/ADVOCATE: <i>Travis Chee</i> 9.29.16	
DATE TIME OUT OF UNIT:			
DOJ ATTORNEY / ADVOCATE COMMENTS			
<i>- Request to make corrections has been made. The current/standard terms & conditions has been attached for ROW & TCE & proposed ROW</i>			
REVIEWED BY: (Print)	Date / Time	SURNAMED BY: (Print)	Date / Time
<i>Timme Ghee</i>	9/21/16	<i>Vernica Black</i>	9/22/16 8:05 am
DOJ Secretary Called:	for Document Pick Up on		at By:
<i>Howard P. Draper</i>	9/22/16 8:05 am		
PICKED UP BY: (Print)	DATE / TIME:		

NNDJ/DRRF-July 2013

↓ Pslm has been retyped for a clean copy. Document is now legally sufficient after being resubmitted.
Thx. - *Travis*
DOJ



**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

RIGHT-OF-WAY APPLICATION

COMES NOW THE APPLICANT Navajo Nation c/o Navajo Nation Water Management Branch of P.O. Box 678, Fort Defiance, Arizona 86504 this 11th day of August, 2016, who hereby petition(s) the Bureau of Indian Affairs and respectfully files under the terms and provisions of the Act of February 5, 1948 (62 Stat. 17; 25 U.S.C. 323-328), and Departmental Regulations 25 CFR 169, an application of a perpetual (term of years) right-of-way for the following purposes and reasons: **to construct, operate and maintain the "16-inch or less inner diameter water line known as The Navajo Gallup Water Supply Project (NGWSP) Reach 26.3", located in the Ojo Encino and Torreon vicinities, McKinley and Sandoval Counties, New Mexico.**

Across the following described **Navajo Tribal Trust Lands** (water line easement description):

Description	County	Township	Range	Section	Quarter Section	Length (ft)	Width (ft)	Acreage
Waterline	Sandoval	21N	6W	24	NW 1/4	1,572.54	40	1.44
Waterline	McKinley	20N	5W	4	SW 1/4	2,731.54	40	2.51

Water Line Easement:

Said right-of-way across Tribal Trust Lands to be approximately 4,304.08 feet in length, 40 feet in width, and 3.95 in acres, as shown on attached map of definite location, attached hereto, and made a part hereof.

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 resources 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. That 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.

DATE 8/11/16 APPLICANT 
Navajo Nation Water Management Branch

REQUIRED SUPPORTING DOCUMENTS:

1. () Written consent of landowner (ROW Form 94-7).
2. () Map (plats) of definite location (2 original mylars & 2 copies, See 25 CFR 169.6, 169.7, 169.8, 169.9, 169.10 and 169.11).
3. () Deposit of estimated damages or compensation (See 169.4 and 169.14).
4. () Evidence of Authority of Officers to Execute Papers (ROW Form 94-4)
5. () For corporation or business, requirements of 25 CFR 169.4 and 169.5 (unless previously filed):
 - () a. State certified copy of corporate charter or articles of incorporation.
 - () b. Certified copy of corporate resolution, by-laws, articles of partnership or association authorizing signatory to file the application.

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

RIGHT-OF-WAY APPLICATION

COMES NOW THE APPLICANT Navajo Nation c/o Navajo Nation Water Management Branch of P.O. Box 678, Fort Defiance, Arizona 86504 this 11th day of August, 2016, who hereby petition(s) the Bureau of Indian Affairs and respectfully files under the terms and provisions of the Act of February 5, 1948 (62 Stat. 17; 25 U.S.C. 323-328), and Departmental Regulations 25 CFR 169, an application of a 3 years (term of years) right-of-way for the following purposes and reasons: **a temporary construction easement to construct, operate and maintain the "16-inch or less inner diameter water line known as The Navajo Gallup Water Supply Project (NGWSP) Reach 26.3", located in the Ojo Encino and Torreon vicinities, McKinley and Sandoval Counties, New Mexico.**

Across the following described **Navajo Tribal Trust Lands** (water line easement description):

Description	County	Township	Range	Section	Quarter Section	Length (ft)	Width (ft)	Acreage
Waterline	Sandoval	21N	6W	24	NW 1/4	1,572.54	60	2.17
Waterline	McKinley	20N	5W	4	SW 1/4	2,731.54	60	3.76

Water Line Easement:

Said right-of-way across Tribal Trust Lands to be approximately 4,304.08 feet in length, 60 feet in width, and 5.93 in acres, as shown on attached map of definite location, attached hereto, and made a part hereof.

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 resources 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. That 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.

DATE 8/11/16 APPLICANT 
Navajo Nation Water Management Branch

REQUIRED SUPPORTING DOCUMENTS:

1. () Written consent of landowner (ROW Form 94-7).
2. () Map (plats) of definite location (2 original mylars & 2 copies, See 25 CFR 169.6, 169.7, 169.8, 169.9, 169.10 and 169.11).
3. () Deposit of estimated damages or compensation (See 169.4 and 169.14).
4. () Evidence of Authority of Officers to Execute Papers (ROW Form 94-4)
5. () For corporation or business, requirements of 25 CFR 169.4 and 169.5 (unless previously filed):
 - () a. State certified copy of corporate charter or articles of incorporation.
 - () b. Certified copy of corporate resolution, by-laws, articles of partnership or association authorizing signatory to file the application.



**THE NAVAJO NATION
DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT BRANCH**

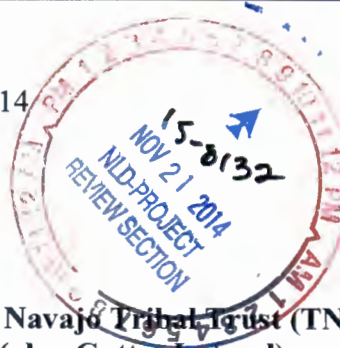
P.O. BOX 678 * FORT DEFIANCE, ARIZONA 86504 * (928)729-4004 * FAX (928)729-4126

**BEN SHELLY
PRESIDENT**

**REX LEE JIM
VICE PRESIDENT**

November 20, 2014

Howard Draper
Project Review Section
Navajo Nation Land Department



RE: Application for consent to ROW and TCE across Navajo Tribal Trust (TNT) lands for Navajo Gallup Water Supply Project Reach 26.3 (aka. Cutter Lateral)

Dear Mr. Draper:

Navajo Nation Water Management Branch hereby submits this application on behalf of The Navajo Nation and its Assigns (Applicant) for Tribal consent to permanent Rights-of-Way (ROW) and Temporary Construction Easement (TCE) for Tribal Trust lands for the Navajo Gallup Water Supply Project Reach 26.3 project (aka Cutter Lateral). We respectfully request the permanent ROW in perpetuity, so long as the ROW shall be actually used for the purpose of the proposed project..

Enclosed with this letter are the following:

1. Check # 032070 from SMA, in the amount of \$500.00 as payment for filing fee.
2. Summary table of NAVAJO TRIBAL TRUST lands.
3. Project area land status map.
4. Supporting resolutions from Counselor, Ojo Encino, Torreon, Pueblo Pintado and Whitehorse Lake Chapters and Eastern Navajo Agency Council.
5. Biological Resources Compliance Form (BRCF) from Navajo Fish and Wildlife Dept.
6. Cultural Resources Concurrence Letter, signed by Navajo Historic Preservation Dept.
7. Permission to Survey Letter
8. Easement plat maps for Tribal Trust lands, both ROW and TCE (signed paper copies)
9. Environmental Assessment (EA)

Should you have any questions or require any further information, please do not hesitate to contact me at 928-729-4004, or contact our authorized ROW agent, Andrew Robertson with Souder, Miller & Associates at 505-264-1488. We request your prompt attention in processing this application. Thank you very much for your assistance.

Sincerely,

Jason John
Branch Manager

CC: Leonard Tsosie, Navajo Nation Council
Andrew Robertson, Souder, Miller & Associates




THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT
JONATHAN NEZ VICE PRESIDENT

M E M O R A N D U M

TO: Bidtah Becker, Executive Director
Division of Natural Resources

FROM: 
Russell Begaye, *President*
The Navajo Nation

DATE: May 24, 2016

SUBJECT: **Delegation of Authority for Rights of Way (ROW) for the NGWSP Reaches 26.1, 26.2 & 26.3**

The Division of Natural Resources, Water Management Branch, is responsible for administration of certain water development projects. After consultation with the Department of Justice, the Office of the President and Vice-President is in agreement to delegate the execution authority of the President to the Water Management Branch. Therefore, Jason John, Branch Manager, is hereby delegated to execute Right of Way applications that shall apply just to the NGWSP Reaches 26.1, 26.2 & 26.3 projects. This delegation shall immediately terminate upon completion of the NGWSP Reaches 26.1, 26.2 & 26.3 projects.

You will be required to provide updates on this project as requested by the Office of the President and Vice-President. If you have any questions regarding this delegation, please contact Karis N. Begaye, Legal Counsel, Office of the President and Vice-President, at 928-871-7812 or knbegaye@navajo-nsn.gov.

cc: Jason John, Manager
Water Management Branch, Division of Natural Resources

Navajo Gallup Water Supply Project, Reach 26.3
Right of Way and Temporary Construction Easement Summary - Tribal Trust Lands

Reach Number	Description	County	Township	Range	Section	Quarter Section	Length (ft)	Right-of-Way		Temp Const. Easement		Total ROW+TCE Acreage
								Width (ft)	Acreage	Width (ft)	Acreage	
26.3	Waterline	Sandoval	21N	6W	24	NW1/4	1,572.54	40	1.44	60	2.17	3.61
26.3	Waterline	McKinley	20N	5W	4	SW1/4	2,731.54	40	2.51	60	3.76	6.27
TOTALS:							4,304.08	40	3.95	60	5.93	9.88

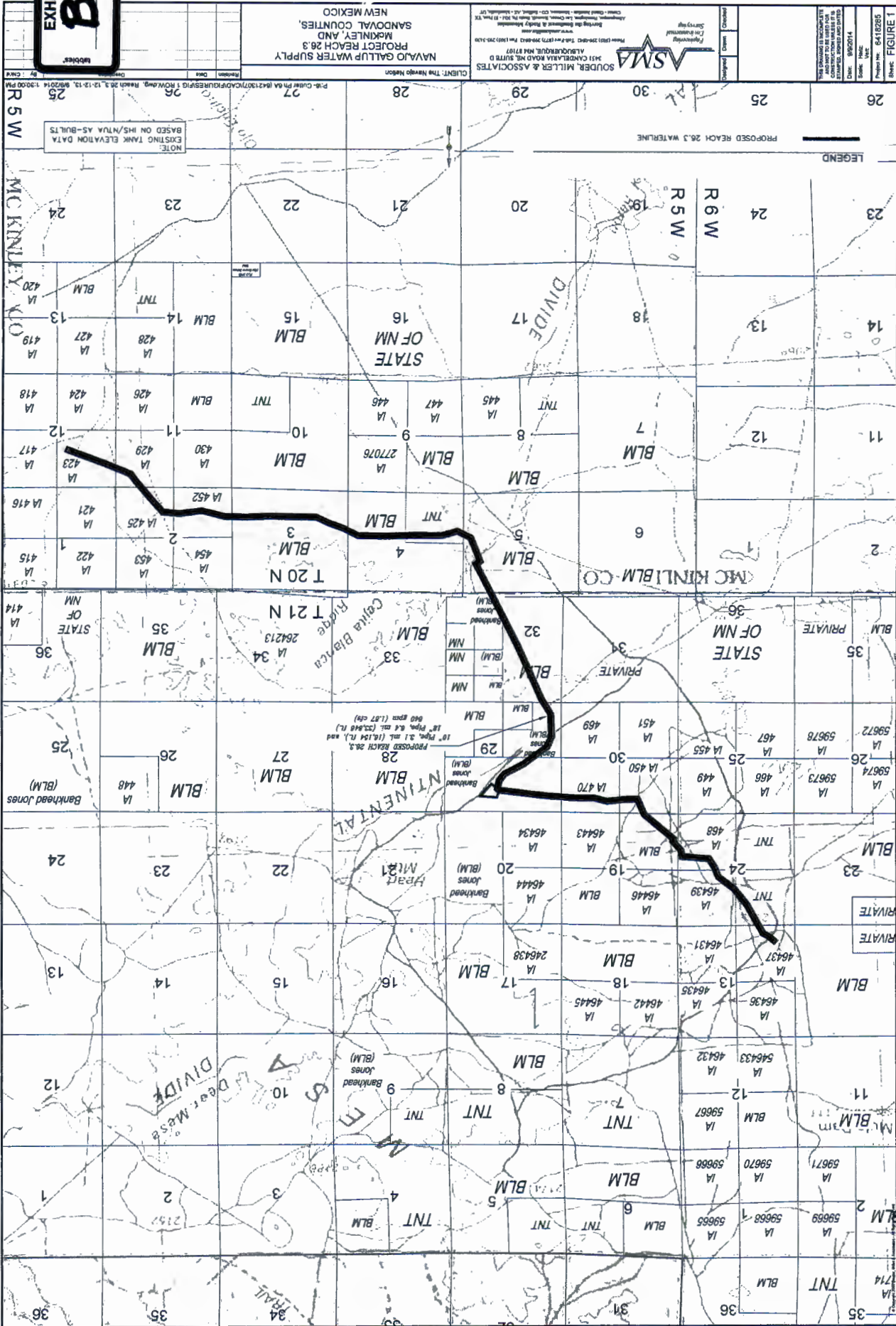
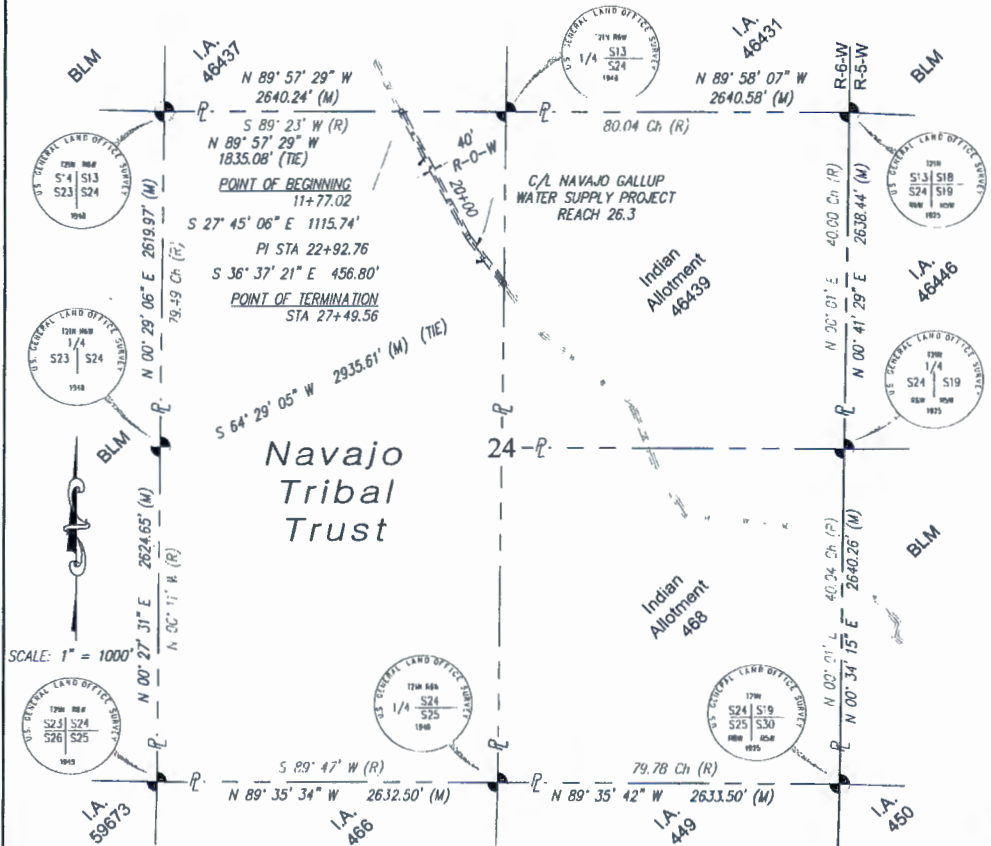


EXHIBIT B

SANDOVAL COUNTY, NEW MEXICO

SEC - 24, T - 21 - N, R - 6 - W



APPLICANT'S CERTIFICATE

THIS IS TO CERTIFY THAT JOHN K. MELTON OF SOUDER, MILLER & ASSOCIATES, WHO SUBSCRIBED THE STATEMENT BELOW, IS THE PERSON ENGAGED BY THE UNDERSIGNED APPLICANT TO PREPARE THIS MAP AS THE FINAL LOCATION OF THE WATER PIPELINE THEREBY SHOWN, AND THAT THIS MAP IS FILED AS PART OF THE COMPLETE APPLICATION, AND IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF FEBRUARY 5, 1948 (62 STAT. 17 AND DEPT. REG. 25CFR 169) AS AMENDED, AND WE FURTHER CERTIFY THAT THE RIGHT-OF-WAY(S) HEREIN DESCRIBED IS(ARE) DESIRED FOR THE OPERATION AND MAINTENANCE OF A WATER DISTRIBUTION FACILITY.

ATTEST: 30/04/13
SECRETARY DATE

BY: 10/30/13
PRESIDENT DATE

SURVEYOR'S STATEMENT

JOHN K. MELTON, STATES HE IS, BY OCCUPATION, A LAND SURVEYOR ENGAGED BY SOUDER, MILLER AND ASSOCIATES, TO MAKE THE SURVEY OF THE WATER DISTRIBUTION LINE RIGHT-OF-WAY SHOWN ON THIS MAP, THAT SAID SURVEY WAS MADE UNDER HIS SUPERVISION AND AUTHORITY ON THE 18TH DAY OF APRIL 2013, AND THAT SUCH SURVEY CONFORMS TO THE REQUIREMENTS OF 25 CFR 169.

BY: 10/28/13
JOHN K. MELTON DATE
NM REG. P.S. #17534
SOUDER, MILLER AND ASSOCIATES



Station	Owner	Feet	Miles	Acres	Rods
11+77.02 to 27+49.56	NAVAJO TRIBAL TRUST	1572.54	0.30	1.44	95.31
40 FOOT WIDE RIGHT-OF-WAY NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 NW 1/4 SECTION 24			THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
T-21-N, R-6-W, N.M.P.M., SANDOVAL COUNTY, NEW MEXICO			Drawn	Checked	Approved
Rev. Date Description By Chkd Client: The Navajo Nation Town: Ojo Encino, New Mexico			M.L.S.	R.M.B.	J.K.M.
SOUDER, MILLER & ASSOCIATES 3451 CANDELARIA ROAD NE, SUITE D ALBUQUERQUE, NM 87107 Phone (505) 295-0942 Toll-Free (877) 399-0942 Fax (505) 291-1439 www.soudermiller.com Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Copyright 2013 Souder, Miller & Associates - All Rights Reserved			Date:	Sep. 26, 2014	
			Scale:	1" = 1000'	
			Project No:	6921307	
			Figure 1 of 2		

SANDOVAL COUNTY, NEW MEXICO

SEC - 24, T - 21 - N, R - 6 - W

CENTERLINE DESCRIPTION

A FORTY (40) FOOT WIDE TRACT OF LAND, FOR THE PURPOSES OF A WATER LINE, LOCATED IN THE NORTHWEST QUARTER (NW 1/4) OF SECTION TWENTY FOUR (24), TOWNSHIP TWENTY ONE (21) NORTH, RANGE SIX (6) WEST, N.M.P.M., SANDOVAL COUNTY, NEW MEXICO, AND BEING A PORTION OF THE NAVAJO TRIBAL TRUST, LYING 20 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

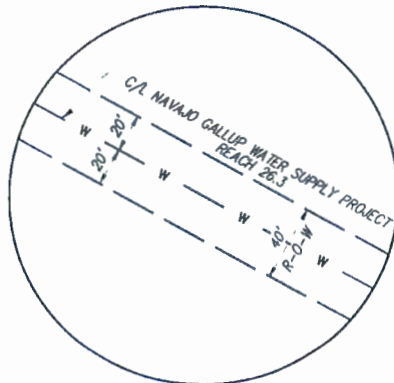
BEGINNING AT WATER LINE STATION 11+77.02 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE NORTHWEST CORNER (NW) OF SECTION TWENTY FOUR (24) BEARS NORTH 89° 57' 29" WEST, A DISTANCE OF 1835.08 FEET;

THENCE SOUTH 27° 45' 06" EAST, A DISTANCE OF 1115.74 FEET;

THENCE SOUTH 36° 37' 21" EAST, A DISTANCE OF 456.80 FEET TO THE POINT OF TERMINATION, WATER LINE STATION 27+49.56 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE WEST QUARTER CORNER (W 1/4) OF SECTION TWENTY FOUR (24) BEARS SOUTH 64° 29' 05" WEST, A DISTANCE 2935.61 FEET;

THE SIDELINES OF THE ABOVE DESCRIBED STRIP SHALL BE PROLONGED OR SHORTENED SO TO TERMINATE ON THE NORTH AND EAST LINES OF SAID NW 1/4 OF SECTION TWENTY FOUR (24);

CONTAINING 62,902 SQ. FT. OR 1.44 ACRES, MORE OR LESS.



TYPICAL DETAIL
40' WIDE R-O-W
N.T.S.

Basis of Bearings:

The bearings and distances used in the above description(s) are on the New Mexico State Plane Coordinates System of 1983, Central Zone.

Station 11+77.02 to 27+49.56	Owner NAVAJO TRIBAL TRUST	Feet 1572.54	Miles 0.30	Acres 1.44	Rods 95.31
40 FOOT WIDE RIGHT-OF-WAY NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 NW 1/4 SECTION 24 T-21-N, R-6-W, N.M.P.M., SANDOVAL COUNTY, NEW MEXICO			THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
Drawn MLS	Checked RMB	Approved JKM	Date: Sep. 26, 2014		
Rev.	Date	Description	By	Chkd	Client: The Navajo Nation
				Town: Ojo Encino, New Mexico	
				SOUDEY, MILLER & ASSOCIATES 3451 CANDELARIA ROAD NE, SUITE D ALBUQUERQUE, NM 87107 Phone: (505) 299-0942 Toll-Free: (877) 299-0942 Fax: (505) 293-1410 www.soudeymiller.com	
				Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Copyright 2013 Soudey, Miller & Associates - All Rights Reserved	
Project No: 6921307			Figure 2 of 2		

SEC - 24, T - 21 - N, R - 6 - W



THIS IS TO CERTIFY THAT JOHN K. MELTON OF SOUDER, MILLER & ASSOCIATES, WHO SUBSCRIBED THE STATEMENT BELOW, IS THE PERSON ENGAGED BY THE UNDERSIGNED APPLICANT TO PREPARE THIS MAP AS THE FINAL LOCATION OF THE WATER PIPELINE THEREBY SHOWN, AND THAT THIS MAP IS FILED AS PART OF THE COMPLETE APPLICATION, AND IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF FEBRUARY 5, 1948 (62 STAT. 17 AND DEPT. REG. 25CFR 169) AS AMENDED, AND WE FURTHER CERTIFY THAT THE RIGHT-OF-WAY(S) HEREIN DESCRIBED IS(ARE) DESIRED FOR THE OPERATION AND MAINTENANCE OF A WATER DISTRIBUTION SYSTEM.

ATTEST: [Signature] 300113
SECRETARY DATE


BY: [Signature] 10/30/12
PRESIDENT DATE

SURVEYOR'S STATEMENT

JOHN K. MELTON, STATES HE IS, BY OCCUPATION, A LAND SURVEYOR ENGAGED BY SOUDER, MILLER AND ASSOCIATES, TO MAKE THE SURVEY OF THE WATER DISTRIBUTION LINE RIGHT-OF-WAY SHOWN ON THIS MAP, THAT SAID SURVEY WAS MADE UNDER HIS SUPERVISION AND AUTHORITY ON THE 16 TH DAY OF APRIL 2013, AND THAT SUCH SURVEY CONFORMS TO THE REQUIREMENTS OF 25 CFR 169.

BY: John K. Melton 10/28/13
JOHN K. MELTON DATE
NM REG. P.S. #17534
SOUDEY, MILLER AND ASSOCIATES



Station 11+77.02 to 27+49.56				Owner NAVAJO TRIBAL TRUST				Fee 1572.54		Miles 0.30		Acres 2.17		Rods 95.31							
60 FOOT TEMPORARY CONSTRUCTION EASEMENT NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 NW 1/4 SECTION 24 SANDOVAL COUNTY, NEW MEXICO														THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED							
T-21-N, R-6-W, N.M.P.M.,														Drawn MLS				Checked RMB		Approved JKM	
Rev.		Date		Description		By		Ckd		Client: The Navajo Nation				Town: Cjo Encino, New Mexico							
										 Professional Surveyors Environmental Surveying				Date: Sep. 26, 2014							
														Scale: 1" = 1000'							
														Project No: 6921307							
PLOT - Color Plot (5/10/2014) Color Plot 16.30x49.56 inches 16.31 x 49.56 140 x 74 dpi														Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Colorado Springs, CO - Denver, CO - Fort Collins, CO - Grand Junction, CO				Figure 1 of 2			

SANDOVAL COUNTY, NEW MEXICO

SEC - 24, T - 21 - N, R - 6 - W

CENTERLINE DESCRIPTION

TWO (2) THIRTY (30) FOOT WIDE TRACTS OF LAND, OFFSET TWENTY (20) FEET ON EACH SIDE OF THE HEREIN DESCRIBED CENTERLINE, FOR THE PURPOSES OF A TEMPORARY CONSTRUCTION EASEMENT TO CONSTRUCT A WATERLINE, LOCATED IN THE NORTHWEST QUARTER (NW 1/4) OF SECTION TWENTY FOUR (24), TOWNSHIP TWENTY ONE (21) NORTH, RANGE SIX (6) WEST, N.M.P.M., SANDOVAL COUNTY, NEW MEXICO, AND BEING A PORTION OF THE NAVAJO TRIBAL TRUST, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

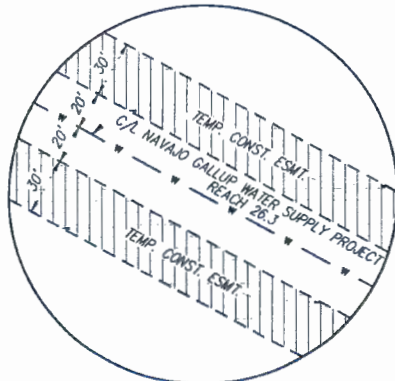
BEGINNING AT WATER LINE STATION 11+77.02 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE NORTHWEST CORNER (NW) OF SECTION TWENTY FOUR (24) BEARS NORTH 89° 57' 29" WEST, A DISTANCE OF 1835.08 FEET;

THENCE SOUTH 27° 45' 06" EAST, A DISTANCE OF 1115.74 FEET;

THENCE SOUTH 36° 37' 21" EAST, A DISTANCE OF 456.80 FEET TO THE POINT OF TERMINATION, WATER LINE STATION 27+49.56 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE WEST QUARTER CORNER (W 1/4) OF SECTION TWENTY FOUR (24) BEARS SOUTH 64° 29' 05" WEST, A DISTANCE 2935.61 FEET;

THE SIDELINES OF THE ABOVE DESCRIBED STRIP SHALL BE PROLONGED OR SHORTENED SO TO TERMINATE ON THE NORTH AND EAST LINES OF SAID NW 1/4 OF SAID SECTION TWENTY FOUR (24);


CONTAINING 94,352 SQ. FT. OR 2.17 ACRES, MORE OR LESS.



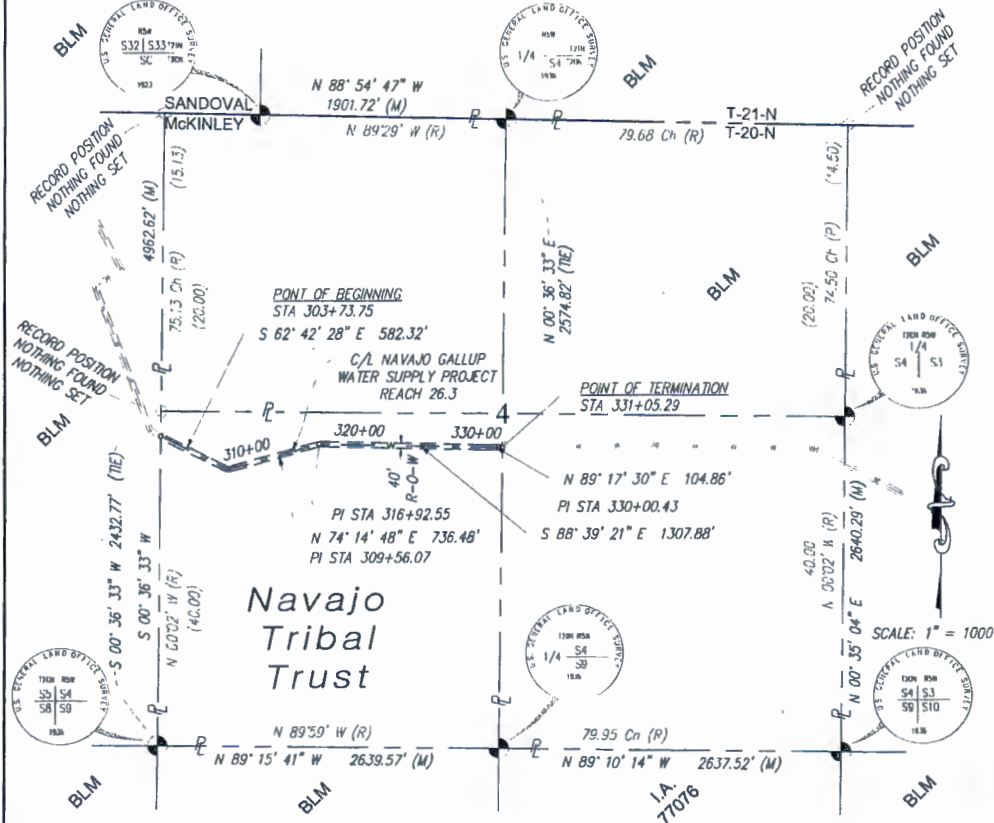
TYPICAL DETAIL
60' TEMPORARY CONSTRUCTION EASEMENT
N.T.S.

Basis of Bearings:

The bearings and distances used in the above description(s) are on the New Mexico State Plane Coordinates System of 1983, Central Zone.

Station 11+77.02 to 27+49.56		Owner NAVAJO TRIBAL TRUST		Feet 1572.54	Miles 0.30	Acres 2.17	Rods 95.31
60 FOOT TEMPORARY CONSTRUCTION EASEMENT NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 NW 1/4 SECTION 24 T-21-N, R-6-W, N.M.P.M., SANDOVAL COUNTY, NEW MEXICO					THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED.		
Drawn MLS	Checked RMB	Approved JKM		Date: Sep. 26, 2014			
Rev.	Date	Description	By	Chkd	Client: The Navajo Nation		
					Town: Ojo Encino, New Mexico		
					SOUDEY, MILLER & ASSOCIATES 3451 CANDELARIA ROAD NE, SUITE D ALBUQUERQUE, NM 87107 Phone (505) 299-0942 Toll-Free (877) 299-0942 Fax (505) 291-1410 www.soudeymiller.com		
					Serving the Southwest & Rocky Mountain Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Copyright 2013 Soudey, Miller & Associates - All Rights Reserved		
 <p>ASMA Association of Surveyors and Mapmakers of America</p>					Scale: N.T.S.		
Project No: 6921307					Figure 2 of 2		

Mc KINLEY COUNTY, NEW MEXICO
SEC - 4, T - 20 - N, R - 5 - W



APPLICANT'S CERTIFICATE

THIS IS TO CERTIFY THAT JOHN K. MELTON OF SOUDER, MILLER & ASSOCIATES, WHO SUBSCRIBED THE STATEMENT BELOW, IS THE PERSON ENGAGED BY THE UNDERSIGNED APPLICANT TO PREPARE THIS MAP AS THE FINAL LOCATION OF THE WATER PIPELINE THEREBY SHOWN, AND THAT THIS MAP IS FILED AS PART OF THE COMPLETE APPLICATION, AND IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF FEBRUARY 5, 1948 (62 STAT. 17 AND DEPT. REG. 25CFR 169) AS AMENDED, AND WE FURTHER CERTIFY THAT THE RIGHT-OF-WAY(S) HEREIN DESCRIBED IS(ARE) DESIRED FOR THE OPERATION AND MAINTENANCE OF A WATER DISTRIBUTION FACILITY.

ATTEST: [Signature] 30/04/13
 SECRETARY DATE

BY: [Signature] 10/30/13
 PRESIDENT DATE

SURVEYOR'S STATEMENT

JOHN K. MELTON, STATES HE IS, BY OCCUPATION, A LAND SURVEYOR ENGAGED BY SOUDER, MILLER AND ASSOCIATES, TO MAKE THE SURVEY OF THE WATER DISTRIBUTION LINE RIGHT-OF-WAY SHOWN ON THIS MAP, THAT SAID SURVEY WAS MADE UNDER HIS SUPERVISION AND AUTHORITY ON THE XX TH DAY OF JUNE 2014, AND THAT SUCH SURVEY CONFORMS TO THE REQUIREMENTS OF 25 CFR 169.

BY: [Signature] 10/28/13
 JOHN K. MELTON DATE
 NM REG. P.S. #17534
 SOUDER, MILLER AND ASSOCIATES



Station		Owner		Feet		Miles	Acres	Rods
303+73.75 to 331+05.29		NAVAJO TRIBAL TRUST		2731.54		0.52	2.51	165.55
40 FOOT WIDE RIGHT-OF-WAY								
NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3								
SW 1/4 SECTION 4								
T-20-N, R-5-W, N.M.P.M., Mc KINLEY COUNTY, NEW MEXICO								
Rev.	Date	Description	By	Chkd	Client: The Navajo Nation	Town: Ojo Encino, New Mexico	Date:	Sep. 26, 2014
							Scale:	1" = 1000'
							Project No:	6921307
								Figure 1 of 2

Mc KINLEY COUNTY, NEW MEXICO

SEC - 4, T - 20 - N, R - 5 - W

CENTERLINE DESCRIPTION

A FORTY (40) FOOT WIDE TRACT OF LAND, FOR THE PURPOSES OF A WATER LINE, LOCATED IN THE SOUTHWEST QUARTER (SW 1/4) OF SECTION FOUR (4), TOWNSHIP TWENTY (20) NORTH, RANGE FIVE (5) WEST, N.M.P.M., MCKINLEY COUNTY, NEW MEXICO, AND BEING A PORTION OF THE NAVAJO TRIBAL TRUST, LYING 20 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT WATER LINE STATION 303+73.75 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE SOUTHEAST CORNER (SE) OF SECTION FOUR (4) BEARS SOUTH 00° 36' 33" WEST, A DISTANCE OF 2432.77 FEET;

THENCE SOUTH 62° 42' 28" EAST, A DISTANCE OF 582.32 FEET;

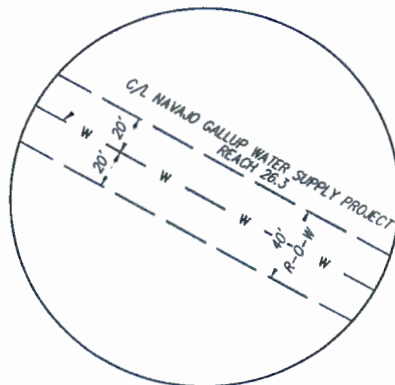
THENCE NORTH 74° 14' 48" EAST, A DISTANCE OF 736.48 FEET;

THENCE SOUTH 88° 39' 21" EAST, A DISTANCE OF 1307.88 FEET;

THENCE NORTH 89° 17' 30" EAST, A DISTANCE OF 104.86 FEET TO THE POINT OF TERMINATION, WATER LINE STATION 331+05.29 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE NORTH QUARTER CORNER (N 1/4) OF SECTION FOUR (4) BEARS NORTH 00° 36' 33" EAST, A DISTANCE 2574.82 FEET;

THE SIDELINES OF THE ABOVE DESCRIBED STRIP SHALL BE PROLONGED OR SHORTENED SO TO TERMINATE ON THE WEST LINE OF THE SW 1/4 OF SAID SECTION FOUR (4), AND THE EAST LINE OF THE SW 1/4 OF SAID SECTION;

CONTAINING 109,262 SQ. FT. OR 2.51 ACRES, MORE OR LESS.



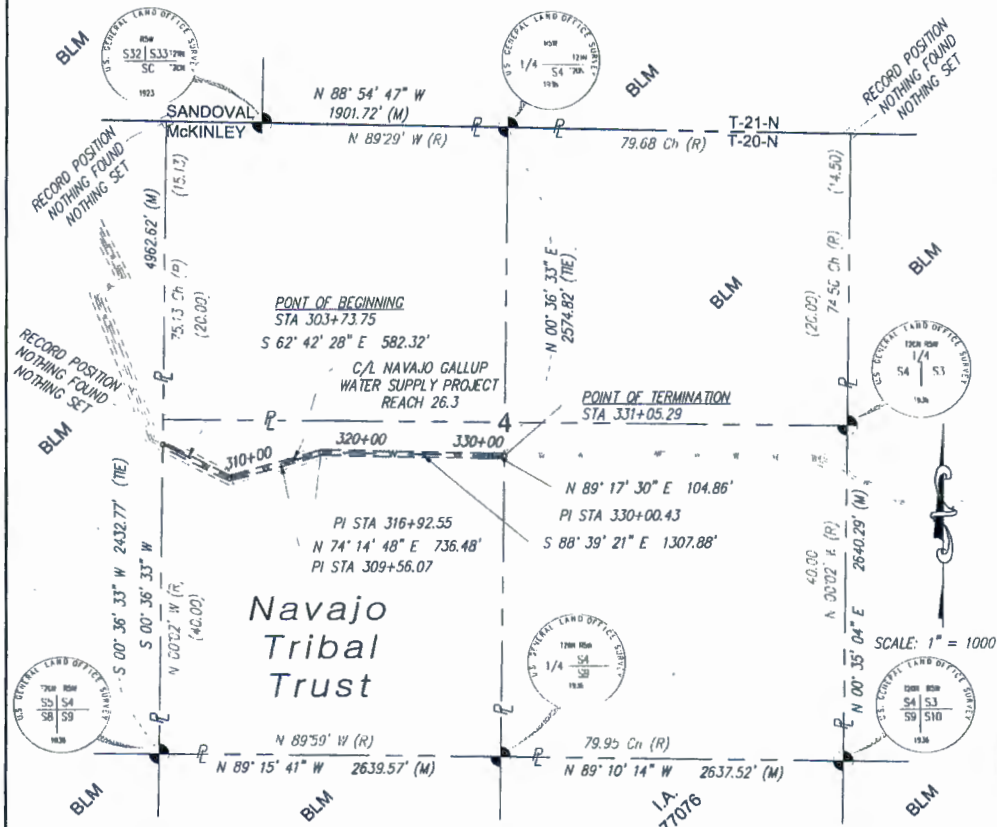
TYPICAL DETAIL
40' WIDE R-O-W
N.T.S.

Basis of Bearings:

The bearings and distances used in the above description(s) are on the New Mexico State Plane Coordinates System of 1983, Central Zone.

Station	Owner	Feet	Miles	Acres	Rods
303+73.75 to 331+05.29	NAVAJO TRIBAL TRUST	2731.54	0.52	2.51	165.55
40 FOOT WIDE RIGHT-OF-WAY NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 SW 1/4 SECTION 4 T-20-N, R-5-W, N.M.P.M., Mc KINLEY COUNTY, NEW MEXICO					
Rev.	Date	Description	By	Chkd	Client: The Navajo Nation
					Town: Ojo Encino, New Mexico
<p>SMMA SOUDEY, MILLER & ASSOCIATES 3451 CANDELARIA ROAD NE, SUITE D ALBUQUERQUE, NM 87107 Phone (505) 299-0912 Toll-Free (877) 299-0912 Fax (505) 291-1410 www.soudeymiller.com Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Copyright 2013 Soudey Miller & Associates - All Rights Reserved</p>					
<p>THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED</p> <p>Drawn: <u>MLS</u> Checked: <u>RMB</u> Approved: <u>JKM</u></p> <p>Date: <u>Sep. 26, 2014</u></p> <p>Scale: <u>N.T.S.</u></p> <p>Project No: <u>6921307</u></p> <p>Figure <u>2 of 2</u></p>					

SEC - 4, T - 20 - N, R - 5 - W



THIS IS TO CERTIFY THAT JOHN K. MELTON OF SOUDER, MILLER & ASSOCIATES, WHO SUBSCRIBED THE STATEMENT BELOW, IS THE PERSON ENGAGED BY THE UNDERSIGNED APPLICANT TO PREPARE THIS MAP AS THE FINAL LOCATION OF THE WATER PIPELINE THEREBY SHOWN, AND THAT THIS MAP IS FILED AS PART OF THE COMPLETE APPLICATION, AND IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF THE ACT OF FEBRUARY 5, 1948 (62 STAT. 17 AND DEPT. REG. 25CFR 169) AS AMENDED, AND WE FURTHER CERTIFY THAT THE RIGHT-OF-WAY(S) HEREIN DESCRIBED IS(ARE) DESIRED FOR THE OPERATION AND MAINTENANCE OF A WATER DISTRIBUTION FACILITY.


ATTEST: Ken S. / 30/11/13
SECRETARY DATE

BY: [Signature] 10/30/17
PRESIDENT DATE

JOHN K. MELTON, STATES HE IS, BY OCCUPATION, A LAND SURVEYOR ENGAGED BY SOUDER, MILLER AND ASSOCIATES, TO MAKE THE SURVEY OF THE WATER DISTRIBUTION LINE RIGHT-OF-WAY SHOWN ON THIS MAP, THAT SAID SURVEY WAS MADE UNDER HIS SUPERVISION AND AUTHORITY ON THE XX TH DAY OF JUNE 2014, AND THAT SUCH SURVEY CONFORMS TO THE REQUIREMENTS OF 25 CFR 169.

BY: John K. Melton 10/28/13
JOHN K. MELTON DATE
NM REG. P.S. #17534
SOUDER, MILLER AND ASSOCIATES



Station 303+73.75 to 331+05.29		Owner NAVAJO TRIBAL TRUST		Foot 2731.54		Miles 0.52	Acres 3.76	Rods 165.55
60 FOOT TEMPORARY CONSTRUCTION EASEMENT NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 SW 1/4 SECTION 4						THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
T-20-N, R-5-W, N.M.P.M.,				Mc KINLEY COUNTY, NEW MEXICO				
Rev.	Date	Description	By	Chkd	Client: The Navajo Nation	Town: Ojo Encino, New Mexico		Drawn M.L.S.
								Checked R.M.B.
								Approved J.K.M.
					SOUDIER, MILLER & ASSOCIATES 3451 CANDELARIA ROAD NE, SUITE D ALBUQUERQUE, NM 87107 Phone (505) 299-6943 Toll-Free (877) 299-0042 Fax (505) 293-1400 www.soudiermiller.com		Date: Sep. 26, 2014	
					Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Bernalillo, Santa Fe, NM - 81 Pages, 1 X		Scale: 1" = 1000'	
					Copyright 2010 Soudier, Miller & Associates - All Rights Reserved		Project No: 6921307	
P-10 - Call or Fax (505) 293-6943 or E-mail R.M.B. at RMB@SMA-Eng.com or P-10 231 1405 San Diego, CA 92106							Figure 1 of 2	

Mc KINLEY COUNTY, NEW MEXICO

SEC - 4, T - 20 - N, R - 5 - W

CENTERLINE DESCRIPTION

TWO (2) THIRTY (30) FOOT WIDE TRACTS OF LAND, OFFSET TWENTY (20) FEET ON EACH SIDE OF THE HEREIN DESCRIBED CENTERLINE, FOR THE PURPOSES OF A TEMPORARY CONSTRUCTION EASEMENT TO CONSTRUCT A WATERLINE, LOCATED IN THE SOUTHWEST QUARTER (SW 1/4) OF SECTION FOUR (4), TOWNSHIP TWENTY (20) NORTH, RANGE FIVE (5) WEST, N.M.P.M., MCKINLEY COUNTY, NEW MEXICO, AND BEING A PORTION OF THE NAVAJO TRIBAL TRUST, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT WATER LINE STATION 303+73.75 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE SOUTHEAST CORNER (SE) OF SECTION FOUR (4) BEARS SOUTH 00° 36' 33" WEST, A DISTANCE OF 2432.77 FEET;

THENCE SOUTH 62° 42' 28" EAST, A DISTANCE OF 582.32 FEET;

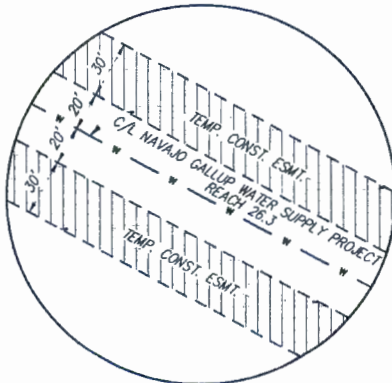
THENCE NORTH 74° 14' 48" EAST, A DISTANCE OF 736.48 FEET;

THENCE SOUTH 88° 39' 21" EAST, A DISTANCE OF 1307.88 FEET;

THENCE NORTH 89° 17' 30" EAST, A DISTANCE OF 104.86 FEET TO THE POINT OF TERMINATION, WATER LINE STATION 331+05.29 FROM WHICH A U.S. GENERAL LAND OFFICE (USGLO) BRASS CAP FOR THE NORTH QUARTER CORNER (N 1/4) OF SECTION FOUR (4) BEARS NORTH 00° 36' 33" EAST, A DISTANCE 2574.82 FEET;

THE SIDELINES OF THE ABOVE DESCRIBED STRIP SHALL BE PROLONGED OR SHORTENED SO TO TERMINATE ON THE WEST LINE OF THE SW 1/4 OF SAID SECTION FOUR (4), AND THE EAST LINE OF THE SW 1/4 OF SAID SECTION;


CONTAINING 163,892 SQ. FT. OR 3.76 ACRES, MORE OR LESS.



TYPICAL DETAIL
60' TEMPORARY CONSTRUCTION EASEMENT
N.T.S.

Basis of Bearings:

The bearings and distances used in the above description(s) are on the New Mexico State Plane Coordinates System of 1983, Central Zone.

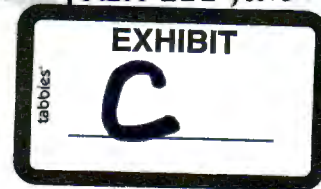
Station 303+73.75 to 331+05.29		Owner NAVAJO TRIBAL TRUST	Feet 2731.54	Miles 0.52	Acres 3.76	Rods 165.55
60 FOOT TEMPORARY CONSTRUCTION EASEMENT NAVAJO GALLUP WATER SUPPLY PROJECT REACH 26.3 SW 1/4 SECTION 4 T-20-N, R-5-W, N.M.P.M., Mc KINLEY COUNTY, NEW MEXICO				THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
Drawn MLS	Checked RMB	Approved JKM	Date: Sep. 26, 2014			
Rev.	Date	Description	By	Chkd	Scale: N.T.S.	
					Project No: 6921307	
 <p>Client: The Navajo Nation Town: Ojo Encino, New Mexico SOUDEK, MILLER & ASSOCIATES 3451 CANDELARIA ROAD NE, SUITE D ALBUQUERQUE, NM 87107 Phone: (505) 299-0712 Toll-Free: (877) 396-6942 Fax: (505) 291-1470 www.soudemiller.com Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Bernalillo, Santa Fe, NM - El Paso, TX Copyright 2013 Soudek, Miller & Associates - All Rights Reserved</p>				Figure 2 of 2		



THE NAVAJO NATION

BEN SHELLY
PRESIDENT

REX LEE JIM



MEMORANDUM

TO : Howard P. Draper, Supervisor
Project Review Section, NLD

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

DATE : June 11, 2013

SUBJECT: NTUA Reach 26.3 Water Pipeline Project

Souder, Miller & Associates dba Navajo Tribal Utility Authority (NTUA), c/o 3451 Candelaria Road NE, Suite D, Albuquerque, New Mexico 87107, submitted an application right of way to construct, operate and maintain a water pipeline to serve Reach 26.3 of the Navajo Gallup Water Supply Project (NGWSP) near the vicinity of Counselor & Ojo Encino Chapters, Sandoval & McKinley Counties, New Mexico.

The water pipeline will cross Navajo Trust lands in the NW/4 of Section 24, T21N, R6W, Sandoval County, and the SW/4 of Section 4, T20N, R5W, McKinley County, New Mexico.

The proposed project is located in District 19 & 20, Star Lake Range Unit 1, permitted to Gladys Herrera and Ben Mestas for grazing. I informed the affected grazing permittees on the proposed request and they had no objection. I obtained the affected landusers consent along with the concurrence of the District 19 & 20, Land Board member, Elizabeth Stoney.

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

cc: Project file

CONSENT 3

(Waiver of compensation for damages)

**CONSENT TO USE
NAVAJO TRIBAL LANDS**

TO WHOM IT MAY CONCERN:

I, Ben Mestas, hereby grant consent to the Navajo Tribe and the Bureau of Indian Affairs to permit **Souder, Miller & Associates (SMA) dba Navajo Tribal Utility Authority (NTUA)** of **Post Office Box 170, Fort Defiance, Arizona 87504**, to use a portion of my land use area for the following purpose(s): **Right of way to construct, operate & maintain the Navajo Gallup Water Supply Project Reach 26-3 crossing Navajo Tribal land in the SW/4 of Section 4, T20N, R5W, McKinley County, New Mexico**, as shown on the map showing the location of the proposed project on the back of this consent form.

I hereby waive any rights I may have to compensation for the diminish-
ment in value of my land use rights as a result of the above-referenced
project as proposed.

REMARKS:

6/6/13 Ben Mestas 6015
Date Land User Signature (or Thumbprint) Census No. Permit No.

WITNESS: _____

6/05/13 Delbert Strong 19
Date Grazing Committee or Land Board Member District No.

Acknowledgement of Field Agent

I acknowledge that the contents of this consent form was read// or fully
explained/ to the land user in Navajo// or English// (check where applicable)

Exxon Kee
Field Agent Signature



EXHIBIT "D"

**NAVAJO NATION RIGHT-OF-WAY TERMS AND CONDITIONS
NAVAJO DEPARTMENT OF WATER RESOURCES – WATER MANAGEMENT BRANCH
(GRANTEE)
(Navajo Gallup Water Supply Project Reach 26.3)**

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 Navajo Department of Water Resources (DWR) or its successors, or assigns uses the right-of-way for the construction, operation and maintenance of the Navajo Gallup Water Supply Project Reach 26.3 (Project).

2. Consideration for the use of land is assessed at \$9,176.10 per year and shall be annually adjusted leased upon the increase in the Consumer Price Index (CPI), U.S. City Average for All Urban Consumers. The CPI for August 2015 shall be used the base for adjust.

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 Navajo Nation contributes the annual consideration to the Project as it will benefit the Navajo Nation and surrounding communities. 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.
- 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. The Grantee shall give employment preference to qualifying Navajos and other Indians in accordance with applicable Navajo and Federal law. The Grantee 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 applicable. Grantee shall apply for and submit all applicable permits and information to the Navajo DWR, or its successor.

NN Right-of-Way Standard Terms and Conditions for Trust Land
7/21/15

5. 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.
6. The Grantee shall reclaim all surface lands disturbed related to the right-of-way, as outlined in a restoration and re-vegetation plan, which shall be approved by the Navajo Nation Environmental Protection Agency (NNHPA) prior to any surface disturbance. The Grantee shall comply with all provisions of such restoration and re-vegetation 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.
7. 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.
8. The Grantee shall obtain prior written permission to cross existing rights-of-way, if any, from the appropriate parties.
9. The Grantee shall be responsible for and promptly pay all damages when they are sustained.
10. 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.
11. The Grantee shall not assign, convey or transfer, 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 of the interior. 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 upon conditions or withheld in the sole discretion of the Navajo Nation. Congress has authorized Navajo DWR to transfer Project title under P.L. 111-11 10602 (f). It anticipated that after Project title is transferred, the Navajo Tribal Utility Authority will operate and maintain the Project. Therefore, the Grantee may assign and transfer the right-of-way to the Navajo Tribal Utility Authority as authorized by federal law without further approval of the Navajo Nation or the Secretary.
12. 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; and
 - 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.
13. 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 site assessment of the premises at least sixty (60) days prior to delivery of the said premises.

NN Right-of-Way Standard Terms and Conditions for Trust Land
7121/15

14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Nothing contained herein shall be interpreted as constituting a waiver, express or implied, of the sovereign immunity of the Navajo Nation.
20. 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.
21. 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.
22. 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**

**NAVAJO DEPARTMENT OF WATER RESOURCES - WATER MANAGEMENT BRANCH
(GRANTEE)
(Navajo Gallup Water Supply Project Reach 26.3)**

- 1 The term of the ROW temporary construction easement shall be granted for three (3) years on the date it is granted by the Secretary of the Interior (Secretary).
2. Consideration for the use of land is assessed at \$41,327.28, which shall be the Navajo Nation's contribution to the project because the Navajo Gallup Water Supply Project (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 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.
 - 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. The Grantee shall give employment preference to qualifying Navajos and other Indians in accordance with applicable Navajo and Federal law. The Grantee 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 applicable. Grantee shall apply for and submit all applicable permits and information to the Navajo DWR, 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 Navajo DWR to transfer Project title under P.L. 111-11 10602 (f). It is anticipated that after Project title is transferred, 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.
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.

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 shall remain Navajo Indian Country for purposes of Navajo Nation jurisdiction.



ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF EXECUTIVE DIRECTOR/ADMINISTRATION

OFFICE OF ENVIRONMENTAL REVIEW

PO BOX 339 WINDOW ROCK ARIZONA 86515 Office: 928/871-7188 Fax: 928/729-4323

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:

A handwritten signature in black ink, appearing to read "Rita Whitehorse-Larsen".

Rita Whitehorse-Larsen, Senior Environmental Specialist
Office of Environmental Review
Office of the Executive Director/Administration
Navajo Nation Environmental Protection Agency

DATE: January 13, 2015

SUBJECT: 164 EOR 003158 ROW Farmington Construction Cutter Lateral Ojo Encino

The Navajo Nation Environmental Protection Agency (NNEPA) reviewed¹ and recommends ***conditional approval*** for the proposed right-of-way (ROW) and temporary construction easement (TCE) to Bureau of Reclamation (BOR) Farmington Construction Office to construct, operate and maintain the 26.3-Navajo Cutter Lateral Water Supply Project (WSP) Reach portions located in the Ojo Encino vicinity, McKinley and Sandoval Counties, New Mexico as stated in EOR 003158 pursuant the Title 4, NNC Chapter 9 Navajo Nation Environmental Policy Act, Subchapter 1, §904.

The Navajo-Gallup Water Supply Project (NGWSP) is a planned regional water supply system that would distribute San Juan River surface waters of the eastern section of the Navajo Nation, the city of Gallup, New Mexico and the southwestern part of the Jicarilla Apache Nation (JAN). The proposed permanent ROW is 4,304.08 feet in length and 40 feet wide consisting of approximately 3.95 acres, more or less, and temporary construction easement is 4,304.08 feet in length and consists

¹ BOR; Ecosystem Management Inc. Environmental Assessment Reach 26.3 of the Navajo-Gallup Water Supply Project. October 2014.

of 5.93 acres, more or less, of Navajo Nation Trust lands. Reach 26.3 is a segment of the NGWSP that includes a waterline, 3 water storage tanks, a chlorination building and 2.1 mile power line.

In 1995, the Navajo Nation Council established the Navajo Nation EPA and subsequently approved the Navajo Environmental Policy Act. NNEPA was delegated to develop, implement and enforce the Navajo Nation's environmental laws and regulations. To this date, the following are the list of each environmental law and the requirements to be in compliance with Navajo Nation's NEPA.

1. Navajo Nation Clean Water Act (CWA):

- a. ***NNEPA Water Quality determines the waters of the US and Navajo Nation.***
- b. §Section 401- USEPA issued a "treatment as state" and directly delegated CWA Section 401 permitting to Navajo Water Quality Program. As informed during multiple meetings with BOR and contractors, 401 permit is required for wash/stream crossings that exhibit ordinary high water marks as determined by Patrick Antonio, Principal Hydrologist, NNEPA Surface and Groundwater Department, Water Quality Program. He can be contacted at 928/871-7998.
- c. §Section 402 – The required permit application is controlled under USEPA Region 9 Water Division 415-972-3409. A copy of the application, Stormwater Pollution Prevention Plan (SWPPP), Best Management Practices (BMPs) and Notice of Intent (NOI) should be submitted to NNEPA Water Quality Program. *"Proposed land surface disturbance is greater than 1.0 acre therefore compliance is required with the Federal General Construction Permit for storm water discharges"* as determined by Patrick Antonio, Principal Hydrologist, NNEPA, Surface & Groundwater Protection Department, Water Quality.

2. Navajo Nation Safe Drinking Water Act:

- a. The NNEPA - Public Water Systems Supervision Program (PWSSP) *recommends approval for the proposed project.*
- b. PWSSP recommends *all proposed drinking water projects to be permitted by the PWSSP and all proposed drinking water projects (extensions, upgrades, new wells, new public water systems, etc.) must also comply with the design review and construction permit pursuant the §§1501 and 1601 of the Navajo Nation Primary Drinking Water Regulations.*
- c. *All proposed wastewater projects to be permitted by the Domestic Wastewater Program. Extensions, upgrades, new sewer infrastructure, septic tanks and other wastewater infrastructure must comply with the design review and construction permit requirements pursuant to §201 of the Domestic Wastewater Program.*
- d. Contact Yolanda Barney, Environmental Program Manager, NNEPA, Surface & Groundwater Protection Department, PWSSP at 928/871-7755 for questions.

3. Navajo Nation Air Pollution Prevention and Control Act:

- a. Apply water to control dust to lessen air impacts to community members and public located in or near the proposed action.
- b. An application for air quality will be sent to Stouder Miller & Associates for compliance.

4. Navajo Nation Pesticide Act:

- a. NTUA 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 928/871-7815/7810/7892 to attain a pesticide use permit (PUP) to ensure the product is in compliance and appropriately applied by a certified and licensed applicator. The PUP must be approved by the Water Quality Navajo Pollution Discharge Elimination Program – Pesticide, PWSSP and Navajo Fish and Wildlife.
- 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 contractor 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 receives 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 land user.

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 underground or aboveground [petroleum] greater than 100 gallons is expected to be at the proposed site.
- c. If there will be any plans to install an UST or AST, NNEPA Storage Tank Program must be contact before commencing any petroleum storage tank construction activities. The design specifications must meet the requirements listed in the Storage Tank Act. Contact the Storage Tank Program at 928/871-7993.

8. Others:

- a. NTUA will comply with the vegetative reclamation per Navajo Agriculture Department's recommended seed mix within the disturbed areas of the ROW corridors. Ms. Judy Willeto is the contact person for the vegetation seeding reclamation activities. She can be reached at 928/871-6071.
- b. Mr. Jack Utter, Department of Water Resources, Water Code Program is the contact for attaining water permit. He can be reached at 928/871-4132/4003.

- c. We recommend BOR to backfill and re-contour the soil material as naturally as possible to lessen the impact to the natural drainages (i.e. redirecting the natural direction of the watershed, creating standing water, creating flooding to the existing roads, etc.) of the land.
- d. Avoid unnecessary ground disturbance and removal of vegetation within and adjacent to the ROW corridors.

If there are any questions you may contact Rita Whitehorse-Larsen at 928/871-7188 or email rwhitehorseL@navajo-nsn.gov. Thank you.

Cc: NTUA, ROW/TCE, PO Box 170, Fort Defiance, Arizona, 86504
Judy Willetto, Division of Natural Resources, Department of Agriculture
Jack Utter, Division of Natural Resources, Water Resources Department, Water Code Program
NNEPA Water Quality, PWSSP; Air Quality, OPP; Pesticides; Superfund; RCRP; Storage Tank
Program; Administration chrono file
Contact person: Andrew Robertson, 505-264-1488



THE NAVAJO NATION

MINERALS DEPARTMENT

Post Office Box 1910

Window Rock, Arizona 86515

Phone: (928) 871-6587 • Fax: (928) 871-7095

Ben Shelly
President

Rex Lee Jim
Vice-President

Interoffice Memorandum

TO: Raymond A. Benally, Director
Water Resources Department

FROM: Perry S. S. S.
Akhtar Zaman, Director
Minerals Department

DATE: December 19, 2011

SUBJECT: DNR 13374: NAVAJO-GALLUP WATER SUPPLY PROJECT

The Minerals Department attended one of the initial meetings related to the subject project. It is our understanding that the Navajo Nation agreed not to charge any consideration for the project; therefore, the assessment is shown as the Navajo Nation's contribution to the project. The Water Resources Department suggested that since there is no consideration, the Minerals Department could provide unit rate(s) and this rate could be used to calculate the Nation's contribution as applications for different phases of the project are submitted.

The Minerals Department also stated that the maximum width recommended is 50.00 feet. However, since the preliminary planning and design has already been done and the project is a priority project, it was decided that the maximum width would not exceed 80.00 feet.

The unit rate recommended below is based on a per acre basis for different size of pipelines. The rate is for a term of 20 years only. The dollar value is the November 2011 value. The rate will need to be adjusted for future applications.

Pipeline Size	Rate: \$/Acre for 20 Years (Nov. 2011 Value)
54 inch	\$182,316.00/acre
48 inch	\$117,614.00/acre
45 inch	\$110,264.00/acre
42 inch	\$102,913.00/acre
36 inch	\$88,211.00/acre
30 inch	\$73,509.00/acre
24 inch	\$58,807.00/acre

22 inch	\$53,907.00/acre
20 inch	\$49,006.00/acre
18 inch	\$44,105.00/acre
15 inch	\$36,755.00/acre
10 inch	\$24,503.00/acre

Please advise if you have any questions.

RSD:AZ/kjs

xc: Howard Draper, Navajo Nation Land Department, DNR

RECLAMATION

Managing Water in the West

Preliminary Draft Environmental Assessment

Reach 26.3 of the Navajo–Gallup Water Supply Project



U.S. Department of the Interior
Bureau of Reclamation
Four Corners Construction Office
2200 Bloomfield Highway
Farmington, NM 87401
Phone: (505) 324-5001

October 2014

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 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
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
CWA	Clean Water Act
DOT	Department of Transportation
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
GHG	Greenhouse gases
HAP	Hazardous air pollutants
HUC	Hydrologic Unit Code
IA	Indian Allotment
JAN	Jicarilla Apache Nation
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
NGWSP	Navajo–Gallup Water Supply Project
NHPD	Navajo Nation Historic Preservation Department
NM	New Mexico
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
PLO	Public Land Order
PLS	Pure Live Seed
RMP	Resource Management Plan
RPFO	Rio Puerco Field Office
ROD	Record of Decision
ROW	Right-of-way
SAR	Sodium Absorption Ratio
SDA	Specially Designated Areas
SHPO	State Historic Preservation Office (New Mexico)
SMA	Souder, Miller and Associates
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
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VRI	Visual Resources Inventory
VRM	Visual Resource Management

TABLE OF CONTENTS

List of Acronyms	i
1. Purpose and Need for Action.....	1
1.1. Background	1
1.2. Purpose and Need for Action	2
1.3. Conformance with Applicable Land Use Plan(s).....	2
1.4. Relationship to Statutes, Regulations or Other Plans	3
1.5. Scoping, Public Involvement, and Issues.....	5
2. Proposed action and Alternative(s)	8
2.1. Elements Common to All Action Alternatives.....	8
2.2. Alternative A—ACEC Reroute	13
2.3. Alternative B—Original ACEC Route	14
2.4. No Action	14
2.5. Alternatives Considered but Eliminated from Detailed Analysis	16
3. Affected Environment and Environmental Consequences	18
3.1. Methods.....	18
3.2. Air Resources	18
3.3. Soil Resources	22
3.4. Water Resources.....	24
3.5. Upland Vegetation	26
3.6. Noxious Weeds and Invasive Species	29
3.7. Fish and Wildlife	30
3.8. Special Status Species.....	33
3.9. Cultural Resources	42
3.10. Land Use	45
3.11. Transportation and Travel Management	45
3.12. Recreation	46
3.13. Visual Resources.....	48
3.14. Livestock Grazing	52
3.15. ACEC.....	53
3.16. Environmental Justice/Socio-Economics	56
3.17. Public Health and Safety	60
4. Supporting Information	61
4.1. Tribes, Individuals, Organizations, or Agencies Consulted.....	61
4.2. List of Preparers	61
4.3. References	63

Appendices

Appendix A. Chapter Resolution	A-1
Appendix B. Re-vegetation Plan	B-1
Appendix C. Biological resources compliance form	C-1
Appendix D. Cultural resources compliance form.....	D-1

Appendix E. Visual Contrast Rating Forms.....	E-1
---	-----

List of Figures

Figure 1. Vicinity map showing the proposed project location in McKinley and Sandoval Counties	6
Figure 2. Locations of proposed alignments and associated infrastructure.....	7
Figure 3. Reach 26.3 Horizontal Drilling Location Plan for Alternative B, Original ACEC Route	15
Figure 4. Dismissed Alternatives and Land Status	17
Figure 5. Reach 26.3 facing southeast Figure 6.. Reach 26.3 facing east.....	27
Figure 7. Example of clearing of pipeline right-of-way through shrub-dominated vegetation	28
Figure 8. Existing Road Network.....	47
Figure 9. Proposed Reach 26.3 VRM Classes	51
Figure 10. Existing Two-track the Proposed Alternative A Alignment would follow.....	52
Figure 11. Grazing allotments and land ownership.....	55

List of Tables

Table 1. Alternative A ROW Surface Ownership Summary	14
Table 2. Alternative B ROW Surface Ownership Summary	14
Table 3. Criteria Pollutant Monitored Values in San Juan County	20
Table 4. Criteria pollutant design value concentrations monitored in San Juan County.....	20
Table 5. 1981–2010 Climate Normals for the Project Area.....	21
Table 6. Soil types in the analysis area, characteristics, and management concerns.....	22
Table 7. Migratory birds with potential to occur in the project area.....	31
Table 8. Federally and Navajo Group 2-listed species	34
Table 9. Fish and Wildlife Service Species of Concern, BLM RPFO and FFO Special Management and Sensitive species, Navajo Group 3 and 4 species, and eagles, with potential to occur in Sandoval and McKinley Counties.....	37
Table 10. Grazing allotments in the proposed project area	52
Table 11. Project Area County Population in Poverty (2002–2012)	57
Table 12. Project Area Key Community Race/Ethnicity and Poverty Data	57
Table 13. Project Area County Population by Race/Ethnicity (2008–2012).....	58

1. PURPOSE AND NEED FOR ACTION

1.1. Background

The Navajo-Gallup Water Supply Project (NGWSP) is a planned regional water-supply system that would distribute San Juan River surface waters to the eastern section of the Navajo Nation, the city of Gallup, New Mexico, and the southwestern part of the Jicarilla Apache Nation (JAN). 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 26.3 is a segment of the NGWSP project that would include a water line, up to 3 water storage tanks, a chlorination building, and about a 2.1 mile power line. This reach would transport potable water to Ojo Encino and Torreon Chapters of the Navajo Nation. Currently, the Torreon Chapter does not have a sufficient water supply to meet the current and projected water needs due to low production rate of its 6 wells—4 are running dry and 2 have poor water quality (oil contaminants, and high chloride, iron, TDS, and sulfate concentrations)—,and the ongoing drought conditions. Both the Chapter and the State of New Mexico Environment Department have declared a state of emergency in Torreon due to a lack of water supply. Furthermore, the New Mexico Environment Department stated that the water emergency situation poses an imminent threat to public health, safety, and welfare to the members of the Torreon Chapter due to lack of portable water for sanitation purposes as they are required to use outhouses (Appendix A).

The proposed Reach 26.3 waterline alignment is located in McKinley and Sandoval Counties, New Mexico, as shown in Figure 1. The alignment would cross lands administered by the Navajo Nation, Bureau of Indian Affairs (BIA), and Bureau of Land Management (BLM; Figure 2). The general legal description for the proposed NGWSP Reach 26.3 action alternatives includes:

Alternative A

Portions of Sections 2, 3, 4, 5, 11, and 12 of Township 20 North, Range 5 West

Portions of Sections 19, 29, 30, and 32 of Township 21 North, Range 5 West

Portions of Sections 13 and 24 of Township 21 North, Range 6 West

Alternative B

Portions of Sections 2, 3, 4, 11, and 12 of Township 20 North, Range 5 West

Portions of Sections 19, 29, 30, 32, and 33 of Township 21 North, Range 5 West

Portions of Sections 13 and 24 of Township 21 North, Range 6 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 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. 11-11 are described in the preferred alternative in the FEIS-NGWSP. The FEIS-NGWSP is available for review at

1 Reclamation's Western Colorado Area Office, Durango, Colorado, or on the World Wide Web at
2 <http://www.usbr.gov/uc/envdocs/eis/navgallup/FEIS/index.html>. The site-specific analysis contained
3 herein tiers to and incorporates by reference the information and analysis in the Reclamation FEIS-
4 NGWSP.

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

15 **1.2. Purpose and Need for Action**

16 The purpose of the Proposed action is to provide the proponent with access to BLM-managed lands and
17 Navajo Nation Tribal Trust and Indian allotment lands managed by the BIA Navajo Region for right-of-way
18 (ROW) access for Reach 26.3 of the NGWSP.

19 The need of the action is established by Title V of the Federal Land Policy and Management Act (FLPMA)
20 of October 21, 1976 (43 USC 1761 et seq.) as amended, BLM will issue ROW grants for pipelines (other
21 than oil and gas pipelines) and other facilities and systems which are in the public interest. It is the policy
22 of the BLM to authorize all ROW applications at the discretion of the authorized office in the most efficient
23 and economical manner possible while protecting the natural environment and providing for public safety
24 (43 CFR 2800 and 2880). In addition, the BIA is to authorize all ROW applications that are within a
25 reservation for the purpose of constructing, operating, or maintaining water conduits (40 CFR 169).
26 Reclamation is the lead project sponsor with BLM and BIA as cooperating agencies. The Navajo Nation
27 and Reclamation have entered a Financial Assistance Agreement, whereby Reclamation is providing
28 funding for the Navajo Nation to construct Reach 26.3 of the NGWSP.

29 An approved ROW grant issued by BLM would authorize the Navajo Tribal Utility Authority (NTUA) to
30 construct Reach 26.3, a segment of the NGWSP. An approved ROW grant from BLM would further
31 progress towards a suitable, long-term water supply for a number of underserved communities in
32 northwestern New Mexico. The Torreon Chapter of the Navajo Nation issued

33 An approved ROW grant issued by the BIA would authorize NTUA to construct Reach 26.3 segments on
34 Navajo tribal trust and Indian allotment lands. An approved ROW grant from the BIA would further
35 progress towards a suitable, long-term water supply for members of the Navajo Nation. The proposed
36 project would also facilitate self-governance and sovereignty goals of the Navajo Nation.

37 **1.3. Conformance with Applicable Land Use Plan(s)**

38 The Proposed action is in conformance with the September 2003 Farmington Resource Management
39 Plan with Record of Decision, as updated in December 2003 (BLM, 2003). The proposal is recognized as
40 an appropriate use of public lands in the FFO planning area Resource Management Plan. The proposed
41 action is in conformance with the Farmington RMP. Specifically the Proposed action is in conformance
42 with the objective of the FFO lands program to grant ROWs to qualified businesses and government
43 entities for use of public lands (BLM 2003, pages 2-5 and 2-6). The Proposed action also is in
44 conformance with the 1986 Rio Puerco Resource Management Plan and ROD (BLM 1986), as amended.
45 The BLM has prepared a revised Draft Resource Management Plan (RMP) and Environmental Impact
46 Statement (EIS) to analyze and update BLM's management of public lands managed by the Rio Puerco
47 Field Office. The Proposed action is in conformance with each of the action alternatives that are being
48 analyzed and could become the revised RMP. Special Designated Areas (SDAs) and Areas of Critical
49 Environmental Concern (ACECs) for the FFO were identified in the RMP/EIS under authority of the

FLPMA allowing for multiple use of lands administered by the BLM. The pipeline and other improvements associated with Reach 26.3 will cross a portion of the Torreon Fossil Fauna West ACEC; however, the Proposed action is in conformance with the objectives of the ACEC—protect the area for scientific research (BLM 1992, page 120).

The Proposed action is in compliance with the Land Use Plans for the Ojo Encino and Torreon Navajo Chapters (ARC 2002, 2003). Providing more Chapter members with access to domestic water is a high priority in both Chapter Land Use Plans, which mention NGWSP as a proposed project.

1.4. Relationship to Statutes, Regulations or Other Plans

The Navajo Nation would comply with all applicable federal, tribal, 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 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 indicates no need for additional Section 7 consultation (Ecosystem Management, Inc. 2014a).

The Navajo Tribal Utility Authority has filed a ROW application with the Farmington Field Office of the Bureau of Land Management (BLM FFO) for proposed construction of Reach 26.3 of the NGWSP. NTUA will apply for a ROW application with the BIA for proposed construction of Reach 26.3 on Tribal Trust, Indian Allotment, and PLO lands. Jemez Mountains Electric Cooperative, Inc. (JMEC) will file a ROW application for the power lines with both BLM and BIA traversing BLM and Tribal Trust lands, respectively. 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),

- 1 • The National Historic Preservation Act of 1966, as amended (P.L. 89-665),
- 2 • The Archaeological and Historic Preservation Act of 1974 (P.L. 86-253),
- 3 • The Archaeological Resources Protection Act of 1979, as amended (P.L. 96-95),
- 4 • The American Indian Religious Freedom Act of 1978, as amended (42 U.S.C. 1996), and
- 5 • The Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601).

6 The MBTA prohibits the taking, killing, or possessing of migratory birds. Executive Order (EO) 13186 was
7 signed on January 10, 2001, directing executive departments and agencies of the federal government to
8 take certain actions to further implement the MBTA including developing and implementing a
9 Memorandum of Understanding (MOU) with the USFWS that would promote the conservation of
10 migratory bird populations. A MOU was developed and entered into by the BLM and USFWS on April 12,
11 2010, to accomplish EO 13186 and to ensure the successful implementation of BLM and USFWS
12 migratory bird conservation responsibilities. The MOU to *Promote the Conservation of Migratory Birds*
13 presents collaborative methods to promote the conservation of migratory bird populations by identifying
14 and implementing strategies which avoid or minimize adverse impacts to migratory birds. The BLM and
15 USFWS have agreed that implementation of the MOU will be in harmony with existing agency missions,
16 and the MOU does not supersede any legal requirements or existing species conservation processes and
17 procedures such as ESA recovery plans. Reclamation does not have an MOU in place with the USFWS
18 for management of migratory birds; a MBTA Directives and Management document is in draft form only.
19 Reclamation analyzes and documents effects to migratory birds during the NEPA process and avoids or
20 mitigates those effects to the maximum extent feasible.

21 The MOU to *Promote the Conservation of Migratory Birds* entered into by the BLM and the USFWS was
22 not completed during the development of the RPFO RMP or the revised FFO RMP. Consultation on the
23 Biological Assessment (BA) with the USFWS for the RMP was completed on October 2002, the EIS was
24 completed in March 2003, and the ROD for the RMP was signed in September of 2003. There are no
25 management constraints or mitigation measures pertaining to the MBTA listed within the RMP, BA, EIS,
26 or ROD. Revision and/or adoption of some elements of the MOU into the RMP may be required.
27 Currently, effects to migratory birds are addressed and mitigated at the project level as outlined in the
28 Migratory Bird Treaty Act BLM/FFO Interim Management Policy (Instruction Memorandum No. NM-F00-
29 2010-001, USDI/BLM 2010).

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

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

- 37 • Navajo Endangered Species Act
- 38 • Resource Land Clearance Policies and Procedures
- 39 • Bald and Golden Eagle Protection Act

40 As the lead agency for the entire NGWSP, Reclamation has developed a Programmatic Agreement for
41 compliance with the National Historic Preservation Act between the project participants. Reclamation,
42 BLM, the Navajo Nation Tribal Historic Preservation Officer (THPO), the BIA, the New Mexico State
43 Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP) are
44 signatories to the Programmatic Agreement. Consulting parties to the Programmatic Agreement include
45 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. 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 Reach 26.3 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.

Compliance with the provisions of the 2009 Paleontological Resources Protection Act (PRPA; Public Law 111-011) requires that the Department of the Interior consider the potential impacts of development plans on significant fossil resources and allow for the implementation of mitigation measures where necessary. Initial compliance is an internal process where the potential for significant paleontological resources to be present is established by a review of the Potential Fossil Yield Classification System (PFYC) for the Area of Potential Effects (APE). Numerical ranking of the associated geological formations under the PFYC system in terms of fossil potential dictates the direction of additional compliance measures. These may range from a determination of no effect to the requirement that a paleontological survey be conducted by appropriate specialists and that further action adheres to any subsequent recommendations.

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 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.

Since 2006, Souder Miller and Associates has facilitated meetings with chapter officials, Navajo Nation Council delegates, Jicarilla Apache Nation officials, other government officials, and residents of ten area chapters, including Ojo Encino, Counselor, and Torreon Chapters, which would be provided water by the proposed waterline alignment. The meetings are typically held every 2–3 months, and rotate between the different chapter houses. To date, approximately 33 such meetings have been held. These meetings are typically scheduled 1–2 months in advance and are publicized at each of the chapters' public chapter meetings and bulletin boards. All major problems and decisions regarding project planning, design, ROW acquisition, and construction are discussed in these public forums.

1.5.1. Issues Dismissed from the Analysis

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

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.

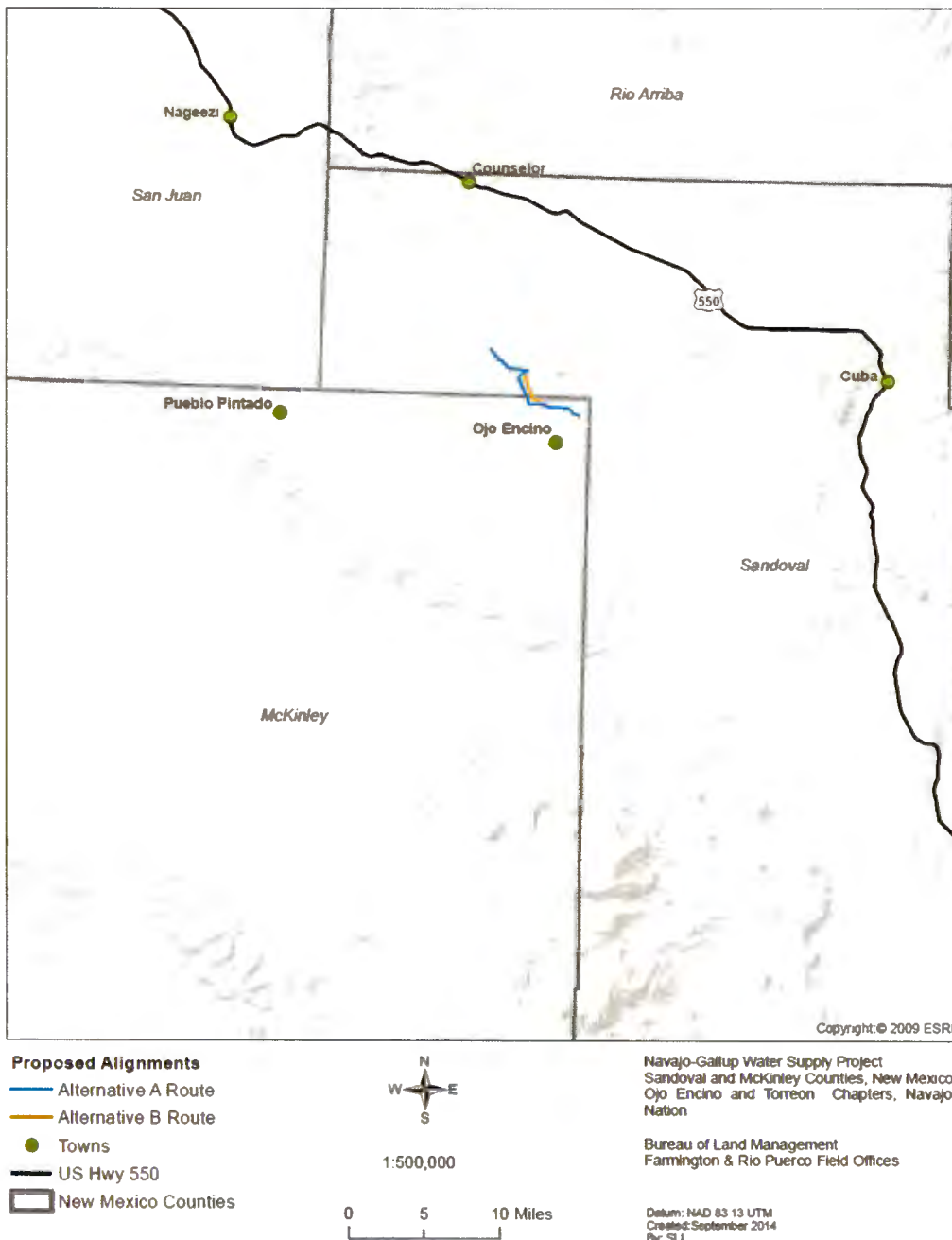


Figure 1. Vicinity map showing the proposed project location in McKinley and Sandoval Counties

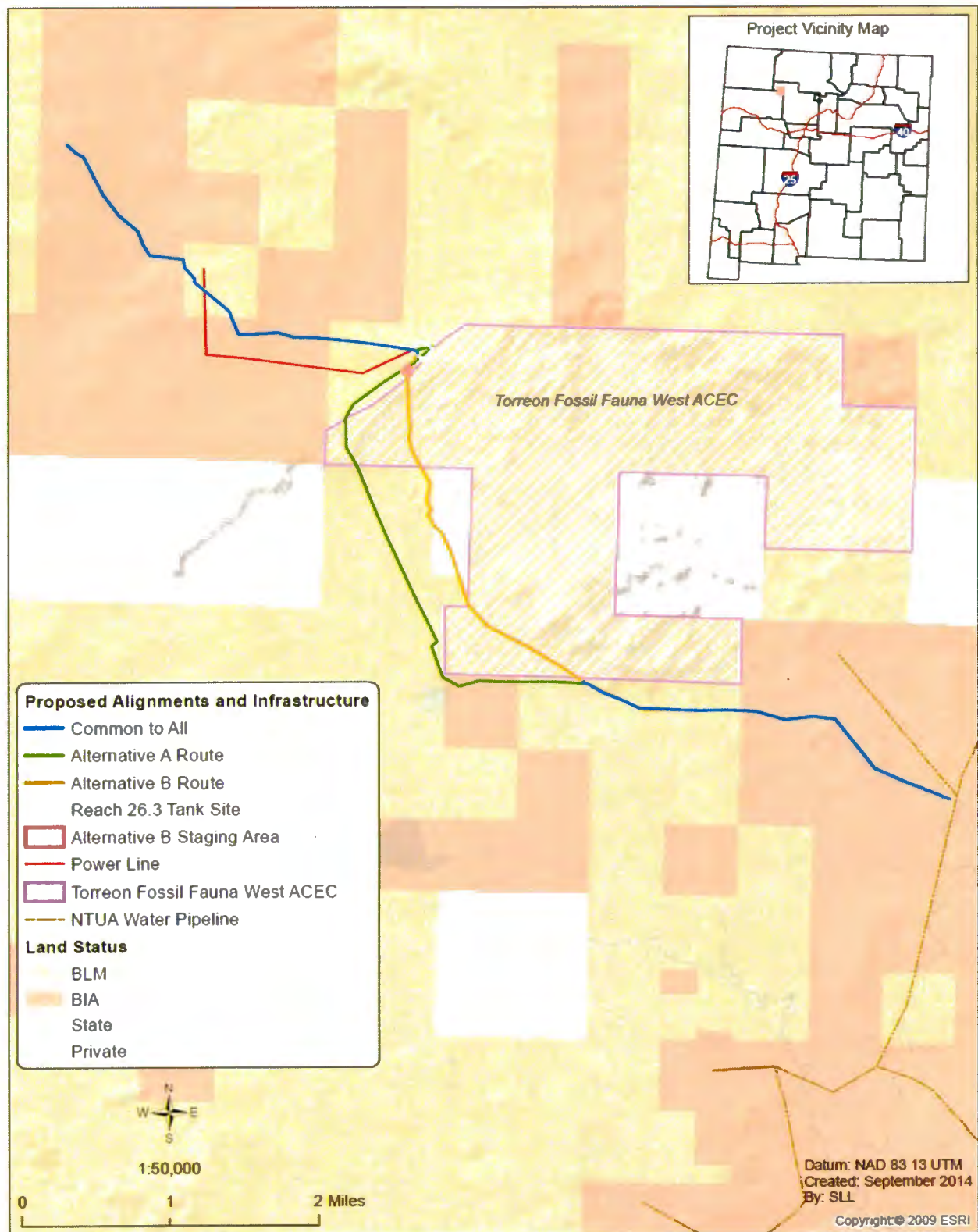


Figure 2. Locations of proposed alignments and associated infrastructure

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 Reach 26.3 of the NGWSP. Construction would consist of disturbing lands along the proposed pipeline and is anticipated to occur from 2014 to 2017. The approval would provide for the construction of one reach of the NGWSP, designated as Reach 26.3. This reach would transport potable water from the tee at the end of Reach 26.1 southeastward to the proposed storage and treatment facility and to an existing NTUA pipeline. Pipeline construction would require a temporary construction easement (TCE) and permanent right-of-way. In addition, the associated power line, water tank, and drain line would require about 14 acres of new permanent easements and 5 acres of TCE. The completed water pipeline would be maintained and operated by NTUA with Reclamation providing assistance as needed for the first 10 years.

2.1.1. *Reach Description*

The following describes the reach and the associated work. See Figure 2 for a map of the proposed alignment of Reach 26.3 including the proposed water pipeline, water storage tank/chlorination site, and power line.

Reach 26.3

From the tee at the end of Reach 26.1, Reach 26.3 branches off and traverses southeastward to the proposed Reach 26.3 Tank Site (storage and treatment facility) located in portions of section 29 of Township 21 North, Range 5 West, which includes a regulation tank and distribution tank. This first portion of Reach 26.3 would include 10- or 12-inch Polyvinyl chloride (PVC) and high density polyethylene (HDPE) pipe. From the proposed Ojo Encino South Tank Site, Reach 26.3 would include with 12-inch PVC and/or HDPE pipe that continues southeastward connecting to an existing NTUA pipeline in portions of section 12 of Township 20 North, Range 5 West.

2.1.2. *Right-of-Way Requirements*

For safe and efficient pipeline construction, a permanent ROW easement and TCE would be obtained from public, tribal and non-tribal entities along the length of the pipeline (Tables 1–2). The ROW and TCE for this project together would total 100 feet in width along the entirety of 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 40-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 60-foot TCE is comprised of two 30-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 Alternatives. The TCE would expire at final completion of the project when project ownership is transferred over to the NTUA.

The associated NGWSP facilities (including water tanks, chlorination site, drain lines and power line) would each require a permanent easement. The total area required for permanent easements to accommodate the water storage and chlorination facilities totals approximately 14 acres. Approximately 5 acres of additional TCE is required for power line construction.

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 20 feet in some areas 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.

At a minimum, two large washes will be crossed by installing fusible HDPE and/or PVC pipe by horizontal directional drilling (HDD). An additional 2.5 acres of TCE has been added to be used as staging areas on Indian Allotment (IA) lands (IA 468 and IA 470) while constructing the HDD wash crossings.

2.1.4. Construction of Water Storage and Chlorination Site

One water storage and chlorination site is included within the scope of the project. This site is located at the end of the first portion of Reach 26.3 in section 29 of Township 21 North, Range 5 West.

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

- Presence and size of existing storage 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 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, placement of prefabricated chlorination buildings, 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. The construction activities would be confined to the easement at all times during construction.

The tank site is without power and would require the construction of a single-phase power line for which separate ROW and TCE would be acquired. All project power lines would be constructed and maintained by JMEC. The power line, which lies on both BLM and Navajo Allotment lands, would have a 20-foot ROW on Navajo Allotment lands with an additional 20-foot TCE and a 30-foot ROW on BLM land with an

1 additional 10 feet of TCE. Permanent ROWs would be centered on the proposed power line alignment.
2 The TCEs would be placed on each side of the permanent ROW. The TCE would expire after
3 construction of the power line is complete. All power line construction activities would be confined within
4 the ROW and TCE at all times during construction.

5 The **Reach 26.3 Tank Site** would provide water storage and chlorination for Ojo Encino and Torreon
6 Navajo Chapters. There are no existing site facilities. Proposed new construction includes installation of a
7 steel regulation tank and two 1,000,000-gallon steel distribution tanks. Construction of one of the
8 1,000,000-gallon distribution tanks will be deferred. Additionally, a new chlorination building must be
9 constructed on the site. Drain lines from new tanks and chlorination building would discharge into an
10 existing wash on the northern edge of the site. Discharges of untreated or treated drinking water from the
11 tanks and chlorination buildings may be periodically made when disinfecting, flushing, filling or emptying
12 the tanks and associated piping.

13 The proposed new facilities would require approximately 7.2 acres of permanent easement. Additionally,
14 a new single-phase power line is proposed to provide power to the site. The estimated length of the
15 power line is 2.1 miles, requiring a permanent easement area approximately 6.5 acres and TCE of 4.7
16 acres.

17 **2.1.5. Design Features, Stipulations, and Requirements**

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

22 *Visual Resource Management*

- 23 • Above-ground structures are required to be painted in one of five colors designated to blend with
24 the natural color of the landscape (USDI/BLM 2003b, pages 2–20).
- 25 • Permit holders are required to coordinate with the Authorized Officer on the design and color of
26 power poles and transmission lines to achieve minimal practicable visual impacts. USDI/BLM
27 2003b, pages 2–20).

28 *Soils and Water*

- 29 • Disturbed areas would be reseeded following specifications using designated seed mixtures
30 within one year of final construction (USDI/BLM 2003b, pages 2–21; see Appendix B Re-
31 vegetation Plan).
- 32 • No construction or routine maintenance activities shall be performed during periods when the soil
33 is too wet to adequately support construction equipment. If such equipment creates ruts in excess
34 of six inches deep, the soil shall be deemed too wet to work (USDI/BLM 2003b, pages 2–21).
- 35 • Any roads used exclusively for construction purposes shall be adequately closed to all vehicular
36 travel and rehabilitated after completion of construction (USDI/BLM 2003b, pages 2–21).
- 37 • Disturbed areas would be reclaimed as described in the Re-vegetation Plan (included as
38 Appendix B) prepared in accordance with the Farmington Field Office Bare Soil Reclamation
39 Procedures published January 2013 and available on the World Wide Web at
40 http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html
- 41 • Navajo Nation would use accepted erosion control measures during construction, supplement
42 grass seeding with native shrub seed in upland areas where shrub cover is diminished due to
43 pipeline disturbance, monitor planting to ensure establishment, and control noxious weeds in
44 disturbed areas (Reclamation 2009, pages 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).
- Navajo Nation 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 would 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, pages 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 re-vegetation process.

Wildlife/Special Status Species

- 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, pages 2–26).
- Navajo Nation would ensure that construction contractors limit ground disturbance to the smallest feasible areas and that they implement Best Management Practices (BMPs) along with the planning or re-seeding of disturbed areas using native plant species to assist in the re-establishment of native vegetation (Reclamation 2009, pages VI–4).
- Navajo Nation would incorporate raptor perch guards or raptor safe configurations on all new transmission structures (Reclamation 2009, pages VI–4). Transmission lines that pose a high collision risk could be marked with spiral vibration dampers or bird flight diverters.
- Navajo Nation would trench and bury pipeline concurrently to minimize trapping of small wildlife. Reclamation would construct escape ramps for trenches left open overnight (Reclamation 2009, pages VI–4).
- 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. 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, pages V-88).
- Construction could be managed to avoid intentional disturbance of dens for kit fox, as construction activities may discourage or disrupt denning activities (Reclamation 2009, pages V-88).
- No construction activities would be permitted from May 15 to July 31 for BLM FFO without a migratory bird nest survey. These surveys would 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 would not be permitted until written approval by a BLM/FFO biologist. The BLM/FFO would monitor any active nests located from a nest survey. On Navajo Nation lands no construction activities would be allowed from March 1–August 15 for Navajo Nation Department of Fish and Wildlife (NNDFW) without first performing migratory bird nest surveys. NNDFW stipulates no disturbance within 165 feet of active 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)

Riparian Areas

- When riparian vegetation cannot be avoided during the permitted project, the permittee is responsible to reestablish any riparian vegetation lost during construction. Cottonwoods would be replaced on a 10-to-1 ratio and willows would be replaced on a 3-to-1 ratio. Sediment barrier fences would 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, pages 2–33).

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, pages 2–36).

- All cut fences are to be tied to H-braces prior to cutting. The opening would be protected as necessary during construction to prevent the escape of livestock (USDI/BLM 2003b, pages 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, pages 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, pages 2–36).
- Cattle guards may be required when new roads cross existing fence lines (USDI/BLM 2003b pages 2–36).
- Navajo Nation would ensure that construction contractors fenced revegetated areas to prevent grazing activities until disturbed areas became reestablished, and Reclamation would work with the Navajo Nation to provide temporary relocation assistance to affected livestock owners along the pipeline corridor (Reclamation 2009, pages 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, an operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery would 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 would 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 or BIA if on Tribal trust lands. Further investigation would dictate site-specific stipulations for avoidance or salvage of any significant paleontological resources (USDI/BLM 2003b, pages 2–39).

Hazardous Materials

- Navajo Nation 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, pages VI–6).

2.2. Alternative A—ACEC Reroute

The proposed pipeline alignment is 9.5 miles with 0.3 miles within the ACEC (Figure 2). This first portion of Reach 26.3 would include 2.1 miles of 10- or 12-inch PVC and/or HDPE pipeline. From the proposed Reach 26.3 Tank Site, the alignment would continue southeastward connecting to an existing NTUA

pipeline in portions of section 12 of Township 20 North, Range 5 West, totaling about 6.3 miles of 12-inch PVC and/or HDPE pipeline. Pipeline construction would require a TCE totaling about 69 acres and permanent right-of-way totaling about 46 acres. The proposed 1,000,000-gallon steel regulation tank height would be approximately 32 feet and located outside the ACEC.

The TCE and ROW for the pipeline and infrastructure would total approximately 133 acres, and after construction activities are completed, the permanent ROW would be about 60 acres (Table 1).

Table 1. Alternative A ROW Surface Ownership Summary

Surface Ownership	TCE (acres)	ROW (acres)	Total (acres)
BLM	38.5	36.9	75.4
Navajo Tribal Trust Lands	5.9	4.0	9.9
Navajo Allotment Land	29.0	18.6	47.6

2.3. Alternative B—Original ACEC Route

This alignment is the most direct route to Torreon, totaling 8.6 miles with 1.8 miles within the ACEC (Figure 2). Directional horizontal drilling would be used to bore under the badlands and open trenching used elsewhere. Boring would start on top of the mesa south of the dirt road and bore > 100 feet deep under the ACEC using, an 18-inch bore or smaller and stop boring in the flats beyond the toe of the badlands (Figure 3). The tank size, location, and height would be the same as Alternative A. This first portion of Reach 26.3 would include 3.1 miles of 10-inch PVC or HDPE pipeline. From the proposed Reach 26.3 Tank Site, this pipeline alignment would continue southeastward, totaling about 5.5 miles of 12-inch PVC or HDPE pipeline. Pipeline construction would require a TCE totaling about 63 acres and permanent right-of-way totaling about 40 acres.

The TCE and ROW for the pipeline and infrastructure would total approximately 127 acres, and after construction activities are completed, the permanent ROW would be about 56 acres (Table 2).

Table 2. Alternative B ROW Surface Ownership Summary

Surface Ownership	TCE (acres)	ROW (acres)	Total (acres)
BLM	37.5	33.6	71.1
Navajo Tribal Trust Lands	2.1	1.5	3.6
Navajo Allotment Land	29.0	18.6	47.6
State	2.9	2.0	4.9

2.4. No Action

The BLM NEPA Handbook (H-1 90-1) states that for 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.



Figure 3. Reach 26.3 Horizontal Drilling Location Plan for Alternative B, Original ACEC Route

2.5. Alternatives Considered but Eliminated from Detailed Analysis

Variations in the alignment of Reach 26.3 were considered in the development of the project to address potential problems associated with ROW acquisition and protection of the ACEC on BLM lands.

Tall Tank Route—This route would bypass the ACEC and private lands with the proposed pipeline totaling 11.9 miles (Figure 4). Pipeline construction would require a TCE totaling about 87 acres and permanent right-of-way totaling about 58 acres. The proposed 2,400,000-gallon regulation tank height would be 64 feet and located partially inside the ACEC. In order to provide enough elevation pressure to push water through the pipe downstream from the tank to Torreon, the tank would have to be taller, 64 feet specifically. This alternative could have significantly lower water quality due to longer time water spends in a pipe before reaching its destination from the longer pipeline and 1.5 million gallons of dead volume within the tank. The dead volume reduces the amount of mixing within the tank, which leads to water stagnation and contributes to deterioration in water quality. Regular flushing of the tank and pipeline to remove stagnant water and bacterial growth would be required. Additional chlorine "shock treatments" to clean the tank and pipeline may be required, which would discharge millions of gallons of water each treatment. This alternative was dismissed due to the water quality and public health issues from a longer pipeline and taller tank.

Larger Pipe Diameter Route—This route would be the same as the Taller Tank Route, except the proposed pipeline would have a larger pipe diameter and the distribution tank would be outside the ACEC (Figure 4). The pipeline would include 3 miles of 10-inch and 8.9 miles of 14-inch PVC pipe. Due to the larger pipe diameter, the pipe flushing velocity would be reduced to 1.88 feet per second, compared with the 2.50 feet per second recommended minimum. This route poses the greatest risk to public health, as flushing velocity is important in water moving fast enough to scour the insides of the pipeline walls to prevent biofilms from accumulating. If the water in the pipe does not have the appropriate flushing velocity for scouring, bacteria can grow in the biofilm and accumulate for weeks or months regardless of the time water spends in a pipe before reaching its destination. Thus, this alternative route was dismissed due to the increased risk to public health.

Private Land Route—A route that bypassed the ACEC by crossing the Chemo Duran property, which is located kitty-corner to the western boundary of the ACEC was considered (Figure 4). This property lacks clear title and is not insurable by title companies; three different title insurance companies were contacted. Federal funded projects cannot be sued to install infrastructure within lands that lack clear title, nor is the Navajo Nation able to accept ownership or maintenance responsibilities for facilities on land without clear title for the rights-of-way. Therefore, this alternative route was dismissed from further analysis.

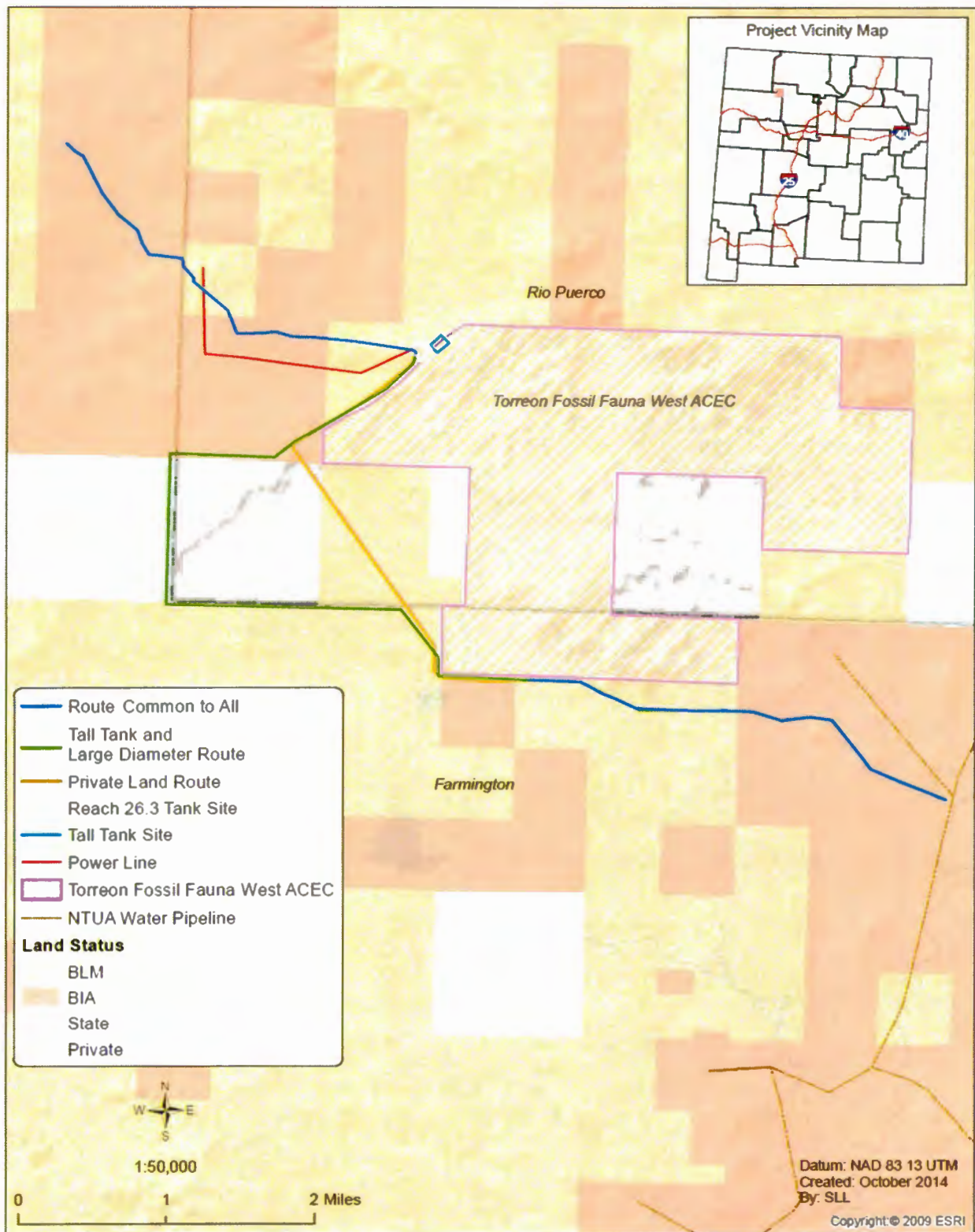


Figure 4. Dismissed Alternatives and Land Status

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 section 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, development, and distribution, and infrastructural development such as roads. Arroyo Chico and Chaco Wash watersheds were the proposed project area is located contains approximately 3,700,000 acres with about 34,000 acres of long-term surface disturbance from oil and gas wells and associated access roads; 30 existing oil and gas wells (USDI/BLM 2003a). The Arroyo Chico and Chaco Wash watersheds have 60 grazing allotments that cover approximately 1,950,800 acres; approximately 47,700 animal use months (AUMs; 3,900 RPFO, 43,800 FFO).

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 well predictions in the 2003 RMP/FEIS, about 71 new well sites would be constructed with 264 acres of surface disturbance. With the addition of these wells, approximately 6 miles of new access roads would be constructed, resulting in no increase in disturbance for the watersheds. Although these actions probably 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 Sandoval and McKinley Counties, New Mexico. Additional general information on air quality in the area is contained in Chapter 3 of the Farmington PRMP/FEIS. In addition,

new information about greenhouse gases (GHGs), and their effects on national and global climate conditions has emerged since this document was prepared. On-going scientific research has identified the potential impacts of GHG emissions such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), 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) (U.S. Department of Interior Bureau of Land Management, 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 (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂) 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

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 (US EPA 2013a) reports that all counties in the Rio Puerco and Farmington Field Offices areas 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 3. 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 (US EPA 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 3. 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 ^{3,4}	60 µg/m ^{3,6}
PM _{2.5}	14 µg/m ³	24 hour	35 µg/m ^{3,3}	150 µg/m ^{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 4). 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 4. 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

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 proposed project 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 5). 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 5. 1981–2010 Climate Normals for the Project 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 Alternatives

Direct and Indirect Impacts

Air Quality and Climate

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 alternatives would be temporary and minor. Project activities that would produce emissions would continue for the three-year period from 2015–2018. 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 alternatives. 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 anticipated 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 alternatives 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 proposed alternatives on global or regional climate.

Cumulative Impacts

Reach 26.3 is part of the NGWSP in New Mexico and 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/BOR 2007, pages v–124). Other factors that currently affect air quality in the area include dust from livestock herding activities, potential recreational use, and 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 proposed project area. This planned weed-treatment project would be unlikely to affect air quality or climate change.

Both the FFO and RPFO manage Federal hydrocarbon resources in their respective planning areas. There are approximately 21,150 wells in the San Juan Basin. About 14,843 of the wells in these counties are Federal wells. 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 and in the 2011 draft RPFO

RMP. This included modeling of impacts on air quality. A more detailed discussion of Cumulative Effects can be found in the Air Resources Technical Report (USDI/BLM 2014).

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. Sources that are considered to have notable contributions to air quality impacts and GHG emissions include electrical generating units, fossil fuel production (nationally and regionally), and transportation.

The proposed project could result in a small direct and indirect increase in several criteria pollutants, HAPs, and GHGs as a result the short-term construction activity. The 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 alternatives 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 6 presents the soils mapped in the project area.

Table 6. Soil types in the analysis area, characteristics, and management concerns

Map Unit/Symbol	Textures	Parental Materials	Drainage Class and Available Water Capacity
Tsosie–Councelor–Blancot fine sandy loams, 1-to-3-percent slopes 10	fine sandy loam	fan alluvium derived from sandstone and shale, fan and stream alluvium derived from sandstone and shale, eolian material and fan and stream alluvium derived from sandstone	well drained moderately high
Doakum-Betonnie complex, 1-to-8-percent slopes	sandy loam	eolian material and fan and slope alluvium derived from sandstone and shale	somewhat excessive to well drained low to

Map Unit/Symbol	Textures	Parental Materials	Drainage Class and Available Water Capacity
11			moderate
Calladito–Elias association, 1-to-6-percent slopes 12	Loamy fine sand	eolian material derived from sandstone	excessively drained high
Councilor-Eslendo-Calladito complex, 2-to-25-percent slopes 14	loam, clay loam, fine sandy loam	eolian deposits derived from sandstone, eolian material and fan alluvium derived from sandstone, slope alluvium over residuum derived from sandstone and shale	well drained moderately high
Badlands 57	Badland	badland	n/a
Doakum-Bentonnie frin sandy loams, 0-to-8-percent slopes 150	fine sandy loams	eolian deposits over slope alluvium derived from sandstone and shale	well drained moderately high
Blancot–Councilor–Tsosie association, 0-to-5-percent slopes 270	fine sandy loam, sandy clay loam	eolian deposits over stream alluvium derived from sandstone and shale, fan alluvium derived from sandstone and shale	well drained moderate

Source: U.S. Department of Agriculture Natural Resources Conservation Service 2008.

3.3.2. Impacts from Proposed Alternative A—ACEC Reroute

Direct and Indirect Impacts

Approximately 115 acres of soil disturbance would occur to construct the waterline and about 18 acres would be disturbed to construct the tank and chlorination site, power line, and drain lines. 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 implementation of the design features. Topsoil will be conserved for reclamation (see section 2.1.5). 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 Re-vegetation Plan (see Appendix B) would decrease long-term soil erosion effects. The proposed pipeline alignment is co-located alongside existing roads and utility ROWs 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 90% 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 re-vegetation and stabilization actions are completed and new vegetation becomes established.

Cumulative Impacts

Under Proposed Alternative A, 133 acres of soil disturbance would occur, causing soil compaction and displacement, which could temporarily affect soil porosity, water holding capacity, aeration, and productivity. Surface disturbances from oil and gas development and associated 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 also 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 26.3 and associated infrastructure with implementation of the design features (Section 2.1.5) and reclamation (see Appendix B).

3.3.3. Impacts from Proposed Alternative B—Original ACEC Route

Direct and Indirect Impacts

Direct and indirect impacts to soils from construction of the pipeline and infrastructure would be the same as Proposed Alternative A, but would disturb about 127 acres of soils. Due to the decrease in surface disturbance, the potential for adverse impacts in the short-term would decrease compared to Proposed Alternative A.

Cumulative Impacts

Cumulative impacts would be the same as Proposed Alternative A, but would include less temporary surface disturbance.

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 local hydrology is dominated by Cañada Corrales, Encino Wash, Toledo Arroyo, and unnamed washes. These are all ephemeral washes; there are no perennial waters in the project area. Runoff in the project area north of the Continental Divide would eventually reach the San Juan River; runoff south of the divide would reach the Rio Grande, both via multiple ephemeral wash tributaries. The proposed project is in the Chaco and Arroyo Chico subbasins and Rio Grande—Elephant Butte and upper San Juan basins. The 12-digit hydrologic unit codes (HUC) are 140801060102, 140801060101, and 130202050501.

1 The principal aquifer in the proposed project area is the Colorado Plateau sandstone aquifers. The
2 ground to water depth varies. The quality of groundwater in the San Juan Basin generally ranges from fair
3 to poor.

4 **3.4.2. Impacts from Proposed Alternative A—ACEC Route**

5 **Direct and Indirect Impacts**

6 The clearing of vegetation for ROWs, TCEs, tank and chlorination site, a power line, and trenching for the
7 waterlines would create exposed soils. Soil movement, resulting from both wind and water action, could
8 occur within the construction zones. The amount of soil movement and potential for sediment transport to
9 stream courses would depend on wind and water events in relation to soil disturbance, the effectiveness
10 of erosion control measures, and the timing and success of reclamation. About 115 acres would be
11 disturbed within the pipeline ROW and TCE, and about 18 acres in areas where construction of the tank
12 and chlorination site, drain lines, and power line would occur. This disturbance would be spread over the
13 anticipated life of the project, which is planned for 2015 through 2018. In relation to the size of the three
14 watersheds (approximately 59,900 acres) in which the improvements are located, the approximate 133
15 acres of disturbance represents a minor percentage (0.2%) of the total area. Due to the dispersed nature
16 of Proposed Alternative A and the relatively small area of disturbance, the effects to water quality from
17 construction activities on upland sites would be widely distributed and difficult to detect.

18 Although the majority of disturbance would occur on upland sites, the waterlines would cross four "blue
19 line" stream courses over their total length of about 9.5 miles. There would be the potential for
20 construction-related disturbance to increase the amount of sediment that would be mobilized within the
21 channel or enter the channel from directly adjacent areas. This would be a temporary effect that would be
22 limited with the implementation of erosion control measures. Short- and long-term effects to surface water
23 quality and quantity are anticipated to be low to negligible under the Proposed Alternative A.

24 The implementation of the design features outlined for soil and water in section 2.1.5 would limit short-
25 term and long-term effects to water quality. Reestablishment of permanent, perennial vegetation would
26 decrease long-term soil-erosion effects and, consequently, effects to floodplains and surface and ground
27 water resources. NPDES permit compliance would require the maintenance of a SWPPP and the design,
28 implementation, and maintenance of BMPs, as needed, to protect water quality. Activities associated with
29 the proposed project that would impact US jurisdictional waterways would be conducted under
30 Nationwide Permit # 12 (Utility Line Activities) and # 13 (Bank Stabilization).

31 **Cumulative Impacts**

32 Under Proposed Alternative A, 133 acres (approximately 0.2% of the three watersheds) would be
33 disturbed, which could temporarily increase sediment transportation to the intermittent and ephemeral
34 water bodies. It is anticipated to have low to negligible impacts to water resources. Surface disturbance
35 from oil and gas development and associated infrastructure and livestock grazing and range
36 improvements would continue, which could increase sediment yield in water bodies. Additional residential
37 growth could also occur from the installation of the waterline, leading to surface disturbance and
38 increased sedimentation from construction of roads, power lines, and homes. The proposed project to
39 control invasive plants on the Navajo Nation could also temporarily increase soil erosion on treated areas
40 until native vegetation becomes re-established. The cumulative impacts on water resources from the
41 past, present, and foreseeable future actions would comprise of short- and long-term surface disturbance
42 (e.g., soil erosion, increased sediment). Cumulative effects of Proposed Alternative A in combination with
43 the past, present, and reasonably foreseeable future would have a negligible contribution to adverse
44 cumulative impacts due to the temporary and short-lived surface disturbance from the proposed
45 construction of Reach 26.3 and associated infrastructure, and the implementation of the design features
46 and reclamation (see Appendix B).

3.4.3. Impacts from Proposed Alternative B—Original ACEC Route

Direct and Indirect Impacts

Direct and indirect impacts to water resources from construction of the pipeline and infrastructure would be the same as Alternative A, but would disturb about 127 acres of soils and would cross four “blue line” stream courses over the total length of about 8.6 miles. Due to the decrease in surface disturbance, the potential for adverse impacts in the short-term would decrease compared to Proposed Alternative A.

Cumulative Impacts

Cumulative impacts would be the same as Proposed Alternative A, but would include less temporary surface disturbance and sedimentation into water bodies/washes.

3.5. Upland Vegetation

3.5.1. Affected Environment

The description of the Arizona/New Mexico Plateau ecoregion is summarized from the EPA's level III ecoregions of the United States narration (US EPA 2013c.). 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 confertifolia*), 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, New Mexico. Important land uses include irrigated farming, recreation, rangeland, wildlife habitat, and some natural gas production.

The vegetation community is mapped as Great Basin conifer woodland and plains and Great Basin grassland (Brown 1994). The dominant vegetation includes big sagebrush (*Artemisia tridentata*), blue grama (*Bouteloua gracilis*), galleta (*Pleuraphis jamesii*), sacaton (*Sporobolus airoides*), spike dropseed (*Sporobolus contractus*), sand muhly (*Muhlenbergia pungens*), and snakeweed (*Gutierrezia sarothrae*; Figure 5).

Specifically, the area west of the Continental Divide is predominantly sagebrush habitat with blue grama, sacaton, and galleta as the dominant grasses. The project area east of the Continental Divide is flatter, more open, and dominated by grasses and low-growing, often dead big sagebrush (Figure 6). This area is more open. Washes crossed by the proposed waterline are bordered by rubber rabbitbrush (*Ericameria nauseosa*).



Figure 5. Reach 26.3 facing southeast

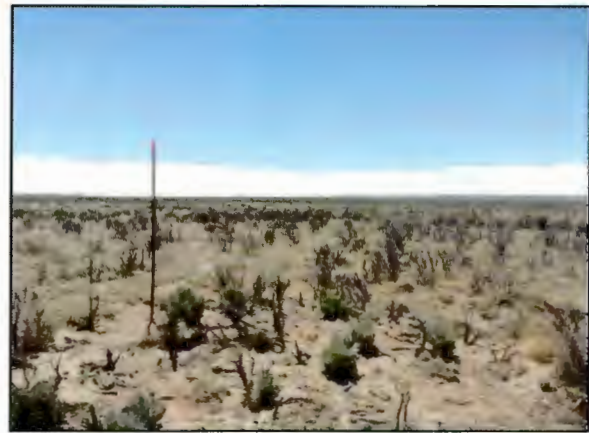


Figure 6.. Reach 26.3 facing east

3.5.2. *Impacts from Proposed Alternative A—ACEC Route*

Direct and Indirect Impacts

Direct impacts on plant communities and habitats would be expected to occur along the ROWs and TCEs for pipelines, the power line, and the other improvements to be constructed. Vegetation would be cleared for all construction activities (see Figure 7 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 greasewood communities), selected from the Bare Soil Reclamation Procedures (BLM FFO 2013), would be used for reseeding the ROW (see Appendix B: Re-vegetation 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. Re-vegetation 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. There would be no conversion from woodland to grass as there is no piñon-juniper habitat within the proposed project area.

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 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).



Figure 7. Example of clearing of pipeline right-of-way through shrub-dominated vegetation

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.

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 high-quality habitats 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

Construction of the pipeline alignment and infrastructure would remove about 133 acres of vegetation, with 7 acres of permanent vegetation removal for the tank and chlorination site. Surface disturbance and removal of vegetation from oil and gas development and livestock grazing would continue. The Great Basin Desert Scrub and piñon juniper woodlands, the plant communities to be most affected from oil and gas development (USDI/BLM 2003a), would not be impacted as these plant communities do not occur within the proposed project area. 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 could change

1 plant community composition and structure over the long-term by restoring native plant communities. In
2 combination with the past, present, the Proposed Alternative A would have a negligible contribution to
3 adverse cumulative effects on vegetation due to the temporary surface disturbance from the proposed
4 construction that is reduced upon revegetation (see Appendix B).

5 **3.5.3. Impacts from Proposed Alternative B—Original ACEC Route**

6 **Direct and Indirect Impacts**

7 Direct and indirect impacts from construction of the pipeline and infrastructure would be the same as
8 Alternative A, however, this proposed action would impact the least amount of vegetation (127 acres)
9 compared to Proposed Alternative A.

10 **Cumulative Impacts**

11 Cumulative impacts would be the same as Proposed Alternative A.

12 **3.6. Noxious Weeds and Invasive Species**

13 **3.6.1. Affected Environment**

14 Specific plants have been designated as noxious weeds by New Mexico State law due to their potential to
15 harm the state economy. The BLM weed management program emphasizes conservation of the native
16 plant community by monitoring, controlling, and preventing noxious weeds and invasive species.
17 Development of weed management programs is required by Executive Order 11312 Invasive Species
18 1999, the Federal Noxious Weed Act of 1974, the New Mexico Noxious Weed Management Act of 1978,
19 and the Federal Plant Protection Act of 2000 (USDI/BLM 2003a). The FFO weed management plan
20 dictates that for all actions on public lands that involve surface disturbance or rehabilitation, reasonable
21 steps would be required to prevent the introduction or spread of noxious weeds, including requirements
22 for using weed seed-free hay, mulch, and straw. These measures also include washing all vehicles and
23 equipment prior to moving on site to remove noxious weed seeds and propagules.

24 The New Mexico Class B noxious weed *Halogeton glomeratus* was found near the Continental Divide and
25 east of the Continental Divide. Class B noxious weed species are limited in range and, in areas with
26 severe infestations management, should be designed to contain the noxious weed and prevent further
27 spread (NMDA 2009). Class B weed species will be treated within the project corridor prior to work
28 commencing. A pesticide use proposal will be initiated for the use of herbicides and the BLM Noxious
29 Weed coordinator will be contacted to assure the use of appropriate herbicides and timing of plant
30 treatments or removal.

31 **3.6.2. Impacts from Proposed Alternative A—ACEC Route**

32 **Direct and Indirect Impacts**

33 Indirect effects of increased vehicle traffic in the area, especially traffic that comes from outside the local
34 area, may result in establishment of invasive/noxious weeds. Invasive/noxious plants generally
35 outcompete native species where bare ground is created. Some construction activities would occur near
36 known locations of the invasive plant *Halogeton glomeratus*. This plant occurs primarily along existing
37 roads near the Continental Divide and east of the Divide. Given the small, discrete areas of proposed
38 disturbance and implementing the design features (section 2.1.5), effects from invasive, nonnative
39 species are expected to be low for both the short and long term for the action area. *Halogeton* will be
40 treated with appropriate control measures within the project area prior to work commencing to avoid
41 spread along the project corridor and to reduce potential direct impacts.

Cumulative Impacts

Other management activities occurring in the area, such as oil and gas development, grazing management and recreation, as well as the proposed construction of Reach 26.3 and associated infrastructure, present the potential for new invasive plant infestations. Constructing Reach 26.3 could lead to construction of more homes, and associated infrastructure, which would also have the potential for spreading of existing noxious weeds and 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 proposed project. These activities, along with the measures included in this proposed project would help to reduce the potential for the introduction and spread of invasive plants.

3.6.3. Impacts from Proposed Alternative B—Original ACEC Route

Direct and Indirect Impacts

Direct and indirect impacts from construction of the pipeline and infrastructure would be the same as Alternative A. However, this proposed action would have the least amount of surface disturbance (127 acres) and potential for spreading and/or establishing noxious weeds compared to the Proposed Alternative A.

Cumulative Impacts

Cumulative impacts would be the same as the Proposed Alternative A.

3.7. Fish and Wildlife

3.7.1. 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 that occur in similar ecoregions as the Proposed action area was compiled through a review of existing bird conservation plans including:

- USFWS Birds of Conservation Concern (BCC)
- New Mexico Partners in Flight (NMPFI) 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 and candidate species.

The selected species have a known distribution in the RPFO and FFO areas and may be affected by various types of perturbations. These species and a brief assessment of their habitat are identified in Table 7.

Bird species observed in the project area include Turkey Vulture (*Cathartes aura*), Red-tailed Hawk (*Buteo jamaicensis*), American Kestrel (*Falco sparverius*), Ash-throated Flycatcher (*Myiarchus cinerascens*), Western Kingbird (*Tyrannus verticalis*), Loggerhead Shrike (*Lanius ludovicianus*), Common

Raven (*Corvus corax*), Barn Swallow (*Hirundo rustica*), Horned Lark (*Eremophila alpestris*), Bushtit (*Psaltirparus minimus*), Bewick's Wren (*Thryomanes bewickii*), Mountain Bluebird (*Sialia currucoides*), Northern Mockingbird (*Mimus polyglottos*), Sagebrush Sparrow (*Amphispiza nevadensis*), Black-throated Sparrow (*Amphispiza bilineata*), Lark Sparrow (*Chondestes grammacus*), Dark-eyed Junco (*Junco hyemalis*), and Pine siskin (*Spinus pinus*).

There is a large cliff complex, Cejita Blanca Ridge, adjacent to portions of Reach 26.3 that contains suitable habitat for cliff nesting raptors.

Table 7. Migratory birds with potential to occur in the project area Table continued on following page.

Species Name	Habitat Associations	Potential to Occur in the Project Area
Bendire's thrasher (<i>Toxostoma bendirei</i>)	On the Colorado Plateau, inhabits open sagebrush with scattered junipers; sparse or degraded understory, lower elevations. Avoids riparian areas and arroyos with dense shrub cover.	High sagebrush cover likely excludes Bendire's thrasher from northern project area but could occur in the southern portion of the project area.
Black-throated sparrow (<i>Amphispiza bilineata</i>)	Xeric habitats dominated by open shrubs with areas of bare ground.	Sagebrush-dominated vegetation could provide suitable habitat for this species. Observed in the project area.
Brewer's sparrow (<i>Spizella breweri</i>)	Closely associated with sagebrush, preferring dense stands broken up with grassy areas.	Sagebrush-dominated vegetation makes this bird likely to occur in project area. Observed in the project area.
Gray vireo (<i>Vireo vicinior</i>)	In northern NM, stands of piñon pine and Utah juniper 5800–7200 feet, 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.	Lack of piñon-juniper cover makes this bird highly unlikely to occur in the project area.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Open country interspersed with improved pastures, grasslands, and hayfields. Nests in sagebrush areas, desert scrub, and woodland edges.	Desert scrub in the analysis area could provide suitable habitat for the species. Observed in the project area.
Mountain bluebird (<i>Sialia currucoides</i>)	Open piñon–juniper woodlands, mountain meadows, and sagebrush shrublands; requires larger trees and snags for cavity nesting.	Desert scrub in the analysis area could provide suitable habitat for the species; although extensive nest habitat is lacking. Observed in the project area.
Mourning dove (<i>Zenaida macroura</i>)	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.	Desert scrub in the analysis area could provide suitable habitat for the species.
Sage sparrow (<i>Amphispiza belli</i>)	Large and contiguous areas of tall and dense sagebrush. Negatively associated with seral mosaics and patchy shrublands and abundance of greasewood.	Sagebrush-dominated vegetation makes this bird likely to occur in project area. Observed in the project area.
Sage thrasher (<i>Oreoscoptes montanus</i>)	Shrub-steppe dominated by big sagebrush.	Sagebrush-dominated vegetation makes this bird likely to occur in project area. Observed in the

Species Name	Habitat Associations	Potential to Occur in the Project Area
		project area.
Scaled quail (<i>Callipepla squamata</i>)	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, but never observed in or around the project area.
Swainson's hawk (<i>Buteo swainsoni</i>)	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. Some potential badland-structure nest sites.
Vesper sparrow (<i>Poocetes gramineus</i>)	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.

General Wildlife

Field surveys of the proposed project areas were made on November 6–8, 2012, February 5–6, March 4, March 29, April 18, 2013, and May 20, 2014. The assessment area included a 400-foot (122 m) right-of-way centered on the waterline and associated structures. The area was surveyed for suitable habitat for protected plants and wildlife, cliffs suitable for nesting raptors, birds, noxious weeds, wetlands, drainages, and surface waters within the project area. No prairie dog towns were observed in the project area. The variety in biotic communities and topography within the proposed alignments provides habitat to a variety of wildlife species. Wildlife observed in the project area includes black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), kangaroo rat (*Dipodomys* spp.), and coyote (*Canis latrans*). Wildlife diversity in the area is limited by the lack of diverse vegetation communities and pressure from human activity.

The project area is classified by the NNDFW as Wildlife Resources Area 3 (low sensitivity) according to the Biological Resource Land Clearance Policies and Procedures (RCP). There are no wildlife-related BLM FFO or RPFO SDAs in or near the project area.

3.7.2. Impacts Common for All Proposed Alternatives

Direct and Indirect Impacts

Migratory Birds

The proposed project would remove potential nesting substrate, including areas cleared for water pipelines, tank and chlorination site, and power line installation, although the impact area may be less because some of the 100-foot temporary construction easement for the water pipelines may not be disturbed. Most of the disturbance would involve the removal of woody and ground vegetation. If vegetation removal occurs outside the breeding season, there would be no direct impact to migratory birds because the local habitat types are abundant and there would be active nests or nestlings. No removal of vegetation would occur during the breeding season without preconstruction nest surveys (see section 2.1.5). If the surveys determine that no nests would be affected by vegetation removal, then there would be no direct effects on migratory birds.

If activities occur during the nesting season and nests are present, direct impacts would be the incidental destruction of active bird nests, including eggs and hatchlings, and the temporary disruption of breeding territories of individual birds because of noise and human presence during construction. Sage-nesting species would be the most likely impacted, such as sage thrasher, sage sparrow, Brewer's sparrow, and vesper sparrow. This work would only be done if no alternative exists and following receipt of the approved permit from the USFWS (see Section 2.1.5).

At the completion of construction activities, re-vegetation of disturbed areas would reduce the impacts of the proposed pipeline and infrastructure construction. Some sage habitat would be converted to grass-dominated habitat within the permanent ROW and 7 acres of potential nesting habitat would be removed for the tank and chlorination site. The amount of projected habitat conversion is small compared to the total amount of available sagebrush habitat in the surrounding area (341,000 acres of shrub/steppe/scrub communities in the RPFO and 551,000 acres of sagebrush communities in FFO).

Due to the staged nature of the Proposed Alternatives, 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, and temporary displacement of construction areas due to noise and human presence. The removal of vegetation is not anticipated to cause loss of sagebrush habitat viability. 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.

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 Alternatives would impact Great Basin Desert Scrub biotic community. 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 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. 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 Alternatives would have a negligible contribution to adverse cumulative impacts on fish and wildlife local populations and habitat.

3.8. 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 the habitats on which they depend, and to consult with the USFWS on all actions authorized, funded, or carried out by a federal 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). Currently, the only federally listed species known to occur within RPFO is the Southwestern Willow Flycatcher. Federally listed species with potential to occur in the project area are listed in Table 8.

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 8 and 9.

Special Management Species

In accordance with BLM Manual 6840, the FFO and RPFO of the Bureau of Land Management have prepared lists of special management species to focus species management efforts toward maintaining habitats under a multiple use mandate, called Special Management Species (SMS; Table 9). The BLM manages certain sensitive species not federally listed as threatened or endangered to prevent or reduce the need to list them as threatened or endangered in the future (Table 9). 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 FLPMA of 1976; and Department of Interior Manual 235.1.1A.

Tables 8 and Table 9 provide an evaluation of potential for BLM SMS and sensitive, 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 8. 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			
Western yellow-billed cuckoo (<i>Coccyzus americanus</i>)	FWS Proposed T	Occurs in well-vegetated riparian areas.	There is no riparian vegetation within the project areas.
Southwestern willow flycatcher (<i>Empidonax traillii</i>)	FWS E, N G2	This species inhabits dense riparian areas dominated by cottonwoods, willows, and	No riparian vegetation occurs in the project area.

Species Name	Conservation Status*	Habitat Associations	Potential to Occur in Analysis Area
<i>extimus</i>)		tamarisk.	
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	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.
Mammals			
Black-footed ferret (<i>Mustela nigripes</i>)	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 prairie dog towns observed within the project area. Nearby prairie dog towns would be avoided by at least 200 meters and do not exceed 80 hectares.
NM Meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	FWS E	Occurs in montane riparian habitats and in tall sedges, thick grasses and willow–alder riparian habitats.	No suitable habitat occurs within the project area.
Fishes			
Rio Grande silvery minnow (<i>Hybognathus amarus</i>)	FWS E	This fish occurs in the Rio Grande.	The project area is not within the Rio Grande watershed and does not contain perennial waters.
Zuni bluehead sucker (<i>Catostomus discobolus yarrowi</i>)	FWS proposed E	This fish occurs in the Zuni River and tributaries.	The project area is not within the Zuni River or tributaries and does not contain perennial waters.
Rio Grande cutthroat trout (<i>Oncorhynchus clarki virginalis</i>)	FWS C	This fish occurs in the Rio Grande.	The project area is not within the Rio Grande watershed and does not contain perennial waters.
Plants			
Jemez Mountains salamander (<i>Plethodon neomexicanus</i>)	FWS E	This New Mexico endemic is found in the Jemez Mountains in parts of Los Alamos, Sandoval, and Rio Arriba counties.). It occurs on loose rocky soils in mixed-conifer forests.	The project area lacks habitat for this species and is outside its range.
Plants			
Mancos milkvetch (<i>Astragalus humillimus</i>)	FWS E, N G2	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 (<i>Erigeron rhizomatus</i>)	FWS T, N G2	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 (<i>Pediocactus knowltonii</i>)	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 well south of the only known locality.
Mesa Verde cactus (<i>Sclerocactus mesae-verdae</i>)	FWS T, N G2	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.	There is some Fruitland Formation in the project area, but the area lacks the soil types and vegetation community where this species occurs. The project area is also outside the known range of Mesa Verde cactus.

- 1 FWS T, E, and C = Fish and Wildlife Service Threatened, Endangered, and Candidate. N G1 and G2 =
- 2 Navajo Endangered Species List rankings: G2 = endangered. All birds on list are protected under the
- 3 Migratory Bird Treaty Act.

Table 9. Fish and Wildlife Service Species of Concern, BLM RPFO and FFO Special Management and Sensitive species, Navajo Group 3 and 4 species, and eagles, with potential to occur in Sandoval and McKinley Counties Table continued on following pages.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Birds			
Golden eagle (<i>Aquila chrysaetos</i>)	BLM SMS, N G3, BGEPA	Occurs in a variety of open habitats and nests mainly on large cliffs.	Moderate: The central portion of the project area borders a large cliff complex, Cejita Blanca Ridge, that provides suitable cliff-nesting habitats for golden eagles in the vicinity of the project area.
Western burrowing owl (<i>Athene cunicularia</i>)	BLM SMS, BLM S, FWS SOC, N G4	Nests in ground cavities in open scrub and desert. Associated with prairie dog towns.	Low: No associated prairie dog colonies occur in the project area, but scattered kangaroo rat burrows east of the Continental Divide could provide habitat; however, no burrowing owls or owl signs were observed during breeding season surveys in 2013 and 2014.
Ferruginous hawk (<i>Buteo regalis</i>)	BLM SMS, BLM S, N G3	Frequently associated with prairie dog towns. Nests in badlands, desert scrub and grasslands on isolated elevated substrates.	Moderate: The project area lacks prairie dog towns, but does contain some suitable nesting structures just west of and on the Cejita Blanca Ridge.
Chestnut-collared longspur (<i>Calcarius ornatus</i>)	BLM S	Occurs in short- or mixed-grass prairies and prefers grazed or recently burned areas.	Unlikely: The project area does not contain suitable habitat due to shrub and grass cover and grass height.
Mountain plover (<i>Charadrius montanus</i>)	BLM S, 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	Unlikely: The project area and the surrounding areas do not contain Mountain Plover habitat due to shrub and grass cover and grass height.
Western yellow-billed cuckoo (<i>Coccyzus americanus</i>)	BLM SMS	Occurs in well-vegetated riparian areas.	Unlikely: There is no riparian vegetation within the project areas.
Prairie falcon (<i>Falco mexicanus</i>)	BLM SMS	Occurs in open habitats and nests on cliff walls.	Moderate: The central portion of the project area borders a large complex of cliffs called Cejita Blanca Ridge, which contains suitable raptor cliff-nesting habitat.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Peregrine falcon (<i>Falco peregrine</i>)	BLM SMS, FWS SOC, N G4	Occurs in a wide variety of habitat types and nests on cliff walls.	Moderate: The central portion of the project area borders a large complex of cliffs called Cejita Blanca Ridge, which contains suitable raptor cliff-nesting habitat.
Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)	BLM S	Occurs in piñon–juniper woodlands of the foothills and lower mountain slopes. Nests on the south side of conifers.	Low: The project area lacks extensive habitat for this species. Transient flocks may occur in the area.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	BLM SMS, BGEPA	Occurs around large bodies of water with fresh fish.	Unlikely: No large bodies of water occur within the project area.
Bendire's thrasher (<i>Toxostoma bendirei</i>)	BLM S	Occurs in sparsely vegetated desert habitats and nests in shrubs, trees, and cacti.	High: Sagebrush cover likely excludes Bendire's thrasher from northern project area but could occur in the southern portion of the project area.
Mammals			
Pronghorn (<i>Antilocapra americana</i>)	N G3	Occurs in grassy areas with no to low shrub cover.	Low: Could occur in the project area but the species prefers more open grassland or low desert scrub habitats.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	BLM S	Occurs in mines and caves and is closely associated with coniferous forests, desert, native prairies, riparian areas and agricultural areas.	Unlikely: Lack of potential roosting and foraging habitats.
Gunnison's prairie dog (<i>Cynomys gunnisoni</i>)	BLM S	Occurs in mostly level, open grassy areas with soil that's suitable for burrowing.	Unlikely: No prairie dog towns were observed in or near the current project area.
Spotted bat (<i>Euderma maculatum</i>)	BLM S	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: This species could use the project area for night-time foraging, and could roost in the cliffs along Cejita Blanca Ridge. Cliffs would not be disturbed during project activities, and it is unlikely that construction on the ground would impact bats roosting in cliff crevices.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Allen's lappet-browed bat (<i>Idionycteris phyllotis</i>)	BLM S	Woodlands and forests and is associated with rocky substrates and cliffs. Roosting may occur in a variety of rock fixtures, abandoned mines, and tree bark.	Low: Suitable roosting habitat for this species is mainly confined to the Cejita Blanca Ridge along Reach 26.3.
Kit fox (<i>Vulpes microtis</i>)	N G4	Occurs in open grassland and desert scrub.	Unlikely: The project area is dominated by continuous big sagebrush. It is unlikely that this species would inhabit the project area.
NM Meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	BLM S	Occurs in montane riparian habitats and in tall sedges, thick grasses and willow-alder riparian habitats.	Unlikely: No suitable habitat occurs within the project area.
Plants			
Galisteo sand verbenia (<i>Abronia bigelovii</i>)	BLM S	Piñon-juniper woodlands and grassland communities at 5,500–6,000 feet (1,665–1,820 m) on barren slopes of Todilto gypsum formation.	Unlikely: The project area lacks the geological substrate on which this species occurs.
Aztec gilia (<i>Aliciella formosa</i>)	BLM SMS, BLM S, N G4	Arid and sparsely vegetated Badland /Salt desert scrub communities in soils of the Nacimiento Formation. 5,000–6,000 feet.	Unlikely: The project area contains Nacimiento Formation but lacks salt desert scrub vegetation. Furthermore, this species is not known from Sandoval or McKinley Counties, NM.
San Juan milkweed (<i>Asclepias sanjuanensis</i>)	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.	Unlikely: The elevation of the project area is above that at which the milkweed is known to occur, but this does not rule out potential occurrence.
Knight's milkvetch (<i>Astragalus knightii</i>)	BLM S	Sandoval County, NM, in the middle Rio Puerco Valley on rimrock ledges of Dakota Formation sandstone in juniper savannah and grassland at 5,700–5,900 feet (1,750–1,800 m).	Unlikely: The project area lacks the geological substrate on which this species is known to occur.
Ripley milkvetch (<i>Astragalus ripleyi</i>)	BLM S	Rio Arriba and Taos Counties, NM, in sagebrush, piñon-juniper, and Gambel oak (<i>Quercus gambelii</i>) thickets in ponderosa pine forests at 7,000–8,250 feet (2,120–2,500 m).	Unlikely: The project area lacks ponderosa pine forests.

Species Name	Conservation Status	Habitat Associations	Potential to Occur in Analysis Area
Acoma fleabane (<i>Erigeron acomanus</i>)	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 (<i>Proatriplex pleiantha</i>)	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 geological formation and is southeast of the known range.
Parish's alkaligrass (<i>Puccinellia parishii</i>)	BLM S, G 4	This grass occurs near alkaline springs, seeps, and seasonally wet areas at 2,600–7,200 feet.	Unlikely: No suitable habitat occurs within the project area based on direct field observations.
Brack's hardwall cactus (<i>Sclerocactus cloverae</i> ssp. <i>brackii</i>)	BLM SMS, BLM S	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.	Unlikely: Potential habitat is located on the east side of the Continental Divide. No cacti were observed during a species-specific survey in May 2014.
Grama grass cactus (<i>Sclerocactus papyracanthus</i>)	BLM S	Occurs in open flats of grasslands and woodlands, often with grama grass.	High: The project area contains the appropriate habitat.
Gypsum Townsend daisy (<i>Townsendia gypsophila</i>)	BLM S	In Sandoval County, NM, in weathered gypsum outcrops of the Jurassic-age Todilto and overlying Morrison Formations.	Unlikely: The project area lacks the geology and minerals on which this species occurs.

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. All birds on list are protected under the Migratory Bird Treaty Act.

3.8.1. Impacts Common to All Proposed Alternatives

Direct and Indirect Impacts

The Proposed Alternatives would have *no effect* on the Bald Eagle, Western Yellow-billed Cuckoo, Southwestern Willow Flycatcher, Mexican Spotted Owl, Townsend's big-eared bat, Gunnison's prairie dog, kit fox, black-footed ferret, New Mexico meadow jumping mouse, Jemez Mountain salamander, Zuni bluehead sucker, Rio Grande silvery minnow, Rio Grande cutthroat trout, Galisteo sand verbena, Aztec gilia, San Juan milkweed, Mancos milkvetch, Knight's milkvetch, Ripley milkvetch, Acoma fleabane, Zuni fleabane, Knowlton's cactus, Mancos saltbush, Mesa Verde cactus, Parish's alkaligrass, and gypsum Townsend daisy because of lack of suitable habitat, which makes occurrence in the project area unlikely.

1 **Golden Eagle**—The proposed project would have *no impact* on the Golden Eagle if a preconstruction
2 nest survey is conducted before construction activities planned between March and July.

3 **Western Burrowing Owl**—The proposed action would have *no impact* on the Burrowing Owl because of
4 lack of extensive nesting habitat and occurrence.

5 **Ferruginous Hawk**—The proposed project would have *no impact* on the Ferruginous Hawk if a
6 preconstruction nest survey is conducted before construction activities planned between March and July.

7 **Chestnut-collared Longspur**—The proposed project would have *no impact* on the Chestnut-collared
8 longspur because of lack of suitable habitat. Suitable habitat in the surrounding area would not be
9 disturbed and is far enough away where noise and human activities should not pose a problem.

10 **Mountain Plover**—The proposed project would have *no impact* on the Mountain Plover because of lack
11 of local suitable habitat. Suitable habitat in the surrounding area would not be disturbed and is far enough
12 away where noise and human activities should not pose a problem.

13 **Prairie Falcon**—The proposed project would have *no impact* on the Prairie Falcon if a preconstruction
14 nest survey is conducted before construction activities planned between March and July.

15 **Peregrine Falcon**—The proposed project would have *no impact* on the Peregrine Falcon if a
16 preconstruction nest survey is conducted before construction activities planned between March and July.

17 **Pinyon Jay**—The proposed project would have *no impact* on the Pinyon Jay because of lack of suitable
18 breeding habitat.

19 **Bendire's Thrasher**—The proposed project would have *no impact* on Bendire's Thrasher because most
20 of the project area lacks appropriate habitat, only a small portion of appropriate habitat would be
21 impacted, and no construction would occur during the breeding season without a preconstruction nest
22 survey.

23 **Pronghorn**—The proposed project would have *no impact* on the pronghorn because of the nature of the
24 project and the mobility and wide range of the species and the project area is too shrubby for this species.

25 **Spotted bat**—The proposed project would have *no impact* on the spotted bat because nearby cliff habitat
26 would not be disturbed.

27 **Allen's lappet-browed bat**—The proposed project would have *no impact* on Allen's lappet-browed bat
28 because nearby cliff habitat would not be disturbed.

29 **Brack's hardwall cactus**—The proposed project would have *no impact* on Brack's hardwall cactus
30 because none was detected in potential habitat in and beside the project area.

31 **Grama grass cactus**—The proposed project *may impact individual* grama grass cacti. The project would
32 have *no impact* on the overall *population* because of the widespread distribution of the species.

33 The Navajo Nation Department of Fish and Wildlife concurred with these determinations on August 28,
34 2014 (Appendix C).

35 **Cumulative Impacts**

36 Surface disturbance and removal of vegetation from oil and gas development and livestock grazing would
37 continue. Wildlife inhabiting the Great Basin Desert Scrub and piñon juniper woodlands would be most
38 affected from oil and gas development (USDI/BLM 2003a). The proposed water pipeline construction
39 would not impact piñon-juniper woodlands or Great Basin desertscrub biotic communities as the project
40 area is mapped as Great Basin conifer woodland and plains and Great Basin grassland (Brown 1994).
41 Depending on the intensity of grazing, available forage (e.g., ungulates), and escape cover for small
42 mammals and birds could be affected.

1 Installation of the waterline could lead to the growth of residential areas, which would increase the human
2 population in the area and lead to more roads, power lines, and other development. The impacts would
3 likely not be substantial in the foreseeable future due to the fact that the project area is rural and sparsely
4 populated.

5 The proposed project to control invasive plants on the Navajo Nation lands could change plant community
6 composition and structure over the long-term by restoring native plant communities. This could improve
7 wildlife habitat quality with restoring/increasing native plant habitats. Only individual plants or animals
8 could be impacted by the construction activities, and the analysis indicates that there would be no effect
9 at the population level for these species, thus, there would be no cumulative effects from this proposed
10 project.

11 **3.9. Cultural Resources**

12 **3.9.1. Affected Environment**

13 The proposed project area is located within the archaeologically rich San Juan Basin of northwest New
14 Mexico. In general, the history of the San Juan Basin can be divided into five major periods: PaleoIndian
15 (ca. 10000 B.C. to 5500 B.C.), Archaic (ca. 5500 B.C. to A.D. 400), Basketmaker II–III and Pueblo I–IV
16 periods (a.k.a. Anasazi; A.D. 1–1540), and the Historic (A.D. 1540 to present), which includes Native
17 American as well as later Hispanic and Euro-American settlers. Detailed descriptions of these various
18 periods are provided in the BLM FFO-FEIS (2003) and will not be reiterated here. Additional information
19 can also be found in the Cultural Resources Technical Report (CRTR; SAIC 2002).

20 Effects to cultural resources must be taken into consideration under every NEPA-governed Proposed
21 action. The term “cultural resources” refers to any historic or prehistoric resource. This encompasses a
22 wide range of material remains that have the potential to provide information about the human use and
23 occupation of the project area. These cultural resources generally consist of archaeological sites and
24 Traditional Cultural Properties (TCPs).

25 Cultural sites vary considerably and can include, but are not limited to, simple artifact scatters, structures
26 or structural remains of various types with a myriad of associated features, rock art and inscriptions,
27 ceremonial/religious features, and roads and trails.

28 The National Register of Historic Places (36 CFR Part 60; NRHP) is the basic benchmark by which the
29 significance of cultural resources are evaluated by a federal agency when considering what effects its
30 actions may have on cultural resources. To summarize, to be considered eligible for the NRHP a cultural
31 resource must have integrity of location, design, setting, materials, workmanship, feeling, and association,
32 and meet one or more of the following criteria: a) are associated with events that have made a significant
33 contribution to the broad patterns of our history; b) are associated with the lives of significant persons in
34 or past; does it c) embody the distinctive characteristics of a type, period, or method of construction;
35 represent the work of a master; possess high artistic values; represent a significant and distinguishable
36 entity whose components may lack individual distinction; or d) have yielded or may be likely to yield
37 information important in history or prehistory. If a site, regardless of age, meets these standards it is
38 referred to as a “historic property.”

39 Pursuant to Reclamation's *Programmatic Agreement Regarding the Consideration and Management of*
40 *Effects on Historic Properties Arising from Construction of the NGWSP, New Mexico* (PA), the Proposed
41 action's Area of Potential Effect (APE) for direct physical effects on historic properties includes all lands
42 within 125 feet of the planned 150 foot construction ROW for a total width of 400 feet as depicted in the
43 FEIS. All lands within the APE for the Proposed Alternatives were surveyed for cultural sites by EMI
44 archaeologists at a BLM Class III level (100% pedestrian survey of the APE). The report identified 9
45 cultural sites (1 previously recorded and 8 new sites). Four of the sites lie on BLM FFO, one on BLM
46 RPFO, one on state land, and three lie on Navajo Nation land. EMI agrees with the initial SHPO
47 recommendation of the previously recorded site as not eligible for listing on the NRHP; EMI recommends
48 four sites as eligible for inclusion on the NRHP under criterion “D” and four as ineligible for listing on the
49 NRHP under any criteria (EMI 2013, 2014b); the NNHPD concurred with the determination for sites on

Navajo National lands (Appendix D). Eight of the sites are archaeological and one is reported as a TCP for traditional Navajo use (discussed in more detail below). Thirty-four isolated occurrences were identified in the proposed project areas. Isolated occurrences were not recommended eligible for listing on the NRHP.

Native American Religious Concerns

TCPs are a separate class of cultural resources and are places that have cultural values that transcend 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 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 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 (Martin 2011).

Navajo Nation Historic Preservation Department (NHPD) policy requires 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 26.3 is adjacent to a historic Navajo structural site that includes a sweat lodge constructed from axe cut juniper branch. The sweat lodge measures 2x2 meters and has collapsed and deflated since initial use. The sweat lodge is associated with traditional Navajo use and is eligible for protection as a TCP. EMI recommended this cultural site for inclusion in the NRHP under criterion "D". The NNHPD concurred with the recommendation (Appendix D).

3.9.2. Impacts from Proposed Alternative A—ACEC Route

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 Alternative A 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.

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. The proposed water pipeline would avoid the four eligible archaeological sites.

Native American Concerns

EMI conducted field interviews at the Ojo Encino Chapter of the Navajo Nation and surrounding area to determine whether the construction of the water pipeline would impact any traditional or sacred areas. Six interviews were conducted. Two traditional cultural property locations were identified within the local area, including Heart Butte and Cejita Blanca Ridge. The interviews revealed that 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. One Jischaa' site that falls within the purview of the NNHPD Jischaa' Policy and NAGPRA are located within the APE Reach 26.3. The Jischaa' site will be avoided by construction.

Cumulative Impacts

Surface disturbance from oil and gas development and associated infrastructure (e.g., access roads) could cause 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 the proposed water pipeline 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.

3.9.3. Impacts from Proposed Alternative B—Original ACEC Route

Direct and Indirect Impacts

Direct and indirect impacts would be the same as Proposed Alternative A. 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. The proposed water pipeline alignment would avoid the four eligible archaeological sites.

Native American Concerns

Same as Proposed Alternative A.

Cumulative Impacts

Same as Proposed Alternative A.

3.10. Land Use

3.10.1. Affected Environment

The major landowners within the proposed project area include Navajo Nation lands held in trust by the BIA and BLM lands (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 26.3 consists of mostly rural activities with scattered infrastructure. Jemez Mountains Electric Cooperative power lines, oil and gas pipelines, and Navajo Tribal Utility Authority waterlines cross the proposed waterline ROWs. Residences within a quarter mile of the waterlines are scattered throughout Reach 26.3, concentrated around the northern half of Reach 26.3 (Figure 8). The predominant land use across both proposed alignments 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 major road (BIA Route 471) that crosses Reach 26.3 at the beginning and then lies to the south as the pipeline continues east receives traffic from large tankers and big-rig trucks because of the gas exploration in the area.

3.10.2. Impacts Common to All Proposed Alternatives

Direct and Indirect Impacts

Impacts to land use are measured in terms of whether the changes to land use caused by the Proposed Alternatives 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 water pipeline and infrastructure would be placed are primarily managed for wildlife habitat and livestock grazing. Although grazing would be temporarily affected during construction activities, this would be a temporary effect. After completion of construction and reclamation of the waterline ROWs, they would again provide wildlife habitat and grazing opportunity. Small areas associated with the water storage and chlorination site, totaling about 7 acres, would not be available for other land uses. Should future waterline development occur in the area, these activities would not be incompatible with the waterline alignment or other grazing improvements because they could be placed away from existing infrastructure/grazing 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 26.3, cumulative effects of the Proposed Alternatives would not contribute to fragmentation of land holdings or bisecting land use patterns, thus would have negligible contributions to cumulative impacts.

3.11. Transportation and Travel Management

3.11.1. Affected Environment

Portions of the proposed reach alignments follow or are crossed by dirt roads. Most of these roads provide access to local residences. The waterline alignments would also follow existing dirt roads and BIA Route 471, road corridors that receive big-rig truck and large tanker traffic because of the gas exploration in the area (Figure 8). The Reach 26.3 Tank site is adjacent to BIA Route 476, which continues north to

1 provide access to existing homes and oil and gas wells. The proposed project includes both a 40-foot
2 wide permanent waterline right-of-way and a 60-foot temporary construction easement. The contractor
3 will either construct berms to prevent public access to the ROWs and temporary construction easements
4 from existing roadways or install signs restricting public access. No new roads will be created. After
5 construction is completed, the temporary construction easement shall revert to BLM. However, NTUA will
6 continue to use the permanent ROW for access to the pipeline for operation and maintenance purposes.

7 **3.11.2. Impacts Common to All Proposed Alternatives**

8 **Direct and Indirect Impacts**

9 Public roads are likely to be disturbed as part of the Proposed Alternatives due to increased traffic
10 volumes and potential temporary disturbance of traffic flow. Some activities may require operating
11 equipment on the edge or shoulder of some roads, especially during excavation of pipelines. Such
12 activities may interfere with traffic, but the effects are anticipated to be low due to low traffic volumes on
13 the road and mitigation measures. Construction activity would increase traffic on roads within the project
14 area; this increase would be spread over a 3-year period, as construction would last from 2015 through
15 2018. The Navajo Nation or the Navajo Nation's contractor will use adequate traffic control devices and
16 warning signs to alert drivers of equipment and activities in or near roadways.

17 **Cumulative Impacts**

18 Existing oil and gas pipeline ROWs and associated infrastructure (power lines, water facility, access
19 roads) and water pipelines cross or are within the general vicinity of Reach 26.3; totaling about 1,000
20 acres of past disturbance. There are no proposed access roads or pipeline ROWs near or adjacent to
21 proposed Reach 26.3. No other activities are known to be occurring or are planned to occur in the project
22 area that would affect transportation and travel management. The proposed construction of Reach 26.3
23 would have negligible contributions to cumulative impacts for transportation and travel management.

24 **3.12. Recreation**

25 **3.12.1. Affected Environment**

26 The BLM provides for multiple recreation uses of the public lands. The goal for both the RPFO and the
27 FFO outdoor recreation programs is to ensure the continued availability of public land for a diverse array
28 of quality resource-dependent outdoor recreation opportunities. Recreation use is managed to protect the
29 health and safety of visitors; to protect natural, cultural, and other resource values; to stimulate enjoyment
30 of public lands; and to resolve user conflicts (USDI/BLM 1986, page 60; 2003b, page 2–14). The RPFO
31 objective for Extensive Recreation Management Areas (ERMAs) is to manage recreation as planned
32 actively on an interdisciplinary basis in concert with other resources/resource programs (USDI/BLM
33 2012). Further general information on recreation in the area can be found in the 2003 Farmington
34 RMP/EIS.

35 The Reach 26.3 alignments lie within the Torreon Fossil Fauna West ACEC, which is also a zone of the
36 proposed San Juan Basin Badlands ERMA. The alignments are located in areas that experience low
37 impact dispersed use, primarily hunting, and recreation in the Torreon Fossil Fauna West ACEC (hiking,
38 OHV use). Dispersed recreation uses in these areas are limited, as the areas are not open to cross-
39 country off-highway vehicle travel.

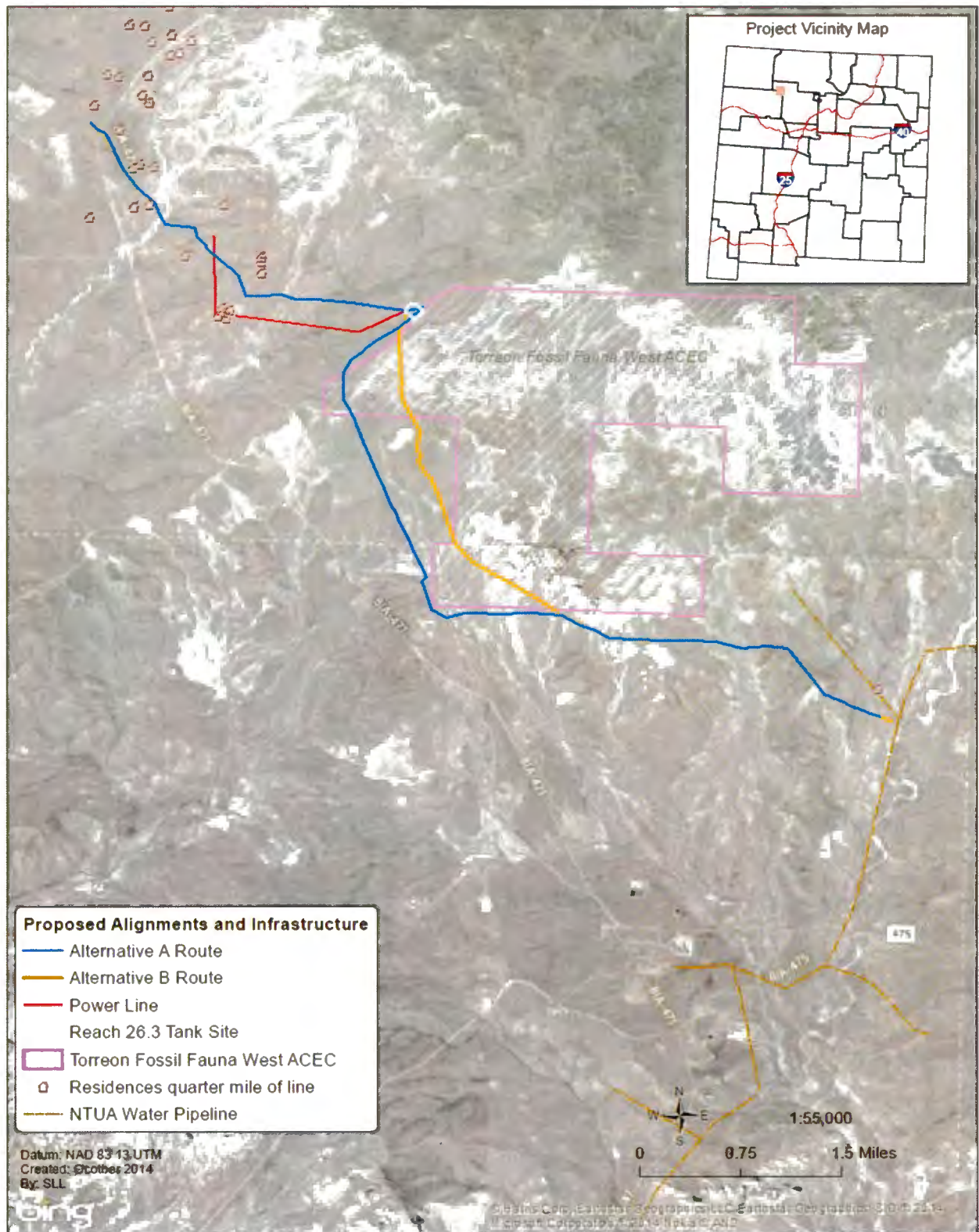


Figure 8. Existing Road Network

3.12.2. *Impacts from Proposed Alternative A—ACEC Route*

Direct and Indirect Impacts

Construction work may temporarily 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 also 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. Furthermore, the proposed alignment is located on the western edge of the Torreon Fossil Fauna ACEC outside the badland area where recreational activities primarily occur.

The recreational user may observe new surface disturbances and construction activities. However, the Proposed Alternative A alignment would be consistent with the existing environment, which contains extensive disturbances associated with utility and energy-development infrastructure and transportation infrastructure. The portion of the alignment through the Torreon Fossil Fauna West ACEC is within an unpaved two-track that is sparsely vegetated. Work would occur during normal business hours to minimize disturbing 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 exists. 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 opportunity would return to preconstruction levels.

Cumulative Impacts

Oil and gas development would continue, which could 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 temporarily increase noise and reduce visual quality of treated areas until native vegetation becomes re-established. Additional residential growth could also 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. The development of the water pipeline would temporarily disturb 0.3 miles within the Torreon Fossil Fauna ACEC, which is also a zone of the proposed San Juan Basin Badlands ERMA. The temporary and short-lived effects from the Proposed Alternative A would not contribute to cumulative effects on recreation.

3.12.1. *Impacts from Proposed Alternative B—Original ACEC Route*

Direct and indirect impacts to recreation use from construction of the water pipeline would be the same as Action Alternative A. However, this alignment would open trench for about 1.6 miles in the Torreon Fossil Fauna West ACEC, which would cause more surface and noise related disturbances from construction activities for recreational users compared to Proposed Alternative A.

Cumulative Impacts

Cumulative impacts would be the same as Proposed Alternative A.

3.13. Visual Resources

3.13.1. Affected Environment

The proposed project area is within the Arizona/New Mexico Plateau ecoregion. Landscapes within this ecoregion include low mountains, hills, mesas, foothills, irregular plains, alkaline basins, some sand

dunes, and wetlands. Sagebrush is thick and dominant throughout most of the area, and grass cover is little to none in most places (see Figures 5 and 6). The characteristic landscape includes a network of 2-track roads used for ranching and recreational access.

The proposed project area falls within the Visual Resource Management (VRM) classes IV and II. Class II objectives are to retain the existing character of the landscape. Management activities may be seen, but should not attract the attention of the casual observer. Class II is located within portions of the Torreon Fossil Fauna West ACEC (Figure 9). A portion of the south end of the Torreon Fossil Fauna West ACEC (Figure 9) and BLM land outside the ACEC are managed under a Class IV objective, which is to provide for management activities that require major modification of the landscape. The level of change to the characteristic landscape can be high and may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impacts through careful location, minimal disturbance, and repeating the basic elements of line, form, color, texture.

3.13.2. Impacts from Proposed Alternative A—ACEC Route

Direct and Indirect Impacts

Under Proposed Alternative A, about 0.3 miles would cross VRM Class II within the Torreon Fossil Fauna West ACEC and 9.2 miles would cross VRM Class IV. The proposed tank and chlorination site would be placed on BLM lands north and outside the Torreon Fossil Fauna ACEC. The proposed tank and chlorination site would be on BLM land managed under VRM Class IV.

Within the Torreon Fossil Fauna West ACEC, open trenching would occur along an existing two track.

With the exception of two large wash crossings that will be constructed using HDD due to a greater pipeline depth required, the entire proposed pipeline alignment would be constructed with open trenching. The proposed pipeline alignment would enter the Torreon Fossil Fauna ACEC along an existing 2-track road (Figure 10) and would follow the road for the entire 0.3 mile through the Torreon Fossil Fauna West ACEC. The disturbance width would be approximately 40 feet with the disturbance centered on the existing two-track. This would widen the existing disturbance of the two-track road by approximately 10 feet on either side of its centerline. The two-track road is considered part of the characteristic landscape. After construction and reclamation, the pipeline surface would generally appear the same as the existing two-track road. The pipeline surface would repeat the elements of form, line, and color that were created by the two-track road and are part of the characteristic landscape. The change would not likely be noticeable by casual observers (ACEC visitors). There may be places where the berm created between the wheel tracks would be gone and the 40 foot wide corridor would be leveled from side to side to reduce erosion, creating a smoother texture, however this contrast would be weak and not attract the attention of visitors who are aware of the two-track road (see Contrast Rating for KOP 5 in Appendix E).

The remainder of the proposed pipeline alignment on BLM lands would occur on land managed under VRM Class IV, which allows for major modification of the landscape. Installation of associated facilities including large water tanks, chlorination stations, and security fences would introduce cylindrical (water tanks) and rectangular (chlorination station, security fencing) forms onto the landscape. New power lines would introduce tall vertical lines onto a landscape where verticals lines are generally absent. Transmission lines that are untreated to reduce visibility can be highly visible at long distances.

The 100-foot wide removal of vegetation along the proposed pipeline alignment would introduce strong contrasting lines along the ROW boundary. Vegetation removal would also result in a strong color contrast between the adjacent undisturbed grey-green vegetation and the light tans of the exposed soils. The contrasts would likely be visible for decades, until vegetation is reestablished.

The design features included in section 2.1.5 Visual Resource Management would reduce color contrast of the new facilities by requiring the proponent to paint the facilities a color that blends with the adjacent vegetation. 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 from BLM's standard environmental colors chart.

The proponent is also required to coordinate with the Authorized BLM Officer on the design and color of power poles and transmission lines to achieve minimal practicable visual impacts. Measures under Soils and Water and Invasive Weed Management would reduce the recovery time for re-vegetation, thereby reducing the contrast within the pipeline ROW.

Cumulative Impacts

Oil and gas disturbance would continue in the vicinity of the proposed pipeline alignment. The proposed designation of the area as a Class IV VRM in the draft RPFO RMP could change the existing landscape character if more oil and gas and utility development is allowed. The cleared ROW along the proposed waterline alignment would result in a visible long-term but temporary change in the characteristic landscape that would last until the ROW is re-vegetated. Facilities would result in a 7-acre permanent change in the character of the landscape, but this would be limited to the tank and chlorination site not the entire length of the water pipeline alignment.

3.13.3. Impacts from Proposed Alternative B—Original ACEC Route

Direct and Indirect Impacts

Under Proposed Alternative B, the proposed pipeline alignment would be 8.6 miles of which 1.8 miles would cross the Torreon Fossil Fauna West ACEC on lands managed under both VRM Class II and IV (Figure 9). The pipeline would enter the Torreon Fossil Fauna ACEC at the northern boundary road (Figure 2). The proposed pipeline would bore from the road under the badlands to the open sagebrush flats (Figure 3), and would have no visual impacts. From the sagebrush flats to the end of the proposed alignment, the proposed pipeline would be installed by open trenching. This construction method would introduce a structure into the characteristic landscape where none exist. About 0.35 miles from the sagebrush flats south to the Torreon Fossil Fauna West ACEC boundary would be within VRM Class II. Open trenching would introduce strong, contrasting lines, color, and texture, which would attract attention of the casual observer. This would not be consistent with VRM Class II objectives where the strongest contrast allowed is weak (see Contrast Rating for KOP 8, Appendix E).

Visual resource impacts for the tank and chlorination site and the proposed pipeline alignment on BLM lands managed for VRM class IV would be the same as the Proposed Alternative A.

Cumulative Impacts

Cumulative impacts would be the same as Proposed Alternative A.

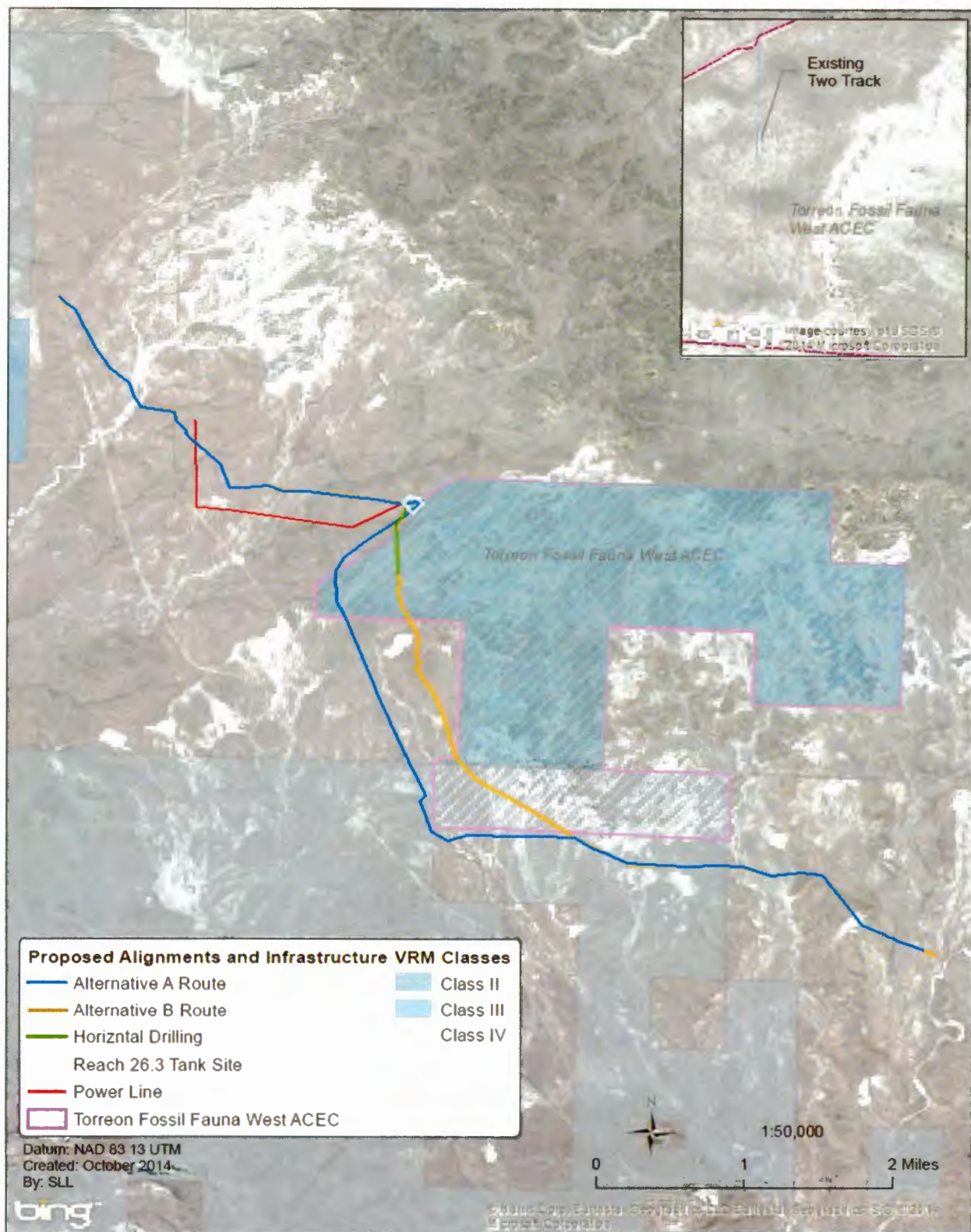


Figure 9. Proposed Reach 26.3 VRM Classes



Figure 10. Existing Two-track the Proposed Alternative A Alignment would follow

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 (BLM 2003).

The proposed reach crosses three grazing allotments managed by the FFO and BIA (Figure 11). The allotments are summarized in Table 10.

Table 10. Grazing allotments in the proposed project area

Allotment Name and Number	Annual Operating Period	Maximum Permitted (head)			Available AUM ¹	Public land portion	Organization Managing Allotment
		Cattle	Sheep	Horse			
Counselor Community 6015	3/01–2/28	146	2,287	2	5,902	100%	FFO

Allotment Name and Number	Annual Operating Period	Maximum Permitted (head)			Available AUM ¹	Public land portion	Organization Managing Allotment
		Cattle	Sheep	Horse			
Casaus Brothers Duran 6022	3/01–2/28	32	—	—	177	46	BIA
Star Lake Community 6023	3/01–2/28	—	3,582	—	8,597	100	BIA

¹ AUM = Animal Unit Month

No permanent livestock water sources are within the immediate proposed project area. A number of fences would be crossed by the Reach 26.3 alignments. Livestock may be present during project operations.

3.14.2. Impacts Common to All Proposed Alternatives

Direct and Indirect Impacts

The Proposed 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 B). 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 be no long-term loss of available forage or water resources. Construction of the pipeline 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 reach. 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 would continue, which could introduce noxious 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 Alternatives would not contribute to cumulative impacts on the carrying capacity or available AUMs of the allotments.

3.15. ACEC

3.15.1. Affected Environment

The Torreon Fossil Fauna ACEC (Torreon ACEC) as designated in the 1986 RMP (as amended) and carried forward in the Rio Puerco Draft RMP falls within the proposed water pipeline. The Torreon ACEC was designated to protect the Torreon Fauna Type Locality for scientific study and to help preserve the rich variety of fossils that have been discovered in the southeastern San Juan Basin. A type locality is an

important paleontological feature that represents the place at which a fossil assemblage is typically displayed and from which it derives its name. The Torreon Wash area has been designated as the type locality for the Torrejonian North American Land Mammal Age (Evernden et al. 1964). The stretch of low badlands in the proposed water pipeline alignment is known to produce scientifically significant microvertebrate material from the Paleocene Nacimiento Formation. The BLM deemed it necessary to conduct a paleontological survey where the proposed water pipeline crosses the Torreon ACEC to check for possible fossil materials before proceeding with any ground disturbing activities.

For Proposed Alternative A, a paleontological survey was conducted for of each horizon that was a different color and/or grain size from the adjacent strata, resulting in 16 sampling sites where the proposed water pipeline would bore under the Torreon Fossil Fauna ACEC (Ziegler Geologic Consulting LLC 2014). Of the 16 sampled sites, only two produced fossil material. A small bone fragment that was tentatively identified as a cervical rib and 13 fragments of bone were found, including a cervical rib, shaft of a limb bone, and several small fragments of complex skeletal elements and a possible crocodile scute (Ziegler Geologic Consulting LLC 2014).

For Proposed Alternative B, paleontological resource-monitoring method was used to conduct the survey by prospecting on foot the proposed pipeline alignment with a 200-foot wide survey buffer, 400 foot total (Burris 2013). Fossil material was found at two locations along the escarpment. Bone fragments were found, including a *Champsosaurus* vertebra, intermediate distal and middle phalanx, and miscellaneous unidentifiable bone fragments, and a crocodile scute and turtle shell fragments. These fossil materials were found scattered as float at the locations, so the source of the fossils could not be determined (Burris 2013).

3.15.2. Impacts from Proposed Alternative A—ACEC Route

Direct and Indirect Impacts

No tooth fragments or teeth, which are critical to identifying mammalian taxa from these units, were found (Ziegler Geologic Consulting LLC 2014). Based on the paleontological survey conducted, installing the proposed water pipeline route would not affect any high-density microvertebrate fossil localities. Thus, it was recommended that construction be allowed to proceed through this corridor (Ziegler Geologic Consulting LLC 2014). The proposed alignment would open trench for 0.3 miles within an existing unpaved two track, thus construction would occur within a previously disturbed area and outside the badland area as well. Open trenching would occur to a depth of 6 feet to allow for access to the pipe with minimal ground disturbance and to avoid the need to re-drill in the event of any operational problems. The requested ROW would be 40 feet wide with no additional 60 foot TCE within the Torreon ACEC to minimize the construction footprint. Water pipeline design features to reduce potential impacts to the Torreon ACEC and its resources would be implemented. These would include using higher pressure-rated pipe to reduce chance of leaks in the future that would require ground disturbance for repair; higher compaction of final backfill on escarpment to help reduce erosion; installing water bars/berms on escarpment to reduce erosion; reseeding the entire disturbed area per BLM re-vegetation plan (Appendix C); and no driving access for operational/maintenance activities on the escarpment. The proposed water pipeline would have no effect on the unique paleontological resource or badlands in the Torreon ACEC, thus would adhere to the management objectives of protecting the Torreon Fauna Type Locality for scientific study and helping to preserve the rich variety of fossils in the southeastern San Juan Basin.

Cumulative Impacts

Surface and subsurface disturbance from oil and gas developments, fire and fuels management on non-federal lands, and mineral development could contribute to cumulative impacts to paleontological resources through incremental degradation, reducing the information and interpretive potential of paleontological resources in the region. Activities that would require federal approval would adhere to laws, regulations, and policies established to protect paleontological resources. Proposed Alternative A would not contribute to cumulative impacts to paleontological resources, as high-density microvertebrate fossil localities would not be impacted.

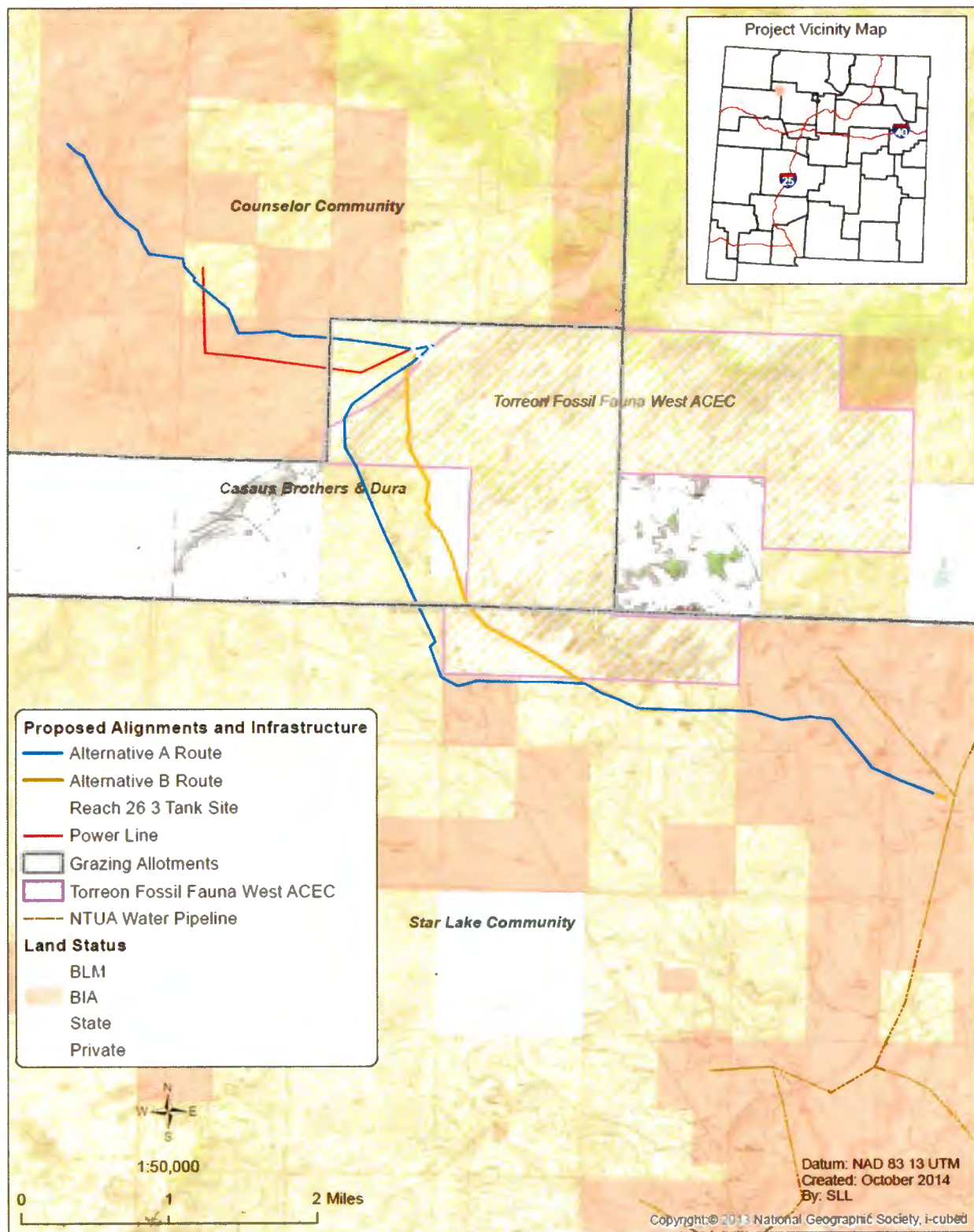


Figure 11. Grazing allotments and land ownership

3.15.3. *Impacts from Proposed Alternative B—Original ACEC Route*

Direct and Indirect Impacts

Under this action alternative, the pipeline alignment would cross two outcrops of the Paleocene Nacimiento Formation. Fragments of vertebrate fossils were found along the escarpment in the northern portion of the alignment in the Torreon ACEC (Burris 2013). Directional boring would be used for approximately 1,000 feet, starting at the top of the mesa and extending to the valley floor beyond the toe of the badlands to reduce potential impacts to paleontological resources and the badlands; open trenching would be conducted elsewhere. Directional boring to a depth of 100 feet could impact paleontological resources that are still buried. Microvertebrate fossils could be destroyed or displaced; displacing fossils would remove the stratigraphic context, which is important for understanding the evolutionary timeline of mammals found within the Torreon ACEC. In addition, the potential to directly impact buried microvertebrate fossils could destroy new scientific information as new species in the Torreon ACEC have been discovered recently by the New Mexico Museum of Natural History. Open trenching would be used for about 1.6 miles, which could uncover vertebrate fossils; the southern portion of the alignment in section 4 exhibits geologic features and preservational conditions that suggest significant fossils could be present under the soil cover (Burris 2013). This alignment would disturb more area in the Torreon ACEC, 1.8 miles, compared to the 0.3 miles of the Proposed Alternative A.

Mitigation Measures

To reduce impacts to paleontological resources in the ACEC, a monitor is recommended where the Nacimiento Formation is exposed and surface disturbance would occur in addition to the design feature in Section 2.1.5.

Cumulative Impacts

Surface and subsurface disturbance from oil and gas developments, fire and fuels management on non-federal lands, and mineral development could contribute to cumulative impacts to paleontological resources through incremental degradation, reducing the information and interpretive potential of paleontological resources in the region. Activities that would require federal approval would adhere to laws, regulations, and policies established to protect paleontological resources. Proposed Alternative B could contribute to adverse cumulative impacts to paleontological resources, as microvertebrate fossil localities could be impacted by the horizontal drilling and during open trenching as fossils may be present under the soil cover.

3.16. Environmental Justice/Socio-Economics

3.16.1. *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.
- **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 study area counties 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 11). 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 11. 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 30.2%	7,165 17.7%	19,934 11.1%	22,152 18.2%	71,017 21.3%	421,123 20.6%	34,569,951 12.1%
Percent of Population in Poverty 2012	27,296 37.7%	8,806 22.0%	18,502 13.7%	25,802 20.3%	80,406 21.5%	327,444 17.7%	48,760,123 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 12).

Table 12. 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

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?
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 Tract 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 three 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 13). 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 11). 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 13. 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 13.6%	28,714 71.4%	46,334 35.3%	24,496 19%	109,288 29%	952,569 46.3%	50,545,275 16.4%	382 11.6%	2,958 1.7%	99 6.0%
White alone	7,413 10.3%	5,370 28.6%	61,977 47.2%	54,218 42.2%	128,978 34.67%	831,543 40.5%	196,903,968 63.7%	74 2.3%	3,762 2.2%	47 2.9%
Black or African American alone	353 0.5%	149 0.4%	2,704 2.1%	794 0.6%	4000 1.08%	35,586 1.7%	37,786,591 12.2%	0 0%	250 0.1%	5 0.3%
American Indian or Alaskan	52,358 72.8%	5,629 14.0%	15,964 12.2%	46,676 36.3%	120,627 32.43%	176,766 8.6%	2,050,766 0.7%	2,692 82.0%	162,920 94.3%	1,429 87.0%

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
Native alone										
Asian alone	506 0.7%	173 0.4%	1,685 1.3%	464 0.4%	2828 0.76%	25,411 1.2%	14,692,794 4.8%	73 2.2%	834 0.5%	14 0.9%
Native Hawaiian and Other Pacific Islander alone	38 0.1%	7 0%	100 0.1%	72 0.1%	217 0.06%	989 <.01%	480,063 0.2%	0 0%	209 0.1%	0 0%
Some Other Race	7 <.01%	22 0.1%	437 0.3%	84 0.1%	550 0.15%	3,623 0.2%	616,191 0.2%	0 0%	102 0.1%	0 0%
Two or more Races	1,469 2.0%	137 0.3%	2,101 1.6%	1,796 1.4%	5,503 1.48%	28,800 1.4%	6,063,063 2.0%	62 1.9%	1,660 1.0%	49 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 13, 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).

3.16.2. Impacts Common to All Proposed Alternatives

Direct and Indirect Impacts

The construction could impede access to multiple-use resources on BLM lands such as hunting, gathering, or woodcutting, however, this would be temporary during construction activities in any local

area. Upon completion of construction, the reclamation activities would reestablish access where waterlines cross existing roads 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 tribal, 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. Indirect effects would apply to all residents and public land users in the proposed project area equally. Development of the proposed waterlines 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; thereby resulting in an improved quality of life.

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

Cumulative impacts to environmental justice/socio-economics could occur from future oil and gas development. Annual oil and gas production could double over current levels (USDI/BLM 2003a, page 4-129), which could provide an increase in jobs, expenditures, and public revenues. Sandoval and McKinley counties both have disproportionately minority populations that could benefit from resource development of federal and non-federal interests, through job development. Development of Reach 26.3 would provide a safe water supply to many households who do not have access otherwise on the Navajo Nation and should stimulate the local economy for both the construction and operation phases. There are no other known projects, that, when considered with the Proposed Alternatives, would contribute to cumulative effects on environmental justice/socio-economics.

3.17. Public Health and Safety

3.17.1. Affected Environment

OSHA laws regulate worker safety. The Proposed action would include use of heavy equipment and creating open trenches during the course of construction and would comply with OSHA regulations (Navajo–Gallup Water Supply Project Reaches 24.1, 24.1 JAN, 25, and 26 Plan of Development 2014). 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 proposed 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.

3.17.2. Impacts Common to All Proposed Alternatives

Direct and Indirect Impacts

Construction of proposed Reach 26.3 would provide a safe, reliable water source to the residents of the Torreon and Ojo Encino Chapters that would otherwise haul water from NTUA watering points or from unregulated sources, such as livestock wells and springs. A safe and reliable water source would remove

1 health and safety issues from consuming untreated, bacterial or chemical (natural arsenic and uranium),
2 contaminated water. The health issues related to consuming uranium-contaminated—kidney toxicity and
3 can accumulate in bones and tissues—and arsenic contaminated water—increases risk of internal organ
4 and lung cancer—would be removed. A reliable water supply would also reduce incidence of disease and
5 infection related to waterborne contaminants. The increased risk of diseases (dysentery, diarrhea) spread
6 by flies exposed to human waste from outhouses may also be reduced as indoor plumbing and basic
7 sanitation (wastewater treatment facilities) becomes possible.

8 Primary activities that could pose a risk to public health and safety from the implementing the Proposed
9 Alternatives are related to construction traffic and the operation of heavy equipment near public
10 roadways. Health and safety risks for construction workers are related to the operation of heavy
11 equipment, working around heavy equipment, and working in the vicinity of utilities (primarily gas
12 gathering pipelines). These activities pose a risk of physical injury associated with auto accidents,
13 contacting moving equipment, or explosion or fire from a punctured gas line. Direct and indirect effects to
14 public health and safety would be minor and short term with the implementation of design features and
15 adherence to OSHA regulations and BLM ROW grant stipulations.

16 **Cumulative Impacts**

17 There are no other known projects, that, when considered with the Proposed Alternatives that would
18 contribute to cumulative effects on public health and safety.

19 **4. SUPPORTING INFORMATION**

20 **4.1. Tribes, Individuals, Organizations, or Agencies Consulted**

21 Public scoping in this EA is tiered to the Reclamation FEIS-NGWSP, which conducted five public scoping
22 meetings held specifically for the project and consulted with state and federal agencies, tribal
23 governments, local governments, and interested organizations. The following individuals, agencies, or
24 groups were consulted or sent copies of this document for review and comment:

25 Bureau of Indian Affairs—Navajo Regional Office

26 Navajo Nation Chapters

27 Navajo Nation Historic Preservation Department

28 Navajo Nation Department of Fish and Wildlife

29 New Mexico State Historic Preservation Office

30 Souder Miller and Associates

31 U.S. Army Corps of Engineers

32 U.S. Fish and Wildlife Service

33 **4.2. List of Preparers**

34 **BLM Farmington Field Office**

35 Janelle C. Alleman, Outdoor Recreation Specialist

36 James M. Copeland, Archaeologist

37 Stan Dykes, Noxious Weed Coordinator

- 1 John Kendall, Wildlife Biologist,
- 2 Darlene E. Horsey, Realty Specialist
- 3 Sharrie Landon, Biological Scientist
- 4 John B. Kendall, Threatened and Endangered Species Biologist
- 5 Amanda Nisula, NEPA Coordinator
- 6 Sarah N. Scott, Natural Resource Specialist
- 7 Sheila L. Williams, District Botanist
- 8 Dale L. Wirth, Branch Chief
- 9 **Ecosystem Management, Inc.**
- 10 Keith Baker, NEPA Specialist
- 11 Matthew E. Brooks, Wildlife Biologist
- 12 Garth Hayden, Cultural Resources Specialist
- 13 Stephanie Lee, NEPA Specialist and Technical Editor
- 14 David Squires, VRM Specialist
- 15 Mike Tremble, Environmental Scientist
- 16 Kate Wright, Cultural Resources Specialist

4.3. References

- Architectural Research Consultants, Incorporated. 2002. Land Use Plan for Torreon/Star Lake Chapter.
- Architectural Research Consultants, Incorporated. 2003. Land Use Plan for Ojo Encino Chapter.
- Barger, N. N., J. E. Herrick, J. Van Zee, and J. Belnap. 2006. Impacts of biological soil crust disturbance and composition on C and N loss from water erosion. *Biogeochemistry* 77:247–263.
- Belnap, J., R. Rosentreter, S. Leonard, J. H. Kaltenecker, J. Williams, and D. Eldridge. 2001. Biological Soil Crusts: Ecology and Management. Technical Reference 1730-2. U.S. Department of Interior, Bureau of Land Management. Denver, Colorado.
- Boshell, Cynthia. 2010. Public Land Policy as a Cultural Empowerment Tool: The Federal Land Policy and Management Act of 1976 (FLPMA), with special emphasis on the California Traditional Gathering Policy. Internet Web Site: http://users.humboldt.edu/boshell/PDF/boshell_FLPMA.pdf. Accessed July 14, 2014.
- Brown, D. E. (Ed.). 1994. Biotic Communities: Southwestern United States and Northwestern Mexico. University of Utah Press, Salt Lake City, Utah.
- Brugge, D. M. 1993. An Investigation of AIRFA Concerns Relating to the Fruitland Coal Gas Development Area. Office of Contract Archaeology, University of New Mexico. Manuscript on file, Bureau of Land Management, Farmington, New Mexico.
- Burris, John. 2013. A Paleontological Resource Survey for the Navajo Gallup Water Supply Reach 26.3, Section 29, T 21 N, R 5 W, Sandoval County, New Mexico; Section 4, T 20 E, R 5 W, McKinley County, New Mexico.
- Ecosystem Management, Inc. 2013. A Cultural Resource Survey of Approximately 843 Acres for the Navajo Gallup Water Supply Reach 26.3, Sandoval and McKinley Counties, New Mexico.
- Ecosystem Management, Inc. 2014a. Biological Survey Report for Navajo–Gallup Water Supply—Reach 26.3 Project. EMI, Albuquerque, New Mexico.
- Ecosystem Management, Inc. 2014b. An Addendum to a Cultural Resource Survey of Approximately 843 Acres for the Navajo Gallup Water Supply Reach 26.3, Sandoval and McKinley Counties, New Mexico.
- Enquist, C., and D. Gori. 2008. Implications of Recent Climate Change on Conservation Priorities in New Mexico in A Climate Change Vulnerability Assessment for Biodiversity in New Mexico, Part I. The Nature Conservancy in New Mexico.
- Eveling, D.W., and A. Bataille. 1984. The effect of deposits of small particles on the resistance of leaves and petals to water loss. *Environmental Pollution* 36:229–238.
- Evernden, J.R., Savage, D.E., Curtis, G.H. and James, G.T., 1964, Potassium-argon dates and the Cenozoic mammalian chronology of North America: *American Journal of Science*, v. 262, p. 145-198.
- Federal Emergency Management Agency (FEMA). Map Service Center: FEMA Flood Hazard Mapping. Available at: <http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping>.
- Fleischner, T. L. 1994. Ecological costs of livestock grazing in western North America. *Conservation Biology* 8:629–644.
- Gelbard, J. L., and J. Belnap. 2003. Roads as conduits for exotic plant invasions in a semiarid landscape. *Conservation Biology* 17:420–432.

- 1 Gilpin, D. 2013. Navajo-Gallup Water Supply Project Ethnographic Overview of Native American Cultural
2 Association with the San Juan Basin, New Mexico. PaleoWest Archaeology, Phoenix. Ms. on file, Bureau
3 of Reclamation, Durango, Colorado.
- 4 Goddard Institute for Space Studies. 2007. Annual Mean Temperature Change for Three Latitude Bands.
5 Datasets and Images. GISS Surface Temperature Analysis, Analysis Graphs and Plots. New York, New
6 York. (Available on the Internet: <http://data.giss.nasa.gov/gistemp/graphs/Fig.B.lrg.gif>).
- 7 Hirano, T., M. Kiyota, and I. Aiga. 1995. Physical effects of dust on leaf physiology of cucumber and
8 kidney bean plants. *Environmental Pollution* 89:255–261.
- 9 Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: The Physical Basis*
10 (Summary for Policymakers). Cambridge University Press. Cambridge, England and New York, New
11 York. (Available on the Internet: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>).
- 12 ——. *Climate Change. 2007, Synthesis Report. A Report of the Intergovernmental Panel on Climate*
13 *Change.*
- 14 International Energy Agency. 2012. *CO2 Emissions from fuel combustion highlights.* IEA Publications.
15 Paris, France. (Available on the Internet: <http://www.iea.org/co2highlights/co2highlights.pdf>).
- 16 Kelly, K., R. Martin, R. Begay, T. Neff, and C. Werito. 2006. "We Will Help You With What We Know":
17 Diné Traditional Cultural Places in Dinétah. Museum of Northern Arizona Environmental Solutions, Inc.,
18 Flagstaff. Manuscript on file at Bureau of Land Management, Farmington, New Mexico.
- 19 Martin, J.A. 2011. Significant Traditional Cultural Properties of the Navajo People. Traditional Culture
20 Program, Navajo Nation Historic Preservation Department, Window Rock, Arizona.
- 21 Monsen, S.B., R. Stevens, and N.L. Shaw. 2004. Restoring western ranges and wetlands. General
22 Technical Report, RMRS-GTR 136. U.S. Department of Agriculture, Forest Service, Rocky Mountain
23 Research Station, Fort Collins, Colorado.
- 24 National Academy of Sciences. 2006. *Understanding and Responding to Climate Change: Highlights of*
25 *National Academies Reports.* Division on Earth and Life Studies. National Academy of Sciences.
26 Washington, D.C. (Available on the Internet: [//dels.nas.edu/basc/Climate-HIGH.pdf](http://dels.nas.edu/basc/Climate-HIGH.pdf)).
- 27 National Park Service. 1995. National Register of Historic Places Bulletin 15: How to Apply the National
28 Register Criteria for Evaluation. Department of Interior. Washington, D.C. Available online:
29 <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf>.
- 30 ——. 1998. National Register of Historic Places Bulletin 38: Guidelines for Evaluating and Documenting
31 Traditional Cultural Properties. Department of Interior. Washington, D.C. Available online:
32 <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb38.pdf>.
- 33 Natural Resources Conservation Service (NRCS). 2008. Soil Survey of Sandoval County Area, New
34 Mexico, Parts of Los Alamos, Sandoval, and Rio Arriba Counties. Available online:
35 <http://soildatamart.nrcs.usda.gov/Manuscripts/NM656/0/Sandoval%20NM.pdf>.
- 36 ——. 2013. Web Soil Survey. Available at: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.
- 37 Navajo Natural Heritage Program. 2008. Navajo Nation Endangered Species List: Species Accounts.
38 Version 3.08 for Navajo Endangered Species List. Navajo Natural Heritage Program, Department of Fish
39 and Wildlife, Window Rock, Arizona.
- 40 New Mexico Department of Agriculture (NMDA). 2009. New Mexico Noxious Weed List, Update April
41 2009. Online: http://www.nmda.nmsu.edu/wp-content/uploads/2012/04/troublesome_weeds_nm.pdf.

- 1 New Mexico Environmental Department. 2010. New Mexico Environmental Department (NMED). 2010.
2 Inventory of New Mexico Greenhouse Gas Emissions: 2000–2007. Available at:
3 http://www.nmenv.state.nm.us/cc/documents/GHGInventoryUpdate3_15_10.pdf.
- 4 ——. 2012. Northwest New Mexico Monitoring Network Presentation to BLM. June 26, 2012. Presented
5 by Mark Jones New Mexico Environment Department.
- 6 Parker, P. L., and T. F. King. 1998. Guidelines for Evaluating and Documenting Traditional Cultural
7 Properties. National Park Service, National Register Bulletin 38. Washington.
- 8 Souder, Miller and Associates. 2014. Navajo–Gallup Water Supply Project Reach 24.1, 24.1 JAN, 25 and
9 26 Plan of Development. Souder, Miller and Associates, Albuquerque, New Mexico.
- 10 Tafoya, J. 2013. Personal communication. BLM Rangeland Management Specialist.
- 11 Thompson, J. R., P.W. Mueller, W. Fluckiger, and A. J. Rutter. 1984. The effects of dust on
12 photosynthesis and its significance for roadside plants. *Environmental Pollution* 34:171–190.
- 13 U.S. Department of the Interior (US DOI). 2008. Guidance on the Applicability of the Endangered Species
14 Act's Consultation Requirement to Proposed actions Involving Emissions of Greenhouse Gases. Memo
15 from Office of the Solicitor. October 3, 2008.
- 16 U.S. Department of the Interior Bureau of Land Management (USDI/BLM). 1986. Rio Puerco Resource
17 Management Plan and Record of Decision. November 1986.
- 18 ——. 2003a. Farmington Proposed Resource Management Plan/Final Environmental Impact Statement.
19 September 2003.
- 20 ——. 2003b. Farmington Resource Management Plan with Record of Decision. Farmington, New Mexico.
- 21 ——. 2005. Procedures for Performing Cultural Resources Fieldwork on Public Lands in the Area of New
22 Mexico BLM Responsibilities, BLM Handbook Supplement H-8001-1. March 2005.
- 23 ——. 2008. NEPA Handbook H 1790 1 [BLM 1/30/2008]. Washington, D.C.
- 24 ——. 2010. Migratory Bird Treaty Act—BLM/FFO Interim Management Policy. Instruction Memorandum
25 No. NM-F00-2010-001. Farmington Field Office, Farmington, New Mexico.
- 26 ——. 2011. Air Resources Technical Report for Oil and Gas Development. New Mexico, Oklahoma,
27 Texas, and Kansas. Bureau of Land Management, New Mexico State office. Santa Fe, New Mexico.
- 28 ——. 2012. Rio Puerco Resource Management Draft Plan & Environmental Impact Statement. August
29 2012.
- 30 ——. 2013. Bare Soil Reclamation Procedures. BLM FFO, Farmington, New Mexico.
- 31 ——. 2014. Air Resources Technical Report for Oil and Gas Development. Santa Fe: Bureau of Land
32 Management, New Mexico State Office.
- 33 U.S. Department of the Interior, Bureau of Reclamation (Reclamation). 2009. Planning Report and Final
34 Environmental Impact Statement: Navajo–Gallup Water Supply Project, New Mexico–Arizona.
35 Reclamation, Upper Colorado Region, Salt Lake City, Utah.
- 36 ——. 2011. Programmatic Agreement Navajo–Gallup Water Supply Project. New Mexico–Arizona.
37 Reclamation, Upper Colorado Region, Salt Lake City, Utah.
- 38 U.S. EPA. 2008. National Emissions Inventory. <http://www.epa.gov/ttn/chief/net/2008inventory.html>.

- 1 ——. 2009. Inventory of US Greenhouse Gas Emissions and Sinks: 1990–2007. Environmental
2 Protection Agency, Washington, D.C. April 2009.
- 3 ——. 2011. 2005 National-Scale Air Toxics Assessment. Summary of Results.
4 <http://www.epa.gov/ttn/atw/nata2005>.
- 5 ——. 2012. National-Scale Air Toxics Assessment. Retrieved February 27, 2014, from U.S.
6 Environmental Protection Agency: <http://www.epa.gov/ttn/atw/nata2005>.
- 7 ——. 2013a. The Green Book Nonattainment Areas for Criteria Pollutants. Retrieved February 25,
8 2014, from U.S. Environmental Protection Agency: <http://www.epa.gov/airquality/greenbook/>.
- 9 ——. 2013b. Air Quality Index Report. Retrieved March 12, 2014, from U.S. Environmental Protection
10 Agency: http://www.epa.gov/airdata/ad_rep_aqi.html.
- 11 ——. 2013c. Level III Ecoregions of the United States. Available online: [http://www.](http://www.epa.gov/wed/pages/ecoregions/level_iii.htm)
12 [epa.gov/wed/pages/ecoregions/level_iii.htm](http://www.epa.gov/wed/pages/ecoregions/level_iii.htm).
- 13 ——. 2014. Air Trends: Design Values. Retrieved February 25, 2014, from U.S. Environmental
14 Protection Agency: <http://www.epa.gov/airtrends/values.html>.
- 15 U.S. Government Accountability Office. 2007. Climate Change: Agencies Should Develop Guidance for
16 Addressing the Effects on Federal Land and Water Resources. GAO-07-863. Washington, D.C. August
17 2007.
- 18 Valkenburgh, R. F. Van. 1941. Diné Bikeyah. Department of the Interior, Office of Indian Affairs, Navajo
19 Services, Window Rock. Ms. on file, Bureau of Land Management, Farmington, New Mexico.
- 20 ——. 1974. Navajo Sacred Places and A Short History of the Navajo People. Garland American Indian
21 Ethnohistory Series, Navajo Indians, 3 Vols. Garland Publishing Inc., New York and London.
- 22 Zeigler Geologic Consulting. 2014. Torreon ACEC Microvertebrate Locality Assessment: Summary
23 Report.

24

APPENDIX A. CHAPTER RESOLUTION



THE NAVAJO NATION

TORREON/STAR LAKE CHAPTER

P.O. BOX 1024 * CUBA, NEW MEXICO 87013 * (505) 731-2336

Dave B. Rico	Lavern Wagner	Leo L. Cherley	Joe L. Cayadito, Jr.	Markene R. Waukoo	Sherwood Willets	Wally Toledo	Alberta Ballard
Council Delegate	Council Delegate	President	Vice President	Secretary/Treasurer	Coordinator	Coordinator	Office Specialist

RESOLUTION OF

TORREON/STAR LAKE CHAPTER

TSL 07/2003-059-225

DECLARING A STATE OF WATER EMERGENCY FOR THE TORREON/STAR LAKE CHAPTER, AND REQUESTING CONCURRENCE WITH DECLARATION BY THE STATE OF NEW MEXICO

WHEREAS:

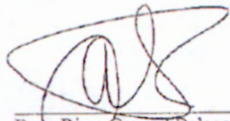
1. Torreon/Star Lake Chapter does not have sufficient water supply to meet its current and projected water needs; and
2. The upcoming summer and continuing drought are placing ever greater demands on the water supply; and
3. The Indian Health Service currently has \$6 million allocated and/or planned for water projects in the Torreon/Star Lake service area; and
4. The IHS will delete these projects indefinitely, and the community will lose these funds and these water projects if adequate water supply can not be provided; and
5. Two (2) new IHS wells have recently been abandoned due to insufficient water quality and quantity; and
6. A safe and reliable water supply is indispensable to preventing water-borne diseases, such as Hepatitis A and dysentery; and
7. The public health and economic livelihood of the 512 families currently connected to the water system, plus an additional 253 families who will be connected by IHS if adequate water supply can be found (total: 765 families, 3,649 people), depends on having a safe and reliable water supply.

NOW THEREFORE BE IT RESOLVED THAT

1. The Torreon/Star Lake Chapter finds a state of water emergency to exist in the community; and
2. The Torreon/Star Lake Chapter requests concurrence with this emergency finding by the State of New Mexico Environment Department.

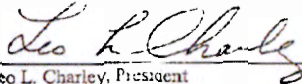
CERTIFICATION

WE HEREBY CERTIFY THAT THE FOREGOING RESOLUTION was duly considered by the Torreon/Star Lake Chapter at a duly called meeting at Na'Neelzhiin, New Mexico at which a quorum was present and that the same was motioned by: Mae E. Toledo and seconded by: Joe Montoya and adopted by a vote of 62 in favor 00 opposed and 00 abstained on the 6th day of July 2003.

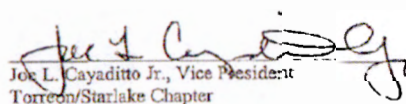


Dave Rico, Council Delegate
Torreon/Starlake Chapter

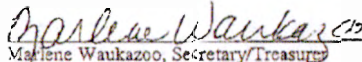
LaVern Wagner, Council Delegate
Torreon/Starlake Chapter



Leo L. Charley, President
Torreon/Starlake Chapter



Joe L. Cayaditto Jr., Vice President
Torreon/Starlake Chapter



Marlene Waukazoo, Secretary/Treasurer
Torreon/Starlake Chapter

Sherwood Willetto, Land Board
Torreon/Starlake Chapter



BILL RICHARDSON
Governor

State of New Mexico
ENVIRONMENT DEPARTMENT
Field Operations Division
Administrative Office
525 Camino de Los Marquez, Suite 1
Santa Fe, New Mexico 87505
Telephone (505) 827-1400
Fax (505) 476-8141



RON CUREY
Secretary

Ana Maria Ortiz
Director

July 11, 2003

David Harris, Executive Director
New Mexico Finance Authority
409 St. Michaels Drive
Santa Fe, New Mexico 87505

SUBJECT: Chapter of Torreon Emergency Request

Dear Mr. Harris:

On July 8, 2003, the New Mexico Environment Department's Drinking Water Bureau (NMED-DWB) was contacted regarding its emergency conditions existing at the Chapter of Torreon water system.

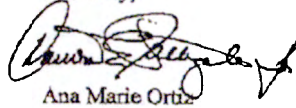
The NMED-DWB is now fully aware of the emergency situation that exists at the Torreon water system that affects approximately 512 families, all of whom are completely dependent on wells for drinking water. The emergency is associated with low production rate of its 6 wells, 4 of which are running dry and 2 of which are poor quality. One of which is poor in water quality as it was high in TDS, chloride, iron, and sulfate. Another well had oil in it and did not pump test it as the oil would damage the pump. The community is hauling its water and there is major health problems related to lack of potable water for sanitation purposes as people are required to use outhouses.

Based on information provided by DWB staff, the NMED believes an emergency situation exists which poses an imminent threat to public health, safety, and welfare to the members of the Chapter of Torreon water system.

If you have any additional questions, please call Jim Perry, Acting Chief of the Drinking Water Bureau, at 827-1400, ext. 1019.

Chapter of Torreon Emergency
July 11, 2003
Page 2 of 2

Sincerely,


Ana Marie Ortiz
Director, Field Operation Division
New Mexico Environment Department

APPENDIX B. RE-VEGETATION PLAN

This re-vegetation plan was designed to meet the requirements presented in the U.S. Department of the Interior Bureau of Land Management Farmington Field Office (BLM FFO) Bare Soil Reclamation Procedures (BLM FFO 2013) for disturbance resulting from the construction of the Navajo–Gallup Water Supply (NGWS) Reach 26.3. The proposed project would consist of installing approximately 18.7 miles (30.1 km) of 10-inch and 12-inch diameter (25 and 30-cm) polyvinyl chloride pipe from the Ojo Encino North tank site to the Pueblo Pintado tank site, in Sandoval and McKinley Counties, NM. The waterline would include 40 feet (12 m) of permanent right-of-way (ROW) and 60 additional feet (18 m) of temporary construction easement (TCE). The total acreage of permanent ROW would be 91 acres (36.8 ha); the total acreage of TCE would be 136 acres (55.0 ha). The total area of ROW and TCE combined would be approximately 227 acres (91.9 hectares).

The project would also include the construction of a water storage & chlorination facility at the existing Pueblo Pintado tank site. The additional tank would have 2.3 acres (0.9 ha) of permanent easement. This tank would require the construction of a 0.26-mile-long (0.42-km) single-phase power line totaling 1.3 acre (0.5 ha).

The total area of potential disturbance for the pipeline and associated infrastructures would be approximately 230 acres (93.1 ha).

The major portion of the excavation will be done by bulldozers, scrapers and track hoes and possibly trenchers. A ripper will more than likely be used to break up sandstone, siltstone and shale. Topsoil will be stockpiled separate from general excavation material and will then be utilized during reseeding. The pipeline trench will reach a maximum depth in some areas as deep as 20 to 30 feet but typically averages around six feet in depth. The bottom width of the trench will be approximately three to four feet in width. Boring would involve a bore machine. Soil compaction would be conducted with sheepsfoot rollers, excavators, and/or jumping jack tampers. It is anticipated that water would need to be pumped from trenches when encountered to off-worksites areas. This water would need to be pumped off of the work area in order to minimize mud and rutting from heavy equipment and to dispose of excess water in the working trench. Contractors would be required to obtain all necessary permitting for such water disposal prior to commencing construction. Soils would be reshaped to original form and the area reseeded with native vegetation.

The waterline and power line right-of-ways would be completely cleared of vegetation. Not all portions of the temporary construction easements would require vegetation removal because not all parts of the easements would be impacted—these would mostly function for staging areas and storage. A re-vegetation plan is required for all disturbances that remove vegetation and expose bare soil on BLM FFO lands.

The re-vegetation plan will follow the protocol outlined in Vegetation Reclamation Procedure B for disturbances over 0.1 acre. The initial onsite pre-disturbance visit was conducted on March 5th, 2013. Representatives from BLM FFO, BLM Rio Puerco Field Office (RPFO), and the Bureau of Reclamation met with Ecosystem Management, Inc. (EMI) to survey the vegetation communities in the project area and discuss seed mixes and noxious weed issues. Re-vegetation on lands belonging to the BLM RPFO will also follow the Bare Soil Reclamation Procedures and resulting re-vegetation plan, as agreed to following the initial onsite visit and meeting with both field offices.



Long view of typical 100-foot disturbance right-of-way for the NGWSP; installation for 22-inch or greater diameter HDPE pipe. Photo not from Reach 26.3, which would install 12-inch diameter or less pipe.



Cross view of typical 100-foot disturbance right-of-way for the NGWSP. Photo not from Reach 26.3.

B.1. Site Description

Pre-disturbance site photos are presented below.

B.1.1. Vegetation Communities

Sagebrush Community—The majority of the project area is classified as the Sagebrush Community (Photo 2). The dominant pre-disturbance vegetation consists of *Artemisia tridentata* (sagebrush), *Gutierrezia sarothrae* (broom snakeweed), and *Bouteloua gracilis* (blue grama). *G. sarothrae* is classified as an undesirable reclamation species in the Bare Soil Reclamation Procedures manual. *A. tridentata* is not recommended for revegetation because of its invasive nature in heavily grazed areas. Other plants that occur in portions of the sagebrush community include *Chrysothamnus Greenei* (Green's rabbitbrush), *Pleuraphis jamesii* (galleta), *Sporobolus airoides* (sacaton), and *Muhlenbergia pungens* (sandhill muhly). *S. airoides* is more along the base of Cejita Blanca Ridge on Reach 26.3. The habitat along the Cejita Blanca Ridge is an ecotone of sagebrush habitat and badlands. Many of the washes in this area also contain *Ericameria nauseosa* (rubber rabbitbrush). The other grass species are the same as those mentioned above.

Unclassified grasslands—A portion of Proposed Alternative B contains grasslands in the ACEC. These areas cannot be classified based on the eight vegetation communities corresponding to the Bare Soil Reclamation Procedures. These areas warrant a unique selection of revegetation seed mixes that do not include shrub species because the establishment of shrubs in grassland habitat would reduce the ecological function and values of these areas.

This area would only be disturbed if Proposed Alternative B is selected for the final design plan. This area consists of open grassland/scrub-shrub habitat at the base of badlands. It is dominated by short *A. tridentata*, scattered *Atriplex obovata*, *Artemisia spinescens* (bud sagebrush), *Opuntia* sp. (prickly pear), *S. airoides*, *P. jamesii*, and *Muhlenbergia pungens*. This area is most similar to the badland community type. We recommend that the seed mix be selected from this community type. This area spans from approximately 285058 E, 3988814 N to 285244 E, 3987972 N (NAD83 UTM Zone 13N).



Photo 1. North end of line facing northwest. This area is near multiple residences.

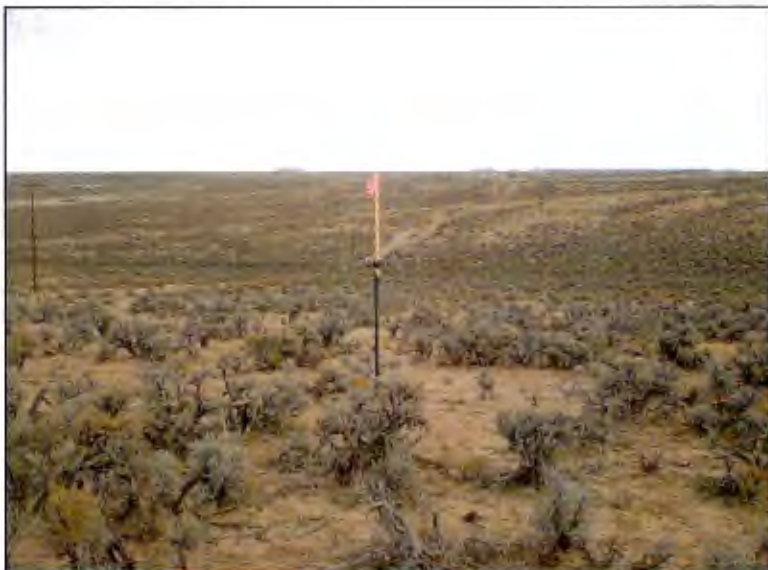


Photo 2. North end of project facing northwest.



Photo 3. North end of project are facing southwest. This area is near multiple residences.



Photo 4. Proposed power line facing north.



Photo 5. Proposed tank site.



Photo 6. Area near Cejita Blanca Ridge facing west.



Photo 7. Cejita Blanca Ridge looking south.



Photo 8. North of Ojo Encino facing south.



Photo 9. Southeast end of project area facing southeast.

B.2. Reclamation

B.2.1. Seed Mixes

The reduced-palatability seed mix is recommended for the widespread sagebrush community. 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.

B.2.2. Reclamation Techniques

Provided below are some procedures and methods that may to help achieve more effective reclamation success (taken from the BLM FFO community and seed-mix descriptions).

Soil Testing: Development of a soil-testing plan for evaluation of the results of topsoil handling and reclamation procedures related to re-vegetation 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 consist 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 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.

Table 1. Seed mixes for community types. Species in bold are known to grow in the project area

Common Name	Scientific Name	Variety	Season	Form	PLS lbs./acre*
Reduced Palatability seed mix (for Sagebrush and Pinyon–Juniper Communities)					
Rubber rabbitbrush	<i>Ericameria nauseosa</i>	VNS	NA	Shrub	2
Four-wing saltbush	<i>Atriplex canescens</i>	VNS	NA	Shrub	2
Fringed sage	<i>Artemisia frigida</i>	VNS	NA	Sub-shrub	2
Purple threeawn	<i>Aristida purpurea</i>	VNS	Warm	Bunch	3
Indian ricegrass	<i>Achnatherum hymenoides</i>	Paloma or Rimrock	Warm	Bunch	3.5
Blue grama	<i>Bouteloua gracilis</i>	Alma or Hachita	Warm	Sod	2
Sand dropseed†	<i>Sporobolus cryptandrus</i>	VNS	Warm	Bunch	0.25
Scarlet globemallow	<i>Sphaeralcea coccinea</i>	VNS	Warm	Forb	0.25
Rocky Mountain beeplant	<i>Cleome serrulata</i>	VNS	Warm	Forb	0.25
Hairy false goldenaster	<i>Heterotheca villosa</i>	VNS	Warm	Forb	0.25
Unclassified Grasslands seed mix (Taken from badland seed-pick list)					
Indian ricegrass	<i>Achnatherum hymenoides</i>	Paloma or Rimrock	Warm	Bunch	3
Blue grama	<i>Bouteloua gracilis</i>	Alma or Hachita	Warm	Sod	2
Sand dropseed†, ‡	<i>Sporobolus cryptandrus</i>	VNS	Warm	Bunch	3
Galleta	<i>Pleuraphis jamesii</i>	Viva florets	Warm	Bunch/Sod-forming	3
Small-flower globemallow	<i>Sphaeralcea parvifolia</i>	VNS	Warm	Forb	0.25

*Based on 60 pure live seeds (PLS) per square foot, drill seeded. Double this rate (120 PLS/ft.2) if broadcast or hydroseeded.

† *S. cryptandrus* is preferred over *S. airoides*, the common dropseed in the project area, because it is better suited for re-vegetation projects (S. Dykes, BLM FFO noxious weed coordinator, personal communication).

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: A straw mulch (see above) with no sterile cover nurse crop would be a better option than using a nurse crop in that the mulch would help preserve soil moisture in the upper 2–3 inches of soil, while nurse crops in arid environments can compete with native seedlings for moisture.

BLM Consultation: BLM is available provide consultations concerning fencing options to help minimize industry costs, should fencing be necessary to achieve reclamation success.

B.2.3. 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. Large portions of the project area lack substantial grass cover, and the revegetated right-of-way may attract hungry animals from the surrounding areas. Indeed, a visual inspection of the project area suggests that heavy grazing, coupled with the recent years' drought, have had negative impacts on native vegetation. Moreover, it is impractical to fence off up to 9.5 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 re-vegetation.

The New Mexico Class C and BIA Navajo Region Class C noxious weed *Tamarix ramosissima* (salt cedar) was found scattered in Encino Wash (285686 E, 3985632 N), Toledo Arroyo (288769 E, 3985322 N), and Torreon Wash (291027 E, 3984206 N). The New Mexico Class B and BIA Navajo Region Class B noxious weed *Halogeton glomeratus* also occurs in some portions of the project area (Figure 2).

T. ramosissima should remain confined to the washes in which it occurs if measures are taken to prevent the spread of seeds. *H. glomeratus* can be very problematic in disturbed areas where it may thrive from lack of competition. Following the protocol in the Bare Soil Reclamation Procedures Appendix D. Surface Use Plan of Operations Weed Management, the BLM FFO and RPFO 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 RPFO and 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.

B.3. Monitoring and Reporting Requirements

Post-re-vegetation monitoring requirements for Vegetation Reclamation Procedure B are presented below and can be found in section 3 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.

B.3.1. Monitoring Responsibilities

The operator is responsible for the following:

- Conducting annual monitoring starting two calendar years after approval of required earthwork and/or seeding, and continuing until the vegetation percent cover standards have been attained, or an exception has been issued by the FFO and RPFO. The FFO monitoring form will be completed and submitted to the FFO and RPFO by December 31 of the year monitored.
- Reading the line point-intercept transects to document to FFO that vegetation percent cover standards have been attained.
- Requesting concurrence from the FFO and RPFO that vegetation percent cover standards have been attained.
- Participating in conferences with the FFO and other effected parties to analyze issues contributing to unsuccessful reclamation.
- Participating in the implementation of remedial actions developed during the conference process as necessary.
- Conducting long term monitoring (every fifth year) after vegetation percent cover standards have been attained during the life of the well.
- All areas authorized by the APD until the operator transfers the permit or abandons the project and obtains a Final Abandonment Notice (FAN) from the FFO.

The FFO/RPFO is responsible for the following:

- Establishing monitoring sites in collaboration with the operator during the required earthwork and/or seeding inspection, and submitting to the operator the initial monitoring report within 60 days of earthwork and/or seeding inspection approval.
- Evaluating annual monitoring reports submitted by the operator, and acknowledging to the operator that the reports have been received and evaluated within 60 days after received from the operator.
- Providing concurrence (or not) to the operator that the vegetation percent cover standards have been attained and rational for the determination within 60 days of receiving the request for concurrence.
- Participating in conferences with the operator and other effected parties to analyze issues contributing to unsuccessful reclamation.
- Participating in the implementation of remedial actions developed during the conference process as necessary.

B.3.2. 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.
- Request concurrence from the FFO and RPFO that percent vegetation cover standards have been attained.
- FFO and RPFO will provide concurrence (or not) that percent vegetation cover standards have been attained.
- Develop remedial plans to correct impacts to re-vegetation 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.

B.3.3. Monitoring Reporting

The FFO annual monitoring form will be completed and submitted to the FFO and RPFO by December 31 of the year monitored. The FFO and RPFO will evaluate the monitoring reports submitted and acknowledge that the reports have been received and evaluated within 60 days after they are received.

B.4. Standards

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%.

Unclassified Grassland—≥ 25% foliar cover of trees/shrubs/grasses/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35% (Taken from the greasewood community type standards).

FFO and RPFO will read the line point intercept transects when the vegetation appears to have the potential to attain the standard. The holder may also request FFO and RPFO staff to repeat a linear transect with a representative of the holder present if the holder believes the standard may be attained. The FFO and RPFO will compile the following information to document that the percent vegetation cover standards have been attained:

- The overall percent foliar cover score from the linear transects for the ROW.
- The line point intercept transect data sheets.
- Photos from each established photo point.
- Two photos of each ROW line point intercept transect location: one photo looking each direction along the ROW. One photo taken of each transect from one end of the transect looking straight down to the ground.
- The FFO and RPFO will prepare a notice to the ROW file that the percent cover standards have been attained.
- A copy of the notice will be supplied to the holder upon request.

The operator may request FFO and RPFO concurrence that vegetation percent cover standards have been attained any time after two calendar years of completion of earthwork and seeding. When the vegetation on a reclaimed site appears to meet the required percent re-vegetation standard, the proponent may read the transect to document that the percent vegetation standards for the site have been attained. A request for concurrence that the percent re-vegetation standards have been attained may be submitted to the FFO and RPFO. The request for concurrence will include the transect data sheets and photos taken from all the initial photo points established in the initial monitoring report. The FFO and RPFO will review the request and either approve or deny the request within 60 days. If the FFO and RPFO denies the request, the FFO and RPFO may initiate a site inspection within 60 days of the denial to analyze the site and determine if remedial actions may be appropriate.

B.5. Final Abandonment and Relinquishment

Requirements for the abandonment or relinquishment of re-vegetation monitoring for Vegetation Reclamation Procedure B are described below and can be found in section 3 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. The operator must document that percent cover standards have been obtained when submitting a request for a FAN or a relinquishment. If ownership of any portion of the permit, grant, or authorization is transferred to another entity, the re-vegetation and monitoring requirements for the portion transferred will be assumed by the acquiring entity.

B.5.1. Lack of Progress in the Attainment of the Reclamation Standards

When monitoring reports indicate that bare soil reclamation is not successful, or the FFO/RPFO identifies negative impacts within the reclamation area, the FFO/RPFO 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 re-vegetation 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 3 in the Bare Soil Reclamation Procedures (BLM FFO 2013)).

B.6. Literature Cited

Souder, Miller and Associates. 2014. Navajo–Gallup water supply project Reach 24.1, 24.1 JAN, 25, and 26 plan of development. Souder, Miller and Associates, Albuquerque, NM.

U.S. Department of the Interior Bureau of Land Management Farmington Field Office (BLM FFO). 2013. Bare Soil Reclamation Procedures.

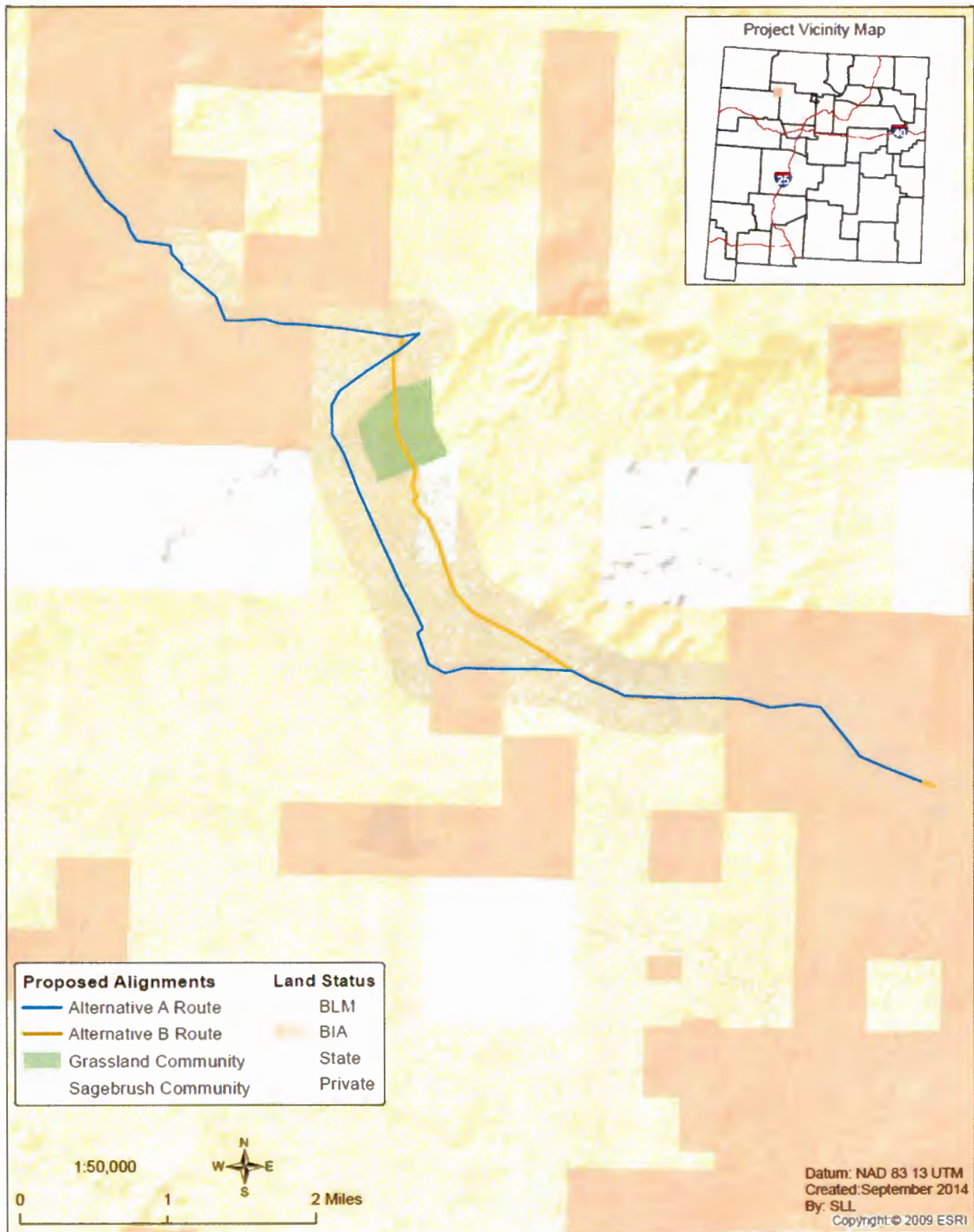


Figure B-1. Vegetation communities for Reach 26.3

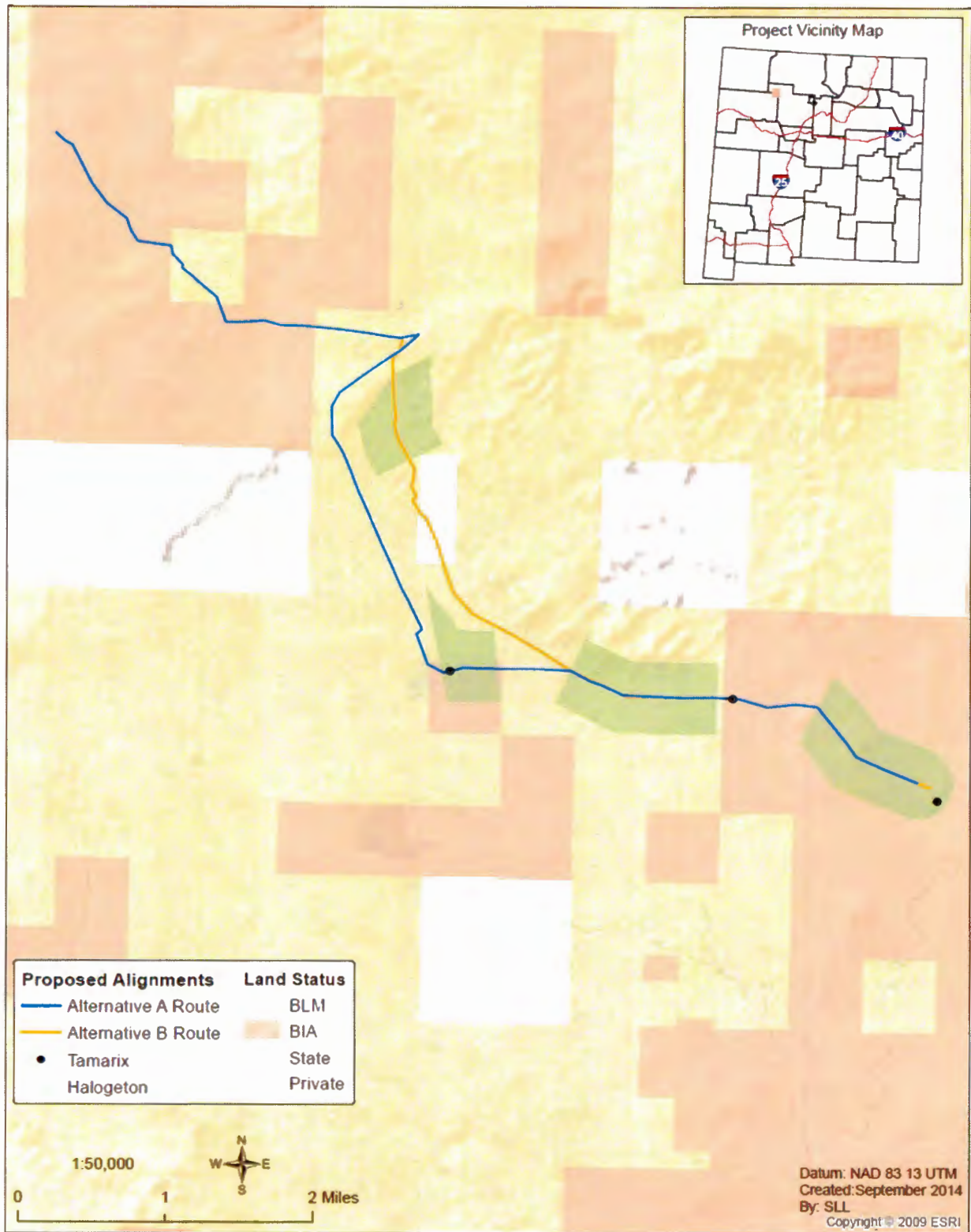


Figure B-2. General location of noxious weeds for Reach 26.3

**APPENDIX C. BIOLOGICAL RESOURCES COMPLIANCE
FORM**

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 26.3 and Power Line

DESCRIPTION: Souder, Miller & Associates propose to construct a water line approximately 10.1 miles in length with a 30-ft. wide disturbance ROW and an additional 70-ft. TCE. The project also includes the construction of power line 2.2 miles in length with a 30-ft. wide ROW. Total new disturbance for the proposed waterline and associated infrastructure would be approximately 137.8 acres. ROW applicant for operation and maintenance activity unknown.

LOCATION: Counselor & Ojo Encino Chapters, McKinley & Sandoval Counties, New Mexico

REPRESENTATIVE: Matt Brooks, Ecosystem Management, Inc. for Souder, Miller & Associates

ACTION AGENCY: U.S. Department of the Interior Bureau of Reclamation (USBR) - Upper Colorado Region

B.R. REPORT TITLE / DATE / PREPARER: USDOI - Bureau of Reclamation NGWSP Reaches 12.1 & 12.2

Proposed Water Line/MAY 2012/Nelson Consulting, Inc. & SWCA Environmental Consultants

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3. Suitable nesting habitat for Migratory Birds is present in and adjacent to the TCE.

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED: [1] *Aquila chrysaetos* (Golden Eagle), G3, BGEPA, MBTA, GBENPR, REPR; [2] *Buteo regalis* (Ferruginous Hawk), G3, MBTA; [3] *Athene cunicularia* (Burrowing Owl), G4, MBTA; [3]

FEDERALLY-LISTED SPECIES AFFECTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES: [1] Mitigation measures will be implemented to avoid impacts on species protected under the MBTA that could potentially nest within and adjacent to the proposed action areas.

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: Pamela A. Kyselka/28 AUG 2014

COPIES TO: (add categories as necessary)

☐☐

2 NTC § 164 Recommendation:	Signature	Date
<input checked="" type="checkbox"/> Approval	<i>Gloria M. Tom</i>	2/28/14
<input type="checkbox"/> Conditional Approval (with memo)		
<input type="checkbox"/> Disapproval (with memo)		
<input type="checkbox"/> Categorical Exclusion (with request letter)		
<input type="checkbox"/> None (with memo)	Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife	

*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
REX LEE JIM

MEMORANDUM

TO : David Mikesic, Zoologist
Department of Fish and Wildlife

FROM : 
Gloria M. Tom, Director
Department of Fish and Wildlife

DATE : August 25, 2014

SUBJECT : DELEGATION OF AUTHORITY

I will be on travel Tuesday through Thursday, August 26 - 28, 2014. I am hereby delegating you to act in the capacity of the Director, Department of Fish and Wildlife, effective 8:00 a.m. on Tuesday, August 26, 2014. This delegation shall end at 5:00 p.m. on Thursday, August 28, 2014.

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


David Mikesic, Zoologist
Department of Fish and Wildlife

APPENDIX D. CULTURAL RESOURCES COMPLIANCE FORM



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

1

WCD-ERheume
ENV 3 00

JUL 15 2013

CERTIFIED RETURN RECEIPT REQUESTED

Mr. Ron Maldonado
Navajo Nation
Historic Preservation Department
P.O. Box 4950
Window Rock, AZ 865 5

Subject: Class III Cultural Resources Inventory of Reach 26.3, Navajo Gallup Water Supply Project (NGWSP)

Dear Mr. Maldonado:

Enclosed for your review and comment is Ecosystem Management, Inc.'s (EMI) Class III Inventory report of the Reaches 26.3 pipeline alignment area. The purpose of this report is to locate and document archaeological resources and Traditional Cultural Properties that have the potential to be affected by NGWSP construction activities. The Class III survey occurred on lands administered by the Bureau of Land Management (BLM), The Navajo Nation, the State of New Mexico, and private entities. The survey was conducted under BLM Permit 15-2920-1-U and Navajo Nation Cultural Resources Inventory Permit #B-2695. The report identifies sites located on Navajo Nation land and BLM land. The Bureau of Reclamation is submitting this report to your office and the New Mexico State Historic Preservation Office (NM SHPO) in compliance with the Programmatic Agreement for this project. Consultation regarding concurrence of the eligibility and effects determinations will take place concurrent between your office and NM SHPO for those sites under the regulatory jurisdiction.

The report presents two alternative alignments for Reach 26.3: the Area of Critical Environmental Concern (ACEC) route and the Private route. The ACEC route goes through the Torreon ACEC on BLM land which presents management issues for paleontological resources. The Private route skirts around the ACEC and contains a parcel of private land mixed in with BLM and Navajo land. At this time the preferred route has not been chosen. However Reclamation believes that it is appropriate for the Section 106 consultation to move forward by considering potential effects on both alignments within this report.

This survey resulted in the location of nine archaeological sites within the project area: one previously recorded site (LA 05737 - NM-G-60-29) and eight newly recorded sites (LA 174775, LA 174776, LA 174777, LA 174778, NM-G-60-61, NM-G-60-62, LA 176078, and NM-G-60-63). Two Traditional Cultural Properties (TCPs) locations were identified through ethnographic interviews. Thirty-four isolated occurrences were identified in the project area. Isolated occurrences are not considered eligible for listing on the National Register of Historic Places or State Register of Cultural Properties.

Three sites within the project area are located on Navajo Nation land. They are:

- Site NM-G-60-61 is an archaic lithic scatter (6000 BC-600 AD)

- Site NM-G-60-62 is a historic Navajo structural site with an unknown period of use.
- Site NM-G-60-63 is a historic refuse scatter and associated structure of indeterminate cultural affiliation (1945-1960).

Five sites within the project area are located on BLM land. They are:

- Site LA 105737 / NM-G-60-29 is a modern Navajo artifact scatter (1960s-1980s).
- Site LA 174775 is a historic Navajo structural site with an unknown period of use.
- Site LA 174776 is a historic structural Navajo habitation site (1930-1975).
- Site LA 174778 is a historic/modern structural site of indeterminate cultural affiliation (1940s-Present).
- Site LA 176078 is a non-structural historic refuse scatter (1945-1960).

One site within the project area is located on New Mexico State land. It is:

- Site LA 174777 is a historic habitation site of indeterminate cultural affiliation (1863-1920).

No sites within the project area are located on Private land.

Sites LA 174775, LA 174777, NM-G-60-61, and NM-G-60-62 are recommended eligible to the National Register of Historic Places (NRHP) under criterion "D." The remaining five sites (LA 105737 / NM-G-60-29, LA 174776, LA 174778, LA 176078, and NM-G-60-63) are recommended as not eligible to the NRHP. After reviewing the report, Reclamation has determined that the recommendations provided by EMI are accurate and correct. The four sites listed above are eligible to the NRHP; while six sites are not eligible.

The three eligible sites (LA 174777, NM-G-60-61, and NM-G-60-62) are located within the project Area of Potential Effect (APE). One eligible site (LA 174775) was recorded during an earlier iteration of the alignment and now falls outside of the finalized APE. EMI has recommended that no ground disturbing activities occur within the four eligible sites. While three sites are within the APE, they lay outside the construction Right of Way where all ground disturbing activities will be confined to. EMI worked with the project proponent, rerouting the line where necessary, to ensure avoidance of all eligible properties. In the event that future circumstances require ground disturbance within any of the site boundaries, archaeological testing and possible data recovery will become necessary. An archaeological monitor will be present during construction to ensure adherence to the stipulations presented within this report. Reclamation has determined that complete avoidance is the preferred management strategy for the above listed sites, and that adherence to this management strategy results in a determination of *no adverse effect* on historic properties located in the project APE. This determination applies to both the ACEC alignment and the Private alternative alignment.

In addition to the nine archaeological sites listed above, two TCPs were identified during the associated ethnographic interviews. Heart Butte and Cejita Blanca Ridge TCPs were identified as being in the local area but removed from the project APE and will not be negatively affected by the waterline segment. Two interviewees mentioned the existence of known sweat lodges, which may be considered TCPs, but they are located far outside the project area and will not be affected by the project. Reclamation has determined that, while eligible to the NRHP, the two confirmed TCPs (Heart Butte and Cejita Blanca Ridge) will incur *no adverse effect* from the pipeline construction.

We are requesting your concurrence on our NRHP eligibility determinations for sites NM-G-60-61, NM-G-60-62, and NM-G-60-63. We are also requesting your concurrence on our determination of *no adverse effect* on historic properties within the project APE. Upon your concurrence and similar concurrence from NNHPD, our engineering contractor (Souder Miller & Associates) will be informed that Reach 26.3 is

cleared for cultural resources, provided they adhere to the management stipulations presented in this report. 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 August 13, 2013.

If you should have any questions or require additional information, please contact me at 970-385-652

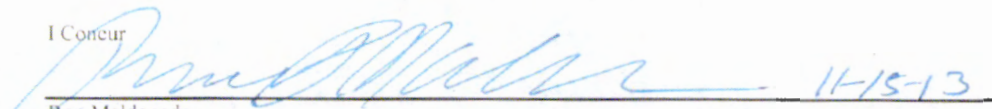
Sincerely,



Ernie Rheaume
Archaeologist

Enclosure

I Concur


Ron Maldonado 11-15-13
Tribal Historic Preservation Officer, Navajo Nation Historic Preservation Department

APPENDIX E. VISUAL CONTRAST RATING FORMS

Proposed Alternative A Visual Contrast Rating Form

Visual Contrast Rating Worksheet
Bureau of Land Management

SECTION A. PROJECT DESCRIPTION	
District/Field Office: Rio Puerco	Date: 010/02/2014
Key Observation Point: KOP 5 (Photo# 2014 09 19 KOP 5-1 SW)	
VRM Class: VRI Class II	
Location: 36° 1' 4.76 " N, 107° 23 ' 33.47 "	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION			
	Land/Water	Vegetation	Structures
FORM	none	Not distinct, dense sagebrush	2-track road
LINE	none	none	Straight to curving
COLOR	Light tan	Sagebrush gray-green dominant with some light tans from grasses	Light tan from unvegetated portions of road
TEXTURE	smooth	moderate	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION			
	Land/Water	Vegetation	Structures
FORM	No change	No change	Slight widening of roadbed in some areas
LINE	No change	No change	No change
COLOR	No change	No change	No change
TEXTURE	No change	No change	No change

SECTION D. CONTRAST RATING		__SHORT TERM				_X_LONG TERM									
1.DEGREE OF CONTRAST		FEATURES												2. Does project design meet VRM objectives? __X_Yes __No (explain on back)	
		LAND/WATER BODY				VEGETATION				STRUCTURES					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended __Yes __X_No (explain on back)	
ELEMENTS	FORM				X				X				X		
	LINE				X				X				X		
	COLOR				X				X				X		
	TEXTURE				X				X			X	X		

SECTION D. (Continued)

Comment from item 2.

Pipeline route would follow the existing 2-track road entirely through the ACEC. Construction would be centered on the 2-track road and widen the existing disturbance by approximately 10 feet on either side of the centerline. After reclamation, the pipeline surface would repeat the elements of form, line and color that were created by the 2-track road and are part of the characteristic landscape. The change would not likely be noticeable by casual observers (ACEC visitors). The element of texture would change slightly because the berm of the existing 2-track road would be removed and the pipeline surface would likely have a smoother texture. However, this contrast would be weak and not likely attract the attention of the casual observer.

Additional Mitigating Measures (See item 3)



Proposed Alternative B Visual Contrast Rating Form

Visual Contrast Rating Worksheet Bureau of Land Management

SECTION A. PROJECT DESCRIPTION	
District/Field Office: Rio Puerco	Date: 09/22/2014
Key Observation Point: KOP 8 (Photo# 2014 09 19 KOP 8-7)	
VRM Class: VRI Class II	
Location: 36° 1' 7.67" N, 107° 23' 6.91" W	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION			
	Land/Water	Vegetation	Structures
FORM	Mostly flat w/ a few rectangular rock formations in foreground	Not distinct	none
LINE	Diagonal in immediate FG, mostly not distinct in valley but a few short vert & horiz	Not distinct	none
COLOR	White, light tans, grays and light red	Predominantly sagebrush gray-green & light tan (grasses), scattered dark green (juniper)	none
TEXTURE	Rough to smooth	Smooth to moderate	none

SECTION C. PROPOSED ACTIVITY DESCRIPTION			
	Land/Water	Vegetation	Structures
FORM	No change	No change	No change
LINE	No change	Strong contrasting straight lines in sagebrush at edges of pipeline surface	Strong contrasting lines along both sides of pipeline surface
COLOR	No change	No change	Introduction of highly visible light color on pipeline surface
TEXTURE	No change	No change	Introduction of long, smooth textured structure where none exist

SECTION D. CONTRAST RATING															
<div style="display: flex; justify-content: space-between;"> __ SHORT TERM <u>X</u> LONG TERM </div>															
1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet VRM objectives? __Yes __X_No (explain on back)	
		LAND/WATER BODY				VEGETATION				STRUCTURES					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
ELEMENTS	FORM				X					X				X	3. Additional mitigating measures recommended __Yes __X_No (explain on back) Evaluator's Names Date David Squires 09/22/2014
	LINE				X	X				X					
	COLOR				X					X	X				
	TEXTURE				X					X	X				

SECTION D. (Continued)

Comment from item 2.

Under this alternative, the pipeline would introduce a structure into the characteristic landscape where none exist. The pipeline surface would introduce strong, contrasting lines, color and texture which would demand viewer attention. This would not be consistent with VRI Class II where the strongest contrast allowed is weak.

Additional Mitigating Measures (See item 3)

none



Databases, Tables & Calculators by Subject

FONT SIZE:

Change Output Options: From: 2004 To: 2014

GO

include graphs

include annual averages

[More Formatting Options](#)

Data extracted on: January 16, 2015 (10:58:01 AM)

Consumer Price Index - All Urban Consumers

Series Id: CUUR0000SA0
Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100

Download: [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9	187.6	190.2
2005	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3	193.2	197.4
2006	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8	201.5	201.8	201.6	200.6	202.6
2007	202.416	203.499	205.352	206.686	207.949	208.352	208.299	207.917	208.490	208.936	210.177	210.036	207.342	205.709	208.976
2008	211.080	211.693	213.528	214.823	216.632	218.815	219.964	219.086	218.783	216.573	212.425	210.228	215.303	214.429	216.177
2009	211.143	212.193	212.709	213.240	213.856	215.693	215.351	215.834	215.969	216.177	216.330	215.949	214.537	213.139	215.935
2010	216.687	216.741	217.631	218.009	218.178	217.965	218.011	218.312	218.439	218.711	218.803	219.179	218.056	217.535	218.576
2011	220.223	221.309	223.467	224.906	225.964	225.722	225.922	226.545	226.889	226.421	226.230	225.672	224.939	223.598	226.280
2012	226.665	227.663	229.392	230.085	229.815	229.478	229.104	230.379	231.407	231.317	230.221	229.601	229.594	228.850	230.338
2013	230.280	232.166	232.773	232.531	232.945	233.504	233.596	233.877	234.149	233.546	233.069	233.049	232.957	232.366	233.548
2014	233.916	234.781	236.293	237.072	237.900	238.343	238.250	237.852	238.031	237.433	236.151	234.812	236.736	236.384	237.088



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 26.3 and Power Line

DESCRIPTION: Souder, Miller & Associates propose to construct a water line approximately 10.1 miles in length with a 30-ft. wide disturbance ROW and an additional 70-ft. TCE. The project also includes the construction of power line 2.2 miles in length with a 30-ft. wide ROW. Total new disturbance for the proposed waterline and associated infrastructure would be approximately 137.8 acres. ROW applicant for operation and maintenance activity unknown.

LOCATION: Counselor & Ojo Encino Chapters, McKinley & Sandoval Counties, New Mexico

REPRESENTATIVE: Matt Brooks, Ecosystem Management, Inc. for Souder, Miller & Associates

ACTION AGENCY: U.S. Department of the Interior Bureau of Reclamation (USBR) - Upper Colorado Region

B.R. REPORT TITLE / DATE / PREPARER: USDOI - Bureau of Reclamation NGWSP Reaches 12.1 & 12.2
Proposed Water Line/MAY 2012/Nelson Consulting, Inc. & SWCA Environmental Consultants

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3. Suitable nesting habitat for Migratory Birds is present in and adjacent to the TCE.

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED: [1] *Aquila chrysaetos* (Golden Eagle), G3, BGEPA, MBTA, GBENPR, REPR; [2] *Buteo regalis* (Ferruginous Hawk), G3, MBTA; [3] *Athene cunicularia* (Burrowing Owl), G4, MBTA; [3]

FEDERALLY-LISTED SPECIES AFFECTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES: [1] Mitigation measures will be implemented to avoid impacts on species protected under the MBTA that could potentially nest within and adjacent to the proposed action areas.

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: Pamela A. Kyselka/28 AUG 2014

COPIES TO: (add categories as necessary)



2 NTC § 164 Recommendation:

Signature

Date

☒ Approval

☐ Conditional Approval (with memo)

☐ Disapproval (with memo)

☐ Categorical Exclusion (with request letter)

☐ None (with memo)

Gloria M. Tom

8/28/14

Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife

*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

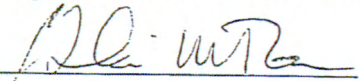
Date

THE NAVAJO NATION

BEN SHELLY
REX LEE JIM

MEMORANDUM

TO : David Mikesic, Zoologist
Department of Fish and Wildlife

FROM : 
Gloria M. Tom, Director
Department of Fish and Wildlife

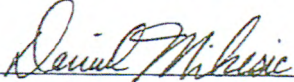
DATE : August 25, 2014

SUBJECT : DELEGATION OF AUTHORITY

I will be on travel Tuesday through Thursday, August 26 - 28, 2014. I am hereby delegating you to act in the capacity of the Director, Department of Fish and Wildlife, effective 8:00 a.m. on Tuesday, August 26, 2014. This delegation shall end at 5:00 p.m. on Thursday, August 28, 2014.

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


David Mikesic, Zoologist
Department of Fish and Wildlife



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-ERheume
ENV-3.00

JUL 15 2013

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. Ron Maldonado
Navajo Nation
Historic Preservation Department
P.O. Box 4950
Window Rock, AZ 86515

Subject: Class III Cultural Resources Inventory of Reach 26.3, Navajo Gallup Water Supply Project (NGWSP)

Dear Mr. Maldonado:

Enclosed for your review and comment is Ecosystem Management, Inc.'s (EMI) Class III Inventory report of the Reaches 26.3 pipeline alignment area. The purpose of this report is to locate and document archaeological resources and Traditional Cultural Properties that have the potential to be affected by NGWSP construction activities. The Class III survey occurred on lands administered by the Bureau of Land Management (BLM), the Navajo Nation, the State of New Mexico, and private entities. The survey was conducted under BLM Permit #157-2920-11-U and Navajo Nation Cultural Resources Inventory Permit #B12695. The report identifies sites located on Navajo Nation land and BLM land. The Bureau of Reclamation is submitting this report to your office and the New Mexico State Historic Preservation Office (NM SHPO) in compliance with the Programmatic Agreement for this project. Consultation regarding concurrence of the eligibility and effects determinations will take place concurrently between your office and NM SHPO for those sites under their respective regulatory jurisdiction.

The report presents two alternative alignments for Reach 26.3: the Area of Critical Environmental Concern (ACEC) route and the Private route. The ACEC route goes through the Torreon ACEC on BLM land which presents management issues for paleontological resources. The Private route skirts around the ACEC and contains a parcel of private land mixed in with BLM and Navajo land. At this time the preferred route has not been chosen. However Reclamation believes that it is appropriate for the Section 106 consultation to move forward by considering potential effects on both alignments within this report.

This survey resulted in the location of nine archaeological sites within the project area: one previously recorded site (LA 105737 / NM-G-60-29) and eight newly recorded sites (LA 174775, LA 174776, LA 174777, LA 174778, NM-G-60-61, NM-G-60-62, LA 176078, and NM-G-60-63). Two Traditional Cultural Properties (TCPs) locations were identified through ethnographic interviews. Thirty-four isolated occurrences were identified in the project area. Isolated occurrences are not considered eligible for listing on the National Register of Historic Places or State Register of Cultural Properties.

Three sites within the project area are located on Navajo Nation land. They are:

- Site NM-G-60-61 is an archaic lithic scatter (6000 BC-600 AD).

- Site NM-G-60-62 is a historic Navajo structural site with an unknown period of use.
- Site NM-G-60-63 is a historic refuse scatter and associated structure of indeterminate cultural affiliation (1945-1960).

Five sites within the project area are located on BLM land. They are:

- Site LA 105737 / NM-G-60-29 is a modern Navajo artifact scatter (1960s-1980s).
- Site LA 174775 is a historic Navajo structural site with an unknown period of use.
- Site LA 174776 is a historic structural Navajo habitation site (1930-1975).
- Site LA 174778 is a historic/modern structural site of indeterminate cultural affiliation (1940s-Present).
- Site LA 176078 is a non-structural historic refuse scatter (1945-1960).

One site within the project area is located on New Mexico State land. It is:

- Site LA 174777 is a historic habitation site of indeterminate cultural affiliation (1863-1920).

No sites within the project area are located on Private land.

Sites LA 174775, LA 174777, NM-G-60-61, and NM-G-60-62 are recommended eligible to the National Register of Historic Places (NRHP) under criterion "D." The remaining five sites (LA 105737 / NM-G-60-29, LA 174776, LA 174778, LA 176078, and NM-G-60-63) are recommended as not eligible to the NRHP. After reviewing the report, Reclamation has determined that the recommendations provided by EMI are accurate and correct. The four sites listed above are eligible to the NRHP; while six sites are not eligible.

The three eligible sites (LA 174777, NM-G-60-61, and NM-G-60-62) are located within the project Area of Potential Effect (APE). One eligible site (LA 174775) was recorded during an earlier iteration of the alignment and now falls outside of the finalized APE. EMI has recommended that no ground disturbing activities occur within the four eligible sites. While three sites are within the APE, they lay outside the construction Right of Way where all ground disturbing activities will be confined to. EMI worked with the project proponent, rerouting the line where necessary, to ensure avoidance of all eligible properties. In the event that future circumstances require ground disturbance within any of the site boundaries, archaeological testing and possible data recovery will become necessary. An archaeological monitor will be present during construction to ensure adherence to the stipulations presented within this report. Reclamation has determined that complete avoidance is the preferred management strategy for the above listed sites, and that adherence to this management strategy results in a determination of *no adverse effect* on historic properties located in the project APE. This determination applies to both the ACEC alignment and the Private alternative alignment.

In addition to the nine archaeological sites listed above, two TCPs were identified during the associated ethnographic interviews. Heart Butte and Cejita Blanca Ridge TCPs were identified as being in the local area but removed from the project APE and will not be negatively affected by the waterline segment. Two interviewees mentioned the existence of known sweat lodges, which may be considered TCPs, but they are located far outside the project area and will not be affected by the project. Reclamation has determined that, while eligible to the NRHP, the two confirmed TCPs (Heart Butte and Cejita Blanca Ridge) will incur *no adverse effect* from the pipeline construction.

We are requesting your concurrence on our NRHP eligibility determinations for sites NM-G-60-61, NM-G-60-62, and NM-G-60-63. We are also requesting your concurrence on our determination of *no adverse effect* on historic properties within the project APE. Upon your concurrence and similar concurrence from NNHPD, our engineering contractor (Souder Miller & Associates) will be informed that Reach 26.3 is

cleared for cultural resources, provided they adhere to the management stipulations presented in this report. 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 August 13, 2013.

If you should have any questions or require additional information, please contact me at 970-385-6521.

Sincerely,



Ernie Rheaume
Archaeologist

Enclosure

I Concur



Ron Maldonado

Tribal Historic Preservation Officer, Navajo Nation Historic Preservation Department



United States Department of the Interior

Navajo Region
P.O. Box 1060
Gallup, NM 87305



MC:620/Division of Environmental, Cultural, & Safety Management

AUG 14 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 – Reach 26.3, McKinley and Sandoval Counties, New Mexico
EA-15-9923

Dear Mr. Rieger:

The Environmental Assessment for the Bureau of Reclamation's proposed Reach 26.3 of the Navajo-Gallup Water Supply Project, McKinley and Sandoval Counties, New Mexico, located on 57.5 acres of Navajo Tribal Trust and Navajo Indian Allotted lands, McKinley and Sandoval 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 fund the construction of the Reach 26.3 segment of the Navajo-Gallup Water Supply Project. The proposed action would include a water line, up to 3 water storage tanks, a chlorination building, and an approximate 2.1 mile power line. 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 Planning Report and Final Environmental Impact Statement – 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,

Regional Director, Navajo Region

Enclosure

**FINDING OF NO NEW SIGNIFICANT IMPACT
REACHES 26.3 OF THE NAVAJO-GALLUP WATER SUPPLY PROJECT
McKINLEY & SANDOVAL COUNTIES, NEW MEXICO
EA-15-9923**

Locations:

**Portions of Sections 2, 3, 4, 5, 11, and 12 of Township 20 North, Range 5 West
Portions of Sections 19, 29, 30, and 32 of Township 21 North, Range 5 West
Portions of Sections 13 and 24 of Township 21 North, Range 6 West**

Sandoval & McKinley Counties, New Mexico

The Bureau of Reclamation proposes to fund the construction of Reach 26.3 of the Navajo-Gallup Water Supply Project (NGWSP) that would include a water line, up to 3 water storage tanks, a chlorination building, and an approximate 2.1 mile power line. Construction would consist of disturbing lands along the proposed pipeline and is anticipated to occur from years 2015 to 2017. This reach would transport potable water from the tee at the end of Reach 26.1 southeastward to the proposed storage and treatment facility and to an existing Navajo Tribal Utility Authority (NTUA) pipeline. Pipeline construction would require a temporary construction easement (TCE) and permanent right-of-way (ROW). In addition, the associated power line, water tank, and drain line would require about 14 acres of new permanent easements and 5 acres of TCE. The completed water pipeline would be maintained and operated by NTUA with Reclamation providing assistance as needed for the first 10 years. The proposed Reach 26.3 waterline alignment is located in McKinley and Sandoval Counties, New Mexico. The alignment would cross lands administered by the Navajo Nation, Bureau of Indian Affairs (BIA), and Bureau of Land Management.

The purpose of the Proposed Action is to provide the Navajo Nation with access to Navajo Nation Tribal Trust and Indian allotment lands managed by the BIA Navajo Region for ROW access for Reach 26.3 of the NGWSP. An approved ROW grant issued by the BIA would authorize Navajo Nation to construct Reach 26.3 segments on Navajo tribal trust and Indian allotment lands. An approved ROW grant from the BIA would further progress towards a suitable, long-term water supply for members of the Navajo Nation. This reach would transport potable water to Ojo Encino and Torreon Chapters of the Navajo Nation. Currently, the Torreon Chapter does not have a sufficient water supply to meet the current and projected water needs due to low production rate of its 6 wells—4 are running dry and 2 have poor water quality (oil contaminants, and high chloride, iron, TDS, and sulfate concentrations)—and the ongoing drought conditions.

In the addition to the *Navajo-Gallup Water Supply Project Planning Report and Final Environmental Impact Statement*, 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). The proposed action is not a major federal action that will significantly impact the quality of the human environment. Therefore, an Environmental Impact Statement is not required for implementing the Proposed Action. This Finding of No New Significant Impact (FONNSI) is supported by the attached Supplemental Environmental Assessment (EA) and supporting appendices and documents.

The following references serve as the basis for this decision and are incorporated in the EA document.

1. Regional and Navajo Nation Tribal involvement was conducted and environmental issues related to the proposed action were identified and addressed in the EA. Formal Scoping was completed during the NGWSP EIS process. In addition, since 2006, Souder Miller and Associates has facilitated meetings with chapter officials, Navajo Nation Council delegates, Jicarilla Apache Nation officials, other government officials, and residents of ten arca chapters, including Whitehorse Lake, Ojo Encino, Pueblo Pintado, and Torreon Chapters. All of which would be provided water by the proposed waterline alignment. Consultation with the Navajo Nation and BLM supported the conclusions from previous scoping and identified no new information not previously considered in the PR/EIS.
2. Alternative courses of action and Design Features, Stipulations, and Requirements have been developed in response to environmental concerns and issues. The EA discloses the environmental consequences of three alternatives: Alternative A – ACEC Reroute (Proposed); Alternative B – Original ACEC Reroute; and the “No Action” alternative (EA – Sections 2.2, 2.3, and 2.4).
3. Air Resources – Impacts to air resources would be temporary from exhaust emissions and dust. Impacts to air quality attributes to this project would be temporary and minor. The proposed project could result in a very small direct and indirect increase in several criteria pollutants, hazardous air pollutants, and greenhouse gases as a result of the short-term construction activity. No impacts to climate change would be expected from the implementation of the proposed alternative (EA – Section 4.2.1).
4. Soil Resources – Approximately 115 acres of soil disturbance would occur to construct the waterline and about 18 acres would be disturbed to construct the tank and chlorination site, powerline, and drain lines. Total acres of Navajo Tribal Trust lands would be 9.9 acres and Navajo Indian Allotment lands would be 47.6 acres. Effects would be short-term until re-vegetation and stabilization actions are completed to establish new vegetation (EA – Section 4.2.2).
5. Water Resources – 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 (EA – Section 4.2.3).
6. Upland Vegetation – Direct impacts on plant communities and habitats would be expected to occur along the ROWs and TCEs for pipelines, the power line, and the other improvements to be constructed. Vegetation would be cleared for all construction activities. 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 (EA – Section 4.2.4).
7. Noxious Weeds and Invasive Species – 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. Given the small, discrete areas of proposed disturbance and

implementing the design features (section 2.1.5), effects from invasive, nonnative species are expected to be low for both the short and long term for the action area (EA – Section 4.2.5).

8. Fish and Wildlife – 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- and long-term. No major or long-term effects on non-avian wildlife are anticipated. Based on the limited nature of ongoing and reasonably foreseeable future actions, the temporary and short-lived effects due to the project would not significantly contribute to cumulative effects on common wildlife species and migratory birds (EA – Section 4.2.6).
9. Special Status Species – There will be no effect to special status species due to lack of habitat or species in or near the area based on field observations. The Navajo Department of Fish and Wildlife concurred with the determinations on August 28, 2014 and the issued the Biological Resources Compliance Form (BRCF NNDWF Review No. 12EM-02) (EA – Section 4.2.7).
10. Cultural Resources - There may be direct and indirect impacts to cultural resources; however, resources will be avoided to the extent possible. The proposed pipeline will avoid four sites eligible for the National Register. If historic properties/TCPs cannot be avoided and will be adversely affected, Reclamation or contractors will prepare a treatment plan, in consultation with Parties to Programmatic Agreement. Two traditional cultural properties were identified within the local area, as well as one Jischaa' site. Cumulative impacts most likely would not be substantial due to project location (EA – Section 4.2.8).
11. Land Use - The lands where the water pipeline and infrastructure would be placed are primarily managed for wildlife habitat and livestock grazing. Although grazing would be temporarily affected during construction activities, this would be a temporary effect. After completion of construction and reclamation of the waterline ROWs, they would again provide wildlife habitat and grazing opportunity (EA – Section 4.2.9).
12. Transportation & Travel Management – Public roads are likely to be disturbed as part of the Proposed Action Alternatives due to increased traffic volumes and potential temporary disturbance of traffic flow. 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 (EA – Section 4.2.10).
13. Recreation – Construction work may temporarily 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 also 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 (EA, Section 4.2.11).
14. Livestock Grazing – Grazing permittees would be contacted prior to any construction operations on their respective portions of the proposed reach. 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 terms if design features are followed (EA, Section 4.2.14).

15. Environmental Justice/Socio-Economics – Development of the proposed waterlines 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, thereby resulting in an improved quality of life. Increased water supply should stimulate economy in the local area for both construction and operation phases (EA, Section 4.2.15).
16. Public Health & Safety – 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 (EA, Section 4.2.16).

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



Regional NEPA Coordinator

8/11/2015

Date



In Reply, Refer to:
4N420 – Real Estate Services
Rights of Way

United States Department of the Interior
Bureau of Indian Affairs
Eastern Navajo Agency
P. O. Box 328
Crownpoint, New Mexico 87313



JAN 25 2013

Souder, Miller & Associates
Attn: Andrew Robertson, P.E.
3451 Candelaria Road NE, Suite D
Albuquerque, New Mexico 87107-1948

Dear Mr. Robertson:

Reference is made to the receipt of the Tribal Consent dated January 15, 2013, for permission to survey, to conduct a walk-on survey for maps, archaeological, environmental and ethnographic surveys and studies for the proposed Navajo Gallup Water Supply Project, Reaches 24.1, 24.1 JAN, 24.1 Lybrook, 25, 26.1, 26.2 and 26.3.

The Navajo Nation has given its concurrence to the survey for tribal trust lands, as contained in the letter from the Navajo Land Department, received on January 15, 2013. Prior to entry upon or across allotted land, consent from the Indian land owners is required.

Subject to any prior rights or adverse claims and to all applicable regulations of 25 CFR 169, authorization is hereby granted to proceed with the necessary survey subject to the following terms and conditions of the Navajo Nation:

1. The rights of local Navajo people will be respected and protected.
2. Personnel with the Division of Natural Resources (DNR) will retain the right to monitor the field survey.
3. The field survey will be conducted at your own risk. The Navajo Nation will not be held liable for any personal injury or property damage that occurs during the course of field survey.
4. Vehicles will be kept on existing roads and trails. Surface disturbance will be kept to an absolute minimum while conducting the field survey.
5. The Permittee will comply with all applicable Tribal and Federal laws and regulations.
6. Approval of right-of-way, business site lease or any actual construction is not implied.

This authorization is for SURVEY ONLY on Tribal Trust Lands, according to the Tribal Consent received on January 15, 2013.

If you have any question, please contact our Rights-of-Way Section at (505) 786-6002/6149.

Sincerely,


Superintendent, Eastern Navajo Agency

MILLER ENGINEERS, INC.

DBA SOUDER, MILLER & ASSOCIATES

DATE	COMMENT	AMOUNT	NET AMOUNT
09/11/2014	Tribal consent filing fee for NGWSP R26.3 Water line ROW		500.00
VENDOR Navajo Nation Land Department		TOTAL	500.00



THIS DOCUMENT HAS AN ARTIFICIAL WATERMARK IN PAPER. SEE BACK SIDE FOR OTHER SECURITY FEATURES

MILLER ENGINEERS, INC.

DBA SOUDER, MILLER & ASSOCIATES

3451 CANDELARIA RD. NE, SUITE D
ALBUQUERQUE, NM 87107

505.256.7364

Five Hundred and no/100

DATE
09/17/14

AMOUNT
\$500.00

PAY
TO THE
ORDER
OF:

NAVAJO NATION LAND DEPARTMENT
P.O. BOX 2249
WINDOW ROCK AZ 86515.2249

AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE

MP

MP



Eastern Navajo Agency Council

P.O. Box 668 Crownpoint, New Mexico 87313

RESOLUTION OF THE EASTERN NAVAJO AGENCY COUNCIL SUPPORTING THE CUTTER LATERAL AND EASTERN NAVAJO WATER REGIONALIZATION PROJECT

Resolution No. ENAC-12/06-001

December 2, 2006

RECEIVED
DEC 27 2006

WHEREAS:

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
EASTERN NAVAJO AGENCY

1. The Eastern Navajo Agency Council is a consortium of duly elected representatives of thirty-one (31) Chapters of the Navajo Nation authorized to take certain actions with respect to the Eastern Navajo Agency Council and its residents; and
2. Numerous Navajo Chapters in Eastern Navajo Agency face immediate water emergencies due to dropping wells, poor water quality and/or lack of water supply capacity to service many needy families; and
3. These Chapters also face a long-term crisis due to inadequate aquifer recharge, well draw-down and sole-reliance on groundwater; and
4. The lack of sustainable water supply endangers the public health and safety and economic livelihood of the community members; and
5. Many community members are not connected to safe drinking water and basic sanitation services; and
6. The lack of water supply capacity may jeopardize funding from Federal sources to connect these low-income residents to basic water and sanitation services; and
7. Regionalization of the individual chapter water systems will improve water quality, provide capacity to serve poor and isolated families and improve water security for all the chapters in the short-term; and
8. Regionalization will facilitate bringing San Juan River water and/or relieve stress on local aquifers as a sustainable water solution to these chapters in the long-term; and

Johnny Johnson
President

Tommy McDonald
Vice-President

Dorothy Rogers
Secretary

Resolution ENAC-12/06-001

9. The San Juan River Settlement and Navajo Gallup Water Supply Project, including the Cutter Lateral, will allow for a strategic approach to fund and implement capital improvements that benefit all the chapters; and
10. The State of New Mexico has proposed funding initial phases of the Cutter Lateral in 2007, which serves as a first step to completing this project to benefit all Eastern Navajo Agency Chapters and the Navajo Nation as a whole.

NOW, THEREFORE, BE IT RESOLVED:

1. The Eastern Navajo Agency Council finds that the only solution to both these short-term and long-term problems is cooperation between the Chapters and regionalization of the water system.
2. The Eastern Navajo Agency Council supports the proposed Cutter Lateral project, consisting of five (5) or more phases, as the first step to implementation of the Navajo Gallup Water Supply Project and San Juan River Settlement.
3. The Eastern Navajo Agency Council respectfully requests the State of New Mexico, The USDA-Rural Utilities Services, and Indian Health Service, the Navajo Nation and other agencies' assistance to implement the Cutter Lateral project as quickly as possible.
4. The Eastern Navajo Agency Council offers its support and assistance, as available, to implement this project to benefit members of all New Mexico Navajo Chapters.

CERTIFICATION

WE HEREBY CERTIFY THAT THE FOREGOING RESOLUTION was duly considered and approved by a vote of 103 in favor, 02 opposed, 03 abstain, during the Eastern Navajo Agency Council Meeting on December 2, 2006, at Whitehorse Lake Chapter, New Mexico.

MOTION: Frank Chee Willetto

SECOND: McGarrett Pablo


Johnny Johnson, President


Tommy McDonald, Vice-President


Dorothy Rogers, Secretary

Navajo Nation, Counselor Chapter House

P.O. Box # 209, Counselor, New Mexico, 87018
Phone: (505) 568-4311 Fax: (505) 568-4311

Isaac Sage, Chapter President
Harry Domingo Sr., Vice President
Laura C. Lopez, Secretary/Treasurer

Harry J. Willets, Council Delegate
Gloria C. Lee, Community Service Coordinator
Martha A. Aragon, Office Specialist



RESOLUTION OF THE COUNSELOR CHAPTER

COUN# 2006-03-005

**SUPPORTING THE CUTTER LATERAL AND EASTERN CHAPTERS WATER
REGIONALIZATION PROJECT.**

WHEREAS:

1. The Counselor Chapter is a certified Chapter of the Navajo Nation Government by Resolution No. CAP-34-98, Local Governance Act, 26 NNG (1), subsection 3(A); and
2. Counselor Chapter recognizes that the Eastern Navajo Chapters: Huerfano, Counselor, Ojo Encino, Torreon, Pueblo Pintado and Whitehorse Lake face immediate water emergencies due to dropping wells, poor water quality and/or lack of capacity to serve many needy families; and
3. Counselor Chapter recognizes that these chapters also face a long-term water crisis due to inadequate aquifer recharge, well draw-down and sole-reliance on groundwater; and
4. Counselor Chapter recognizes the lack of sustainable water supply endangers the public health and safety and economic livelihood of the community members; and
5. Counselor Chapter recognizes many community members are not connected to safe drinking water and basic sanitation services; and
6. Counselor Chapter recognizes the lack of water supply capacity may jeopardize funding from Federal sources to connect these low-income residents to basic water and sanitation services; and
7. Counselor Chapter recognizes regionalization of the individual chapter water systems will improve water quality, provide capacity to serve poor and isolated families and improve water security for all the chapters in the short-term; and
8. Counselor Chapter recognizes the regionalization will facilitate bringing San Juan River water as a sustainable water solution to these chapters in the long-term; and
9. Counselor Chapter recognizes a regional system will allow for a strategic approach to fund and implement capital improvements that benefit all the chapters

COPY

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Counselor Chapter finds that the only solution to both of these short-term and long-term problems are cooperation between the Chapters and regionalization of the water system.
2. The Counselor Chapter supports the proposed Cutter Lateral project, consisting of five (5) phases.
3. The Counselor Chapter respectfully requests the State of New Mexico, the USDA-Rural Utilities Services, the Indian Health Service, the Navajo Nation and other agencies' assistance to implement the Cutter Lateral project as quickly as possible.
4. The Counselor Chapter offers its support and assistance, as available, to implement this project to benefit chapter members.

CERTIFICATION

We hereby certify that the foregoing resolution was duly considered by the Counselor Chapter at a duly called meeting at Counselor Chapter, Navajo Nation, at which a quorum was present and the same was passed by a vote of 30 in favor, 0 opposed, and 0 abstained this 17 day of August, 2006.

Motion: Irene George

Second: Tully Butler

Samuel Sage
Samuel Sage, President

Harry Domingo Sr.
Harry Domingo, Sr. Vice President

Laura C. Lopez
Laura C. Lopez, Sec/Treasurer

Harry Wellito
Harry Wellito, Council Delegate

SS

COPY



**THE
NAVAJO
NATION**

OJO ENCINO CHAPTER
HCR 79, BOX 1500
CUBA, NEW MEXICO 87013
PHONE: (505) 731-2263 *** FAX: (505) 731-2263

PRESIDENT
JOE SHIRLEY, Jr.
VICE PRESIDENT
FRANK J. DAYISH, Jr.

RESOLUTION OF THE OJO ENCINO CHAPTER
RESOLUTION No. OJOE-06-03-III
MARCH 10, 2006

Whereas Ojo Encino Chapter is certified local government entity of the Navajo Nation charged with the responsibility to promote and protect the interest and general welfare of the community members pursuant to Title II, Section 4001 (a) of the Navajo Tribal Code; and

Whereas the Eastern Chapters of Huerfano, Nageezi, Counselor, Ojo Encino, Torreon, Pueblo Pintado and Whitehorse Lake face immediate water emergencies due to dropping wells, poor water quality and/or lack of capacity to serve many needy families; and

Whereas these Chapters also face a long-term water crisis due to inadequate aquifer recharge, well draw-down and sole-reliance on groundwater; and

Whereas the lack of sustainable water supply endangers the public health and safety and economic livelihood of the community members; and

Whereas many community members are not connected to safe drinking water and basic sanitation services; and

Whereas the lack of water supply capacity may jeopardize funding from Federal sources to connect these low-income residents to basic water and sanitation services; and

Whereas regionalization of the individual chapter water systems will improve water quality, provide capacity to serve poor and isolated families and improve water security for all the chapters in the short-term; and

Whereas regionalization will facilitate bringing San Juan River water as a sustainable water solution to these chapters in the long-term; and

Whereas a regional system will allow for a strategic approach to fund and implement capital improvements that benefit all the chapters;

Therefore be it resolved:

The Ojo Encino Chapter finds that the only solution to both these short-term and long-term problems is cooperation between the Chapters and regionalization of the water system; and

The Ojo Encino Chapter supports the proposed Cutter Lateral project, consisting of five (5) phases;

Page Two, Ojo Encino Chapter Resolution #06-03-III

The Ojo Encino Chapter respectfully requests the State of New Mexico, the USDA - Rural Utilities Service, the Indian Health Service, the Navajo Nation and other agencies' assistance to implement the Cutter Lateral project as quickly as possible; and

The Ojo Encino Chapter offers its support and assistance, as available, to implement this project to benefit chapter members.

CERTIFICATION

We hereby certify the foregoing resolution was duly considered and approved at the Ojo Encino Chapter meeting, Ojo Encino Navajo Nation, New Mexico, at which a quorum was present and that same was passed by a vote of 32 in favor, 0 opposed, and 2 abstained on this 10th day of March, 2006.

Motion: Tom Jim Sala Second: Elizabeth Stoney


Chapter President, Jeanette Vice


Chapter Secre./Treas., Patrick Werito


Chapter V-President, Roger Toledo


Council Delegate, Harry J Willet

es



THE NAVAJO NATION

TORREON/STAR LAKE CHAPTER

P.O. BOX 1024 * CUBA, NEW MEXICO 87013 * (505) 731-2336 - Fax# 505-731-1514

Dave B. Rice Council Delegate	LaVern Wagner Council Delegate	Joe L. Cayaditto, Jr. President	Leo L. Charley Vice President	Evangeline Tachine Secretary/Treasurer	Sherwood Willetto Landboard	Wally Toledo Coordinator	Alberta Ballard Office Specialist
----------------------------------	-----------------------------------	------------------------------------	----------------------------------	---	--------------------------------	-----------------------------	--------------------------------------

RESOLUTION OF TORREON/STAR LAKE CHAPTER TSL 03/2006-059-

REQUESTING THE STATE OF NEW MEXICO, THE USDA - RURAL UTILITIES SERVICE, THE INDIAN HEALTH SERVICE, THE NAVAJO NATION AND OTHER AGENCIES' ASSISTANCE TO IMPLEMENT THE CUTTER LATERAL PROJECT AS QUICKLY AS POSSIBLE AND TO REQUEST ALL EASTERN CHAPTERS OF HUERFANO, NAGEEZI, COUNSELOR, OJO ENCINO, TORREON, PUEBLO PINTADO AND WHITEHORSE LAKE TO REGIONALIZE AND IMPROVE WATER QUALITY OF THE INDIVIDUAL CHAPTER WATER SYSTEM TO PROVIDE CAPACITY TO SERVE POOR AND ISOLATED FAMILIES AND IMPROVE WATER SECURITY FOR ALL EASTERN CHAPTER COMMUNITY IN THE LONG-TERM WATER CRISIS.

WHEREAS;

1. Torreon/Star Lake Chapter is certified local government entity of the Navajo Nation charged with the responsibility to promote and protect the interest and general welfare of the community members pursuant to Title II, Section 4001 (a) of the Navajo Tribal Code; and
2. The Eastern Chapters of Huerfano, Nageezi, Counselor, Ojo Encino, Torreon, Pueblo Pintado and Whitehorse Lake face immediate water emergencies due to dropping wells, poor water quality and/or lack of capacity to serve many needy families; and
3. Chapters also face a long-term water crisis due to inadequate aquifer recharge, well draw-down and sole-reliance on groundwater; and
4. The lack of sustainable water supply endangers the public health and safety and economic livelihood of the community members; and
5. Many community members are not connected to safe drinking water and basic sanitation services; and
6. Lack of water supply capacity may jeopardize funding from Federal sources to connect these low-income residents to basic water and sanitation services; and
7. Regionalization of the individual chapter water systems will improve water quality, provide capacity to serve poor and isolated families and improve water security for all chapters in the short-term; and
8. Regionalization will facilitate bringing San Juan River water as a sustainable water solution to these chapters in the long-term; and
9. Regional system will allow for a strategic approach to fund and implement capital improvements that benefit all the chapters; and

NOW THEREFORE BE IT RESOLVED THAT:

1. The Torreon/Star Lake Chapter finds that the best solution to both these short-term and long-term problems is cooperation between the Chapters and regionalization of the water system; and

2. The Torreon/Star Lake Chapter supports the proposed Cutter Lateral project, consisting of five (5) phases;


3. The Torreon/Star Lake Chapter respectfully requests the State of New Mexico, the USDA - Rural Utilities Service, the Indian Health Service, the Navajo Nation and other agencies' assistance to implement the Cutter Lateral project as quickly as possible; and

4. The Torreon/Star Lake Chapter offers its support and assistance, as available, to implement this project to benefit chapter members.

CERTIFICATION

We, hereby certify that the foregoing resolution was duly by the Torreon/Star Lake Chapter, Navajo Nation, New Mexico, at which a quorum was present and that the same was motioned by: Lita Cayaditto and seconded by: Mae Sandoval and adopted by a vote of 36 in favor, 0 opposed, this 23^d day of March, 2006.


Joe L. Cayaditto Jr., President
Torreon/Star Lake Chapter


Leo L. Charley, Vice President
Torreon/Star Lake Chapter


Evangeline Tachine, Secretary/Treasurer
Torreon/Star Lake Chapter


Sherwood Willetto, Land Board
Torreon/Star Lake Chapter

David Rico, Council Delegate
Laverne Wagner, Council Delegate
Frank Choe Willetto, President
Herbert Antonio, Vice-President
Rena Murphy, Secretary/Treasurer
Sammie Jim, Community Service Coordinator
Paulino Joe, Chapter Office Specialist



THE NAVAJO NATION
PUEBLO PINTADO CHAPTER-DISTRICT #15
HCR 77 BOX 3076
Cuba, New Mexico 87013
(505) 655-1221
FAX (505) 655-0410

Jac Shirley, Jr., PRESIDENT

Frank Dayleh, Jr., VICE-PRESIDENT

PPC-04-06-043

RESOLUTION OF
PUEBLO PINTADO CHAPTER
EASTERN NAVAJO AGENCY
DISTRICT #15

Supporting the Cutter Lateral and Eastern Chapters Water Regionalization Project.

WHEREAS:

1. The Pueblo Pintado Chapter is a certified local government entity of the Navajo Nation charged with the responsibility to promote and protect the interest and general welfare of the community members pursuant to Title II, Section 4001 (a) of the Navajo Tribal Code; and
2. The Eastern Chapters of Huerfano, Nageezi, Counselor, Ojo Encino, Torreon, Pueblo Pintado and Whitehorse Lake face immediate water emergencies due to dropping wells, poor water quality and/or lack of capacity to serve many needy families; and
3. These Chapters also face a long-term water crisis due to inadequate aquifer recharge, well draw-down and sole-reliance on groundwater; and
4. The lack of sustainable water supply endangers the public health and safety and economic livelihood of the community members; and
5. Many Community members are not connected to safe drinking water and basic sanitation services; and
6. The lack of water supply capacity may jeopardize funding from Federal sources to connect these low-income residents to basic water and sanitation services; and
7. Regionalization of the individual chapter water system will improve water quality, provide capacity to serve poor and isolated families and improve water security for all the chapters in the short-term; and
8. Regionalization will facilitate bringing San Juan River water as a sustainable water solution to these chapters in the long-term; and
9. A regional system will allow for a strategic approach to fund and implement capital improvements that benefit all the chapters.

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Pueblo Pintado Chapter finds that the only solution to both these short-term and long-term problems is cooperation between the Chapters and regionalization of the water system; and
2. The Pueblo Pintado Chapter supports the proposed Cutler Lateral project, consisting of five (5) phases; and
3. The Pueblo Pintado Chapter respectfully requests the State of New Mexico, the USDA - Rural Utilities Service, the Indian Health Service, the Navajo Nation and other agencies assistance to implement the Cutler Lateral project as quickly as possible; and
4. The Pueblo Pintado Chapter offers its support and assistance, as available, to implement this project to benefit chapter members.

CERTIFICATION

WE HEREBY CERTIFY THAT THE FOREGOING RESOLUTION was duly considered by the Pueblo Pintado Chapter at a duly called meeting at Pueblo Pintado, New Mexico (Navajo Nation) at which a quorum was present, Motioned by: Preston Sandoval, Seconded by: Annie Becitty and passed by a vote of 28 in favor, 00 opposed and 00 abstained, this 9th day of April 2006.


Frank Chee Willetto, President
Pueblo Pintado Chapter


Herbert Antonio, Vice-President
Pueblo Pintado Chapter


Rena Murphy, Secretary/Treasurer
Pueblo Pintado Chapter

Whitehorse Lake Chapter
HCR 9 Box 4069
Cuba, New Mexico 87013
Phone: (505) 655-5430/5431
Fax : (505) 655-5432
Website:

Dave Rico, Council Delegate
Lavern Wagner, Council Delegate
Andrew Jim, President
Darren Hudson Vice-President
Janie B. Jim Sec./Treasurer
Howard Martinez, Land Board
Bobby Tsosie, Coordinator
Lena Calamity, Office Specialist

Joe Shirley, Jr. Navajo Nation President

Frank Daylah, Jr., Navajo Nation Vice-President

PROPOSED RESOLUTION OF WHITEHORSE LAKE CHAPTER
THE NAVAJO NATION

SUPPORTING THE CUTTER LATERAL AND EASTERN CHAPTERS WATER
REGIONALIZATIONAL PROJECT

WHEREAS:

1. The Whitehorse Lake Chapter is certified by the Navajo Nation Council as local governmental entity charged with the responsibility to protect and advocate for its membership; and
2. That these chapters also face a long-term water crisis due to inadequate aquifer recharge, well-draw down and sole-reliance on groundwater; and
3. That the lack of sustainable water supply endangers the public health and safety and economic livelihood of the community members; and
4. That many community members are not connected to safe drinking water and basic sanitation services; and
5. That the lack of water supply capacity may jeopardize funding from Federal sources to connect these low-income residents to basic water and sanitation services; and
6. That regionalization of the individual chapter water systems will improve water quality, provide capacity to serve poor and isolated families and improve water security for all the chapters in the short-term; and
7. That regionalization will facilitate bringing San Juan River water as a sustainable water solution to these chapters in the long-term; and

8. That a regional system will allow for a strategic approach to fund and implement capital improvement that benefit all the chapters.

NOW THEREFORE BE IT RESOLVED THAT:

1. The Whitehorse Lake Chapter supports the proposed Cutter Lateral project, consisting of five (5) phases.
2. The Whitehorse Lake Chapter respectfully requests the State of New Mexico, the USDA-Rural Utilities Services, the Indian Health Service, the Navajo Nation and other agencies' assistance to implement the Cutter Lateral project as quickly as possible.
3. The Whitehorse Lake Chapter offers its support and assistance, as available, to implement this project to benefit chapter members.

CERTIFICATION

WE, hereby certify that the foregoing resolution was duly considered by the Whitehorse Lake Chapter at a duly called meeting, Whitehorse Lake, New Mexico, Navajo Nation, at which a quorum was present and that the same was motion by Chris Smith Jr. and second by Ruth Lewis and passed by a vote of 25 in favor, and 00 opposed, this 12th day of March, 2006.


Dave Rico, Council Delegate


Laverne Wagner, Council Del.


Howard Martinez, Land Board


Andrew Jim, President


Darren Hudson, Vice-Pres.


Janie Jim, Sec. Treas.