HBP - 1

GENERAL CORRESPONDENCE

YEAR(S):

2004 - 1980

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November 20, 2004

Mr. Roger Anderson, Bureau Chief
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, New Mexico 87505

Re: Renewal of the Hydrostatic Discharge Permit (HBP NM-001), Transwestern Pipeline Company

Dear Mr. Anderson:

Transwestern Pipeline Company (Transwestern), requests from the Oil Conservation Division (OCD), renewal of hydrostatic test water discharge permit (HBP NM-001). This request has been submitted to your office as per Section 1-201 of the New Mexico Water Quality Control Commission Regulations. Transwestern received from the OCD on December 24, 1999, a five year authorization to discharge hydrostatic waters subject to conditions specified in that letter authorization which expires on December 8, 2004.

This permit renewal request applies to discharges of new water into new pipe which is to be used in the pressure testing of gathering and mainline pipe and ancillary appurtenances directly attached to the pipe.

Should your agency require additional information concerning this request, contact the undersigned at our Roswell Technical Operations office at (505) 625-8022.

Thank you for your time and consideration in this matter.

Sincerely,

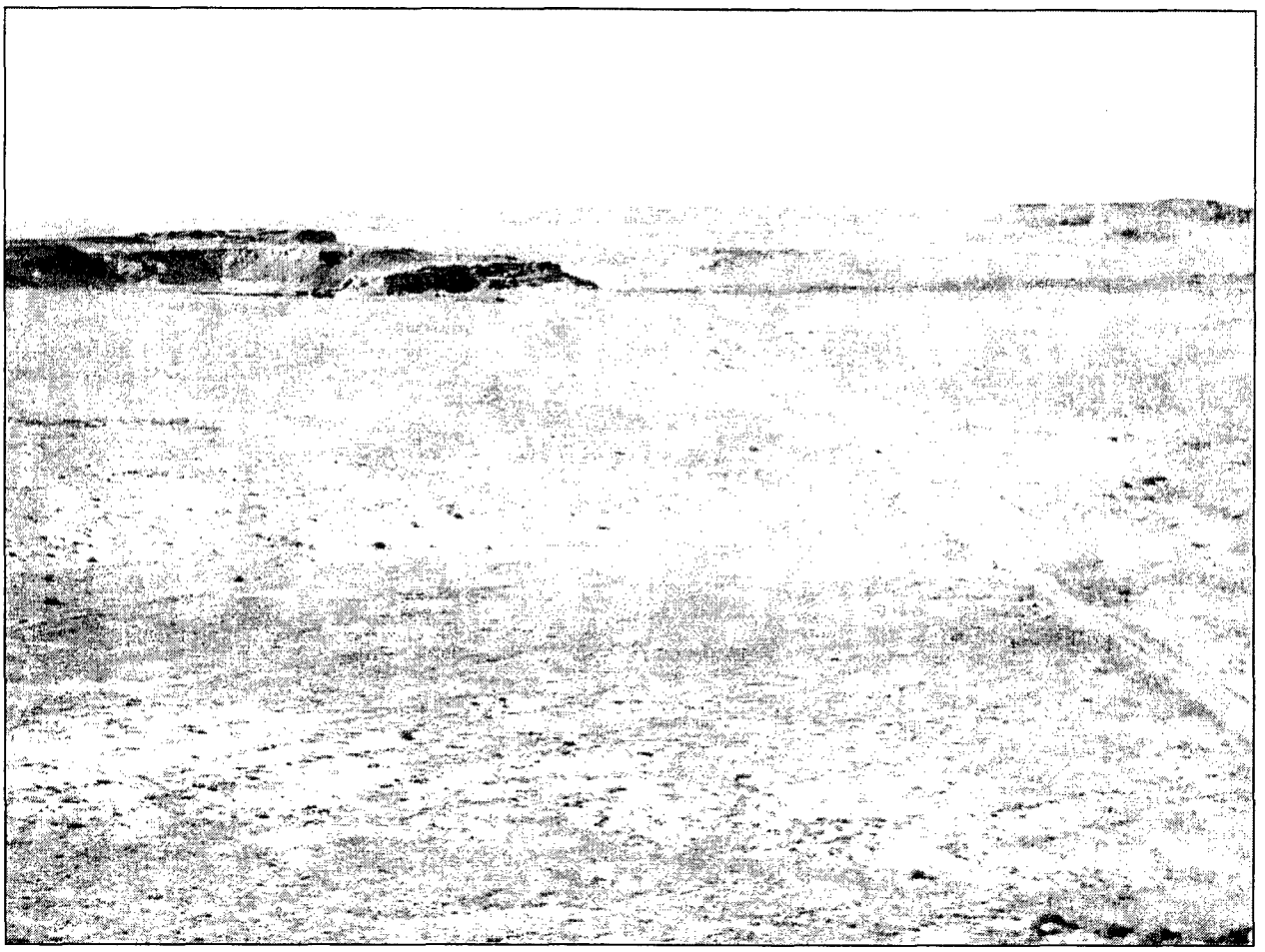
Larry Campbell

Larry Campbell
Division Environmental Specialist

xc: envisions file no. 205.40

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS

TRANSWESTERN PIPELINE COMPANY
SAN JUAN 2005 EXPANSION PROJECT
Docket No. CP04-104-000
Environmental Assessment
May 2004



FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 2
Transwestern Pipeline Company
Docket No. CP04-104-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) on the natural gas pipeline facilities proposed by Transwestern Pipeline Company (Transwestern) in the above-referenced docket.

The EA was prepared to satisfy the requirements of the National Environmental Policy Act. The staff concludes that approval of the proposed project, with appropriate mitigating measures, would not constitute a major Federal action significantly affecting the quality of the human environment.

The EA assesses the potential environmental effects of the construction and operation of the proposed San Juan 2005 Expansion Project. Transwestern proposes to expand its natural gas system by the construction of approximately 72.6 miles of pipeline loop and modifying facilities at three existing compressor stations in New Mexico.

The purpose of the San Juan 2005 Expansion Project is to provide additional natural gas pipeline capacity for upstream producers and shippers of natural gas from the San Juan and Rocky Mountain basins. Transwestern states that it is proposing to construct these facilities in order to transport up to 375 million cubic feet per day (MMcf/d) of natural gas to downstream markets in the Southwestern and Midwestern United States.

The EA has been placed in the public files of the FERC. A limited number of copies of the EA are available for distribution and public inspection at:

Federal Energy Regulatory Commission
Public Reference and Room
888 First Street, N.E., Room 2A
Washington, DC 20426
(202) 502-8371

Copies of the EA have been mailed to Federal, state and local agencies, public interest groups, interested individuals, newspapers, and parties to this proceeding.

Any person wishing to comment on the EA may do so. To ensure consideration prior to a Commission decision on the proposal, it is important that we receive your comments before the date specified below. **Please carefully follow these instructions to ensure that your comments are received in time and properly recorded:**

- Send an original and two copies of your comments to:

  Secretary
  Federal Energy Regulatory Commission
  888 First St., N.E., Room 1A
  Washington, DC 20426;

- Label one copy of the comments for the attention of the Gas Branch 2, PJ 11.2.

- Reference Docket No. CP04-104-000; and

- **Mail your comments so that they will be received in Washington, DC on or before June 28, 2004.**

Please note that we are continuing to experience delays in mail deliveries from the U.S. Postal Service. As a result, we will include all comments that we receive within a reasonable time frame in our environmental analysis of this project. **However, the Commission strongly encourages electronic filing of any comments or interventions or protests to this proceeding.** See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site at http://www.ferc.gov under the "e-Filing" link and the link to the User's Guide. Before you can file comments you will need to create a free account which can be created by clicking on "Sign-up."

Comments will be considered by the Commission but will not serve to make the commentor a party to the proceeding. Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR 385.214).[1] Only intervenors have the right to seek rehearing of the Commission's decision.

Affected landowners and parties with environmental concerns may be granted intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which would not be adequately represented by any other parties. **You do not need intervenor status to have your comments considered.**

Additional information about the project is available from the Commission's Office of External Affairs, at **1-866-208-FERC** or on the FERC Internet website (www.ferc.gov) using the

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[1]Interventions may also be filed electronically via the Internet in lieu of paper. See the previous discussion on filing comments electronically.

eLibrary link. Click on the eLibrary link, click on "General Search" and enter the docket number excluding the last three digits in the Docket Number field. Be sure you have selected an appropriate date range. For assistance with eLibrary, the eLibrary helpline can be reached at 1-866-208-3676, TTY (202) 502-8659 or at FERCONLINESUPPORT@FERC.GOV. The eLibrary link on the FERC Internet website also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission now offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries and direct links to the documents. Go to www.ferc.gov, click on "eSubscription" and then click on "Sign-up."

Magalie R. Salas
Secretary

TRANSWESTERN PIPELINE COMPANY
SAN JUAN 2005 EXPANSION PROJECT

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NNEPA	Navajo Nation Environmental Protection Agency
NNHPD	Navajo Nation Historic Preservation Department
NOI	Notice of Intent to Prepare an Environmental Assessment for the Proposed Transwestern San Juan 2005 Expansion Project, Request for Comments on Environmental Issues
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NWI	National Wetlands Inventory
OEP	Office of Energy Projects
OPS	Office of Pipeline Safety
PCB	polychlorinated biphenyls
Project	the Transwestern San Juan 2005 Expansion Project
psig	pounds per square inch gauge
RSPA	the Research and Special Programs Administration
SCM	Sensitive Cultural Manifestations
SPCC Plan	Spill Prevention, Containment and Countermeasure Plan
SWPPP	Stormwater Pollution Prevention Plan
TCP	Traditional Cultural Property
Transwestern	Transwestern Pipeline Company
Transwestern CSR Plan	Transwestern's Construction Stabilization and Restoration Plan
TSS	total suspended solids
UDP	Unexpected Discovery Plan
USGS	U.S. Geological Survey
WQC	Clean Water Act Section 401 Water Quality Certification

1.0 PROPOSED ACTION

The staff of the Federal Energy Regulatory Commission (Commission or FERC) has prepared this environmental assessment (EA) to address the potential environmental impacts of the natural gas transportation facilities proposed by the Transwestern Pipeline Company (Transwestern). On April 8, 2004, Transwestern filed an application with the Commission in Docket No. CP04-104-000[1], pursuant to Section 7(c) of the Natural Gas Act (NGA) and Part 157 of the Commission's regulations, seeking a Certificate of Public Convenience and Necessity (Certificate) authorizing the construction and operation of certain facilities in San Juan and McKinley Counties, New Mexico. Prior to filing an application, Transwestern began working with the FERC staff under FERC's National Environmental Policy Act of 1969 (NEPA) Pre-Filing environmental review process on September 17, 2003. All documents filed under Docket No. PF03-8-000 are part of the record for Docket No. CP04-104-000. The application was noticed in the Federal Register on April 15, 2004. The proposed action is known as the Transwestern San Juan 2005 Expansion Project (the Transwestern Expansion Project or the Project).

We[2] prepared this EA in order to comply with the requirements of the NEPA and its implementing regulations issued by the Council on Environmental Quality at Title 40 Code of Federal Regulations (CFR) Parts 1500-1508, and the Commission's regulations at 18 CFR Part 380. The assessment of environmental impacts is an integral part of the FERC's decision whether to issue Transwestern a Certificate to construct and operate the proposed facilities.

1.1 Project Purpose and Need

Transwestern seeks authorization to site, construct, and operate pipeline, compression, and ancillary facilities in order to provide additional natural gas pipeline capacity for upstream producers and shippers of natural gas from the San Juan and Rocky Mountain basins. Transwestern states that it is proposing to construct these facilities in order to transport up to 375 million cubic feet per day (MMcf/d) of natural gas to downstream markets in the Southwestern and Midwestern United States.

1.2 Proposed Facilities

Transwestern proposes to expand its natural gas system by the construction of approximately 72.6 miles of pipeline loop[3] (the San Juan Lateral Loop) and modifying facilities at three existing compressor stations in New Mexico (see Figure 1.2-1: General Location of Project Facilities). More specifically, Transwestern requests Commission authorization to:

- Construct and operate approximately 63.3[4] miles of 36-inch-diameter pipeline loop starting at approximate milepost (MP) 8.9 on the existing Transwestern San Juan Lateral, in San Juan County, New Mexico, extending south-southwest to the existing mainline valve (MLV) just south of Navajo Highway 9 at about MP 71.9;

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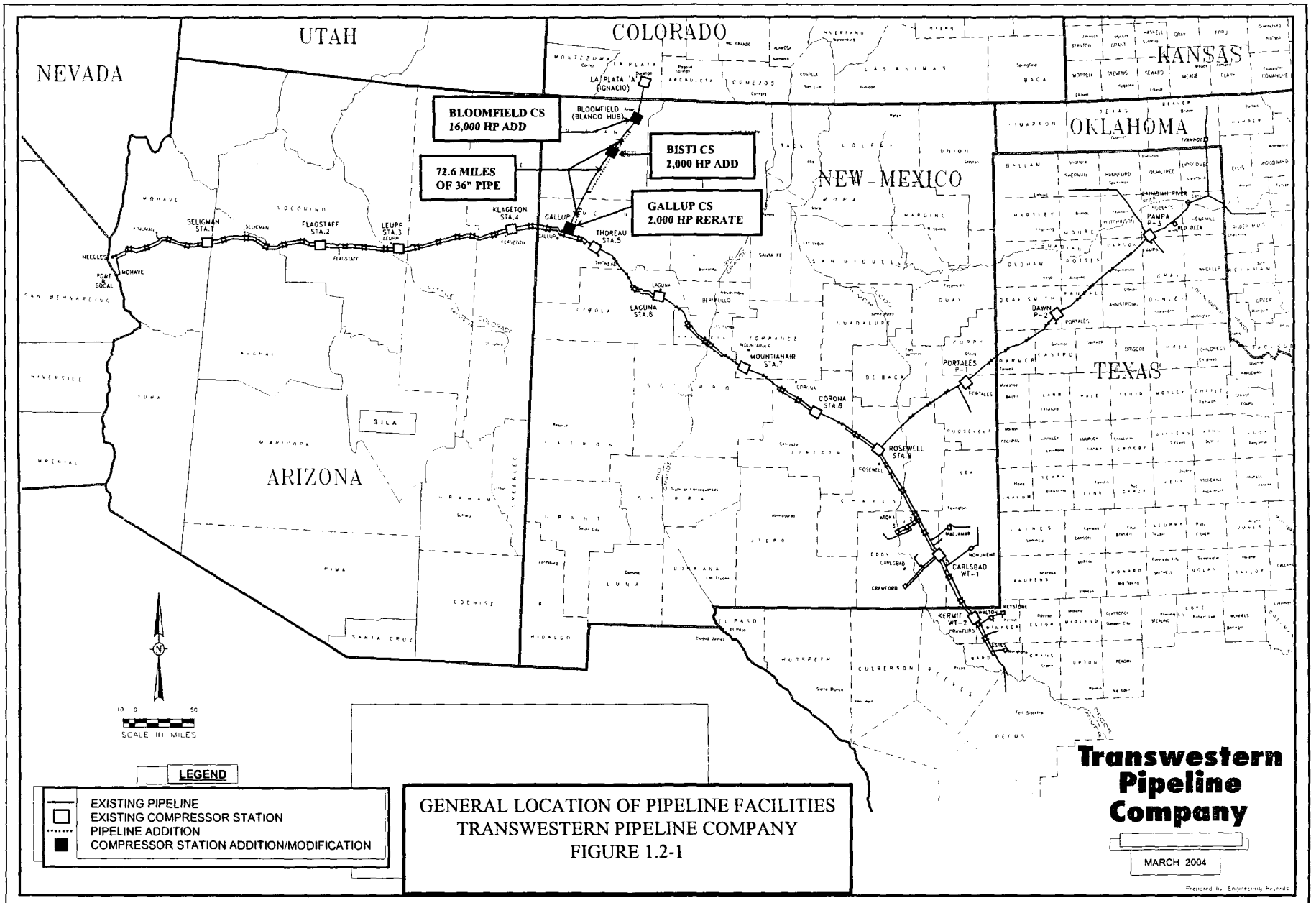
[1] Pre-filing activities for this project were conducted in Docket No. PF03-8-000.

[2] The pronouns we, us, and our refer to the staff of the FERC's Office of Energy Projects.

[3] A pipeline loop is a segment of pipeline that is usually adjacent to an existing pipeline and connected to it at both ends.

[4] Represents actual surveyed distance. Milepost references represent existing Transwestern system MP designations and not necessarily actual ground distances for this Project.


NEVADA
UTAH
COLORADO
KANSAS
OKLAHOMA
NEW MEXICO
TEXAS
ARIZONA
BLOOMFIELD CS
16,000 HP ADD
72.6 MILES
OF 36" PIPE
BISTI CS
2,000 HP ADD
GALLUP CS
2,000 HP RERATE
BLOOMFIELD (BLANCO HUB)
LA PLATA "A" (IGNACIO)
GALLUP
KLAGETON STA.4
THOREAU STA.5
SELIGMAN STA.1
FLAGSTAFF STA.2
LEUPP STA.3
NEEDLES
MOHAVE
LAGUNA STA.6
MOUNTAINAIR STA.7
CORONA STA.8
ROSWELL STA.9
PORTALES P-1
DAWN P-2
PAMPA P-3
MAL JAMAR
CARLSBAD WT-1
KERMIT WT-2
WALTON
SCALE IN MILES
LEGEND
EXISTING PIPELINE
EXISTING COMPRESSOR STATION
PIPELINE ADDITION
COMPRESSOR STATION ADDITION/MODIFICATION
GENERAL LOCATION OF PIPELINE FACILITIES
TRANSWESTERN PIPELINE COMPANY
FIGURE 1.2-1
Transwestern Pipeline Company
MARCH 2004

- Construct and operate approximately 9.3 miles of 36-inch-diameter pipeline loop starting at the existing MLV just south of Pinedale Road in McKinley County, New Mexico (about MP 87.8), and extending south-southwest to terminate at the existing Transwestern Gallup Compressor Station in McKinley County, New Mexico. The Gallup Compressor Station is located at approximate MP 97.1 of the existing San Juan Lateral;

- Bloomfield Compressor Station - Transwestern proposes to add one new 15,000 horsepower (HP) electric-drive compressor unit and abandon and remove the existing 7,000 HP motor on compressor unit 4 and replace it with a new electric drive motor operated at a maximum 8,000 HP. Additionally, Transwestern proposes to add a motor control center, gas after-cooling (one bay), perform station piping modifications, relocate a hydrocarbon tank, and replace an existing fence with a wall near the office building. An electrical substation would be constructed to service the new compressor unit. Additionally, new blow down silencers would be located south of the existing fence line on Transwestern's property. The existing Bloomfield Compressor Station is located near Bloomfield, San Juan County, New Mexico.

- Bisti Compressor Station – Transwestern proposes to abandon and remove an existing 10,000 HP electric-drive motor and associated facilities and replace it with a 12,000 HP electric drive motor. Additionally, Transwestern proposes to rebundle the compressor unit, perform station piping modifications, add launcher and receiver facilities, add a new blow down silencer, and install a new scrubber. An additional 1.4 acres of land currently leased from the Bureau of Land Management would be fenced for operation of new station facilities. The existing Bisti Compressor Station is located near the Bisti Trading Post, San Juan County, New Mexico;

- Gallup Compressor Station – Transwestern proposes to abandon and remove an existing compressor (compressor only, not the motor) and replace it with a new compressor and ancillary piping/pigging modifications. The existing electric motor would be rerated from 10,000 to 12,000 HP. A new blowdown silencer would be added at the station. Current surface water drainage would be improved. Transwestern would purchase in fee 5.3 acres currently leased at this location. The existing Gallup Compressor Station is located near Gallup in McKinley County, New Mexico.

- Install pigging facilities and MLVs at various locations as required by United States Department of Transportation (DOT) regulations.

The Maximum Allowable Operating Pressure (MAOP) of the San Juan Lateral Loop would be 1,202 pounds per square inch gauge (psig).

Table 1.2-1 provides a summary of the proposed Transwestern Expansion Project pipeline and aboveground facilities.

Transwestern plans to start construction activities on or about October 1, 2004, and place the new facilities in service by June 1, 2005.

1.2.1 Nonjurisdictional Facilities

There are no nonjurisdictional facilities associated with the proposed San Juan 2005 Expansion Project. However, Transwestern would construct and operate certain facilities under the authority of Section 2.55(a) of Commission's regulations. These facilities would be limited to mainline valves, pig launchers/receivers, yard and station piping, cathodic protection equipment, gas cooling equipment, and

electrical equipment. All Section 2.55(a) facilities would be located within the footprint of Transwestern's existing compressor stations or those new sites for which authorization is being sought in the current application and are being considered in this EA. Therefore, the potential environmental effects of these facilities are encompassed by the discussion of the affected facility sites.

Table 1.2-1

Summary of Proposed Facilities

Facility	Description	Location (milepost)	Location (County, State)
PIPELINE FACILITIES			
San Juan Lateral Loop A	New 36-inch-diameter Pipeline Loop	8.9 – 57.4[a/]	San Juan, New Mexico (NM)
San Juan Lateral Loop A	New 36-inch-diameter Pipeline Loop	57.4 – 71.9[a/]	McKinley, NM
San Juan Lateral Loop B	New 36-inch-diameter Pipeline Loop	87.8 – 97.1[a/]	McKinley, NM
ABOVEGROUND FACILITIES			
Bloomfield Compressor Station	Install new electric compressor unit (15,000 HP), abandon and remove the existing 7,000 HP motor and replace with a new motor operated at 8,000 HP, motor control center, gas cooling, construct an electrical substation, and associated piping modifications, and fence work.	0.0 [a/]	San Juan, NM
Bisti Compressor Station	Abandon and remove existing 10,000 HP electric motor and replace with new 12,000 HP electric motor; rebundle the compressor, install piping/pigging modifications, and fence work.	36.6 [a/]	San Juan, NM
Gallup Compressor Station	Remove existing compressor (existing motor remains) and replace with new compressor and ancillary piping/pigging modifications. Re-rate existing electric motor from 10,000 HP to 12,000 HP.	97.1[a/]	McKinley, NM
Main Line Valves	Install new valves	8.9[a/] 18.8[a/] 36.6[a/] 54.2[a/] 71.9[a/] 87.6[a/] 97.1[a/]	San Juan, NM San Juan, NM San Juan, NM San Juan, NM McKinley, NM McKinley, NM McKinley, NM
Pigging Facilities	Install pigging facilities		
	Launcher Launcher/Receiver Receiver Launcher Receiver	8.9 36.6 71.9 87.6 97.1	San Juan, NM San Juan, NM McKinley, NM McKinley, NM McKinley, NM

[a/] Mileposts are existing San Juan Lateral mileposts.

1.3 Public Review and Comment

We initiated review of the Project using the FERC's NEPA Pre-Filing environmental review process. This process was established to allow and encourage early involvement by citizens, governmental entities, non-governmental organizations, and other interested parties. During the pre-filing process we worked with Transwestern and interested stakeholders to identify and resolve issues, where possible, prior to

Transwestern's filing of its formal application with FERC. As part of this process, FERC assigned the Project pre-filing Docket No. PF03-8-000. Initial contacts by us and Transwestern were made to Federal, state, and Navajo Nation natural and cultural resource agencies and other stakeholders having an interest in the Project. The contacts were given a brief description of the Project and a request for information regarding the applicable permitting or other regulatory review authority. Follow-up correspondence and pre-filing meetings were conducted as requested by the agency representatives. In addition, we conducted a series of inter-agency meetings in the Project area during the week of November 3 through November 7, 2003. Transwestern held a series of public open houses in the evenings during the same week.

Transwestern sent information gathering letters to 16 Native American Tribes with a potential interest in the Project and conducted meetings at each of the 14 Navajo Nation Chapter Houses located in areas that would be crossed by the proposed pipeline. These meetings were held to exchange information about the Project, answer questions, and gather input regarding any Project-related concerns at each local Chapter. Table 1.3-1 provides a summary of the public and Chapter House meetings that were held as part of Transwestern's pre-filing process.

Table 1.3-1
Summary of the Public and Navajo Nation Chapter House Meetings Held During the FERC NEPA Pre-Filing Process

Date(s)	Location
11/03/03	Mountainair, NM (Ancient Cities Restaurant.)
11/04/03	Bloomfield, NM (Multicultural Center)
11/05/03	Gallup, NM (Community Service Center)
11/06/03	Crownpoint , NM (Chapter House)
11/10/03	Huerfano, NM (Chapter House)
11/12/03, 01/18/04	Church Rock, NM (Chapter House)
11/13/03, 01/19/04	Standing Rock, NM (Chapter House)
11/14/03	Tohatchi, NM (Chapter House)
11/17/03	Coyote Canyon, NM (Chapter House)
11/17/04	White Rock, NM (Chapter House)
11/18/03, 12/03/03	Thoreau, NM (Chapter House)
11/18/04	Nahodishgish, NM (Chapter House)
11/19/03, 01/18/04	Pinedale, NM (Chapter House)
11/21/03	Burnham, NM (Chapter House)
02/05/04	Becenti Chapter (Note: Transwestern line does not cross this chapter boundary)

Issues, comments and concerns raised during the FERC NEPA Pre-Filing Process that are relevant to this EA are summarized in Table 1.3-2, below.

Table 1.3-2
Issues Identified at Public and Chapter House Meetings Held During the FERC NEPA Pre-Filing Process

Issue	Specific Comments	EA Section Where Comment Is Addressed
Noise	Potential noise impacts from modifications at Bisti Compressor Station on Bisti Wilderness Area.	2.7.2
Surface Waters	Navajo Nation EPA requests review of Clean Water Act (CWA) 404 permit and CWA Section 401 Water Quality Certification (WQC).	2.3.2
Hydrostatic Testing	Concerns from previous projects including unauthorized discharges, inadequate oversight, and erosion problems during discharge of hydrostatic test water. Water quality results requested for review prior to discharge.	2.3.2
	Identification of available volumes of hydrostatic testwater sources.	2.3.2
Threatened, Endangered, and Special-Status Species	Identification of listed species and development of appropriate mitigation measures.	2.4.3
Access Roads	Concern expressed from experience with past projects that unauthorized access roads were used.	1.5
	Concerns were expressed that access would not be maintained to and from residences.	1.5
	Concerns expressed regarding long term maintenance of access roads following construction.	1.5
Surface Damage	Concern was expressed regarding damage payments for temporary loss of grazing rights on Navajo Nation lands.	2.8
Contaminated Soils	Concern expressed regarding potential disturbance of contaminated soils during construction near MP 67.2 (Shell site) and United Nuclear Corporation uranium mine.	2.5.6
Cultural Resources	Concern expressed about cultural artifacts that may periodically be washed into the Project area.	2.6
	Use only construction work areas and access roads approved by Navajo Nation Historical Preservation Department.	App J
	Concerns about potential effects to archeological sites and historic properties.	2.6/App J
Socioeconomics	Use of Navajo labor during construction and operation of Project facilities.	2.8
	Appraisals for right-of-way payments to allottees.	2.8
	Installation of taps along pipeline for use by Navajo Nation.	2.8
Safety	Safety of multiple pipeline facilities	2.9
	General maintenance practices of pipeline rights-of-way, i.e. exposed pipelines.	2.9
	Notification prior to blasting.	2.1.3
	Safety of pipeline right-of-way when used for vehicular access.	2.9
	Development of Project Health and Safety Plan for construction personnel	2.1.2

Lastly, Transwestern prepared and circulated for review and comment by the stakeholders the Transwestern Applicant-Prepared Draft EA, dated December 13, 2003, to promote an exchange of information and assist in the identification of potential impacts and mitigation measures. Comments on the Transwestern Applicant-Prepared Draft EA were received from the U.S. Army Corps of Engineers (COE), the U.S. Bureau of Land Management (BLM), the New Mexico State Land Office (NMSLO), the New Mexico Historic Preservation Officer (NMHPO), and the Navajo Nation Department of Fish and Wildlife (NNDFWL). A summary table of the comments received on the Transwestern Applicant-Prepared Draft EA is included as Appendix E. The summary table in Appendix E indicates the nature of the comment, the resolution of the comment, and the location in the EA where the comment is addressed.

On December 24, 2003 the FERC issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Transwestern San Juan 2005 Expansion Project, Request for Comments on Environmental Issues* (NOI). The NOI was sent to individuals and organizations having a potential interest in the

Project, including: Federal, state, and local officials and agencies; Native American tribal representatives; conservation organizations; local libraries and newspapers; residents within 0.5 mile of the compressor stations that would be modified; and property owners along the proposed pipeline route. Written comments were requested on specific concerns about the Project or issues that should be considered during preparation of this EA.

We received three comment letters in response to the NOI. Issues raised in these letters are included in the table provided in Appendix E. All of the concerns raised have been addressed in this EA.

1.4 Construction, Operation, and Maintenance Procedures

All facilities proposed by Transwestern would be designed, constructed, tested, operated, and maintained to conform with, or exceed, the requirements of Title 49 of the CFR, Part 192 (49 CFR 192), Transportation of Natural and Other Gas by Pipeline: Minimum Safety Standards. Among other design standards, 49 CFR 192 specifies pipeline material selection; minimum design requirements; protection from internal, external, and atmospheric corrosion; and qualification procedures for welders and operations personnel. In addition, Transwestern would comply with 18 CFR, 380.15, Siting and Maintenance Requirements, and other applicable Federal and state regulations.

Transwestern has incorporated our *Upland Erosion Control, Revegetation and Maintenance Plan* (FERC Plan) into its own construction and operating specifications for upland areas that would be affected by the proposed Project. We have reviewed Transwestern's Construction Stabilization and Restoration Plan (Transwestern CSR Plan), included in Appendix A, and find that it meets or exceeds the requirements in our Plan. The Transwestern CSR Plan therefore provides an acceptable level of protection to natural resources in upland areas. Table 1.4-1 provides a summary of the provisions of the Transwestern CSR Plan that differ from the FERC Plan.

Table 1.4-1
Transwestern Modifications to FERC Plan

FERC Plan Section	Transwestern Modification	Clarification or Variance
III.C	Transwestern would continue to monitor and maintain the disturbed construction area for revegetation and/or erosion problems resulting from construction. Transwestern does not believe grazing can be practically deferred from the construction areas due to the length of the project across open grazing lands.	Clarification
III.F	FERC Plan states that written recommendations must be obtained from local soil conservation authorities or land management agencies. The Transwestern CSR Plan states that Transwestern would make a reasonable attempt to obtain such recommendations.	Variance
IV.E	Transwestern CSR Plan identifies suitable fabric to prevent inappropriate materials from being utilized	
IV.F.1.a	Transwestern believes use of sediment control logs may also be appropriate under some conditions.	Variance
IV.F.1.b	Transwestern would install temporary slope breakers on all slopes greater than 5% at the spacing identified. FERC Plan only requires temporary slope breakers where base of slope is less than 50 feet from waterbody, wetland, and road crossings.	Variance
V.A.5	Grade the right-of-way to restore pre-construction contours *to the maximum extent practicable* and leave the soil in the proper condition for planting.	Variance
V.C.2	Transwestern would consult with the landowner, Natural Resource Conservation Service (NRCS), or Navajo Agricultural Products Industry (NAPI) relative to the specific soils found at the specific location and perform soil decompaction as required by the affected party.	Variance

Transwestern has adopted the FERC *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures) as its construction and operating specifications for waterbodies that would be crossed by the proposed Project. Our Procedures are available on the FERC Internet Website at http://www.ferc.gov/industries/gas/enviro/wetland.pdf.

Transwestern would use standard pipeline construction procedures, including: survey and staking of the right-of-way, clearing and grading, trenching, pipe stringing and bending, welding and coating, lowering-in and backfilling, hydrostatic testing, and cleanup. In addition to standard pipeline construction methods, Transwestern would use special construction techniques where warranted by site-specific conditions. These special techniques would be used when constructing across Waters of the U.S, rugged topography, agricultural, and significant cultural resource areas, utilities, and roads. No COE jurisdictional wetlands would be crossed by the Project.

Transwestern would incorporate the mitigation measures identified in Appendix B, as well as all requirements identified by Federal, state, and Tribal agencies, in its construction drawings and specifications for the Project. Contractors would also be provided with copies of applicable environmental permits. Transwestern would conduct training for construction personnel regarding proper field implementation of the Transwestern CSR Plan and FERC Procedures and other mitigation measures. Transwestern would conduct this environmental training before and during construction.

For purposes of quality assurance and compliance with mitigation measures, other applicable regulatory requirements and Transwestern specifications, Transwestern would be represented on each Project facility by its Chief Inspector. The Chief Inspectors would be assisted by one or more craft inspectors. A full time Environmental Inspector(s), separate from the craft inspectors, having peer status with all other activity inspectors would be assigned to the Project facilities. The Environmental Inspector's duties, as described in Transwestern's Plan, would include ensuring compliance with the environmental conditions attached to the FERC Certificate, Transwestern's environmental designs and specifications, environmental conditions attached to other permits or authorizations, and landowner requirements. The Environmental Inspector would also have the authority to order appropriate corrective action. In addition, a full time Cultural Resources Inspector (CRI) would be assigned to the Project facilities. The CRI's responsibilities are described in the Memorandum of Agreement (MOA) and include monitoring construction activities during ground disturbance and. in the case of discovery, would evaluate whether the discovery qualifies as an Unanticipated Discovery. Further, the FERC would have its own independent environmental inspectors conducting periodic oversight inspections during and after construction of the Project to monitor for compliance with the Commission's environmental conditions.

Transwestern would develop a Spill Prevention, Containment and Countermeasure Plan (SPCC Plan) to be implemented during construction of the facilities. The SPCC Plan would address potential, inadvertent spills of fuels, lubricants, and other hazardous materials and describe spill prevention practices, spill handling and emergency notification procedures, and training requirements. Additionally, the Transwestern SPCC plan would identify adjacent foreign pipeline companies and describe how Transwestern would coordinate with these companies in the event of a response action. Proper implementation of the SPCC Plan would be included in the environmental training for construction personnel.

Transwestern would also develop a Stormwater Pollution Prevention Plan (SWPPP) to be implemented during construction of the facilities. The SWPPP would address potential erosion associated with the Project during construction and operation of the facilities. Proper implementation of the SWPPP would be included in the environmental training for construction personnel.

Post Construction Monitoring would be conducted per the Transwestern CSR Plan and FERC Procedures and other applicable permit conditions.

1.4.1 Standard Pipeline Construction

Construction would occur only after all right-of-way easements, grants, and required permits and clearances have been obtained. Transwestern would survey the route prior to initiating construction-related activities. The boundaries of the construction right-of-way and extra work areas would be flagged and signage installed to alert construction personnel of specific project requirements. Following the survey, the right-of-way would be cleared and graded where necessary to create a reasonably level working surface to allow safe passage of equipment. Temporary erosion and sediment controls would be installed in accordance with Transwestern's CSR Plan and the FERC Procedures and Transwestern's SWPPP.

The trench would be excavated to a sufficient depth to allow a minimum of 3 feet of soil cover between the top of the pipe and the final land surface after backfilling. Landowners and/or managers may have other minimum depth requirements. Spoil would typically be stored on the opposite side of the trench from the construction equipment working side and over existing easements where possible. Transwestern does not anticipate that blasting would be required to achieve the required burial depth along portions of the Project. If blasting is warranted in areas where rock is encountered that can not be moved from the ditch line without explosives, Transwestern would ensure compliance with all Federal and state regulations regarding the transportation, storage, and use of explosive materials and other applicable regulations.

The pipe segments would be temporarily placed or "strung" beside the trench, where they are bent as necessary, welded together, inspected, and the joints coated in preparation for installation in the trench. The completed sections of pipe would be lowered into the trench, padded as necessary with clean fill or other protective covering to prevent damage from large rocks or exposed bedrock, and backfilled.

The pipeline would then be hydrostatically tested to ensure that it is capable of operating at the design pressure. Water withdrawal and discharge for hydrostatic testing would be done in compliance with all applicable Federal, state, and Tribal regulations. The test water would be discharged through an energy dissipating device to an approved location.

Following hydrostatic testing of the pipeline, the right-of-way, temporary extra work areas, and other disturbed areas would be finish graded and any remaining construction debris removed and disposed of properly. Original land contours would be restored to preconstruction conditions as much as practicable. In accordance with Transwestern's CSR Plan and FERC Procedures, erosion and sediment control measures would be installed, and revegetation of previously vegetated areas would be initiated. Private and public property, such as fences, gates, driveways, and roads disturbed by the pipeline construction, would be restored to original or better condition.

1.4.2 Special Pipeline Construction Techniques

Waters of the U.S.

Crossings of Waters of the U.S. would be constructed in accordance with the FERC Procedures and applicable permits. Waters of the U.S. include perennial streams, intermittent streams, and arroyos. No perennial Waters of the U.S. or jurisdictional wetlands would be crossed by the Project. The proposed pipeline facilities would cross one irrigation canal at two locations, three intermittent Waters of the U.S., and numerous arroyos with intermittent and/or ephemeral flows. These crossings would be completed

during the winter, low/no flow period to the extent possible. To protect the pipeline from erosion where it would cross arroyos and other Waters of the U.S., Transwestern would bury the pipeline with a minimum of 4 feet of top cover.

In addition, Transwestern intends to utilize existing public and private roads and pipeline rights-of-way for access during construction. No new access roads are proposed. Some of the roads proposed for use cross Waters of the U.S. Transwestern would provide temporary erosion controls, as described in the Transwestern CSR Plan and FERC Procedures, as necessary, to help minimize erosion and sedimentation impacts to Waters of the U.S. from its use of these roads during construction. During final restoration activities, Transwestern would repair all Project access roads to pre-construction conditions, or better. Further, Transwestern would evaluate the need to install permanent erosion/sedimentation control devices (ECDs) on the access roads used. Transwestern would install permanent ECDs as necessary and permissible along Project access roads.

Rugged Topography

The Transwestern Expansion Project would involve construction in rugged topography (e.g., steep canyons and slopes). In side slope areas, leveling of the construction right-of-way would involve "two-tone" construction techniques, in which the contractor would construct the working side of the right-of-way such that it has two levels or tones that parallel the ditch. In certain areas, grading of the total construction right-of-way may be limited (less grading on the travel side) to minimize disturbance. In specific areas of steep vertical slopes, a crew separate from the mainline crew may install the pipeline and restore the right-of-way. The steep slope stabilization should follow immediately after pipeline installation to minimize potential for erosion.

Following clearing activities in these areas, grading tractors would build a level grade for the excavation of the ditch and both the stringing of the pipe and movement of equipment and vehicles. Spoil from the ditch area may be used to build a travel lane for the passage of equipment. The pipeline ditch would be constructed along the newly graded right-of-way. Additional spoil may be stored in spoil storage areas across from the ditch.

Following backfill and final grading, the original contours would be restored as near as practicable and stabilized following Transwestern's CSR Plan and FERC Procedures (see Appendices D and E).

Agricultural Areas

A portion of the pipeline route in San Juan County, between approximate MP 8.9 and MP 31.2, would bisect a portion of the Navajo Agricultural Products Industry (NAPI) lands. This area contains several crop fields with pivot irrigation systems. The existing utility corridor threads between irrigated plots. Transwestern has configured the construction work space to minimize impacts to active pivot irrigation systems in this area. In addition, the following general construction methods would be followed in agricultural areas:

- Prior to construction, the NAPI would be contacted to locate existing drainage structures and irrigation facilities. Information regarding future locations of drainage tiles and irrigation systems would be requested from the NAPI;

- Water flow in crop irrigation systems would be maintained unless shutoff is coordinated with the affected parties;

- Natural flow patterns of fields would be maintained by providing breaks in topsoil and subsoil stockpiles, as necessary;

- Existing fences would be cut and braced along the right-of-way, and temporary gates would be installed to control livestock and limit public access.

- In all actively cultivated agricultural lands, which include permanent or rotated cropland, hayfields, or improved pastures, topsoil stripping shall be conducted in accordance with Transwestern's CSR Plan;

- On all actively cultivated NAPI lands, the trench would be excavated to a sufficient depth to allow a minimum of 6 feet of soil cover between the top of the pipe and the final land surface after backfilling. On all other NAPI lands, the trench would be excavated to a sufficient depth to allow a minimum of 4 feet of soil cover between the top of the pipe and the final land surface after backfilling; and

- Restoration and revegetation practices would follow those outlined in the Transwestern CSR Plan (Appendix D).

Road/Utility Crossings

Transwestern would construct road crossings in compliance with applicable permits and approvals. At highways and paved roads, the pipeline would typically be installed by boring underneath the road (bored crossing) with no interruption of traffic flow. Other roads would be crossed by trenching across the road (open-cut crossing). This technique would require temporary closure of these roads and implementing detours. If no reasonable detour is feasible, at least one traffic lane would be maintained, except for brief periods essential to laying the new pipeline. During the brief period when a road is completely cut, steel plates would be available on-site to cover the open area to permit travel by emergency vehicles. Construction disturbance at each open-cut road crossing would typically be completed in one day. However, any open trenches across roads would either be fenced or covered with steel plates during non-working hours.

Transwestern has indicated that there would be no closure of roads that are primary school routes, mail routes, or medical transport routes. Roadways damaged during construction would be repaired to as near pre-construction conditions as possible. Construction and operation of the Transwestern Expansion Project is not expected to have a significant impact on local traffic patterns.

Existing power line and pipeline rights-of-way would be crossed by methods acceptable to the facility operator. Transwestern's contractor would contact New Mexico's One Call system prior to construction. There would be no affect on the use or integrity of power lines, foreign pipelines, or utilities from construction or operation of the Project.

1.4.3 Aboveground Facility Construction

Construction at compressor stations and valve sites would be constructed in accordance with Transwestern's CSR Plan and FERC Procedures and all applicable permits and approvals. Construction would typically be completed in the following sequence:

- If necessary, the site would be graded and contoured to the appropriate base level;

- Any needed utilities, foundations, buildings or other structures would be constructed and equipment installed;
- The facility equipment would be tested;
- The aboveground facilities would be connected to the pipeline facilities; and
- Final site cleanup, paving, landscaping, etc. would be completed.

1.5 Land Requirements

The San Juan Lateral Loop would parallel existing pipeline easements for its entire length. Where possible, the loop would be installed 25 feet east or west of an existing pipeline. Transwestern would negotiate with foreign pipeline companies to utilize a portion of those permanent easements during construction. Construction would involve all or part of the new and existing Transwestern permanent right-of-way and/or portions of foreign pipeline rights-of-way, plus 60 feet of temporary work space. Construction of the Project facilities would typically require use of a 110-foot wide construction corridor. After construction, Transwestern would retain 50 feet of permanent easement, of which 25 feet would be new permanent easement. Figure 1.5-1 shows typical right-of-way cross sections for the proposed pipeline loop.

Extra work space would typically be necessary at crossings of roads and Waters of the U.S., side hill slopes; truck turnarounds; hydrostatic test areas; and crossover, tie-in, staging, fabrication, and foreign pipeline crossing locations. Additional off right-of-way areas are proposed for pipe storage and contractor yards. Transwestern intends to utilize existing public and private roads and pipeline rights-of-way for access during construction. No new access roads are proposed. Transwestern would utilize only those private roads that have been identified on Project drawings and for which approval to use the road has been requested and granted in advance. During final restoration activities, Transwestern would repair all Project access roads to pre-construction conditions, or better.

Construction of the San Juan Lateral Loop pipeline facilities would temporarily disturb a total of approximately 1,101.7 acres of land. Following construction, approximately 220.4 acres of new right-of-way would be maintained for pipeline operation and maintenance activities. Table 1.5-1 summarizes the land area affected by construction and operation of the proposed pipeline facilities.

Table 1.5-1
Land Requirements for Pipeline Facilities

Facility	Length (miles)[a]	Construction Right-of-Way Width (feet)	New Right-of-Way Width (feet)	Land Affected By Construction (acres)	Land Permanently Affected by Operation (acres)
San Juan Lateral Loop	63.3	110	25	955.0[b]	192.2[c]
San Juan Lateral Loop	9.3	110	25	146.7[b]	28.2[c]
Subtotal Pipeline Right-of-Way	**72.6**	--	--	**1,101.7**	**220.4[c]**
Thoreau Pipe Yard	N/A	N/A	N/A	54.0	0.0
Farmington Contractor Yard	N/A	N/A	N/A	20.8	0.0
Gallup Pipe Yard	N/A	N/A	N/A	32.0	0.0
Gallup Contractor Yard	N/A	N/A	N/A	20.2	0.0
NAPI Contractor Yard	N/A	N/A	N/A	19.9	0.0
Subtotal Yards	--	--	--	**146.9**	**0.0[c]**

[a] Mileage based on Transwestern MP system.
[b] Includes all extra work space attached to the construction right-of-way.
[c] Acreage does not include overlap of existing easements.
N/A = not applicable

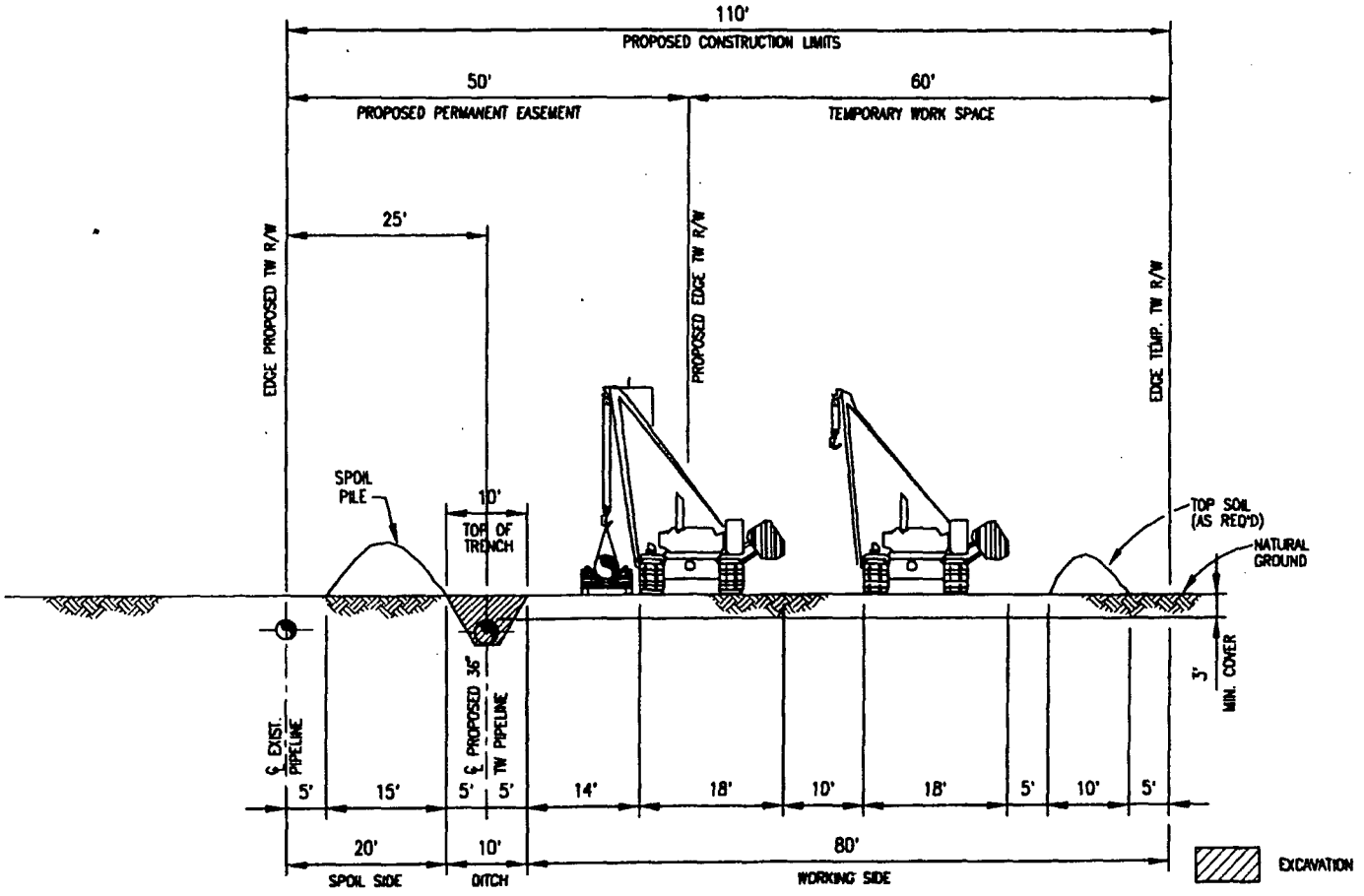
Construction at the three existing Compressor Stations would temporarily disturb approximately 24.9 acres of land, all of which is within or adjacent to existing Transwestern property or lease boundaries. Following construction Transwestern would utilize an additional 7.7 acres of land for construction, operation, and maintenance activities. Table 1.5-2 summarizes the land area affected by construction and operation of aboveground facilities.

Table 1.5-2
Land Requirements for Aboveground Facilities

Facility	Property Size (acres)	Land Affected By Construction (acres)[b]	New Land Permanently Affected by Operation (acres)[b]
Bloomfield Compressor Station	7.0	4.0	1.0
Bisti Compressor Station	3.5	5.6	1.4
Gallup Compressor Station [a]	10.0	15.3	5.3
Total Aboveground Facilities	**20.5**	**24.9**	**7.7**

[a] Construction at the Gallup Compressor Station includes additional land for equipment staging.
[b] Land affected by construction and operation of new tap and tie-in valves is included in the land area calculations for the pipeline loops.

TW – SAN JUAN EXPANSION
PROPOSED R/W ARRANGEMENT



PIPELINE, STATION, OR ACCOUNT NUMBER		SCALE: 1"=20'		CONST. YR. 2004	TRANSWESTERN PIPELINE COMPANY HOUSTON, TEXAS
FILENUMBER	CADD FILENAME P:\E&C\PROJECT DATA\C.016290\		DRAWN SP	DATE 6-17-03	
REV. NO. – DESCRIPTION		BY	DATE	APP.	
3	R/W DISCUSSIONS	FAS	9-29-03	JL	SAN JUAN EXPANSION PROPOSED 36" LATERAL RIGHT OF WAY ARRANGEMENT
2	R/W DISCUSSIONS	FAS	7-11-03	JL	
1	R/W DISCUSSIONS	SP	7-03-03	JL	
0	FOR PROPOSAL	SP	6-17-03	JL	

PROJECT NO. C.016290.03

PREVIOUS DWG. NO.

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DWG. NO. CS-SJL-A 3

1.6 Construction Schedule and Workforce

Transwestern anticipates that construction of the Project would require about five months. Transwestern proposes to initiate construction of the Project in October 2004, construct through the winter of 2004/2005 and have all facilities in service by June 1, 2005. Construction of the Project would require an average of 200 workers, with a peak workforce of 300 persons occurring during the months November through April.

1.7 Permits Required

Transwestern is in the process of filing for and obtaining all required permits, clearances, and approvals for construction and operation of the Project. These required permits, clearances, and approvals would apply to all facilities associated with the Project. All major environmental permits, approvals, and consultations required for the Transwestern Expansion Project are identified in Table 1.7-1. An MOA has been developed to address interagency cultural resource issues for the Project. The MOA includes an Unexpected Discovery Plan (UDP) that contains procedures that would be followed should previously unknown cultural resources be discovered.

1.8 Future Plans and Abandonment

Transwestern currently has no plans that involve future expansion or abandonment of the proposed facilities. Should the facilities be expanded or abandoned, a FERC authorization or Certificate and an appropriate environmental analysis would be conducted. The expansion or abandonment would be subject to applicable Federal, state, and Tribal regulations in effect at that time.

Table 1.7-1

Environmental Permits, Approvals, and Consultations

Agency	Permit/Approval/Consultations	Status
FEDERAL		
Federal Energy Regulatory Commission	Certificate of Public Need and Necessity under Section 7 of the NGA	Application filed March 2004
Advisory Council on Historic Preservation	Comment on the Project and its effect on historic properties under Section 106 of the National Historic Preservation Act, including MOA and UDP	Comment January 26, 2004
U.S. Army Corps of Engineers	Permit under Section 404 of the CWA	Application to be filed June 2004
U.S. Fish and Wildlife Service	Consultations under Section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, and the Fish and Wildlife Coordination Act	Ongoing
U.S. Environmental Protection Agency Region 9	Storm Water Construction Permit and permit for discharge of hydrostatic test water under Section 402, CWA, National Pollutant Discharge Elimination System	Application to be filed May 2004
	Water Quality Certification under Section 401 of CWA on Navajo Nation Lands	Application to be filed June 2004
Federal Highway Administration	Encroachment Permits	Application to be filed prior to construction
US Department of Interior, Bureau of Indian Affairs	Comment on Project and effect on Navajo Nation Land; Right-of-Way Grant (Tribal Trust and Allotted lands); Special Use and Archeological Permit	Ongoing

Table 1.7-1

Environmental Permits, Approvals, and Consultations

Agency	Permit/Approval/Consultations	Status
US Department of Interior, Bureau of Land Management	Comment on Project and effect on BLM Land; Right-of-Way Grant and Temporary Use Permits	Ongoing
Bureau of Alcohol, Tobacco, and Firearms	Explosives User's Permit	Application to be filed as necessary prior to construction
STATE		
New Mexico Environmental Department	Water Quality Certification under Section 401 of the CWA	Application to be filed June 2004
	Consumptive Water Use Permit	Application to be filed June 2004
New Mexico Oil Conservation Division	Hydrostatic Test Water Discharge Permit under National Pollutant Discharge Elimination System	Application to be filed as necessary
New Mexico Fish and Game Department	Consultations for State-listed threatened and endangered species under Endangered Species Act or State Law	Ongoing
New Mexico State Land Office	Comment on Project and effect on New Mexico lands	Ongoing
New Mexico Historic Preservation Department	Consultations for cultural resources under Section 106 of the National Historic Preservation Act or State Law, including MOA and UDP	Ongoing
NAVAJO NATION		
Navajo Nation Environmental Protection Agency	Reviews hydrostatic test water discharge plans under Navajo Nation Pollutant Discharge System, and solid waste management plans under Resource Conservation and Recovery Act (RCRA)	Application to be filed June 2004
Navajo Nation Water Quality Program	Review Section 404 and 401 of the CWA. Review SWPPP prior to submittal of NOI to use General Construction Permit	Application to be filed June 2004
Navajo Nation Historic Preservation Department	Comment on the Project and its effect on historic properties under Section 106 of the National Historic Preservation Act, including MOA and UDP	Ongoing
Navajo Nation Department of Fish & Wildlife	Consultations under Section 7 of the Endangered Species Act and Navajo Nation Endangered Species List	Ongoing

2.0 ENVIRONMENTAL ANALYSIS

This environmental analysis describes the existing environment in the Project area, discusses the environmental consequences of the proposed Project, and identifies recommended mitigation measures to minimize potential Project-related impacts.

2.1 Geology

The proposed facilities would be located entirely within the Colorado River Plateaus physiographic subdivision (U.S. Geological Survey (USGS) 1965). Topography in this subprovince is characterized by mesas, rolling hills, and eroded badlands. The proposed pipeline route would cross alluvial, eolian (wind blown) deposits, and bedrock units ranging in age from upper Cretaceous to lower Tertiary. Compressor stations are located on sedimentary deposits and bedrock units of Quaternary, Tertiary, Paleozoic, and Jurassic age.

The San Juan Lateral Loop includes two segments: a longer, northern segment from MP 8.9 to approximate MP 71.9; and a shorter, southern segment from approximate MP 85.7 to MP 97.1. The northerly pipeline segment would cross two major structural elements: the San Juan Basin and the Chaco Slope. The northern portion of this loop segment (MP 8.9 to about MP 27.7) would begin in the San Juan Basin. The predominant topography crossed in the San Juan Basin consists of mesas with prominent south-facing steep slopes, with flat tops that slope gently to the north, badlands, and broad rolling hills. The area also contains several drainages that have cut deep canyons and arroyos into surficial layers. The pipeline crosses into the Chaco Slope area at approximate MP 27.7, and continues to the end of the northerly loop section at MP 71.9. The Chaco Slope area is characterized as containing washes and broad floodplains, alluvial fans, mesas, plateaus, and steep-sloped ridges. The southern segment, beginning at approximate MP 87.8, would traverse the extreme northwest portion of the Zuni Uplift, ending at the Gallup Compressor Station (approximate MP 97.1). This area is comprised of mesas, cuestas (hillslopes), ridges and fan terraces, as well as floodplains and upland drainage ways.

2.1.1 Geologic Hazards

Geologic hazards in New Mexico include flooding, unstable soils, and earthquakes. While the Project area is not recognized as a seismically active region, two earthquake epicenters have been recorded in the vicinity of the proposed route (Stover et al. 1988). The first epicenter, located about 5 miles east of MP 64 was recorded in 1977 and had a Modified Mercalli Intensity of VI. The second, located 6 to 7 miles east of MP 71, was recorded in 1976 and was also a VI on the Modified Mercalli Scale. However, there do not appear to be active faults associated with these epicenters (Howard 1978), nor would the route cross any active faults.
There were no recorded earthquakes of significance within 250 miles of the project area between 1990 and 2004 (USGS, 2004). There is a low potential for soil liquefaction in the Project area (Algermissen et al. 1982). The pipeline route would not cross any terrain that is susceptible to karst development (Davies et al. 1976).

The geologic hazard most likely to be encountered along the pipeline route is landslides. The area around the Zuni Uplift, a portion of which is crossed by the southern pipeline segment, has a high susceptibility and high incidence of landslides (Radbruch-Hall et al. 1976). The major landslide problem in this area results from the undercutting of resistant rock on the edges of mesas or prominent escarpments. Another type of landslide results from debris flows (the mass movement of unconsolidated materials downward along a slope). Along the northerly pipeline segment, an escarpment is present from about MPs 16 to 17 and small debris flows have been mapped in Gallegos Canyon (Guzetti and Brabb 1987). The northerly

segment of the pipeline would cross the Chaco River Canyon between approximate MPs 42 and 43, and scarps between MPs 45 to 46. Guzetti and Brabb (1987) have mapped an alluvial fan deposit, more than 1 mile across from about the start of the southern section of the loop at MP 87.8 to MP 90.0. The alluvial fan was deposited in part by debris flows. Therefore, a landslide hazard associated with debris flows exists in these locations.

The proposed pipeline facilities would be designed and installed in accordance with 49 CFR, Part 192, Minimum Federal Safety Standards for the Transportation of Natural and Other Gas by Pipeline. Transwestern's pipeline installation techniques, including burial depths, padding and use of rock-free backfill, will effectively insulate the pipeline from minor earth movements, washouts, floods, and unstable soils that may occur in the project area.

Along with the previously described measures to mitigate for minor earth movements, the orientation of the pipeline along the long axis of a slope face would minimize the overall energy to which a segment of pipe would be exposed during a major landslide event. It is expected that any major landslide events would at worst expose the pipe along the slope face requiring subsequent reburial. Therefore, geologic hazards are not anticipated to impact the proposed pipeline facilities.

All proposed compressor station modifications would be placed within or in areas nearby to the fenced boundaries of existing compressor station yards. No geologic hazards have been identified at the existing aboveground facilities.

2.1.2 Mineral Resources

The proposed alignment of the San Juan Lateral Loop would pass through areas containing economically important geologic resources including oil, natural gas, coal, and uranium (USGS 1965). The northern third of the pipeline route (from approximate MPs 8.9 to 28.1) would cross the Blanco Mesa Verde Gas Field, a very large field and part of the San Juan Basin that covers more than 1 million acres and contains thousands of producing wells (Pritchard 1972). The pipeline facilities would also cross the Bisti Oil Field between about MPs 23.0 and 26.0. Coal bed methane is also being produced from the San Juan Basin. Methane gas reserves in the Fruitland formation (crossed from approximate MPs 28.6 to 40.1) are estimated to be 50 trillion cubic feet of gas in place and are estimated to be half that amount in the Menefee formation (crossed from approximate MPs 42.3 to 71.9) (Gas Research Institute, 1990). No active oil or gas wells would be affected by the pipeline facilities.

The pipeline route would cross two important coal-producing formations: the Fruitland formation and the Menefee formation. The Fruitland has an estimated 5 billion tons of strippable coal, and the Menefee up to 291 million tons. No producing coal mines would be crossed by the proposed route (Barker and Bolton 1988).

The proposed pipeline loop would not affect any actively mined or quarried areas or any active natural gas, methane or oil production facilities. In addition, because the proposed pipeline would be installed adjacent to existing pipelines and transportation corridors that already preclude mining, they are not likely to affect future exploitation of mineral resources.

2.1.3 Blasting

Transwestern has determined that blasting would not be required during construction to achieve the required pipe burial depth. If consolidated rock requires blasting for removal, Transwestern would use controlled blasting techniques in compliance with all state and federal regulations governing the use of explosives. If blasting is required, Transwestern would notify residents prior to initiation of blasting

activities. Transwestern's intent is to minimize disruption of residents' routines and/or traditional activities by notification, time-of-day restrictions if appropriate, and other information dissemination.

Transwestern would not windrow rock along the right-of-way unless permission is secured from the landowner or land managing agency. Excess rock could be used for stormwater runoff control. Disposal of rock debris would be to an appropriate area approved by the individual landowners in accordance with all applicable regulatory requirements. In addition, Transwestern has identified two existing commercial disposal operations in the project area that could be utilized for hauling and disposal of excess rock and dirt.

2.2 Soils

Soils affected by the proposed Project typically consist of clay loam, silt loam, sandy loam and fine sand textural classes derived from loess (windblown silt of varying thickness), alluvium, sediments weathered from bedrock, and debris flows. Drainage is characterized as rapid to very slow, depending on the soil texture, depth, and slope. No soils within the Project area are classified as prime farmland, as defined by the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS).

Construction of the Transwestern Expansion Project could result in erosion (by both water and wind) or loss of soil productivity due to compaction in active agricultural areas. Erosion potential would increase due to clearing, grading, trenching, and backfilling. Soil structural damage and compaction could also result from construction in soils with a high clay content. Soil map units describing soils with a high clay content comprise about 28.7 miles of the pipeline right-of-way. According to the NRCS mapping used to describe the soils that would be crossed by the proposed pipeline facilities, there are approximately 52.4 miles of soils in map units with high to severe potential for wind erosion. Soils in map units with high or severe potential for water erosion are scarce along the Project route, except in large floodplains, gulleys and washes (especially at MPs 16 to 17; 42 to 43; 45 to 46) where these soil types are present.

Soil erosion can be reduced through the implementation of the erosion and sediment control practices specified in the Transwestern CSR Plan and FERC Procedures. The Transwestern CSR Plan and FERC Procedures contain detailed guidelines, specifications and restrictions applicable to erosion control and prompt land restoration and revegetation. These erosion control measures include the installation of slope breakers and sediment barriers such as silt fence or hay bales; the use of specified mulch, seed mixtures, and erosion control fabrics; and follow-up monitoring of right-of-way stability and revegetation success. The Transwestern CSR Plan also contains measures specifically designed to protect and restore agricultural lands. Transwestern has requested comments and recommendations regarding Transwestern's Plan and appropriate seed mixes from the NRCS (Aztec, Crownpoint, and Gallup Offices), the Crownpoint Bureau of Indian Affairs (BIA) Department of Natural Resources, the Navajo Nation Department of Natural Resources, and the BLM. Transwestern would incorporate any comments and recommendations received into their construction plans. The Transwestern CSR Plan and the FERC Procedures are included in Appendices D and E.

According to the NRCS mapping used to characterize the soils that would be crossed by the Project, there are approximately 39.6 miles of soils with potential for severe compaction along the proposed pipeline right of way. The Transwestern CSR Plan includes adequate provisions for restoring soils that become compacted by construction activities during restoration activities.

We have reviewed the Transwestern CSR Plan and find it to be effective as or more effective than the FERC Plan in mitigating for adverse impacts on soils. The specific modifications to our Plan proposed by Transwestern are discussed in Section 1.4, Table 1.4-1. Implementation of the erosion control and restoration measures contained in the Transwestern CSR Plan would correct any temporary adverse

impacts on soils and prevent significant long-term impacts from construction and operation of the Project. In addition, Transwestern's incorporation of NRCS and other land management agency recommendations would enhance restoration efforts. Therefore, we believe that with implementation of the Transwestern CSR Plan, the significance of long term impact on soils would be minimized.

2.3 Water Resources

2.3.1 Groundwater

The Transwestern Expansion Project would be located in northwestern New Mexico, an area that is underlain by the Colorado Plateau aquifer. The Colorado Plateau aquifer is made up of four distinct principal aquifers including the Uinta-Animas aquifer, the Mesa Verde aquifer, the Dakota-Glen Canyon aquifer system, and the Coconino-De Chelly aquifer. These aquifers underlie an area of approximately 110,000 square miles in western Colorado, northwestern New Mexico, northeastern Arizona, and eastern Utah (USGS 1995). The pipeline facilities would be underlain by the Uinta-Animas aquifer and the Mesa Verde aquifer.

There are no U.S. Environmental Protection Agency (EPA) designated sole source aquifers in New Mexico (EPA 2003). There are no public or private water wells located within 150 feet of the pipeline workspace areas (NMOSE, 2003). There are no residences within 50 feet of any proposed construction areas that may have a well not listed in the New Mexico GIS data base. Should Transwestern identify wells that are not listed on the New Mexico GIS database, Transwestern would perform, with landowner concurrence, pre- and post-construction water well testing. This testing would include tests for flow, total suspended solids (TSS), oil and grease, and pH. Transwestern has not identified any areas of contaminated groundwater within ¼ mile of proposed construction areas.

Most of the pipeline route would occur in areas where groundwater is at least 50 feet below the ground surface. In the areas where alluvium may be encountered, groundwater would tend to be closer to the surface. Because groundwater would generally be found well below the bottom of the trench, Transwestern does not anticipate that trench dewatering would be required for this Project.

Operation of the proposed pipeline facilities would not typically require the use of any water. No significant increase in water use is anticipated from operations at the modified compressor stations.

A release of natural gas from the proposed facilities would not affect groundwater. The greatest potential for impact to groundwater would be an accidental release of a hazardous material (such as fuels, lubricants and solvents) during construction of the proposed facilities and operation of the compressor stations. Through consultation with the appropriate agencies, Transwestern has developed an SPCC Plan for the construction of pipeline and compressor station facilities. The SPCC Plan describes the preventive and mitigative measures that would be used to minimize the impact associated with any inadvertent spill of hazardous materials including designated refueling areas, spill response procedures, containment and clean-up measures, hazardous material storage and disposal procedures, and other Best Management Practices (BMPs).

Transwestern has existing SPCC Plans addressing the operation of facilities at its compressor stations. Transwestern would revise those plans, as needed, to reflect any relevant changes that result from the proposed modifications at the compressor stations. Implementation of Transwestern's SPCC Plan for construction of pipeline facilities and the modified operational SPCC Plans for activities at the existing compressor stations would prevent significant adverse impacts on groundwater resources.

2.3.2 Surface Water

No perennial Waters of the U.S. would be crossed by the proposed Project. However, Transwestern's pipeline facilities would cross three intermittent streams, and numerous arroyos. Arroyos are considered to be Waters of the U.S., having only intermittent/ephemeral flow of water following storm events (ACOE 2003). There are no surface water intakes within three miles of any proposed stream crossing. None of the Waters of the U.S. crossed by the Project are known to contain contaminated sediments (NMED 2003). No surface waterbodies are located at the compressor stations and none of the compressor stations are located within a 100-year floodplain (FEMA 1988; 1978). Table 2.3-1 summarizes the Waters of the U.S. that would be crossed by the Project. These waterbodies would be crossed during the winter dry months using the open cut construction method, as described in the FERC Procedures. The intermittent Waters of the U.S. do not have site-specific water quality standards or designated uses assigned by the State of New Mexico Water Quality Commission.

Section 404 of the Clean Water Act (CWA) requires issuance of a permit prior to the temporary or permanent placement of fill in Waters of the U.S. Transwestern would be required to obtain a CWA Section 404 Permit from the COE prior to construction. Similarly, Transwestern would be required to obtain a CWA Section 401 Water Quality Certification (WQC). In New Mexico, the CWA Section 401 WQC is issued by the Water Quality Division of the New Mexico Environment Department (NMED). On Navajo Nation lands, the WQC is issued by EPA Region 9. Additionally, the Navajo Nation Environmental Protection Agency (NNEPA) has requested review of this application. Transwestern has indicated that they would file applications for these permits in June 2004.

Table 2.3-1

Waters of the U.S. Crossed by the Transwestern Expansion Project

Mile Post	Waters of the US Name	Width (feet)*	Intermittent (I) or Ephemeral (E)
Loop A			
8.7	Tributary to Horn Canyon	N/A	E
16.3	Gallegos Canyon	524	I
20.6	West Fork Gallegos Canyon	287	I
20.6	Tributary to West Fork Gallegos Canyon	84	E
22.1	Tributary to West Fork Gallegos Canyon	93	E
22.1	Tributary to West Fork Gallegos Canyon	40	E
37.6	Hunters Wash	15	E
38.3	Tributary to Hunters Wash	15	E
42.6	Chaco River	813	I
43.8	Tributary to Chaco River	74	E
43.9	Tributary to Chaco River	2	E
44.1	Tributary to Chaco River	2	E
44.3	Tributary to Chaco River	2	E
44.7	Tributary to Chaco River	4	E
44.8	Tributary to Chaco River	1	E
44.9	Tributary to Chaco River	3	E
44.9	Tributary to Chaco River	3	E
44.9	Tributary to Chaco River	4	E
45.3	Tributary to Chaco River	7	E
45.5	Tributary to Chaco River	6	E
45.7	Tributary to Chaco River	3	E
45.7	Tributary to Chaco River	25	E
46.2	Tributary to Indian Creek	1	E
46.3	Tributary to Indian Creek	150	E
46.5	Tributary to Indian Creek	20	E
48.3	Tributary to Indian Creek	15	E
48.6	Tributary to Indian Creek	10	E
48.7	Tributary to Indian Creek	3	E
48.7	Tributary to Indian Creek	3	E
48.7	Tributary to Indian Creek	3	E
48.8	Tributary to Indian Creek	3	E
48.8	Tributary to Indian Creek	3	E
48.9	Tributary to Indian Creek	3	E
48.9	Tributary to Indian Creek	3	E
50.4	Indian Creek	56	E
50.6	Tributary to Indian Creek	11	E
66.1	Standing Rock Wash	20	E
66.1	Standing Rock Wash	20	E
66.2	Tributary to Standing Rock Wash	4	E
69.1	Tributary to Soft Water Wash	775	E
Loop B			
89.6	Tributary to Puerco River	34	E
89.7	Tributary to Puerco River	30	E
89.7	Tributary to Puerco River	21	E
89.8	Tributary to Puerco River	41	E
89.8	Tributary to Puerco River	37	E
90.6	Tributary to Puerco River	63	E
90.9	Tributary to Puerco River	55	E
91.5	Tributary to Puerco River	45	E
91.9	Tributary to Puerco River	40	E
92.6	Tributary to Puerco River	12	E
92.6	Tributary to Puerco River	12	E
93.1	Hard ground Canyon	358	E
95.2	Tributary to Puerco River	117	E

* Widths reflect width of eroded channel and does not necessarily represent water width when water is present.

The proposed pipeline loop would cross one irrigation canal at two locations. Table 2.3-2 summarizes the two irrigation canal crossings that would result from construction of the Project. The canal crossings would be completed while the canal is not charged with water, using a horizontal bore, as approved by the NAPI.

Table 2.3-2

Irrigation Canals Crossed by the Transwestern Expansion Project

Mile Post	Name	Width (feet)*	Intermittent (I) or Ephemeral (E)
14.1	NAPI Canal (1st crossing)	50	I
15.8	NAPI Canal (2nd crossing)	50	I

* Widths reflect width of the lined channel.

Because of the intermittent/ephemeral flow of water typically following storm events, Transwestern would cross the arroyos using the methods described in the FERC Procedures if flowing water is present at the time of crossing; or using methods described in Transwestern's CSR Plan if dry at the time of crossing. Transwestern's proposal to construct during the low or no-flow season (November through June) would minimize the probability of encountering flowing water in the waterbodies during construction.

Construction activities such as clearing and grading, waterbody crossings, equipment refueling, and hydrostatic testing could adversely affect water quality. To minimize impacts, Transwestern would implement the approved SPCC Plan and adhere to the protective measures contained in the Transwestern CSR Plan and FERC Procedures and the mitigative measures contained in Appendix F. Provisions for minimizing impacts described in the FERC Procedures include completion of construction in a timely manner, installation of erosion and sedimentation controls, and preventing the storage of hazardous materials within 100 feet of any Waters of the U.S. Following completion of these crossings, stream channels would be backfilled, re-contoured, and restored immediately upon installation of the pipeline in accordance with time frames indicated in the FERC Procedures.

Transwestern also indicated that it would locate extra workspaces at least 50 feet away from stream banks. However, review of Transwestern's filed photo alignment sheets identified a number of areas where it appears that extra workspaces may be located within 50 feet of a Water of the U.S. While these waterbodies would most likely be dry at the time of crossing and would not require the protective measures accorded with the FERC Procedures, there is always a possibility of an unexpected storm event occurring. If unexpected water flow were to occur, cleared extra workspaces along the stream bank could add to the erosion caused by the storm event. Therefore, in order to protect stream banks in the event of unexpected water flow, Transwestern has agreed to file site-specific drawings for all crossings where extra workspaces would be located closer than 50 feet to a Water of the U.S. These site-specific drawings would be reviewed and approved in writing by the Director of the Office of Energy Projects (OEP), prior to construction.

2.3.3 Hydrostatic Testing

Hydrostatic testing of the pipeline and associated facilities would be required to ensure the integrity of the new facilities. Transwestern proposes to obtain all necessary waters for hydrostatic testing of the pipeline facilities from the NAPI irrigation canal and/or groundwater wells. Water for hydrostatic testing of the aboveground facilities would be obtained from local water supplies or water truck. Table 2.3-3 summarizes the potential sources of hydrostatic test water for the proposed Project.

Transwestern would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from EPA or state-issued discharge permit as required for the discharge of hydrostatic test water to Waters of the U.S. Transwestern is preparing a Hydrostatic Testing Plan that lists potential sources of water, surface water withdrawal and discharge locations, as well as methods for discharging of test water following completion of the testing. Transwestern's Hydrostatic Testing Plan would contain provisions for the installation of sediment barriers and energy dissipation devices to minimize erosion of upland areas, streambed scour, suspension of sediments, or excessive flow to the greatest extent practicable. Sampling of test water would be performed, if necessary, during discharge and in accordance with any NPDES or state-issued discharge permit requirements. Chemical additives would not be used during hydrostatic testing.

Table 2.3-3

Summary of Proposed Hydrostatic Test Water Sources

Facility	Source	Withdrawal Location (milepost)	Approximate Volume (gallons)
PIPELINE FACILITIES			
San Juan Lateral Loop – MP 8.9-71.9	El Paso Field Services Chaco Plant	20.0[a/]	16,600,000
San Juan Lateral Loop – MP 87.7-97.1	Water Well	97.1[a/]	2,500,000
ABOVEGROUND FACILITIES			
Bloomfield Compressor Station	City of Bloomfield	N/A	50,000
Bisti Compressor Station	Water Truck	N/A	40,000
Gallup Compressor Station	Well	97.1[a/]	20,000

[a/] Mileposts are existing San Juan Lateral mileposts
N/A - Not applicable

The draft Hydrostatic Testing Plan was developed considering the importance of surface waters to various users in the desert southwest. Transwestern is currently negotiating with El Paso Field Services for the uptake of cooling tower discharge waters at the El Paso Field Services Chaco Plant near MP 20.0. The cooling water is currently discharged to evaporation ponds for disposal. Transwestern would reuse this water for its hydrostatic testing and discharge the water into various Waters of the U.S. crossed by the project as determined by engineering requirements. Transwestern would obtain all necessary authorizations and permits prior to the surface discharge of any test waters to Waters of the U.S. and/or upland areas.

Our review of Transwestern's CSR Plan and other site-specific measures described above, combined with Transwestern's commitment to use the FERC Procedures at all waterbody crossings, indicates that construction of the Project would not result in any long term impacts to surface waters. However, in order to verify that potential impacts on Navajo Nation lands and other lands resulting from the discharge of hydrostatic testwaters are minimized, **we recommend that**:

> **Transwestern finalize the Hydrostatic Testing Plan, in consultation with the NNEPA, NMED, and EPA Region 9, and file the final Hydrostatic Testing Plan and evidence of this consultation with the Secretary, for review and written approval of the Director of OEP, prior to construction.**

2.3.4 Wetlands

Transwestern reviewed National Wetlands Inventory (NWI) maps and conducted field delineation surveys to determine the location and boundaries of all COE jurisdictional wetlands along its proposed pipeline routes. Surveys were conducted during August, September, and October 2003 using the current Federal methodology (Environmental Laboratory 1987). The arroyos crossed by the Project are not classified as jurisdictional wetlands because of a lack of at least one of the three required parameters. Wetland delineations revealed that no jurisdictional wetlands would be crossed by the proposed Project. Based on our review, we believe the Project would have no impacts on wetlands.

2.4 Vegetation, Wildlife, and Fisheries; Sensitive Species

2.4.1 Vegetation

Transwestern conducted biological surveys in August through December, 2003. These surveys assessed habitat and recorded plants and animals encountered within the survey corridor (typically, 200 feet wide along the existing right-of-way). Transwestern noted that the survey period was characterized by extreme drought conditions. This made it more difficult to verify presence of certain plant species, as some were likely dormant during the survey period. Extreme drought can also make local plant and animal populations more susceptible to biological disturbance (e.g., parasites, competition) and physical stressors, factors that can result in lowered fitness and decreased productivity and survival. Therefore, Transwestern has proposed additional and species-specific surveys during 2004. These surveys would be conducted during the appropriate flowering or active period for each species, and in accordance with applicable agency recommendations and requirements.

Construction of the proposed pipeline facilities, including temporary workspace and permanent right-of-way, would affect approximately 1,028.1 acres of rangeland, which consists primarily of desert scrub (about 61 percent), desert grassland (29 percent), and juniper savanna (10 percent). No forest land was identified by Transwestern during the biological surveys. Juniper savanna contains widely scattered trees in a grass and shrub matrix; however, these trees are not of sufficient size and density that would classify them as "forest."

All modifications at existing compressor stations would occur within or nearby to the currently fenced station boundaries. Therefore, no significant additional impact on vegetation would result from compressor station modifications.

Impact on vegetation is anticipated to be long-term. Restoration would be in accordance with Transwestern's CSR Plan and the mitigation measures included in Appendix F of this EA, as well as the FERC Procedures. All areas disturbed during construction would be revegetated following completion of construction activities, and all temporary workspace areas would be allowed to revert to pre-construction conditions. Native herbaceous species should begin to establish within the first several years after reseeding; however, the arid climate in northern New Mexico results in slow plant growth. For example, Transwestern reports that native grasses and forbs are still recovering from the disturbance associated with construction-related activity in 1991. Thus, several years to decades would likely be required to achieve vegetative densities similar to those for the surrounding undisturbed areas, and longer for mature trees. Transwestern's proposed looping, which would make use of the existing corridor as much as possible, would help lessen these effects to vegetative communities.

Noxious weeds are typically pioneer plant species that are quick to establish themselves in recently disturbed areas, often at the expense of more desirable species. According to New Mexico's Noxious

Weed Management Act, a noxious weed is any plant that is not indigenous to New Mexico and has been targeted for control because of its negative impact on the economy or the environment. Transwestern reported three noxious weed species (halogeton, salt cedar, and Russian olive) present during the 2003 surveys.

Transwestern has consulted with the Navajo Nation, BLM, NRCS, and BIA regarding specific revegetation techniques and seed mixes to maximize the potential for successful revegetation of the right-of-way. Transwestern indicates that it is preparing a project-specific revegetation plan that includes the agency comments and recommendations as well as landowner requests. In order to ensure that Transwestern adequately addresses the issues and concerns associated with revegetation of areas disturbed by construction, **we recommend that**:

> **Transwestern finalize a project-specific revegetation plan, developed in consultation with the Navajo Nation, BLM, NRCS, and BIA, that identifies measures to minimize long-term impacts on vegetation resulting from construction of the project, including actions to minimize the establishment or spread of noxious weeds. Transwestern should file this Plan with the Secretary, along with evidence of consultation with the listed agencies, for review and written approval by the Director of OEP prior to construction.**

Based on the looping nature of the project, Transwestern's proposed mitigation measures, and our condition, we believe that the project's impacts to vegetation would be minimized to the maximum extent practicable.

2.4.2 Wildlife and Fisheries

Wildlife species inhabiting the proposed project area include those species characteristic of desert scrub and desert grassland habitats. Common species are shown in table 2.4.3-1. Other species (e.g., some raptors, waterfowl, and various bats) may be present if specific habitat requirements are present.

Table 2.4.3-1

Common Wildlife Species in the Project Area

	Desert Scrub	Desert Grassland	Juniper Savanna
Mammals	mule deer, coyote, pronghorn antelope, cottontail rabbit, deer mouse, Botta's pocket gopher, other small rodents	mule deer, coyote, blacktail jackrabbit, whitetail prairie dog, Ord's kangaroo rat, whitetail antelope squirrel, other small rodents	mule deer, coyote, cottontail rabbit, whitetail prairie dog, whitetail antelope squirrel, spotted ground squirrel, Stephen's woodrat, other small rodents
Birds	sage sparrow, lesser goldfinch, raven, red-tailed hawk, turkey vulture, mourning dove	mountain plover, roadrunner, ferruginous hawk, burrowing owl, raven, red-tailed hawk, turkey vulture, mourning dove	juniper titmouse, gray flycatcher, mountain plover, pinyon jay, burrowing owl, raven, red-tailed hawk, turkey vulture, mourning dove
Reptiles/Amphibians	plains spadefoot toad, lesser earless lizard, sagebrush lizard, side-blotched lizard, plateau striped whiptail, bullsnake, western rattlesnake	plains spadefoot toad, desert grassland whiptail, bullsnake, western rattlesnake	plains spadefoot toad, lesser earless lizard, desert grassland whiptail, western hognose snake, bullsnake, western rattlesnake, coachwhip

Construction of the project would result in a minor and temporary impact on wildlife species. Some construction-related mortality may occur to individuals of smaller and less mobile species, but this is not expected to have population-level impacts. Larger, more mobile wildlife would be able to avoid

construction areas. In general, local wildlife populations are expected to avoid the construction areas during and for a short time following construction. Due to the abundance of adjacent similar habitat, the temporary displacement of individuals is not expected to result in significant increase in mortality rates, although increased competition for food, shelter, or other needs may cause mortality to weaker individuals.

Transwestern's use of an existing pipeline corridor would help minimize potential effects to wildlife by reducing the overall extent of habitat clearing and land disturbance. Once the right-of-way has been restored in accordance with Transwestern's CSR Plan and our recommendations in EA section 2.4.1, wildlife would likely return and use the right-of-way.

No Federal, state, or Tribal wildlife refuges, management areas, or similarly designated areas would be crossed by the project.

No fisheries would be affected by construction or operation of the proposed facilities. The San Juan 2005 Expansion Project would not cross any perennial waters that provide habitat for fish.

We conclude that implementation of the mitigation measures contained in Appendix F and adherence to the Transwestern CSR Plan, FERC Procedures, and our recommendations would prevent significant adverse impacts to local wildlife and habitat resulting from construction and operation of the proposed project.

Raptors and Other Migratory Birds

The Migratory Bird Treaty Act of 1918 serves to protect migratory birds from deleterious impacts. Executive Order 13186 was enacted in 2001 to, among other things, ensure that environmental analyses of Federal actions evaluate the effects of actions and agency plans on migratory birds. Several elements of the executive order are relevant to the San Juan 2005 Expansion Project.

Raptors are thought to often be sensitive to human disturbance, especially during the nesting season. During Transwestern's 2003 biological survey, all potential raptor evidence (i.e., whitewash, stick nests, trees and cliff facings suitable for nesting, calls) was recorded within about a 0.5-mile radius of the proposed project area. Potential raptor nesting habitat was identified along much of the project route.

Transwestern's 2004 surveys would assess migratory bird presence, habitat, and nesting activity, and would be conducted during the time periods and according to protocols established by the U.S. Fish and Wildlife Service (FWS) and the Navajo Nation Department of Fish and Wildlife (NNDFWL). Transwestern's proposed construction schedule is generally outside of migratory bird nesting periods, although there may be some overlap. Transwestern states if construction extends into a nesting season, it would establish appropriate "no-construction" zones if an active nest is identified. Indirect effects on migratory birds could occur if important nesting habitat was permanently removed. However, Transwestern would avoid removing large trees to the maximum extent practicable. Alteration of shrub and ground habitat is not expected to be problematic, as disturbed areas would be restored, and these habitats are not scarce in the project area. Because of these considerations, we believe that the San Juan 2005 Expansion Project would not significantly impact migratory birds.

2.4.3 Threatened and Endangered and Other Special Status Species

Transwestern has consulted with the FWS, NNDFWL, New Mexico Department of Game and Fish (NMDGF), and the New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD), to

obtain information on the potential presence of Federal-, Navajo Nation-, and state-listed threatened or endangered species, and other species of special concern that may occur in the project area. Based on Transwestern's research and the information provided by the agencies, 56 species and 1 species grouping (waterfowl and shorebirds) were originally identified as potentially occurring in the counties crossed by the project. In subsequent consultation, the NNDFWL informed Transwestern that six additional plant species may have the potential to occur in the project area and should be surveyed for.

Because of specific habitat requirements or known geographic range, Transwestern was able to eliminate 36 of these species from further analysis. We have reviewed this information and believe the proposed project would not affect these 36 species. Thus, we do not discuss them further. The remaining 32 species (and the waterfowl grouping) are potentially present in the project area. Table 2.4.3-2 lists these species along with Transwestern's survey results and habitat evaluation, as well as our comments.

Because of the aforementioned limitations of the 2003 surveys, we can not conclude that the absence of positive identification during 2003 means that the species would not be present during construction. We do note, however, that Transwestern proposes to conduct additional surveys in 2004. For certain species, Transwestern has already proposed contingency measures in the event individuals are identified in the 2004 surveys. In other cases, Transwestern states it would "develop appropriate conservation measures" should sensitive species be identified.

Federally-Listed Species

Section 7 of the Endangered Species Act of 1973 (ESA), as amended, requires a Federal agency to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of a federally listed endangered or threatened species or result in the adverse modification of the designated critical habitat of a federally listed species. The agency is required to consult with the FWS to determine whether any federally listed or proposed listed species or any critical or proposed critical habitat may occur in the action area, to determine the action's potential effects on these species or critical habitats, to identify appropriate measures to avoid or mitigate impacts on listed species, and to report its findings to the FWS in a Biological Assessment (BA). We are requesting that the FWS consider this EA as our BA for the proposed project.

Table 2.4.3-2

Special Status Species Potentially Present in the Project Area

Species	Status[a/] Federal	State	Navajo	Habitat	Comments[b/]
PLANTS					
San Juan milkweed (*Asclepias sanjuanensis*)		SSOC		sandy loam soils in scrub and juniper savanna	unidentified milkweed present; potential habitat present from MPs 28.8-29.1
Chaco milkvetch (*Astragalus micromerius*)		SSOC		gypseous or limy sandstones in scrub and juniper woodland	none observed; habitat likely not present
Zuni milkvetch (*Astragalus missouriensis* var. *accumbens*)		SSOC		gravelly clay banks in dry, alkaline soils derived from sandstone, in piñon-juniper woodlands	none observed; potential for occurrence noted by the NNDFWL
Naturita milkvetch (*Astragalus naturitensis*)		SSOC	NG4	sandstone ledges/rimrock in pinyon-juniper woodland	up to 100 individuals observed along proposed route; suitable habitat present from MPs 10.0-16.0 and MPs 18.3-28.8
Acoma fleabane (*Erigeron acomanus*)	FSOC	SSOC	NG3	sandy slopes/benches beneath sandstone cliffs in piñon-juniper woodland	none observed; potential for occurrence noted by the NNDFWL
Bisti fleabane (*Erigeron bistiensis*)	FSOC			ridge tops and sandy slopes	none observed; habitat likely not present
Zuni fleabane (*Erigeron rhizomatus*)	FT		NG3	nearly barren clay hillsides with shale-derived soils	none observed; habitat likely not present
Sivinski's fleabane (*Erigeron sivinskii*)	FSOC	SSOC	NG4	shale in piñon-juniper woodland and desert scrub	none observed; potential for occurrence noted by the NNDFWL
Aztec gilia (*Gilia formosa*)	FSOC	SE		Salt desert scrub communities in soils of the Nacimiento Formation	none observed; potential for occurrence noted by the NNDFWL
Navajo bladderpod (*Lesquerella navajoensis*)		SSOC	NG4	limestone mesa rims in sparse piñon-juniper woodland	none observed; potential for occurrence noted by the NNDFWL
Knowlton cactus (*Pediocactus knowltonii*)	FE	SE		juniper-sagebrush	none observed; habitat likely not present
Narrow-mouth penstemon (*Penstemon breviculus*)		SSOC		sandy clayey soils associated with sagebrush, pinyon, and juniper	none observed; habitat likely not present
Mano shadscale (*Proatriplex pleiantha*)		SSOC		desert badlands with saline clay soils	none observed; habitat likely not present

Table 2.4.3-2

Special Status Species Potentially Present in the Project Area

Species	Status[a]			Habitat	Comments[b]
	Federal	State	Navajo		
Parish's alkali grass (*Puccinellia parishii*)	FSOC	SE		alkaline springs, seeps, and seasonally wet areas	none observed; habitat likely not present
Brack's fishhook cactus (*Sclerocactus cloveriae* var. *brackii*)	FSOC	SE		broken terrain on gravelly or rocky slopes in river deposited gravels and other substrates	none observed; potential for occurrence noted by the NNDFWL
Mesa Verde cactus (*Sclerocactus mesae-verdae*)	FT	SE	NG3	in sparsely vegetated, highly alkaline or gypsierous clays; flowering is in early to mid-May.	none observed; potential habitat present from MPs 36.1-65.1
BIRDS					
Golden eagle (*Aquila chrysaetos*)			NG3	may nest near or forage in most southwestern vegetative communities	one individual observed; one possible nest site in general Project vicinity; however, construction would occur outside of nesting season
Western burrowing owl (*Athene cunicularia hypugea*)	FSOC			grasslands and open shrubland; prairie dog towns and recently disturbed areas--typically in burrows made by other animals	none observed; potential habitat present along Project route, especially in prairie dog towns; however, construction would occur outside of nesting season
Ferruginous hawk (*Buteo regalis*)			NG3	open grasslands/prairie/ scrub/badlands; often nests on ground, may use trees/shrubs	one individual observed; one possible nest site in general Project vicinity; however, construction would occur outside of nesting season
Mountain plover (*Charadrius montanus*)	FSOC		NG4	grassland and shortgrass prairie; alkalai flats; agricultural fields; utility rights-of-way and other disturbed areas; prairie dog towns	none observed; potential habitat present from MPs 32.1-39.1; however, construction would occur outside of nesting season
Peregrine falcon (*Falco peregrinus anatum* and *Falco peregrinus tundrius*)	FSOC	ST	NG4	tall cliffs and other high structure	several observed; common resident
Bald eagle (*Haliaeetus leucocephalus*)	FT	ST	NT	large trees or high structure near water	more common in winter; nesting not likely in project area due to lack of large bodies of water
Gray vireo (*Vireo vicinior*)		ST		open juniper/oak woodlands/shrublands	seasonal migrant (April-September); proposed construction schedule would not overlap; no effect anticipated

Table 2.4.3-2

Special Status Species Potentially Present in the Project Area

Species	Status[a/] Federal	State	Navajo	Habitat	Comments[b/]
Waterfowl and Shorebirds			EI	perennial streams/ponds; also wetlands and intermittent flows such as ditches and canals	no permanent water or wetlands would be crossed by the Project; no nesting impacts anticipated; temporary and minor displacement of adult birds in ditches or irrigated areas not expected to be a significant impact
MAMMALS					
Pronghorn (*Antilocapra americana*)			NG3	open prairie and sagebrush plain	none observed; highly mobile species--any individuals present would not be significantly affected by the Project
Black-footed ferret (*Mustela nigripes*)	FE		NG2	large prairie dog complexes	none observed; prairie dog towns present along the Project route from MPs 24.5-36.2 and 96.0-96.6
Kit fox (*Vulpes macrotis*)			NG4	forms dens in open prairie/grasslands	none observed; one historic den site in general Project vicinity

a/ FE/SE = Federal/State Endangered Species
FT/ST/NT = Federal/State/Navajo Threatened Species
FSOC/SSOC = Federal/State Species of Concern
NG2 = Navajo Nation species or subspecies whose prospects of survival or recruitment are in jeopardy.
NG3 = Navajo Nation species of subspecies whose prospects of survival or recruitment are likely to be in jeopardy in the foreseeable future.
NG4 = Any species of subspecies the NNDFWL does not currently have sufficient information to support listing as NG2 or NG3 but has reason to consider them.
EI = Economic importance

b/ Observation status refers to Transwestern's 2003 surveys. Transwestern proposes to resurvey for all these species in 2004, except for the pronghorn.

Transwestern has assisted the FERC with its responsibilities under Section 7 by coordinating with the FWS (both in writing and at project meetings) regarding potential and occupied habitats of listed species within the project area. Based on this information, two federally endangered species (Knowlton cactus and black-footed ferret) and three federally threatened species (Zuni fleabane, Mesa Verde cactus, and bald eagle) are potentially present in the project area. Transwestern proposes to survey for these species during its 2004 biological surveys. To ensure protection for federally listed species, **we further recommend that:**

> **Before the initiation of surveys, Transwestern should consult with the FWS (and, in the case of cross-listed species, with the appropriate resource agency) to verify required survey methods and timing. If facilities are not constructed within 1 year from the date of issuance of a FERC certificate, Transwestern should contact the FWS to update the species list and to determine if additional surveys are required. Survey reports and any FWS or other agency comments on the surveys and their conclusions should be filed with the Secretary. Survey reports should include the following information:**
>
> **a. name(s) and qualifications of the person(s) conducting the survey;**
> **b. method(s) used to conduct the survey;**
> **c. date(s) of the survey;**
> **d. area surveyed (including the mileposts surveyed); and**
> **e. proposed mitigation that would substantially minimize or avoid potential impacts.**
>
> **Transwestern should not begin construction activities until:**
>
> **a. FERC staff receives comments from the FWS regarding the proposed action;**
> **b. FERC staff completes formal consultation with the FWS, if required; and**
> **c. Transwestern has received written notification from the Director of OEP that construction or use of mitigation may begin.**

Transwestern did not identify Zuni fleabane, Knowlton cactus, or Mesa Verde cactus during the 2003 survey. Based on habitat requirements, it is unlikely that Zuni fleabane or Knowlton cactus would be present. However, suitable habitat for Mesa Verde cactus is present in the project area (see table 2.4.3-2). Transwestern would not be authorized to initiate project work until any required informal or formal Section 7 consultation is complete. In accordance with the above recommendation, we believe the proposed project is *not likely to adversely affect* Zuni fleabane, Knowlton cactus, or Mesa Verde cactus.

Bald eagles are closely associated with water, since principal prey consists of fish either captured live or eaten as carrion. Other wildlife species may be taken as well. Bald eagles are known to winter and nest in suitable habitat throughout New Mexico, including San Juan County. Transient eagles may also be present during the summer. Transwestern identified potential raptor nesting habitat during the 2003 surveys; however, no prime bald eagle nesting sites were found. Transwestern's proposed 2004 surveys would further assess potential bald eagle nesting or roosting sites. Even if nesting habitat is not present, bald eagles could roost within or temporarily visit the project region, given that construction is proposed for the winter months. As such, Transwestern has committed to delay activity in a given area if a bald eagle were observed roosting within 0.5 mile of a construction area prior to the start of construction that day. In this circumstance, construction would begin only after the eagle had left the area. Should an eagle enter an active construction area, work would continue. In accordance with Transwestern's proposal and our recommendation above, we believe the proposed project is *not likely to adversely affect* the bald eagle.

Black-footed ferrets were once distributed throughout the high plains of the Rocky Mountains and western Great Plains regions, but are now thought to be the rarest mammal in the United States. Preferred habitat is grassland plains in association with prairie dog towns of at least 80 acres. Prairie dogs are the main prey for the black-footed ferret.

Transwestern identified a prairie dog town between MPs 24.5-36.2 that is large enough to potentially support black-footed ferrets. Another complex, between MPs 96-96.6, is smaller than the threshold that determines if ferret surveys are required. Thus, Transwestern proposes to complete FWS protocol surveys of the larger prairie dog town during 2004. Based on our recommendation, Transwestern would not be authorized to begin construction until we have reviewed the surveys reports and completed any necessary consultation with the FWS. As such, we believe the proposed project is *not likely to adversely affect* the black-footed ferret.

Navajo Nation-Listed Species

The Navajo Nation has established an endangered species list along with species-specific avoidance and mitigation measures. Several of the Navajo-listed species (Zuni fleabane, Mesa Verde cactus, bald eagle, and black-footed ferret) are crosslisted under the ESA. Our discussion and effects determinations for these four species are presented above. Transwestern acknowledges that the Navajo Nation may have survey protocols or conservation recommendations that vary slightly from those of the FWS for these species, and that Transwestern would coordinate with the NNDFWL with regards to species-specific issues. Transwestern's 2004 surveys would include all species identified by the NNDFWL as potentially occurring in the project area. In response to a request by the NNDFWL, Transwestern has agreed to inform the NNDFWL of the presence of any rare plants observed in the 2004 survey, whether on the Navajo endangered species list or not.

Habitat for the Naturita milkvetch is present along the proposed route, and Transwestern's 2003 surveys found small groups in several locations. It is likely that individual plants occurring within the proposed right-of-way would be lost during construction. The NNDFWL generally recommends a 200-foot buffer zone in order to avoid sensitive plants, and Transwestern states it would "avoid and provide buffers where practicable" given the physical constraints of looping pipeline within an established corridor. In the case of the Naturita milkvetch, the overall population may benefit from pipeline disturbance (although a short-term loss of individuals would be expected), as this species was observed thriving in areas previously disturbed by pipeline construction.

The NNDFWL provided Transwestern with a report of an historic kit fox den in the project vicinity, although Transwestern did not identify any kit fox during the 2003 biological surveys. Transwestern would determine kit fox activity at the historic location during the 2004 survey, as well as look for other kit fox dens along the proposed route. Should these surveys identify any active kit fox dens, Transwestern would consult with the NNDFWL and develop appropriate mitigation measures.

Pronghorn could be present in the project area during construction. The project would have no significant effect on adults because they are highly mobile and attentive and would be able to avoid project activities. Transwestern proposes to construct between November and June, which overlaps the pronghorn lambing season, which generally begins in May. Transwestern would consult with the NNDFWL to determine if construction during the lambing season could occur within 1 mile of potential lambing areas.

Transwestern's 2003 surveys recorded the presence of golden eagle, ferruginous hawk, and peregrine falcon. However, the proposed project is not likely to disturb active nests (see our discussion on raptors in section 2.4.2, above). Further, the NNDFWL has established species-specific buffer zones to prevent

disturbance to nesting raptors. Transwestern would adhere to any required buffer zones or timing windows.

Mountain plover habitat is present in the project area (see table 2.4.3-2). Transwestern would conduct species-specific surveys for the mountain plover in accordance with NNDFLW (and/or FWS) protocols. If nesting mountain plovers were present, Transwestern would adhere to the required buffer zones and timing windows.

Federal Species of Special Concern

Species that have not been formally listed under the ESA may still be of Federal concern. Transwestern has identified nine Federal species of special concern that may occur in the project area (table 2.4.3-2). Two of these (mountain plover and peregrine falcon) have already been discussed.

Transwestern did not find any of the Federal plant species of concern during the 2003 biological surveys. Transwestern's 2004 surveys would further assess the potential for these species to be present during construction.

Suitable habitat for the western burrowing owl is present along the project route. Construction activities are proposed during non-nesting periods. If burrowing owls are present during preconstruction surveys, Transwestern would coordinate with the FWS to determine appropriate buffer zones and other mitigation measures.

State-Listed Species and State Species of Special Concern

The New Mexico Wildlife Conservation Act designates certain species as state threatened or endangered. The state of New Mexico has also established a list of species of concern. Eleven of the 17 so-designated species are included above in the Federal and Navajo sections. The remaining species include five plants and the gray vireo. We do not anticipate any project effect on the gray vireo because it is a seasonal migrant not expected in the project area during Transwestern's proposed construction.

Transwestern's 2003 biological surveys did not note the presence of Chaco milkvetch, Zuni milkvetch, narrow-mouthed penstemon, or Mano shadscale. Habitat is likely not present for these species. Suitable habitat for San Juan milkweed is present in one location, and an unidentified milkweed noted during the 2003 survey may be this species. Transwestern intends to confirm the identification of this milkweed during the flowering period in 2004. Should the San Juan milkweed (or any other state sensitive plant) be confirmed during the 2004 surveys, Transwestern would consult with the NMEMNRD to develop appropriate conservation measures.

2.5 Land Use, Recreation Areas, and Visual Resources

2.5.1 Land Requirements

The 72.6-mile San Juan Lateral Loop would be constructed parallel and/or adjacent to the existing Transwestern right-of-way or foreign pipeline rights-of-way. Construction of the two looping segments would disturb approximately 1,248.6 acres of land, including construction right-of-way and extra workspaces adjacent to the construction right-of-way (1,101.7 acres) and pipe and contractor yards (146.9 acres). Undeveloped rangeland is the predominant land use crossed by the pipeline facilities. The remaining areas that would be crossed by the pipeline facilities consist of agricultural lands and

developed lands. No residential lands would be crossed by the Project and Transwestern has indicated that there are no planned developments that would be affected by the proposed facilities.

Of the 72.6 miles of land that would be crossed by the proposed pipeline facilities, approximately 71.2 miles would cross Navajo Nation and Allottee lands, approximately 0.7 miles are managed by the BLM, approximately 0.5 miles are owned by the State of New Mexico, and approximately 0.2 miles are owned by private landowners.

Following construction, all temporary and extra workspace areas, contractor yards, and pipeyards would be restored to pre-construction conditions. Approximately 220.4 acres of land would be retained as new right-of-way outside of existing rights-of-way and would be allowed to revert to former use with some restrictions on future activities. Transwestern's easement agreements would prohibit tree crops, excavations, and construction of permanent aboveground structures within the permanent right-of-way. No new compressor stations are proposed. Table 2.5-1 summarizes the land areas that would be affected by the proposed pipeline facilities.

Table 2.5-1

Land Use and Acres Affected by Pipeline Construction and Operation

Facility	Total Length[a] (miles)	Rangeland[b]		Agricultural[e]		Developed[f]		Total	
		Const.[c]	Oper.[d]	Const.[c]	Oper.[d]	Const.[c]	Oper.[d]	Const.[c]	Oper.[d]
San Juan Lateral Loop A	63.3	902.0	363.6	31.9	13.7	21.1	7.0	955.0	384.3
San Juan Lateral Loop B	9.3	1037.5	55.2	0.0	0.0	11.2	1.3	146.7	56.5
Total	**72.6**	**1028.1**	**418.8**	**31.9**	**13.7**	**32.3**	**8.3**	**1,101.7**	**440.8**

[a] Mileage based on Transwestern MP system..
[b] Open rangelands include undeveloped desert plains, grasslands and sagebrush scrub used primarily for grazing, including existing pipeline right-of-way, and dirt roads.
[c] Includes all extra work space associated with the construction right-of-way.
[d] Operational right-of-way includes the acreage of new permanent right-of-way and the overlap of existing permanent rights-of-way.
[e] Agricultural land includes active agricultural and irrigated croplands.
[f] Developed lands includes electric power or gas utility stations, manufacturing or industrial plants, commercial facilities, and paved roads.

A total of 24.9 acres would be affected by construction at existing compressor stations owned and operated by Transwestern (see Table 1.5-2). All modifications and construction work areas would be within or in areas nearby to the currently fenced boundaries of existing compressor station yards. At the Bloomfield Compressor Station, Transwestern owns about 40 acres, some of which is outside the existing fenceline. During construction of the pipeline, the pipeline contractor would use a portion of the 40 acre site for laydown area. In addition, a portion of this site would be used by the station contractor during activities at the Bloomfield Compressor Station. At the Bisti Compressor Station, all modifications would occur on Transwestern lands already leased from the BLM for operation of the compressor station. Some of the proposed modifications at the Bisti Compressor Station (pigging facilities, side valves, MLV, tanks, and miscellaneous piping, etc.) would occur outside of the currently fenced area, but on Transwestern's leased property. Finally, activities at the Gallup Compressor Station would require the acquisition of a small pie-shaped piece of property outside of the existing fenced property for installation of the new pig receiver.

The permanent modifications are minor when compared to the existing facilities. As a result, there would be no significant change to existing land use at these aboveground facilities from construction and operation of the Project.

2.5.2 *Agricultural Lands*

As mentioned in Section 1.4.2, special construction and restoration measures would be taken in agricultural areas to minimize disturbance during construction and ensure that the land is returned to as near pre-construction condition as possible. Implementation of measures to segregate and conserve topsoil, avoid and correct soil compaction and avoidance and repair of any damage to irrigation systems and drainage in agricultural fields are of special importance. Implementation of the construction and restoration provisions in the Transwestern CSR Plan in areas used for agricultural purposes would avoid adverse impacts on land use resulting from construction and operation of the proposed pipeline facilities. See Section 1.4.2 for additional discussion on agricultural lands crossed by the Project.

2.5.3 *Residences*

Transwestern did not identify any residences located within 50 feet of construction work areas. Based on field survey information, Transwestern indicates that the nearest residential structure would be located about 71 feet from the construction work area near MP 96.7. Table 2.5-2 identifies the structures and residences located along the pipeline route and their distances from the pipeline centerline.

2.5.4 *Recreation Areas*

Recreation areas include parks, forests, wilderness areas, trails, wild and scenic rivers, resource or wildlife management areas or sanctuaries, critical ecological or unique natural areas and other similar areas. There no designated Federal, state, or Tribal recreation areas would be crossed by construction of the facilities. However, the Bisti Wilderness Area boundary is located about 3,500 feet from the center of the Bisti Compressor Station (MP 36.4).

The Bisti Wilderness Area includes the Bisti and the De-Na-Zin areas that total 44,600 acres, and is currently administered by the BLM. The Wilderness is important to local Navajos, a major tourist attraction, and a draw for professional and amateur photographers. While none of the proposed Project facilities would cross the Bisti Wilderness Area, there may be some short-term disturbance from construction-related noise. However, Transwestern has consulted with the BLM Bisti Wilderness manager who has indicated that short-term construction-related noise would not affect the resources associated with the Bisti Wilderness Area. See Section 2.7.2 for a discussion of noise impacts and mitigation.

2.5.5 *Visual Resources*

Based on field surveys and a review of available information, Transwestern did not identify any designated visual resources in the vicinity of the proposed Project. To further mitigate for any potential visual impacts associated with installation of new aboveground facilities, Transwestern has proposed to paint all new aboveground structures to blend into the surrounding landscape. The proposed color scheme would resemble the background landscape features and minimize the visual impact of any new facilities. Because the Transwestern Expansion Project would be constructed on or adjacent to existing pipeline rights-of-way and existing aboveground facilities, and all aboveground facilities would be painted to blend into the landscape, we do not believe that construction and operation of the proposed Project would not adversely affect the existing visual quality of the area.

Table 2.5-2

Structures Located Along the Project Right-of-way

MP	Distance from Centerline(ft)	Offset	Comment
11.6	493	East	Non-residence structure
11.7	579	East	Non-residence structure
16.1	238	East	Single family dwelling
67.2	569	East	Single family dwelling
70.4	199	West	Single family dwelling
70.5	309	West	Single family dwelling
71.1	621	West	Church
71.3	658	West	Single family dwelling
71.3	581	West	Single family dwelling
71.4	602	West	Single family dwelling
71.4	575	West	Single family dwelling
71.4	635	West	Single family dwelling
71.4	522	West	Single family dwelling
71.4	580	West	Single family dwelling
71.8	613	West	Single family dwelling
71.8	569	West	Single family dwelling
71.8	555	West	Single family dwelling
92.9	345	West	Single family dwelling
92.9	420	West	Single family dwelling
93.3	450	West	Single family dwelling
93.3	400	West	Single family dwelling
93.3	330	West	Single family dwelling
93.3	320	West	Single family dwelling
93.5	400	West	Single family dwelling
93.5	350	West	Single family dwelling
93.5	335	West	Single family dwelling
93.5	420	West	Single family dwelling
93.5	275	West	Single family dwelling
95.7	400	West	Single family dwelling
96.7	146	West	Single family dwelling
96.8	150	East	Single family dwelling
96.8	142	East	Race Track area (not a residence)
97.0	300	East	Single family dwelling
97.1	420	West	Single family dwelling

2.5.6 Hazardous Wastes

During scoping consultations, the NNEPA identified the location of potential soil contamination near a Shell Oil Company site at MP 67.2. The proposed route would avoid entering the Shell Oil Company facility at MP 67.2. However, during construction should Transwestern encounter any contaminated soils it would manage all excavated materials in accordance with local, state, and federal regulations for handling contaminated soils. Transwestern would coat all pipe with an inert, fusion bonded epoxy coating, including the joints, which would prevent deterioration of the pipeline. Any contaminated soils encountered that would not pose a hazard to the integrity of the pipeline would be replaced in situ, unless the contamination of the soil is the responsibility of Transwestern in which case these soils would be managed per the Transwestern SPCC plan. Transwestern is obligated to inform the contractor of any health or safety concerns it may be aware of on the right-of-way and the contractor is then required to inform/train their personnel appropriately.

While not crossed by the proposed route, the United Nuclear Corporation uranium mine is located in Church Rock, NM, approximately 3.2 miles north of the southern portion of the Project. This facility was closed in 1982 and placed on the EPA's National Priority List in 1983 due to surface and ground water contamination (EPA, 2003). No active or formerly active uranium mines would be crossed by the Project, or would be located within 0.25 mile of the route (Barker and Bolton 1988). During interagency

meetings, the NNEPA described the presence of elevated levels of radiation in soils in the vicinity of the United Nuclear Corporation facility. Transwestern indicates that they would address this issue in the development of its Project-specific Health and Safety Plan.

The removal of any piping or equipment required for the tie-in to the existing Transwestern system that has been in contact with natural gas will be done in accordance with the polychlorinated biphenyls (PCB) rules and regulations contained within 40 CFR Part 761, as revised (CFR: June 29, 1998, volume 63, No. 124).

2.5.7 Cumulative Impacts

Cumulative impact results when impacts associated with a proposed project are superimposed on, or added to, impacts associated with past, present, or reasonably foreseeable future projects within the area affected by the proposed Project. Although the individual impacts of the separate projects may be minor, the effects from the projects taken together could be significant.

Existing environmental conditions in the Project area reflect changes based on past projects and activities. For example, the entire pipeline corridor and the sites for the aboveground facilities have been previously disturbed by construction of numerous energy transportation projects and activities associated with the development of the Blanco Hub. Construction of the proposed facilities would result in some cumulative impacts. However, because Transwestern proposes to construct the proposed facilities within and adjacent to existing utility corridors, rather than constructing in greenfield areas, we believe that the expansion of the existing right-of-way would not result in any significant cumulative impacts in the project area.

2.6 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires the Commission to take into account the effects of its undertaking (including issuance of Certificates) on properties listed or eligible for listing on the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. Transwestern, as a non-Federal party, is assisting us in meeting our obligations under Section 106 and the ACHP's regulations set forth at 36 CFR 800.

Transwestern conducted both Class I and Class III Cultural Resource Surveys along the entire Project right-of-way. The Class I survey consisted of literature searches and review of the site files of the Navajo Nation, the BLM, and the New Mexico Cultural Resource Information System (NMCRIS), maintained by the Archaeological Records Management System (ARMS). The Class III inventory consisted of a 100 percent pedestrian inspection of the 110-foot wide construction right-of-way. A 50-foot buffer on each side of the proposed construction ROW, in previously undisturbed areas, was surveyed on BLM land. Other areas that would be used by the Project such as temporary work areas and pipe yards were also surveyed. An ethnological study of the proposed corridor was also conducted. During this inspection by qualified archaeologists and ethnologists, 44 archaeological sites, 30 Sensitive Cultural Manifestations (SCMs: Ceremonial Sites, Traditional Collection Loci, and Burial Locations), and 16 In-use Properties were identified. Transwestern conducted the pedestrian surveys and ethnological study during the fall of 2003. Transwestern states that should they identify any additional extra workspaces, contractor yards, or access roads for the Project, appropriate Class I and Class III Cultural Resource Surveys, and ethnological studies would be conducted.

Avoidance of the archaeological sites and SCMs is the preferred option. However, in some cases such avoidance may not be possible. Potentially eligible sites that cannot be avoided by construction would require subsurface exploratory testing, and possibly data recovery excavations. These activities would be guided by the terms of the MOA signed by the FERC, Navajo Nation, SHPO, and BLM, with Transwestern concurring.

Table 2.6-1 identifies the archaeological sites located along the proposed route.

Table 2.6-1

Archaeological Sites

Site #	Eligible Yes/No[1]	Age	Type	Affiliation	New Site Yes/No	Recommendations
NM-H-25-209/LA 111392	TRC[2]: yes	Prehistoric	Scatter	Anasazi?	No	Test for nature, extent
NM-Q-30-129/LA 1511	TRC: yes	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-H-25-44/LA 17407	TRC: no	Recent	Structural	Navajo	No	No additional work
NM-H-39-2/LA 17500	TRC: yes; SHPO[3]: yes (1991)	Prehistoric/historic	Structural, scatter	Navajo, Anasazi	No	Test for nature, extent
NM-H-59-50/LA 2584, 2585, 2587	TRC: yes; SHPO: yes (1991)	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-HQ-12-84/LA 2591	TRC: no; SHPO: yes (1991)	Prehistoric	Scatter	Anasazi	No	Monitor during construction
NM-Q-12-27/LA 2592, 2593	TRC: yes; SHPO : yes (1991, 1993)	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-Q-12-85/LA 2594, 2596, 2597, 88522	TRC: yes; SHPO: yes (1991)	Historic/Prehistoric	Structural	Anasazi, Navajo	No	Test for nature, extent
NM-Q-12-86/LA 2595	TRC: yes; SHPO: yes (1991)	Historic/Prehistoric	Structural	Anasazi, Navajo	No	Test for nature, extent
LA 30959	TRC: yes; SHPO: yes (1995)	Historic/Prehistoric	Scatter, Structural?	Anasazi, Navajo	No	Test for nature, extent
NM-Q-12-83/LA 36286	TRC: yes	Historic/Prehistoric	Structural	Anasazi, Navajo	No	Test for nature, extent
NM-H-59-48	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Test for nature, extent
NM-Q-30-130	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Test for nature, extent
NM-H-59-49	TRC: yes	Prehistoric	Scatter	Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-H-39-263LA 42611	TRC: no; SHPO: no (1991, 1995)	Prehistoric	Scatter	Anasazi	No	Monitor during construction
LA 42641	TRC: no; SHPO: yes (no date)	Prehistoric?	Scatter	Anasazi?	No	No additional work
NM-H-43-198/LA 42761	TRC: yes; SHPO: yes (1991)	Prehistoric	Scatter	Anasazi	No	Test for nature, extent
LA 6377	TRC: yes	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-H-25-210/LA 8297	TRC: potentially; SHPO: yes (1995)	Prehistoric	Scatter	Anasazi	No	Test for nature, extent
NM-H-39-293/LA 83478	TRC: no; SHPO: no (1991)	Prehistoric?	Scatter	Anasazi, Navajo	No	No additional work[3]
NM-H-43-204/LA 83479	TRC: no; SHPO: no (1991), yes (1994)	Prehistoric	Scatter	Anasazi	No	Monitor during construction
NM-H-54-10/LA 83480	TRC: potentially; SHPO: yes (1991)	Prehistoric	Scatter	Anasazi?	No	Test for nature, extent
NM-H-54-11/LA 83484	TRC: potentially; SHPO: yes (1991)	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-H-54-12/LA 83485	TRC: yes; SHPO: yes (1991)	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-Q-11-29/LA 83488	TRC: potentially	Prehistoric	Structural	Anasazi	No	Test for nature, extent
NM-Q-12-56/LA 89940	TRC: potentially	Prehistoric	Scatter	Anasazi	No	Test for nature, extent
LA 142099	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Test for nature, extent
NM-H-60-11	TRC: yes	Prehistoric	Structural	Anasazi	Yes	Test for nature, extent
NM-Q-11-27	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Test for nature, extent
NM-Q-11-28	TRC: yes	Prehistoric	Structural	Anasazi	Yes	Test for nature, extent

Table 2.6-1

Archaeological Sites

Site #	Eligible Yes/No[1]	Age	Type	Affiliation	New Site Yes/No	Recommendations
NM-Q-12-80	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Test for nature, extent
NM-Q-12-81	TRC: potentially	Historic	Scatter	Navajo	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-12-82	TRC: potentially	Historic/Prehistoric	Structural	Navajo, Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-20-39	TRC: potentially	Prehistoric	Structural	Anasazi	Yes	Test for nature, extent
NM-Q-30-128	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Test for nature, extent
NM-Q-5-3	TRC: potentially	Prehistoric	Structural	Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-6-2	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-6-3	TRC: potentially	Historic	Scatter	Navajo?	Yes	Map, ethnographic survey, surface collect
NM-Q-6-4	TRC: potentially	Historic/Prehistoric	Scatter	Navajo?, Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-6-5	TRC: potentially	Prehistoric	Scatter	Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-6-6	TRC: potentially	Prehistoric/Historic?	Structural	Anasazi, Navajo?	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-6-7	TRC: yes	Prehistoric	Scatter	Anasazi	Yes	Fence, monitor ground disturbance within existing roadbed
NM-Q-6-8	TRC: yes	Historic	Structural	Navajo	Yes	Avoid, monitor during road improvement
LA 42669	TRC: potentially	Prehistoric	Scatter	Archaic	No	Test for nature, extent

1. Eligible refers to a site possessing characteristics worthy of listing on the National Register of Historical Places under the guidelines of Section 106 of the National Historic Preservation Act and other statutory and regulatory requirements.
2. TRC refers to the cultural resource contractor employed by Transwestern Pipeline Company for the San Juan 2005 Expansion Project.
3. SHPO – State Historical Preservation Office.

Transwestern contacted 16 Native American Tribes and requested their comments on the proposed Project. Transwestern has received comments via letter, email, and/or by phone from 15. Four tribes have requested copies of cultural survey reports (Pueblo of San Ildefonso, Mescalero Apache, Hopi and Zuni). The Hopi and Zuni claim cultural affiliation to prehistoric cultural groups in New Mexico and are very interested in any archaeological information. Six tribes expressed no specific concern regarding the project, but requested to be notified of discoveries and be kept informed (Jicarilla Apache Nation, Comanche Indian Tribe, Pueblo of Acoma, Pueblo of Isleta, Southern Ute Tribe and the Ute Mountain Ute Tribe). Transwestern is in regular communication with the Navajo Nation Historical Preservation Department.

Transwestern's Traditional Cultural Property (TCP) study was conducted in compliance with *The Navajo Nation Policy to Protect Traditional Cultural Properties* for the Project. The 10 Navajo Nation Chapters adjacent to, or crossed by, the proposed Project right-of-way, were initially contacted by visits from a Transwestern right-of-way agent to the various Chapter Houses during August and September, 2003. Subsequently the Chapter Houses were re-visited by ethnologists working for the cultural resources consultant during September and October, 2003. The purpose of these meetings was to identify any culturally sensitive locations (such as burial or ceremonial sites) along the proposed right-of-way, as well as to identify the families who hold leases and/or live along this right-of-way. Additional meetings at the

Chapter Houses between Transwestern representatives and interested Chapter members were held in November 2003. As these meetings were designed to address any and all concerns about the Project, all identified cultural resource concerns were discussed at the meetings.

Subsequent to these Chapter House visits, and between September 17 and December 18, 2003, the Transwestern Project ethnologists conducted ethnographic interviews with approximately 26 individuals and groups. This ethnographic work resulted in identification of 17 gravesites and two family burial plots that could be affected by the proposed Project. The locations of these grave sites were visited by the ethnologists, in most cases with the next of kin; and the required Navajo Nation *Identification of Gravesites, Human Remains, and Funerary Items and Statement of Wishes* forms filled out and signed by the next of kin. Transwestern then filed these forms with the Navajo Nation. Construction of the Transwestern Project will conform to *The Navajo Nation Policy for the Protection of Jishchaa': Gravesites, Human Remains, and Funerary Items* and the wishes of the next of kin, which consist, in most cases, of avoidance.

In addition to the gravesites, the ethnographic work identified nine locations where ceremonies had been held, as well as three other locations where eagle feathers are collected. Transwestern will design the Project facilities to limit impacts to these locations, and in all cases will conform to the legal requirements of the Navajo Nation, as specifically outlined in *The Navajo Nation Policy to Protect Traditional Cultural Properties*. Information on these Sensitive Cultural Manifestations is provided in Table 2.6-2.

If any additional physical resources, or traditional cultural properties, are identified during construction, these resources would be treated in compliance with all applicable regulations according to each land's jurisdictional requirements, and, for any human burials, in accordance with the legal requirements of the appropriate land managing agency and the wishes of the next of kin.

Transwestern has also prepared a plan for treating unanticipated discoveries of human remains and historic properties during construction, the Transwestern Unexpected Discovery Plan (UDP) which is incorporated in the Project cultural resource MOA as an appendix. Any previously unidentified archaeological sites or cultural remains that may be found in the Project area during construction would be addressed through the mitigation measures contained in the UDP.

We provided summary documentation and notified the ACHP of anticipated adverse Project effects to historic properties on January 20, 2004. The ACHP responded on January 26, 2004, advising that execution of a Project MOA would satisfy the FERC's obligations to consult with them in accordance with Section 106 of the NHPA. Execution of the MOA was completed on May 17, 2004.

Table 2.6-2

Sensitive Cultural Manifestations[1]

Manifestation Number	Description	Affiliation	Location
TW-TCP-01	*'Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits to the west
TW-TCP-02	*Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits to the northwest
TW-TCP-03	*'Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits Adjacent
TW-TCP-04	Eagle Nest/Collecting site	Navajo, Unknown to Present	Outside of construction limits to the east
TW-TCP-05	Eagle Nest/Collecting site	Navajo, Unknown to Present	Outside of construction limits to the east
TW-TCP-06	Eagle Nest/Collecting site	Navajo, Unknown to Present	Outside of construction limits to the west
TW-TCP-07	*'Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits Adjacent on the east
TW-TCP-08	*'Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits to the west
TW-TCP-09	*'Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits to the east
TW-TCP-10	*'Anaajii* (Enemy Way)/ *Yei Bi Chei* Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits to the east
TW-TCP-011	*'Anaajii* (Enemy Way) Ceremonial Site	Navajo, Unknown to Present	Outside of construction limits to the west
TW-TCP-012	'Squaw Dance Ceremonial Site	Navajo, Unknown to Present	Adjacent to construction on the east
TW-B-001	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 161 ft. east
TW-B-002	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits, ~ 52 ft NE
TW-B-003	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits. ~ 0.2 miles west
TW-B-004	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits. ~ 0.2 miles west
TW-B-005	Navajo Jishchaa' Location	Navajo, Unknown to Present	General location[2] .~ 14 ft west of construction limits
TW-B-006	Navajo Jishchaa' Location	Navajo, Unknown to Present	Surface burial and possible crevice burial within proposed construction limits[2]
TW-B-007	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 113 ft. east
TW-B-008	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 157 ft. east
TW-B-009	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 400 ft. east
TW-B-010	Navajo Jishchaa' Location	Navajo, Unknown to Present	General location.[2] ~ 40 ft. E of proposed centerline
TW-B-011	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 600 ft. west
TW-B-012	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 83 ft. east [3]
TW-B-013	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 200 ft. east
TW-B-014	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 77 ft. east[4]
TW-B-015	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 77 ft. east[4]
TW-B-016	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 400 ft. east
TW-B-017	Navajo Jishchaa' Location	Navajo, Unknown to Present	Outside of construction limits ~ 400 ft. east
TW-FBP-01	Navajo Family Burial Plot	Navajo, Unknown to Present	Outside of construction limits ~ 500 ft. west
TW-FBP-02	Navajo Family Burial Plot	Navajo, Unknown to Present	Outside of construction limits ~ 222 ft. east

[1]Consultation and coordination regarding all the Sensitive Cultural Manifestations is on-going with the Navajo Nation Historic Preservation Department. This consultation is planned to continue throughout the duration of the project.

[2] The exact location of the burial could not be determined by the next-of-kin. Consultation with these next-of-kin regarding their wishes for these Jishchaa' locations are on-going.

[3] Consultation with the next of kin regarding this Jishchaa' location is on-going. An additional burial was reported at 163 feet to the east, but was not relocated in the field.

[4] As per the wishes of the next of kin, this location will be fenced prior to construction and protected from any construction or maintenance related disturbance.

2.7 Air Quality and Noise

2.7.1 Air Quality

Construction of the Transwestern Expansion Project would result in periodic, temporary emissions of fugitive dust and emissions from fuel combustion by motorized construction vehicles and other mobile equipment.

Transwestern would minimize emissions from mobile equipment by using gasoline and diesel engines that comply with applicable EPA mobile source emission standards and regulations (40 CFR Part 85) as well as non-road engines that satisfy requirements in 40 CFR Part 89. Therefore, the potential for adverse impacts is insignificant.

The extent of fugitive dust emissions would depend on the level and location of construction activity and on the moisture content of area soils. Transwestern has indicated that because the route is located in a remote area generally far removed from residential and other developed areas, no long-term impacts would result from the fugitive dust generated by the operation of construction equipment. We have reviewed the route and agree that there are no residential or developed areas that would be adversely affected by temporary increases in fugitive dust. Following completion of construction activities, the generation of fugitive dust would be reduced as equipment leaves the construction area and the construction work areas are revegetated in accordance with Transwestern's Plan.

No additional air pollutants would be expected from the operation of the modified Bloomfield, Bisti, or Gallup Compressor Stations since Transwestern would install electric-driven compressors. Specifically, Transwestern proposes to install electric motors at the existing compressor stations proposed for engine modifications. Operation of electric motors would not result of any increase in air emissions. Operation of the pipeline facilities would not result in significant air emissions. We conclude that no significant, long-term effect on air quality would result from construction or operation of the Project.

2.7.2 Noise

Noise could affect the local environment during both construction and operation of the proposed facilities. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of the day and throughout the week. This variation is caused in part by changing weather conditions and noise source(s). Two measures commonly used by federal agencies to relate the time-varying quality of environmental noise to its known effect on people are the 24-hour equivalent sound level [$L_{eq(24)}$] and the day-night sound level (L_{dn}). The $L_{eq(24)}$ is the level of steady sound with the same total (equivalent) energy as the time-varying sound, averaged over a 24-hour period. The L_{dn} is the $L_{eq(24)}$ with 10 decibels of the A-weighted scale (dBA) added to nighttime sound levels, between the hours of 10 p.m. and 7 a.m., to account for people's greater sensitivity to sound during nighttime hours. FERC guidelines limit noise generated by any new or additional compressors to no greater than an L_{dn} of 55dBA at any nearby noise sensitive area (NSA).

Construction

Noise associated with construction activities would be intermittent during the construction period. Persons in the vicinity of the pipeline, compressor stations, and other aboveground facilities may hear construction noise, but the overall impact would be temporary. The BLM has indicated that construction

noise would not affect the Bisti Wilderness Area. Nighttime noise levels would normally be unaffected, as most construction would occur during daytime hours.

Operation

During the operational phase of the Project, the impact on the noise environment would be limited to the vicinity of the three existing compressor stations. The changes in operational noise at the Bloomfield, Bisti, and Gallup Compressor Stations are addressed below.

Bloomfield Compressor Station

The Bloomfield Compressor Station is located in an industrial/residential area northeast of Bloomfield, New Mexico. The Bloomfield Compressor Station is currently in operation. It consists of three Solar Centaur turbine-driven compressors and one 7,000 HP electric motor-driven compressor. Transwestern proposes to add one new 15,000 HP electric-drive compressor unit and abandon and remove the existing 7,000 HP motor on Compressor Unit 4 and replace it with a new electric drive motor operated at a maximum 8,000 HP. Additionally, Transwestern proposes to add a motor control center, gas after-cooling (one bay), perform station piping modifications, relocate a hydrocarbon tank, and replace an existing fence with a wall near the office building. An electrical substation will be constructed to service the new compressor unit. Additionally, new blow down silencers will be located south of the existing fence line on Transwestern's property.

In July 2000, Transwestern conducted a post-operational noise monitoring program of the entire Bloomfield Compressor Station operating at near full load conditions. The testing was conducted in order to document the noise contribution of the Bloomfield station at the nearest NSA, a trailer home located approximately 1,200 feet southwest of the turbine compressor building. The results of that testing revealed that the current station generates a L_{eq} of 47.5 dBA (L_{dn} of 53.9 dBA) at this NSA, which is below the FERC limit of L_{dn} 55 dBA. The measured level included some noise from other industrial sources in the area.

Transwestern conducted a noise modeling study for the proposed installation of the 15,000 HP electric motor, compressor, and ancillary equipment. No increase in noise contribution would occur as a result of increasing the horsepower on Compressor Unit 4. The results of this study indicate that the total noise contribution of the proposed Project added to the existing noise and incorporating mitigation measures would result in a total noise L_{dn} of 54.3 dBA, which is below the FERC limit of 55 dBA.

However, the projected total noise level is marginally below an L_{dn} of 55 dBA. To ensure that the noise level from the operation of the modified Bloomfield Compressor Station does not exceed an L_{dn} of 55 dBA at nearby NSAs, **we recommend that:**

> **Transwestern should file a noise survey with the Secretary no later than 60 days after placing the modified Bloomfield Compressor Station in service. If the noise attributable to the operation of the station at full load exceeds an L_{dn} of 55 dBA at any nearby NSAs, Transwestern should install additional noise controls to meet that level within 1 year of the in-service date. Transwestern should confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Bisti Compressor Station

The Bisti Compressor Station is located in a rural area on BLM land, about 36 miles southwest of Bloomfield, New Mexico. The nearest NSA to the Bisti Compressor Station is approximately 3,000 feet northwest of the station center. An additional NSA, the Bisti Wilderness Area, is located 3,500 feet east of the station center. At the Bisti Wilderness Area boundary, Transwestern previously agreed to a more stringent noise limitation of 23.8 dBA ($L_{eq(24)}$), a 30.2 dBA (L_{dn}) equivalent, as required by the BLM in January 1996. This limitation applies to the existing facility and any future modifications or additions.

Transwestern proposes to abandon and remove an existing 10,000 HP electric drive motor and associated facilities and replace it with a 12,000 HP electric drive motor. Additionally, Transwestern proposes to rebundle the compressor unit, perform station piping modifications, add launcher and receiver facilities, add a new blow-down silencer, and install a new scrubber.

Transwestern conducted a noise modeling study for the proposed replacement and estimates that the total station noise when operated at peak loads (with the proposed replacement) at the residential NSA would be an $L_{eq(24)}$of 23.2 dBA and an L_{dn} of 29.6 dBA, which is below the FERC limit of 55 dBA. At the Bisti Wilderness Area, total station noise was modeled to be an $L_{eq(24)}$ of 21.5 dBA and an L_{dn} of 27.9 dBA. At both locations, the station noise does not result in any increase over ambient noise and is well below an L_{dn} of 55 dBA.

Gallup Compressor Station

The Gallup Compressor Station is currently in operation. Transwestern conducted an ambient noise monitoring program for the original Gallup Expansion Project in Docket Number CP99-522-000. Monitoring was conducted at the two nearest NSA locations to the station. NSA #1 is located 700 feet northwest of the station, and NSA #2 is located 900 feet to the northeast.

Transwestern proposes to abandon and remove an existing compressor (compressor only, not the motor) and replace it with a new compressor and ancillary piping/pigging modifications. The existing electric motor will be rerated from 10,000 to 12,000 horsepower. A new blowdown silencer will be added at the station.

Transwestern conducted a noise modeling study for the proposed increase in horsepower resulting from the re-rating of the electric motor and incorporating noise control features. This study indicates that the total station noise when operated at peak loads (with the proposed motor re-rate) would be an L_{dn} of 53.6 dBA at NSA #1 and an L_{dn} of 50.1 dBA at NSA #2. At both locations operational noise would fall below the FERC limit of 55 dBA.

However, the projected total noise levels are marginally below an L_{dn} of 55 dBA. To ensure that the noise levels from the operation of the modified Gallup Compressor Station do not exceed an L_{dn} of 55 dBA at nearby NSAs, **we recommend that:**

Transwestern should file a noise survey with the Secretary no later than 60 days after placing the modified Gallup Compressor Station in service. If the noise attributable to the operation of the station at full load exceeds an L_{dn} of 55 dBA at any nearby NSAs, Transwestern should install additional noise controls to meet that level within 1 year of the in-service date. Transwestern should confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

Table 2.7-1 Transwestern Expansion Project Noise Impact Analysis				
Compressor Station/NSA Direction	**Distance from Proposed Compressor Facilities (feet)**	**Existing L_{dn} (dBA)**	**Project Total L_{dn} (dBA)**	**Noise Increase (dBA)**
Bloomfield				
Mobile Home (SW)	1,200	53.9	54.3	0.4
Bisti				
Residence (NW)	3,000	34.6	29.6	0.0
Bisti Wilderness (E)	3,500	30.2	27.9	0.0
Gallup				
Residence (NW)	700	50.5	53.6	3.1
Residence (NE)	900	45.9	50.1	4.2

Based on our review of the noise data provided by Transwestern, we conclude that the installation of new and modified compressor units at these existing compressor stations, with additional proposed noise mitigation features, would not result in significant increases in noise levels at the NSAs.

2.8 Socioeconomics

The majority of the socioeconomic impacts associated with construction of the Project would be short term and localized. This is primarily because of the relatively short construction period during which construction crews would be in any one area. Population influx as a result of construction would occur over the entire length of the pipeline route, which would limit the local impact on housing, town infrastructure services (fire, medical, education, police), and transportation. Some beneficial economic impact to the regional economy would occur as a result of construction workers spending a portion of their income on temporary housing, food, entertainment, etc., and through purchases of construction goods and materials.

Members of the Navajo Nation expressed concern that construction-related surface damage could potentially limit available grazing acreage. Grazing permit holders can apply through the Navajo Nation for compensation for surface damages.

In addition, Transwestern has consulted with the Navajo Nation Office of Labor Relations regarding the temporary employment of qualified members of the Navajo Nation. Transwestern's contractor would utilize qualified members of the Navajo Nation during construction of the Project.

Transwestern indicated that members of the Navajo Nation raised issues related to appraisals for right-of-way payments to allottees and installation of side-taps along the pipeline. We believe these issues are beyond the scope of this EA and therefore will not be addressed.

2.9 Reliability and Safety

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

Methane has an ignition temperature of 1,000 degrees Fahrenheit and is flammable at concentrations between 5.0 percent and 15.0 percent in air. Unconfined mixtures of methane in air are not explosive. However, a flammable concentration within an enclosed space in the presence of an ignition source can explode. It is buoyant at atmospheric temperatures and disperses rapidly in air.

The FERC NEPA Pre-Filing process identified issues regarding safety of multiple facilities and general maintenance practices of pipeline rights-of-way, i.e., exposed pipelines. See Table 1.3-1

a. Safety Standards

The DOT is mandated to provide pipeline safety under Title 49, U.S.C. Chapter 601. The Research and Special Programs Administration's (RSPA), Office of Pipeline Safety (OPS), administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. It develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities. Many of the regulations are written as performance standards which set the level of safety to be attained and allow the pipeline operator to use various technologies to achieve safety. RSPA ensures that people and the environment are protected from the risk of pipeline incidents. This work is shared with state agency partners and others at the Federal, state, and local level. Section 5(a) of the Natural Gas Pipeline Safety Act provides for a state agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing the Federal standards, while Section 5(b) permits a state agency that does not qualify under Section 5(a) to perform certain inspection and monitoring functions. A state may also act as DOT's agent to inspect interstate facilities within its boundaries; however, the DOT is responsible for enforcement action. The majority of the states have either 5(a) certifications or 5(b) agreements, while nine states act as interstate agents.

The DOT pipeline standards are published in Parts 190-199 of Title 49 of the CFR. Part 192 of 49 CFR specifically addresses natural gas pipeline safety issues.

Under a Memorandum of Understanding on Natural Gas Transportation Facilities (Memorandum) dated January 15, 1993 between the DOT and the FERC, the DOT has the exclusive authority to promulgate Federal safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of the FERC's regulations require that an applicant certify that it will design, install, inspect, test, construct, operate, replace, and maintain the facility for which a certificate is requested in accordance with Federal safety standards and plans for maintenance and inspection. Alternatively, the applicant must certify that it has been granted a waiver of the requirements of the safety standards by the DOT in accordance with Section 3(e) of the Natural Gas Pipeline Safety Act. The FERC accepts this certification and does not impose additional safety standards other than the DOT standards. If the Commission becomes aware of an existing or potential safety problem, there is a provision in the Memorandum to promptly alert DOT. The Memorandum also provides for referring complaints and inquiries made by state and local governments and the general public involving safety matters related to pipeline under the Commission's jurisdiction.

The FERC also participates as a member of the DOT's Technical Pipeline Safety Standards Committee which determines if proposed safety regulations are reasonable, feasible, and practicable.

The pipeline and aboveground facilities associated with the Transwestern Expansion Project must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. Part 192 specifies material selection and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion.

Part 192 also defines area classifications, based on population density in the vicinity of the pipeline, and specifies more rigorous safety requirements for populated areas. The class location unit is an area that extends 220 yards on either side of the centerline of any continuous 1 mile length of pipeline. The four area classifications are defined as follows:

Class 1	Location with 10 or fewer buildings intended for human occupancy.
Class 2	Location with more than 10 but less than 46 buildings intended for human occupancy.
Class 3	Location with 46 or more buildings intended for human occupancy or where the pipeline lies within 100 yards of any building, or small well-defined outside area occupied by 20 or more people during normal use.
Class 4	Location where buildings with four or more stories aboveground are prevalent.

Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation. Pipe wall thickness and pipeline design pressures, hydrostatic test pressures, maximum allowable operating pressure, inspection and testing of welds, and frequency of pipeline patrols and leak surveys must also conform to higher standards in more populated areas. The proposed Transwestern Expansion Project would consist of 70.1 miles of Class 1, 2.2 miles of Class 2, and 0.3 mile of Class 3 pipe.

On August 6, 2002, the RSPA published a final rule (67 Federal Register [FR] 50824) that defines high consequence areas (HCAs) where a gas pipeline accident could do considerable harm to people and their property. The definition includes: current class 3 and 4 locations; facilities with persons who are mobility-impaired, confined, or hard to evacuate, and places where people gather for recreational and other purposes. For facilities with mobility-impaired, confined, or hard-to-evacuate persons and places where people gather, the corridor of protection from the pipeline is 300 feet, 660 feet or 1,000 feet depending on the pipeline's diameter and operating pressure.

The final rule, effective September 5, 2002, is the first step in a two-step process to develop integrity management program requirements for gas transmission operators. In the second step, on January 28, 2003, the RSPA published a notice of proposed rule making (68 FR 4278) that proposed requirements to improve the integrity of gas transmission pipelines in the HCAs. This definition satisfies, in part, the Congressional mandate in 49 United States Code 60109 for RSPA to prescribe standards that establish criteria for identifying each gas pipeline facility in a high-density population area.

RSPA developed the HCA definition from the comments received on the notice of proposed rule making, and an earlier notice that invited public comment about integrity management concepts as they relate to gas pipelines. The definition does not yet require any specific action by gas transmission pipeline operators. Action will not be required until integrity management program requirements are issued. Congress recently passed an amendment to Part 192 to strengthen the Nation's pipeline safety laws. The Pipeline Safety Improvement Act of 2002 (HR 3609) was passed by Congress on November 15, 2002, and signed into law by the President in December, 2002. Specifically, the law establishes an integrity management program in all HCAs. The DOT defines HCAs as they relate to the different class zones within the new amendment. Among other requirements, gas pipelines operators will be required to assess Class 1 and Class 2 areas to determine whether or not the area would qualify as a Class 3 area, and thus automatically becoming an HCA, because of the presence of certain types of buildings, recreational areas, or other places of public assembly. The Class 3 designation would require more stringent construction requirements regarding pipeline construction, operation, and inspection. The pipeline integrity management rule for HCAs would require inspection of the entire pipeline every 7 years.

Part 192 prescribes the minimum standards for operating and maintaining pipeline facilities, including the requirement to establish a written plan governing these activities. Under Section 192.615, each pipeline operator must also establish an emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency. Key elements of the plan include procedures for:

- receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters;
- establishing and maintaining communications with local fire, police, and public officials, and coordinating emergency response;
- emergency shutdown of system and safe restoration of service;
- making personnel, equipment, tools, and materials available at the scene of an emergency; and
- protecting people first and then property, and making them safe from actual or potential hazards.

Part 192 requires that each operator must establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and to coordinate mutual assistance. The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials.

b. Pipeline Accident Data

Since February 9, 1970, 49 CFR Part 191 has required all operators of transmission and gathering systems to notify the DOT of specific types of incidents that occurred during the operation of the natural gas transmission and gathering systems nationwide. The DOT changed reporting requirements after June 1984 to reduce the amount of data collected. However, because the 14.5-year period from 1970 through June 1984 provides a larger universe of data and more basic report information than subsequent years, it has been subject to detailed analysis, as discussed below.[5]

From February 1970 through June 1984, the dominant incident cause was outside forces, constituting 53.8 percent of all service incidents. Outside forces incidents result from the encroachment of mechanical equipment such as bulldozers and backhoes; earth movements due to soil settlement, washouts, or geologic hazards; weather effects such as winds, storms, and thermal strains; and willful damage. An analysis of the outside forces incidents shows that human error in equipment usage was responsible for approximately 75 percent of outside forces incidents. Since April 1982, operators have been required to participate in "One Call" public utility programs in populated areas to minimize unauthorized excavation activities in the vicinity of pipelines. The "One Call" program is a service used by public utilities and some private sector companies (*e.g.*, oil pipelines and cable television) to provide preconstruction information to contractors or other maintenance workers on the underground location of pipes, cables, and culverts. The 1986 through 2002 data show that the portion of incidents caused by outside forces has decreased to 39.2 percent.

The frequency of service incidents is strongly dependent on pipeline age. While pipelines installed since 1950 exhibit a fairly constant level of service incident frequency, pipelines installed before that time have

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[5]Jones, D.J., G.S. Kramer, D.N. Gideon, and R.J. Eiber, 1986. "An Analysis of Reportable Incidents for Natural Gas Transportation and Gathering Lines 1970 Through June 1984." NG-18 Report No. 158, Pipeline Research Committee of the American Gas Association.

a significantly higher rate, partially due to corrosion. Older pipelines have a higher frequency of corrosion incidents, since corrosion is a time-dependent process. Further, new pipe generally uses more advanced coatings and cathodic protection to reduce corrosion potential. The use of both an external protective coating and a cathodic protection system, required on all pipelines installed after July 1971, significantly reduces the rate of failure compared to unprotected or partially protected pipe. Older pipelines also have a higher frequency of outside forces incidents partly because their location may be less well known and less well marked than newer lines. In addition, the older pipelines contain a disproportionate number of smaller diameter pipelines, which are more easily crushed or broken by mechanical equipment or earth movements.

The available data show that natural gas pipelines continue to be a safe, reliable means of energy transportation. Based on approximately 308,000 miles in service, the rate of public fatalities for the nationwide mix of transmission and gathering lines in service is 0.01 per year per 1,000 miles of pipeline. Using this rate, the Transwestern Expansion Project might result in a public fatality every 1,377 plus years. This would represent a slight increase in risk to the nearby public.

During the Navajo Nation Chapter House meetings, several attendees expressed concern regarding the use of the right-of-way for vehicular access. Transwestern has indicated that use of the right-of-way for this purpose should pose no threat to human health and safety.

PCB Contamination

Transwestern indicates that removal of any piping or equipment for the Project that has been in contact with natural gas would be done in accordance with the PCB rules and regulations contained within 40 CFR Part 761.

3.0 ALTERNATIVES

Alternatives to the proposed Project include the no-action alternative and route/location alternatives.

3.1 No Action Alternative

Under the No Action Alternative, FERC would not issue the necessary certifications and the project would not be constructed. The Transwestern Expansion Project would provide a low-cost alternative for bringing additional San Juan and Rocky Mountain basin gas supplies into the southwest and midwestern markets. The Transwestern Expansion Project would consist of constructing pipeline looping, compressor modifications, and ancillary facilities that would add 375 MMcf/d of incremental capacity on the San Juan lateral. The proposed facilities would also provide added system reliability and result in minimum environmental impact as most construction activities would be located within or adjacent to existing, previously disturbed pipeline rights-of-way. Consequences of the No Action Alternative would include the curtailment of production and deliverability from wells in the San Juan and Rocky Mountain basin areas due to insufficient pipeline capacity; loss of competition in the transportation services market; loss of gas supplies for Transwestern's shippers; dependency on storage, foreign gas supply sources, and other energy alternatives. Other natural gas transmission companies could then propose to increase their capacity and to construct new facilities take gas out of the San Juan and Rocky Mountain Basin. Such actions likely would transfer impacts from one location to another (and may involve greater, the same, or less impact depending on project length and extent of looping) but are unlikely to eliminate or reduce the current proposed impacts. Therefore, we have not recommended the No Action Alternative.

3.2 Route/Location Alternatives

Because the Transwestern Expansion Project would consist entirely of a pipeline looping segment, no route or location alternatives were investigated. It should also be noted that the major landowner along the proposed route (the Navajo Nation) has requested that Transwestern construct its proposed loop parallel and adjacent to the existing pipeline wherever possible, rather than seek an alternative route. Minor field variations may be required during construction due to landowner requests, to improve constructability, or to avoid sensitive resources.

4.0 STAFF'S CONCLUSIONS AND RECOMMENDATIONS

1. Transwestern shall follow the construction procedures and mitigation measures described in its application and as identified in the environmental assessment (EA), unless modified by this Order. Transwestern must:

   a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
   b. justify each modification relative to site-specific conditions;
   c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
   d. receive approval in writing from the Director of the Office of Energy Projects (OEP) before using that modification.

2. The Director of OEP has delegation authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction (and operation) (activities associated with abandonment) of the project. This authority shall allow:

   a. the modification of conditions of this Order; and
   b. the design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.

3. **Prior to any construction**, Transwestern shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors, and contractor personnel will be informed of the environmental inspector's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility location(s) shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Transwestern shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by this Order. All requests for modifications of environmental conditions of this Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

   Transwestern's exercise of eminent domain authority granted under Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to this Order must be consistent with these authorized facilities and locations Transwestern's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Transwestern shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a

description of the existing land use/cover type, and documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

This requirement does not apply to extra workspace allowed by the *Upland Erosion Control, Revegetation, and Maintenance Plan,* minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

a. implementation of cultural resources mitigation measures;
b. implementation of endangered, threatened, or special concern species mitigation measures;
c. recommendations by state regulatory authorities; and
d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of this certificate and before construction** begins, Transwestern shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how Transwestern will implement the mitigation measures required by this Order. Transwestern must file revisions to the plan as schedules change. The plan shall identify:

a. how Transwestern will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
b. the number of environmental inspectors assigned per spread, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
c. company personnel, including environmental inspectors and contractors, who will receive copies of the appropriate material;
d. the training and instructions Transwestern will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
e. the company personnel (if known) and specific portion of Transwestern 's organization having responsibility for compliance;
f. the procedures (including use of contract penalties) Transwestern will follow if noncompliance occurs; and

g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

(1) the completion of all required surveys and reports;
(2) the mitigation training of onsite personnel;
(3) the start of construction; and
(4) the start and completion of restoration.

7. Transwestern shall employ at least one environmental inspector per construction spread. The environmental inspector*(s)* shall be:
   a. responsible for monitoring and ensuring compliance with all mitigation measures required by this Order and other grants, permits, certificates, or other authorizing documents;
   b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
   c. empowered to order correction of acts that violate the environmental conditions of this Order, and any other authorizing document;
   d. a full-time position, separate from all other activity inspectors;
   e. responsible for documenting compliance with the environmental conditions of this Order, as well as any environmental conditions/permit requirements imposed by other Federal, state, or local agencies; and
   f. responsible for maintaining status reports.

8. Transwestern shall file updated status reports prepared by the (head) environmental inspector with the Secretary on a **biweekly** basis **until all construction and restoration activities are complete**. On request, these status reports will also be provided to other Federal and state agencies with permitting responsibilities. Status reports shall include:

   a. the current construction status of the project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
   b. a listing of all problems encountered and each instance of noncompliance observed by the environmental inspector(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other Federal, state, or local agencies);
   c. corrective actions implemented in response to all instances of noncompliance, and their cost;
   d. the effectiveness of all corrective actions implemented;
   e. a description of any landowner/resident complaints which may relate to compliance with the requirements of this Order, and the measures taken to satisfy their concerns; and
   f. copies of any correspondence received by Transwestern from other Federal, state or local permitting agencies concerning instances of noncompliance, and Transwestern's response.

9. Transwestern must receive written authorization from the Director of OEP **before commencing service** from the project. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the project are proceeding satisfactorily.

10. **Within 30 days of placing the certificated facilities in service**, Transwestern shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
    b. identifying which of the certificate conditions Transwestern has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

11. Transwestern finalize the Hydrostatic Testing Plan, in consultation with the NNEPA, NMED, and EPA Region 9, and file the final Hydrostatic Testing Plan and evidence of this consultation with the Secretary, for review and written approval of the Director of OEP, prior to construction.

12. Transwestern finalize a project-specific revegetation plan, developed in consultation with the Navajo Nation, BLM, NRCS, and BIA, that identifies measures to minimize long-term impacts on vegetation resulting from construction of the project, including actions to minimize the establishment or spread of noxious weeds. Transwestern shall file this Plan with the Secretary, along with evidence of consultation with the listed agencies, for review and written approval by the Director of OEP prior to construction.

13. Before the initiation of surveys, Transwestern shall consult with the FWS (and, in the case of cross-listed species, with the appropriate resource agency) to verify required survey methods and timing. If facilities are not constructed within 1 year from the date of issuance of a FERC certificate, Transwestern shall contact the FWS to update the species list and to determine if additional surveys are required. Survey reports and any FWS or other agency comments on the surveys and their conclusions shall be filed with the Secretary. Survey reports shall include the following information:

    a. name(s) and qualifications of the person(s) conducting the survey;
    b. method(s) used to conduct the survey;
    c. date(s) of the survey;
    d. area surveyed (including the mileposts surveyed); and
    e. proposed mitigation that would substantially minimize or avoid potential impacts

    Transwestern shall not begin construction activities until:

    a. FERC staff receives comments from the FWS regarding the proposed action;
    b. FERC staff completes formal consultation with the FWS, if required; and
    c. Transwestern has received written notification from the Director of OEP that construction or use of mitigation may begin.

14. Transwestern shall file a noise survey with the Secretary no later than 60 days after placing the modified Bloomfield Compressor Station in service. If the noise attributable to the operation of the station at full load exceeds an Ldn of 55 dBA at any nearby NSAs, Transwestern shall install additional noise controls to meet that level within 1 year of the in-service date. Transwestern shall confirm compliance with the Ldn of 55 dBA requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

15. Transwestern shall file a noise survey with the Secretary no later than 60 days after placing the modified Gallup Compressor Station in service. If the noise attributable to the operation of the station at full load exceeds an Ldn of 55 dBA at any nearby NSAs, Transwestern shall install additional noise controls to meet that level within 1 year of the in-service date. Transwestern shall confirm compliance with the Ldn of 55 dBA requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

Appendix A

Transwestern Construction Stabilization and Restoration Plan

TRANSWESTERN CONSTRUCTION, STABILIZATION, AND RESTORATION PLAN

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TRANSWESTERN CONSTRUCTION, STABILIZATION, AND RESTORATION PLAN (CSR PLAN)

I. APPLICABILITY

A. The intent of this CSR Plan is to assist applicants by identifying baseline mitigation measures for minimizing erosion and enhancing revegetation. The project sponsors should specify in their applications for a FERC Certificate (Certificate) any individual measures in this CSR Plan they consider unnecessary, technically infeasible, or unsuitable due to local conditions and to fully describe any alternative measures they would use. Applicants should also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is certificated, further changes can be approved. Any such changes from the measures in this CSR Plan (or the applicant's approved CSR Plan) will be approved by the Director of the Office of Energy Projects (Director), upon the applicant's written request, if the Director agrees that an alternative measure:

1. provides equal or better environmental protection;

2. is necessary because a portion of this CSR Plan is infeasible or unworkable based on project-specific conditions; or

3. is specifically required in writing by another Federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Any requirements in this CSR Plan to file material with the Secretary of the FERC (Secretary) do not apply to projects undertaken under the provisions of the blanket certificate program. This exemption does not apply to a request for alternative measures.

Project-related impacts on wetland and waterbody systems are addressed in the FERC Wetland and Waterbody Construction and Mitigation Procedures (Procedures).

II. SUPERVISION AND INSPECTION

A. ENVIRONMENTAL INSPECTION

1. At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread should be appropriate for the length of the construction spread and the number/significance of resources affected.

2. Environmental Inspectors shall have peer status with all other activity inspectors.

3. Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the Certificate, state and Federal environmental permit conditions, or landowner requirements; and to order appropriate corrective action.

B. RESPONSIBILITIES OF ENVIRONMENTAL INSPECTORS

At a minimum, the Environmental Inspector(s) shall be responsible for:

1. Ensuring compliance with the requirements of this CSR Plan, the Procedures, the environmental conditions of the Certificate authorization, the mitigation measures proposed by the applicant (as approved and/or modified by the Certificate), other environmental permits and approvals, and environmental requirements in landowner easement agreements.

2. Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;

3. Verifying that the limits of authorized construction work areas and locations of access roads are properly marked before clearing;

4. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;

5. Identifying erosion/sediment control and soil stabilization needs in all areas;

6. Ensuring that the location of dewatering structures and slope breakers will not direct water into known cultural resources sites or locations of sensitive species;

7. Verifying that trench dewatering activities do not result in the deposition of sand, silt, and/or sediment near the point of discharge into a wetland or waterbody. If such deposition is occurring, the dewatering activity shall be stopped and the design of the discharge shall be changed to prevent reoccurrence;

8. Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action;

9. Advising the Chief Construction Inspector when conditions (such as wet weather) make it advisable to restrict construction activities to avoid excessive rutting;

10. Ensuring restoration of contours and topsoil;

11. Verifying that the soils imported for agricultural or residential use have been certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;

12. Determining the need for and ensuring that erosion controls are properly installed, as necessary to prevent sediment flow into wetlands, waterbodies, sensitive areas, and onto roads;

13. Inspecting and ensuring the maintenance of temporary erosion control measures at least:

    a. on a daily basis in areas of active construction or equipment operation;

    b. on a weekly basis in areas with no construction or equipment operation; and

    c. within 24 hours of each 0.5 inch of rainfall;

14. Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification;

15. Keeping records of compliance with the environmental conditions of the FERC certificate, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other Federal or state environmental permits during active construction and restoration; and

16. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase.

III. PRECONSTRUCTION PLANNING

The project sponsor shall do the following before construction:

A. CONSTRUCTION WORK AREAS

1. Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads, etc.) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys have been conducted.

2. Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of certificated work areas.

B. DRAIN TILE AND IRRIGATION SYSTEMS

1. Attempt to locate existing drain tiles and irrigation systems.

2. Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.

3. Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.

4. Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.

C. GRAZING DEFERMENT

Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.[1]

D. ROAD CROSSINGS AND ACCESS POINTS

Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.

E. DISPOSAL PLANNING

Determine methods and locations for the disposal of construction debris (e.g., timber, slash, mats, garbage, drilling fluids, excess rock, etc). Off-site disposal in other than commercially operated disposal locations is subject to compliance with all applicable survey, landowner permission, and mitigation requirements.

F. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and Federal agencies as outlined in this CSR Plan and in the Certificate.

1. Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications[2].

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1 TW would continue to monitor and maintain the disturbed construction area for revegetation and/or erosion problems resulting from construction. TW does not believe grazing can be practically deferred from the construction areas due to the length of the project across open grazing lands.

2 FERC Plan states that written recommendations must be obtained from local soil conservation authorities or land management agencies. The TW CSR Plan states that TW will make a reasonable attempt to obtain such recommendations

2. Develop specific procedures in coordination with the appropriate agency to prevent the introduction or spread of noxious weeds and soil pests resulting from construction and restoration activities.

G. STORMWATER POLLUTION PREVENTION PLAN

Make available on each construction spread the Stormwater Pollution Prevention CSR Plan prepared for compliance with the U.S. Environmental Protection Agency's National Stormwater Program General Permit requirements.

IV. INSTALLATION

A. APPROVED AREAS OF DISTURBANCE

1. Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the Certificate. Any project-related ground disturbing activities outside these Certificated areas, except those needed to comply with the CSR Plan and Procedures (e.g., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) will require prior Director approval. All construction or restoration activities outside of the Certificated areas are subject to all applicable survey and mitigation requirements.

2. The construction right-of-way width for a project shall not exceed 110 feet or that described in the FERC application unless otherwise modified by a Certificate condition. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (such as side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists.

   Project use of these additional limited areas is subject to landowner approval and compliance with all applicable survey and mitigation requirements. When such additional areas are used, each one should be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material should be included in the reports:

   a. the location of each additional area by station number and reference to a previously filed alignment sheet, or updated alignment sheets showing the additional areas;

   b. identification of where the Commission's records contain evidence that the additional areas were previously surveyed; and

c. a statement that landowner approval has been obtained and is available in project files.

Prior written approval of the Director is required when the Certificated construction right-of-way width would be expanded by more than 25 feet.

B. TOPSOIL SEGREGATION

1. Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in:

   a. actively cultivated or rotated croplands and pastures;

   b. residential areas;

   c. hayfields; and

   d. other areas at the landowner's or land managing agency's request.

2. In residential areas importation of topsoil is an acceptable alternative to topsoil segregation.

3. In deep soils (more than 12 inches of topsoil), segregate at least 12 inches of topsoil. In soils with less than 12 inches of topsoil make every effort to segregate the entire topsoil layer.

4. Where topsoil segregation is required, maintain separation of salvaged topsoil and subsoil throughout all construction activities.

5. Segregated topsoil may not be used for padding the pipe.

C. DRAIN TILES

1. Mark locations of drain tiles damaged during construction.

2. Probe all drainage tile systems within the area of disturbance to check for damage.

3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs.

4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).

D. IRRIGATION

Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.

E. ROAD CROSSINGS AND ACCESS POINTS

1. Maintain safe and accessible conditions at all road crossings and access points during construction.

2. If crushed stone access pads are used in residential or active agricultural areas, place the stone on suitable synthetic fabric to facilitate removal.[3]

F. TEMPORARY EROSION CONTROL

Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.

1. Temporary Slope Breakers

a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, sediment logs or sand bags.[4]

b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on all slopes greater than 5 percent. (closer spacing should be used if necessary):[5]

Slope (%)	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.

d. Position the outfall of each temporary slope breaker to prevent

3 TW CSR Plan identifies suitable fabric to prevent inappropriate materials from being utilized

4 TW believes use of sediment logs may also be appropriate under some conditions.

5 TW will install temporary slope breakers on all slopes greater than 5% at the spacing identified. FERC Plan only requires TSB's where base of slope is less than 50' feet from waterbody, wetland, and road crossings.

sediment discharge into wetlands, waterbodies, or other sensitive resources.

2. Sediment Barriers

   a. Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments into sensitive resources. They may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials.

   b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.

   c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.

3. Mulch

   a. Apply mulch on all slopes (except in actively cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.

   b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.

   c. Mulch <u>before</u> seeding if:

      (1) final grading and installation of permanent erosion control measures, will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or

      (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.

d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.

e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).

f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.

g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies.

h. Install erosion control fabric on waterbody banks at the time of final bank recontouring. Anchor the erosion control fabric with staples or other appropriate devices.

V. RESTORATION

A. CLEANUP

1. Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (temporary slope breakers and sediment barriers) until conditions allow completion of cleanup.

   The project sponsor should file with the Secretary for the review and written approval of the Director, a winterization plan if construction will continue into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring.

2. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.

3. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench should be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.

4. Remove excess rock from at least the top 12 inches of soil in all actively cultivated or rotated cropland and pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area should be similar to adjacent areas not disturbed by construction. The landowner may approve other provisions in writing.

5. Grade the construction right-of-way to restore pre-construction contours to the maximum practicable extent and leave the soil in the proper condition for planting.

6. Remove construction debris from all construction work areas unless the landowner or land managing agency approves otherwise.

7. Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.

B. PERMANENT EROSION CONTROL DEVICES

1. Trench Breakers

a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers.

b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers.

c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.

d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland.

2. Permanent Slope Breakers

a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, sand bags, or some functional equivalent.

b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, using spacing recommendations obtained from the local soil conservation authority or land managing agency.

In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:

Slope (%)	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.

d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.

C. SOIL COMPACTION MITIGATION

1. Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.

2. Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil. [6]

Alternatively, make arrangements with the landowner to plant and plow under a "green manure" crop, such as alfalfa, to decrease soil bulk density and improve soil structure. If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.

6 TW will consult with the landowner, NRCS, or NAPI relative to the specific soils found at the specific location and perform soil decompaction as required by the affected party.

3. Perform appropriate soil compaction mitigation in severely compacted residential areas.

D. REVEGETATION

1. General

a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.

b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.

2. Soil Additives

Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as possible after application.

3. Seeding Requirements

a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.

b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in actively cultivated croplands unless requested by the landowner.

c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F. and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Lawns may be seeded on a schedule established with the landowner.

d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a-c.

e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.

f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).

g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.
Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.

VI. OFF-ROAD VEHICLE CONTROL

To each owner or manager of forested lands offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include:

A. Signs;
B. Fences with locking gates;
C. Slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and
D. Conifers or other appropriate trees or shrubs across the right-of-way.

VII. POST-CONSTRUCTION ACTIVITIES

A. MONITORING AND MAINTENANCE

1. Conduct follow-up inspections of all disturbed areas after the first and second growing seasons to determine the success of revegetation.

2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful if crop yields are similar to adjacent undisturbed portions of the same field.

   Continue revegetation efforts until revegetation is successful.

3. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in active agricultural areas until restoration is successful.

4. Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless requested otherwise by the land owner or land managing agency), revegetation is successful, and proper drainage has been restored.

5. Routine vegetation maintenance clearing shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion and leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be maintained annually in a herbaceous state. In no case shall routine vegetation maintenance clearing occur between April 15 and August 1 of any year.

6. Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and vehicle trails as necessary.

B. REPORTING

1. The project sponsor shall maintain records that identify by milepost:

   a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used;

   b. acreage treated;

   c. dates of backfilling and seeding;

   d. names of landowners requesting special seeding treatment and a description of the follow-up actions; and

   e. any problem areas and how they were addressed.

2. The project sponsor shall file with the Secretary quarterly activity reports documenting problems, including those identified by the landowner, and corrective actions taken for at least 2 years following construction.

Appendix B

General Measures to Mitigate Environmental and Cultural Impacts
Transwestern Mitigation Measures Summary

General Mitigation Measures

- Transwestern would develop and implement an environmental education and compliance program acceptable to the agencies prior to the start of work. All employees and contractors working in the field would be required to complete this program as a part of their duties.

  The program would include discussions of the biology, distribution, and ecology of special status species within the geographic area of project sites; protection afforded such species under applicable Federal and state laws and regulations; all protection measures that must be followed to protect such species during project activities; penalties for noncompliance; reporting requirements; and the importance of compliance with all protection measures.

  Prior to the start of a construction activity, all Transwestern personnel or subcontractors directly involved with construction activities would be instructed in the stipulations provided in the Unanticipated Discovery Plan (UDP). Those instructions would include: 1) the types of materials qualifying as unanticipated discoveries; 2) the steps outlined regarding the protection of unanticipated discoveries; 3) the need to treat any human skeletal remains and affiliated goods that are encountered with dignity and respect; 4) the steps outlined concerning the notification of the appropriate agency, Transwestern and TRC personnel in the event of discovery of cultural remains; 5) the penalties for failure to report unanticipated discoveries or to comply with the procedures outlined in the Unanticipated Discovery Plan.

  Transwestern would designate Environmental Inspectors who would be responsible for overseeing compliance with project environmental protection measures.

- Approved access (existing) routes of travel would be used to and from specific project sites. Cross-country travel by maintenance vehicles and equipment would be prohibited. Except on county-maintained roads, vehicle and equipment speed limits would be reduced within potential habitat of a listed species.

- Litter would be contained and regularly (daily) removed from each area of active construction along the project route to reduce attractiveness to predators.

- Firearms and pets would be prohibited from work sites.

- Construction and maintenance activities between dusk and dawn would be minimized to the extent practical.

- To minimize the amount of open trenches at any given time, trenching and backfilling crews would be kept close together to the extent practical.

- Trenching would be performed during the cooler months (October to March) to the extent practical. Transwestern recognizes that there may be exceptions (e.g., critical wintering areas) which need to be assessed on a site-specific basis and would respect these areas during construction.

- With the exception of fenced facilities, all unused materials and equipment would be removed from the area upon completion of project.

- At the conclusion of work, all trenches and holes would be completely filled, surfaces cleaned and smoothed, and each site recontoured to match the original profiles as closely as possible.

- Transwestern will identify all trees fifteen feet or greater in height that would be located within the proposed construction workspace areas. During clearing and construction activities the identified trees will be avoided where practicable, when:

    - Avoidance can be accomplished with only minor deviations in the pipeline centerline and within the Certificated right-of-way; and

    - Avoidance does not interfere with safe pipeline construction practices.

- In the event that a wild fire is started as the result of a Transwestern San Juan 2005 Expansion Project pipeline gas release, emergency response actions would be initiated in accordance with the project Emergency Response plan mandated under US Department of Transportation (DOT) Part 192. After the incident is controlled, Transwestern would consult with the U.S. Fish and Wildlife Service (FWS) and other jurisdictional agencies to determine the extent of injury to special status species and populations. If injury were determined to have occurred, procedures for habitat and population recovery would be identified and implemented in proportion to the level of injury identified.

- For emergencies involving a spill or other action that extends beyond the pipeline right-of-way, Transwestern would implement containment measures detailed in its Spill Prevention and Countermeasure Plan. As a part of this process, Transwestern would immediately notify the FWS, and the appropriate state wildlife and environmental agencies. After containment and during cleanup, these agencies may require specific measures for the protection and recovery of special status species and their habitats.

- Transwestern would prepare Health and Safety Plan that incorporates measures for specific issues identified for the project.

- Transwestern would implement its Transwestern Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) that identifies baseline mitigation measures for minimizing erosion and enhancing revegetation (Appendix D).

- Transwestern would implement the FERC Wetland and Waterbody Construction and Mitigation Procedures (Procedures) (Appendix E) and Plan that identify baseline mitigation measures for minimizing the extent and duration of project-related disturbance on waters of the U.S.

- Transwestern would prepare a Project-specific revegetation plan that includes the comments and recommendations of the Navajo Nation, Bureau of Indian Affairs (BIA), U.S. Bureau of Land Management (BLM), and U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) consulted on this issue and/or specific land owner requests.

- Transwestern has developed a Spill Prevention, Containment and Countermeasure (SPCC) Plan for construction that describes the preventive and mitigative measures that would be used to minimize the impact associated with any inadvertent spill of hazardous materials including designated refueling areas, spill response procedures, containment and clean-up measures, hazardous material storage and disposal procedures, and other Best Management Practices (BMPs) (Appendix F).

- In New Mexico, heavy equipment used in the project area will be inspected daily for leaks. No leaking equipment may be used in or within 100 feet of any water of the U.S. including wetlands. (Appendix F)

- To prevent introduction of petrochemicals into waters of New Mexico, fuel, oil, hydraulic fluid, lubricants and other petrochemicals stored within the floodplain must have an impervious secondary containment system to prevent spills. The permittee shall contain and remove any petrochemical spills, including contaminated soil, and dispose of these materials at an approved disposal site.

(Appendix F)

- Refueling of equipment must not take place within 100 feet of any water of the U.S., including wetlands. (Appendix F)

- Transwestern has developed a Stormwater Pollution Prevention Plan (SWPPP) for compliance with the U.S. Environmental Protection Agency's National Stormwater Program General Permit requirements (Appendix G).

- Transwestern would develop a Hydrostatic Test Water Plan for the project. This plan includes details on volumes of water needed, sources, discharge locations and sampling parameters. The discharge of all test waters will be performed in compliance with either the New Mexico Environment Department (NMED) National Pollutant Discharge Elimination System (NPDES) permit requirements or the U.S. EPA Region 9 NPDES requirements depending upon whether the water is discharged into a Water of the U.S. on non-Navajo Nation lands or within Navajo Nation lands, respectively. In any event, the water will be discharged so as to minimize surface erosion, damage to culturally significant sites, threatened and endangered species, and/or human habitations. Transwestern would attempt to locate discharge sites along the right-of-way that would benefit local residents.

- Transwestern has identified the following hazardous material(s) and potential solid wastes that potentially could be used, produced and temporarily stored on or within the right-of-way or any of the right-of-way facilities.

Hazardous Material	**Use and Disposal**
•Acetylene	Acetylene is used during welding operations. Empty acetylene tanks will be returned to gas suppliers for refilling.
Diesel (#2) Fuel*	Diesel will be used to power equipment, temporary pumps, and other engines. Diesel fuel will be spent in the powering of equipment, temporary pumps, and other engines.
Ethylene Glycol	Ethylene glycol (antifreeze) will be contained within vehicle and equipment engines.
Fusion bond epoxy	Fusion bond epoxy will be applied to the outside of the pipe at areas where pipe joints have been welded. Fusion bond epoxy will be spent in the application process.
Gasoline*	Gasoline will be used to power equipment, temporary pumps, and other engines. Gasoline fuel will be spent in the powering of equipment, temporary pumps, and other engines.
Hydraulic fluid*	Hydraulic fluid will be contained within vehicle and equipment engines.
Lubricants (motor oil, grease)*	Motor oil will be contained within vehicle and equipment engines. Waste motor oil will be sent to licensed facilities for recycling. Grease and other lubricants will be spent.

Oxygen	Oxygen will be used during welding operations. Oxygen will be spent during welding and empty tanks will be returned to suppliers of oxygen for refilling.
Paints	Paints will be used on above ground facilities (meter stations, compressor stations, and mainline valves). Paint will be spent during painting activities.
Propane	Propane will be used during welding operations. Propane will be spent during welding and empty tanks will be returned to a propane supplier for refilling.
Sulfuric Acid	Sulfuric acid is found in batteries located in construction equipment and vehicles. Spent batteries will be sent to licensed facilities for recycling or disposal.
Parts Cleaning Solvent	Used to clean mechanical equipment parts. Solvents will be managed following applicable regulations (CERCLA/RCRA/CWA).
Anti-Freeze (ethylene glycol)	Anti-Freeze is typically located in the radiators of vehicles and equipment. Spent anti-freeze will be managed following applicable regulations. (CERCLA/RCRA/CWA).
PCB's at existing compressor stations	Positive results for PCB's have been identified at some Mainline compressor stations. Materials will be managed following applicable regulations (CERCLA)..
Food and drink containers	Food and drink containers will be collected in trash bags on equipment daily and transported to a central collection bin for ultimate disposal at an approved landfill.
Construction debris (e.g. skids, cables, ropes, empty lubricant containers, welding rods)	Construction debris will be collected in trash bags on equipment daily and transported to a central collection bin for ultimate disposal at an approved landfill.
Erosion control device debris (e.g. silt fence, hay bales, jute fabric)	Erosion control device debris will be collected in trash bags on equipment daily and transported to a central collection bin for ultimate disposal at an approved landfill.
Hydrostatic test water	Hydrostatic test water will be discharged at approved locations following all applicable U.S. EPA or NMED NPDES permit conditions.
Sand blasting waste	Representative samples of sand blasting wastes will be collected and characterized to determine whether the materials are hazardous or non-hazardous in nature. These wastes will be disposed of in accordance with applicable regulations (RCRA).
Trees and shrub wastes	Trees and shrub wastes will be dealt with by one of the following methods. (a)stacking/scattering along the right-of-way with landowner approval (brush piles) to help prevent wind erosion; (b) chipping/mulching slash and brush and leaving the chips on the right-of-way; or (c) removing the material and disposing of the debris at an approved off-site facility.
Excess rock and/or boulders	Excess rock and/or boulders will either be removed from the right-of-way to an approved disposal location with land owner approval; used to restore aesthetic visual qualities along the right-of-way; or used to facilitate construction of permanent erosion control devices as necessary.

*Potentially exempt under CERCLA "Petroleum Exclusion" 42 U.S.C.§ 9601(14)

- All hazardous materials which will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities will comply with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations.

- All Solid Wastes generated, temporarily stored, transported or disposed of will comply with the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 9601 et seq., and its regulations.

- The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA section 101(4), 42 U.S.C. 9601 (14), nor does the term include natural gas

Listed Species Mitigation Measures

- Transwestern would implement all conditions described in its Biological Assessment related to threatened and endangered species.

- Project personnel would exercise caution when commuting to the project area to minimize any chance for the inadvertent injury or mortality of species encountered on major roads leading to and from the project site.

- Employees and contractors would look under vehicles and equipment for the presence of protected species prior to movement. No equipment would be moved until the animal has left voluntarily or a person authorized to do so removes it.

- All project actions would be confined to approved areas unless otherwise authorized by involved agencies. The area of disturbance should be the smallest practical, and should consider topography, placement of facilities, location of sensitive burrows, nesting sites or dens, public health and safety, and other pertinent factors. Special habitat features identified by a qualified biologist would be avoided to the extent possible. Work area boundaries would be delineated by posting signs and flagging, erecting temporary fencing, or otherwise clearly marked in order to minimize surface disturbance associated with vehicle or equipment movement. To the extent possible, previously disturbed areas within each component of the project would be used for storage of equipment, parking or vehicles, stockpiling of excavated materials, or any other surface-disturbing activities. The Transwestern Environmental Inspector (EI) shall ensure compliance with these measures. Essentially, the EI is responsible for the overall compliance of the project with all permits and/or clearances, including those established to protect flora and fauna along the project route. As appropriate, all activities that extend outside of the current pipeline right-of-way would require prior approval and review by the FERC, FWS, Navajo Nation and appropriate state wildlife agency.

- Open pipeline trenches, auger holes, or other excavations that could entrap wildlife would be inspected prior to backfilling. In habitats supporting listed species, installed pipe segments shall be capped or taped closed each night. Such pipe segments shall be inspected regularly before sealing. Where excavations cannot be backfilled immediately, escape ramps would be maintained at 300-foot (90 meter) intervals. Escape ramps can be short lateral trenches sloping to the surface or wooden planks extending to the surface.

- All work where prior surveys have documented the occurrence of one or more listed species would be monitored by Environmental Inspector. Transwestern's Environmental Inspector would have the authority to halt all non-emergency actions that might result in the harm to a listed species, and would assist in the overall implementation of protection measures for special status species during project operations.

- A qualified biologist would conduct a pre-activity survey of each project component located within special status species habitat no more than *14* days prior to the onset of activities. The qualified biologist will be familiar with the flora and fauna of NW New Mexico. They will be responsible for pre-construction surveys for listed species as recommended by regulatory agencies. All listed species encountered will be identified, the location(s) delineated and the information given to the EI. All burrows of any protected wildlife species or locations of any protected plants identified during surveys outside of, but near, the pipeline right-of-way shall be flagged prominently so they can be avoided during work activities. Silt fencing or other semi-permanent fencing materials would be erected around such listed plant sites to maximize protection during project construction. Project actions would avoid disturbing such sites. However, if it would become necessary to disturb sensitive areas, plants (except for those that are federally protected) shall be either transplanted or have seeds collected for reseeding following consultation with appropriate state and Federal agencies, and burrows would be carefully excavated under the direct supervision of a qualified biologist, allowing any animals in residence to escape unharmed.

- If a listed species is located during construction, and a contingency for avoidance, removal, or transplant has not been approved by the FWS or appropriate agency, Transwestern would not proceed with project activity until specific consultation with the FWS or other appropriate agency was completed.

- If pre-construction surveys by a qualified biologist record the presence of an active nest of any listed bird species within the limits described in the mitigative measures, project activities would be deferred until monitoring by qualified biologists has determined that young birds have fledged and left the nest or upon consultation with appropriate agencies, it is determined that project activities would not impact the nesting activities. Any such nests would also be strictly protected during the subsequent project action.

- All encounters with special status species would be reported to the environmental inspector, who should record the following information:

    - Type of species;
    - Location (narrative and maps) and dates of observations;
    - General condition and health, including injuries and state of healing;
    - Diagnostic markings, including identification numbers or marks; and
    - Locations moved from and to (if authorized).

- Employees should be notified that they are not authorized to handle or otherwise move listed species either commuting to work sites or at a work site.

- Upon locating a dead or injured special status species, Transwestern would notify the FWS and appropriate state wildlife agency. Written notification must be made within 15 days of the date and time of the finding or incident (if known) and must include: location of the carcass, a photograph, cause of death (if known), and other pertinent information. Injured animals would be transported to a qualified veterinarian for treatment at the expense of Transwestern. If an injured animal recovers, the FWS and appropriate state wildlife agency would be contacted for final disposition of the animal.

- Upon completion of project activities, Transwestern would submit a standardized report to the FERC for distribution to the other agencies, including the FWS. The report should document the effectiveness

and practicality of the mitigation measures, the number of species excavated from their homes or removed from the site, the number of species killed or injured, and other pertinent information. The report also should make recommendations for modifying the stipulations in order to enhance species protection in the future. The final report should provide the actual acreage disturbed by project activities.

Cultural Resources Mitigation Measures

- Transwestern would designate a Cultural Resource Inspector who would monitor during earth moving activities and in the case of a discovery evaluate and verify by inspection, probe and shovel-skim whether or not it qualifies as an unanticipated discovery.
    - Upon verification the occurrence of an unanticipated discovery (other than human remains), the Cultural Resource Inspector would promptly:
    - Notify the Transwestern contacts who will notify FERC and the Navajo Nation Historic Preservation Department (NNHPD) and/or State Historic Preservation Office (SHPO), as appropriate
    - Complete the initial documentation and evaluation of the discovery.
      Assist in determining whether or not the discovered resource can be avoided
- Transwestern would forward information from the survey report to interested Native American Tribes requesting such information, and continue to update them as necessary in regard to discoveries.
- FERC, NNHPD and/or SHPO would concurrently review all discoveries and will issue either a Notice To Proceed (NTP) for a site that requires no further action, or in the case of a more extensive Initial Discovery Report, FERC, NNHPO and /or SHPO would concur on an eligibility determination.
- If cultural remains are encountered, construction activity within 100 feet (30 meters) of the find shall cease immediately. The following steps shall be immediately undertaken by the construction team encountering the remains to ensure that there is no further disturbance:
    - Fence an area of at least 30 feet (10 meters) around the discovery with orange safety fencing or similar material.
    - Prevent all vehicular, machine, or human foot traffic from crossing the location of the find or passing within 100 feet (30 meters) of the discovery location. Remove all machines and supplies from that vicinity.
    - Persons involved in the discovery will immediately notify a segment manager (or designated substitute) who, in turn, will immediately notify the appropriate Chief Environmental Inspector (CEI), Cultural Resource Inspector (CRI) and Environmental Project Manager (EPM). The CRI will then contact the Project Archaeologist at TRC to discuss the significance of the remains and the necessary treatment.
- If human remains are encountered during construction, the following will promptly occur:
    - Appropriate measures would be taken to protect the discovery from further disturbance until it has been fully evaluated and the appropriate treatment of any verified discovery has been completed.
    - Transwestern would promptly contact the CRI to begin assessment of the remains.
    - The CRI would also begin the official notification process by promptly contacting the

Transwestern EPM who would immediately contact the appropriate county coroner's office, the FERC and NNHPD and/or SHPO.

- Notification and treatment procedures for human remains would conform to appropriate Navajo Nation, New Mexico state and federal statutes, regulations and guidance.

  - For any human remains on lands owned, managed, or controlled by the Navajo Nation, Transwestern would abide by the Navajo Nation Policy for the Protection of Jischaa': Gravesites, Human Remains, and Funerary Items.

  - For any human remains on other lands, the process would be consistent with the Bureau of Land Management and SHPO stipulated procedures for treatment of such remains, and consultation with Native Americans regarding treatment and disposition of such remains; and with the provisions of Section 18-6-11.2 (NMSA, 1979 Comp. As amended).

- At the conclusion of the treatment plan, a data recovery report detailing the results of the investigations would be prepared and submitted to the FERC and NNHPD and/or SHPO, as appropriate. The letter format report will include a description of the nature and extent of the investigations, a brief summary of the results, and evaluation of the find, and any recommendations for additional treatment.

- A final report of unanticipated discoveries data recovery investigations will be prepared and submitted within nine months after the completion of fieldwork or as negotiated in conjunction with more extensive data recovery investigations. A single report will be prepared covering all data recovery investigations. The final report will follow the FERC's Guidelines for Reporting on Cultural Resources Investigations.

- Prior to transfer to a curation facility or private land owner(s), the collections will be systematically organized and stored to facilitate research and collections transfer to a final curation facility or the landowners of the property where the collections were made. These curation provisions do not apply to human remains, which must be treated in accordance with applicable Navajo Nation and New Mexico stat law.

- All materials and records from the data recovery program would be curated in a manner consistent with 36 CFR 79, particularly the standards at 36 CFR 79.9 and 79.10. After analysis is complete, materials from Navajo Nation lands would be sent to the Navajo Nation Historic Preservation Department. All materials from non-Navajo Nation lands would be sent to the New Mexico Laboratory of Anthropology for curation. Transwestern shall document the donation of artifacts to the proper repositories.

- In the case of culturally sensitive locations, such as identified cultural resource sites, ceremonial sites, identified rock formations and Sensitive Cultural Manifestations (SCM), construction crews would minimize impacts by restricting all activities in such a way as to avoid these resources. Should the required construction encroach upon such resources, no disturbance shall occur until the Chief Environmental Inspector, in conjunction with the Cultural Resources Inspector, has identified where the impacts will be permitted to occur, and where such disturbance will not be allowed.

Appendix C

References

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Appendix D

List of Preparers

Federal Energy Regulatory Commission

Sipe, Douglas - FERC Project Manager, Land Use, Visual, Alternatives
B.S., Environmental Resource Management, 1994, Pennsylvania State University

Button, Van - Cultural Resources
B.A. Anthropology 1973, Reed College, MA Anthropology 1976, University of Arizona

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B.S., Mechanical Engineering, 1970, University of Maryland

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A.A., Liberal Arts and Sciences, 1970, Queensborough Community College of CUNY
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Appendix E

SUMMARY OF COMMENTS ON THE DECEMBER 13, 2003 DRAFT OF THE EA

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
COE - H. Hannifious	1/19/03	To insure minimal future maintenance of the pipeline where it may cross arroyos, consideration should be given to burying the pipelines deeper than planned in the event that storm events uncover them. The corps regularly issues permits for this very problem on older pipelines.	Insert: To insure minimal future maintenance of the pipeline where it crosses arroyos and other waters of the U.S., Transwestern will bury the pipeline with a minimum of 4 feet of top cover. Transwestern will give additional consideration to burying the pipeline deeper to provide sufficient cover after storm events.	Section 1.4.2 Waters of the U.S.
COE - H. Hannifious	1/19/03	There would not be a Section 10 permit required for this action because the only Section 10 waters in New Mexico are the Navajo Reservoir and the Rio Grande south of the NM/Texas state line.	Delete reference to the Rivers and Harbors Act	Section 1.7, Table 1.7-1
COE - H. Hannifious	1/19/03	Any portion of the pipeline which traverses waters located within the Navajo Nation would also require a Section 401 permit from EPA, Region 9, in San Francisco.	Insert: Region 9 after U.S. Environmental Protection Agency in Table 1.7-1	Section 1.7, Table 1.7-1
COE - H. Hannifious	1/19/03	Section 2.3.2 The Corps of Engineers is also concerned about the affects of construction of associated access roads and their impact on stormwater hydrology/runoff. Such impacts have the potential to have more negative impact than the actual pipeline installation, and accordingly, need more than superficial consideration.	Insert: Transwestern intends to utilize existing public and private roads and pipeline rights-of-way for access during construction. No new access roads are proposed. Some of the roads proposed for use cross waters of the U.S. Transwestern would provide temporary erosion controls, as described in the Transwestern CSR Plan, SWPPP and FERC Procedures, as necessary to help minimize erosion and sedimentation impacts to Waters of the U.S. from its use of these roads during construction. During final restoration activities, Transwestern would repair all Project access roads to pre-construction conditions, or better. Further, Transwestern would evaluate the need to install permanent erosion/sedimentation control devices (ECDs) on the access roads used. Transwestern would install permanent ECDs as necessary and permissible along paved access roads.	Section 1.4.2 Waters of the U.S.
COE - H. Hannifious	1/19/03	NAPI canals are not US Waters	Remove NAPI canal crossings from Table. 2.3-1 and add a new Table 2.3-2 that includes them. Adjust text.	Section 2.3.2 and Table 2.3-1 and new Table 2.3-2
COE - H. Hannifious	1/19/03	For Table 2.3-1 above, please provide the UTM coordinates in Meters	Per Transwestern's telephone call with the COE on 1/30/04, Transwestern will provide UTM coordinates in meters in waterbody table included in its ACOE application.	NO CHANGE REQ'D
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Section 1.4 Construction, Operation and Maintenance Procedures: 1st paragraph, "Title 49 of the Code of Federal Regulations, Part 192 . . .	49 CFR Part 192 is readily available from a number of sources, including the internet at http://www.access.gpo.gov/nara/cfr/waisidx_02/49cfr	NO CHANGE REQ'D

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
		Include copies of the CFR in a separate Appendix.	192_02.html	
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Distinguish between the roles and responsibilities of Environmental Inspector (EI) and qualified biologist in Section 1.4 Construction, Operation and Maintenance Procedures and Appendix J.	Insert: Essentially, the EI is responsible for the overall compliance of the project with all permits and/or clearances, including those established to protect flora and fauna along the project route. Insert: The qualified biologist will be familiar with the flora and fauna of NW New Mexico. They will be responsible for pre-construction surveys for listed species as recommended by regulatory agencies. All listed species encountered will be identified, the location(s) delineated and the information given to the EI.	*APPENDIX H* General Measures to Mitigate Environmental and Cultural Impacts - Listed Species Mitigation Measures.
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Page 1-8 under Section 1.4.2 Special Pipeline Construction techniques: Need more in-depth, detailed project construction activities, this project description is unclear. Need terms defined.	Standard descriptions of construction techniques and definitions for construction terms are included in the EA, typically as the terms are introduced. As a result further clarification of construction activities can be found in Sections 1.4and 1.4.1, by reviewing Figure 1.5-1 Typical ROW Configuration, and other referenced appendices and documents in the EA.	NO CHANGE REQ'D
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Will there be any waste water storage ponds during the construction?	Insert: Transwestern is planning to construct evaporation ponds along the ROW in which to discharge hydrostatic test water. These ponds will be coordinated with appropriate Chapter Houses and grazing permit holders.	Section 2.3.3 Hydrostatic Testing.
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Section 1.7 Permits Required, Table 1.7-1 Environmental Permits, Approvals and Consultations: Agency: Navajo Nation Department of Fish and Wildlife Consultations under Section 7 of the Endangered Species Act. ***Include [and Navajo Nation Endangered Species List]***,	Insert requested reference	Section 1.7, Table 1.7
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Maybe implement monitoring wells.	Explained in phone conversation that natural gas will flow through the line; this is not a liquid project. Insert: Any release of natural gas from the proposed facilities would not affect ground water resources.	Section 2.3.1
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Section 2.4.3 Threatened and Endangered or Special Status Species paragraph 1: include Navajo Nation Department of Fish and Wildlife (NNDFWL) before NNDFW and change NNDFW to NNDFWL,	Change acronym to NNDFWL throughput document. The Navajo Nation Department of Fish and Wildlife is mentioned in a previous section (Section 1.3) and the acronym defined there. The standard convention is to use the acronym throughout the rest of the document.	Throughout

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
NNDFWL - Rita Whitehorse-Larsen	1/23/04	Section 2.4.3 Threatened and Endangered or Special Status Species paragraph 6, "conduct pre-construction biological surveys" ***Include [during the species recommended time survey according to Navajo Nation Department of Fish and Wildlife and/or US Fish and Wildlife],***	Insert requested text	Section 2.4.3
Rita Whitehorse-Larsen	1/23/04	Include [miles] where feet is expressed	The FERC's standard practice is to express distances in miles or stationing in feet, but not both.	NO CHANGE REQ'D
NMGF - Lisa Kirpatrick	1/7/04	Legend on the General Location map (Figure 1.2-1) omits proposed changes to Compressor Station 6	General Location map (Figure 1.2-1) has been updated to reflect all proposed project facilities	General Location map (Figure 1.2-1)
NMGF - Lisa Kirpatrick	1/7/04	The analysis of noise impacts on page 2-16 may be flawed. Although predicted station noise is less than ambient noise that does not necessarily mean there will be no increase. Peak compressor noise levels and their duration should also be presented and discussed.	Delete: last sentence of third paragraph in Bisti Compressor Station discussion. Insert: "operated at peak loads" in first sentence of third paragraph after noise	Section 2.7.2.
NMGF - Lisa Kirpatrick	1/7/04	The EA does not address cumulative impacts as required by the National Environmental Policy Act.	Modify Text of EA to provide Cumulative impact assessment..	New Section 2.5.7
NMGF - Lisa Kirpatrick	1/7/04	In Section 2.4.3 it states that biological surveys for special status species were conducted in "fall/winter 2003." Surveys at any time of year are appropriate for the one broadleaf shrub and two cacti on the list of species potentially present. Surveys for the six forbs and one grass on the list should be conducted during the season when those plants are most likely to be in flower and/or fruit. Many herbaceous species, if present, may have no evident above-ground parts in winter.	.Transwestern would conduct surveys in accordance with agency requirements.	Section 2.4.3
NMSLO - David Eck	1/8/04	Section 2.6 Cultural Resources paragraph 2: Correct to include: New Mexico Cultural Resource Information System	Replace 2nd sentence with: The Class I survey consisted of literature searches and review of the site files of the Navajo Nation, the BLM, and the New Mexico Cultural Resource Information System (NMCRIS), maintained by the Archaeological Records Management System (ARMS).	Section 2.6
NMSLO - David Eck	1/8/04	Appendix J Cultural Resources Mitigation Measures: 100 feet is 30 meters	In 4th bulleted paragraph change 10 meters to 30 meters.	APPENDIX H
NMSHPO - Phillip A. Young		SHPO has reviewed the Draft EA for compliance with Sect. 106 – "at present we do not anticipate any issues that would preclude your pre-filing, and look forward to working with FERC (and TW) in resolving any 106 issues"	NO RESPONSE NEEDED	NO CHANGE REQ'D
BLM - Peggy Gaudy		Does this project really only include the Loop line or does it include the facilities outside of the San Juan Basin?	This information is in the Section 1.2, which includes additional clarification of Loop A/B and more detail on the extent of the work at the compressor stations.	NO CHANGE REQ'D

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
BLM - Peggy Gaudy	??	Section 2.6 Cultural Resources: There is no mention of cultural buffers on each side of the ROW	Replace the 3rd sentence in paragraph 2 with: The Class III inventory consisted of a 100 percent pedestrian inspection of the 150-foot wide construction right-of-way. .A 50-foot buffer on each side of the proposed construction ROW was surveyed on BLM land. Other areas that would be used by the Project such as temporary work areas, pipe yards were also surveyed.	Section 2.6
BLM - Peggy Gaudy		Section 2.6 Cultural Resources: Once a site has been determined not eligible for an undertaking (usually through exhaustion of the data potential) it does not require additional testing and does not need to be avoided construction. This does not include the previous recorded sites on BLM lands for the undertaking, as they require re-evaluation for this undertaking. At this time I disagree with TRC's recommendations.	Delete: "and ineligible" from paragraph 4	Section 2.6
BLM - Peggy Gaudy		What tribes were contacted? Please provide me a copy of the letter sent and a copy of the responses. Did the contact letter include the "site" table we discussed to be used as an initial "ARPA consultation" and the Written Plan of Action (per 43 CFR Part 10(e)) for testing, discoveries and data recovery? If not the tribes will have to be contacted again.	The Information Gathering letter was sent to 16 Native American tribes as an early notification of the Project. The BLM's contact with these and/or additional tribes as part of the BLM ARPA consultation is a separate process.	NO CHANGE REQ'D
BLM - Peggy Gaudy		Will an ethnographic report be prepared? BLM requests a copy.	A Traditional Cultural Property report is being prepared for the NNHPD. The request for a copy of this report should be made through the NNHPD. No report on land use of the area over time by different groups is under preparation nor contemplated.	NO CHANGE REQ'D
BLM - Peggy Gaudy		If the resources (including both physical and TCP) are on BLM lands, the federal laws and regulation we (BLM) work under will apply.	Modify text appropriately.	Section 2.6.
BLM - Barney Wegner		Section 2.4.3, pg 2-11 2nd paragraph: Mountain plover have been recorded in the vicinity of the Bisti Compressor Station. The pipeline route passes through potential habitat.	Modify text appropriately.	Section 2.4.3
BLM - Barney Wegner		Section 2.4.3, pg 2-11 4th paragraph: The large trees are unrelated to the species listed.	Delete: "large trees would not be removed wherever possible," from the text	Section 2.4.3, pg 2-11 4th paragraph
BLM - Barney Wegner		Section 2.5.4 Recreational Areas and Section 2.7.2 Construction Noise: Construction noise will affect the Bisti Wildlife Area.	Consultation with BLM's Richard Simmons indicates that construction noise would not affect the Bisti Wilderness Area.	Section 2.7.2
NNEPA Stephen B. Etsitty	02/09/04	Comment regarding the lack of information in the DEA concerning the management of hydrostatic test water. NNEPA recommended the TW ascertain the interest of Navajo chapters	Modify text appropriately.	Section 2.3.3 Hydrostatic Testing.

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
		and/or communities along the proposed pipeline route, in the alternative uses(s) of test water. Has, or will, TW contacted Navajo chapters and/or communities to present the concept of using the test water for purposes other than a drinking water source for humans?		
NNEPA Stephen B. Etsitty	02/09/04	Page 1-5, Table 1.3-1, Contaminated Soils, indicates that 2.1.2 is the EA section where the comments in the Contaminated Soils section is addressed; however, at 2.1.2 the section is titled Mineral Resources and does not discuss potential disturbance of contaminated soils during construction near MP 67.2 it is suspected that petroleum contaminated soils will be encountered along the proposed route and the concern is whether the contaminated soil will be averted by Transwestern or some soils excavated and disposed of.	Modify text appropriately.	New section: 2.5.6
NNEPA Stephen B. Etsitty	02/09/04	Provide indication that all construction yards and staging areas that may be developed for use in conjunction with this project will be properly addressed, where applicable, in coordination with relevant tribal programs and in compliance with required plans or permits. Where construction yards and staging areas will result in surface disturbing activities, pertinent NOI's and SWPPP's must be completed.	Insert: "These required permits, clearances, and approvals would apply to all appropriate facilities associated with the Project."	Section 1.7
NNEPA Stephen B. Etsitty	02/09/04	Provide additional information, such as company names, addresses and contact person(s) for all "foreign pipelines" that may be affected by the proposed project.	Insert: "Additionally, the Transwestern SPCC plan identifies adjacent foreign pipeline companies and describes how Transwestern would coordinate with these companies in the event of a response action." This information will be included in the final SPCC Plan.	Section 1.4
NNEPA Stephen B. Etsitty	02/09/04	How will Transwestern coordinate response action at locations with other pipelines (including "foreign pipelines) within the project ROW? Will there be coordination among other pipeline owners to develop spill plans that acknowledge and address situations that may subject individuals and property to imminent threats or hazards?.	Insert: "Additionally, the Transwestern SPCC plan identifies adjacent foreign pipeline companies and describes how Transwestern would coordinate with these companies in the event of a response action." The comment regarding the development of spill plans amongst pipeline owners is beyond the scope of this EA.	Section 1.4 and the SPCC plan
NNEPA Stephen B. Etsitty	02/09/04	It is assumed that all sections in the DEA where "XX" is noted will be replaced by specific information.	All sections where "XX" was previously noted in the Draft EA have been replaced with specific information.	Throughout
NNEPA Stephen B. Etsitty	02/09/04	Ensure that the final EA includes, within the appendices, relevant compliance documentation for cultural resources and threatened and endangered species and their habitat.	Due to the sensitive nature of this information and the wide distribution of the EA, the FERC requires relevant compliance documentation associated with cultural resources and threatened and endangered	No change required.

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
			species and their habitat to be filed as "Privileged and Confidential". A request can be made by the NNEPA for copies of this information and in all likelihood it will be provided.	
NNEPA Stephen B. Etsitty	02/09/04	Although the DEA indicates that blasting activities are not anticipated in conjunction with the project, if consolidated soil is encountered during development, blasting may occur. Further, while the DEA indicates that if blasting is required and residents will be provided prior notification, Transwestern is advised to exercise caution in planning any blasting activities that may interfere with traditional ceremonies that occur within certain seasons and at differing times of the day. Cultural considerations in this particular regard are strongly encouraged.	Insert: "In addition to notification, these contacts would also attempt to gather information related to traditional cultural ceremonies, potential time-of-day restrictions, and other information that could minimize the impacts of any potential blasting on local residents."	Section 2.1.3
NNEPA Stephen B. Etsitty	02/09/04	Provide indication that the draft SWPPP will be provided to the NNEPA for review and comment prior to finalization.	Insert: "Review SWPPP prior to submittal of NOI to use General Construction Permit"	Table 1.7-1
NNEPA Stephen B. Etsitty	02/09/04	Will future maps used to convey the proposed route, compressor stations, etc., provide delineation of land status(es)?	Transwestern has filed with its application more detailed construction alignment drawings, which can be reviewed at local libraries. Transwestern would file updated project alignment drawings prior to construction identifying the proposed route, affected landowners and/or land managers, environmental data and engineering data.:	No change required
NNEPA Stephen B. Etsitty	02/09/04	While not required as an essential EA component, is Transwestern in possession of a status report that describes corrective actions undertaken at the Thoreau compressor station that addressed PCB contamination? And, will rewheeling at the existing compressor unit and modification of station piping be impacted by, or vice versa, by the PCB corrective action project?	Insert: "The removal of any piping or equipment required for the tie-in to the existing Transwestern system that has been in contact with natural gas will be done in accordance with the PCB rules and regulations contained within 40 CFR Part 761, as revised (CFR: June 29, 1998, volume 63, No. 124)."	Section 2.5.6
Janet and John Rees	January 9, 2004	Installation of new and replacement motors at the existing compressor stations would increase the emissions of ozone precursors and other air pollutants.	TW proposes to install electric motors at the Bloomfield, Bisti, and Gallup Compressor Stations. These electric motors would not emit ozone precursors or other air pollutants.	Revised section 2.7.1 of the EA.
Janet and John Rees	January 9, 2004	Concerned about the safety of adding a 36-inch-diameter pipeline close to the residential area of Bloomfield.	Transwestern does not propose to add any pipeline facilities near the residential areas in Bloomfield. Further, all facilities would be installed, operated, and maintained in accordance with the DOT Minimal Federal Safety Standards in 49 CFR Part 192.	No change required.

Commenter	Comment Date	Comment/Issue	Resolution	EA Section Where Addressed
Janet and John Rees	January 9, 2004	Concerned about additional noise at the Blanco Hub resulting from installation of a new 10,000 HP compressor unit. Suggest that additional noise be controlled through the use of Best Available Control Technology.	Transwestern proposes to install a new 15,000 HP electric motor-driven compressor in a new noise-insulated building at the Bloomfield Compressor Station. The noise modeling study for this new unit indicates that noise levels at the nearest residence during operation would be an Ldn of 50.3 dBA, below the FERC's limit of 55 dBA.	No change required. See section 2.7.2 of the EA.
Department of Health and Human Services Paul Joe	January 20, 2004	The agency has no project-specific comments at this time, but suggests that nine topics (air quality, water quality/quantity, wetlands and floodplains, hazardous materials/wastes, non-hazardous materials/other materials, noise, occupational health and safety, land use and housing, and environmental justice) be addressed in the EA if appropriate.	The EA addresses all of the appropriate environmental issues required by NEPA.	No change required.

Transwestern Pipeline Company
1331 Lamar Street Suite 650
Houston, TX 77010-1331

P.O. Box 4657
Houston, TX 77210-4657

713-853-0300

April 19, 2004

Martyne Kieling
NM Oil Conservation Division
1220 So. St. Francis Drive
Santa Fe, NM 87505

Dear Martyne Kieling:

On April 8, 2004, Transwestern Pipeline Company (Transwestern) filed an application with the Federal Energy Regulatory Commission (FERC) for a Certificate of Public Convenience and Necessity to construct an expansion to our existing interstate pipeline system. In the application, we are requesting authority to construct approximately 72.6 miles of pipeline and 20,000 horsepower of facilities all within San Juan and McKinley Counties, New Mexico. We have requested the FERC approval of our project by August 1, 2004 in order to commence construction by October 1, 2004 and place the facilities in service by June 1, 2005. The filing has been designated as Docket No. CP04-104-000.

Pursuant to the FERC regulations, we are required to perform the following:

> *The applicant shall make a good faith effort to notify all towns, communities, and local, state and federal governments and agencies that may be involved in the project.*

Many of you have previously been notified about the project. However, some of you may are hearing about our San Juan 2005 Expansion Project for the first time by means of this letter.

Attached are three pieces of information that I hope you'll find useful. The first is a map of the proposed facility additions. The second item is a copy of the Notice Of Application issued by the FERC. The Notice of Application provides a description of the application and states when motions to intervene are due together with the FERC's information sheet on how to intervene in the proceeding.

I have also attached a list of libraries and chapter houses in your area where a copy of our FERC application is available for viewing. The application may also be obtained through the FERC's

website, www.ferc.gov , using the "eLibrary" link and the project docket number identified above. User assistance for the FERC website is available at FERC Online Support at ferconlinesupport@ferc.gov or toll free at (866) 208-3676.

We look forward to working with many of you on this project, and if you have any questions or concerns in regard to our San Juan 2005 Expansion Project, please contact Jason Hill, Right-of-Way Specialist, toll free at (866) 634-0554.

Sincerely,

Stephen Veatch

Senior Director
Certificates and Regulatory Reporting

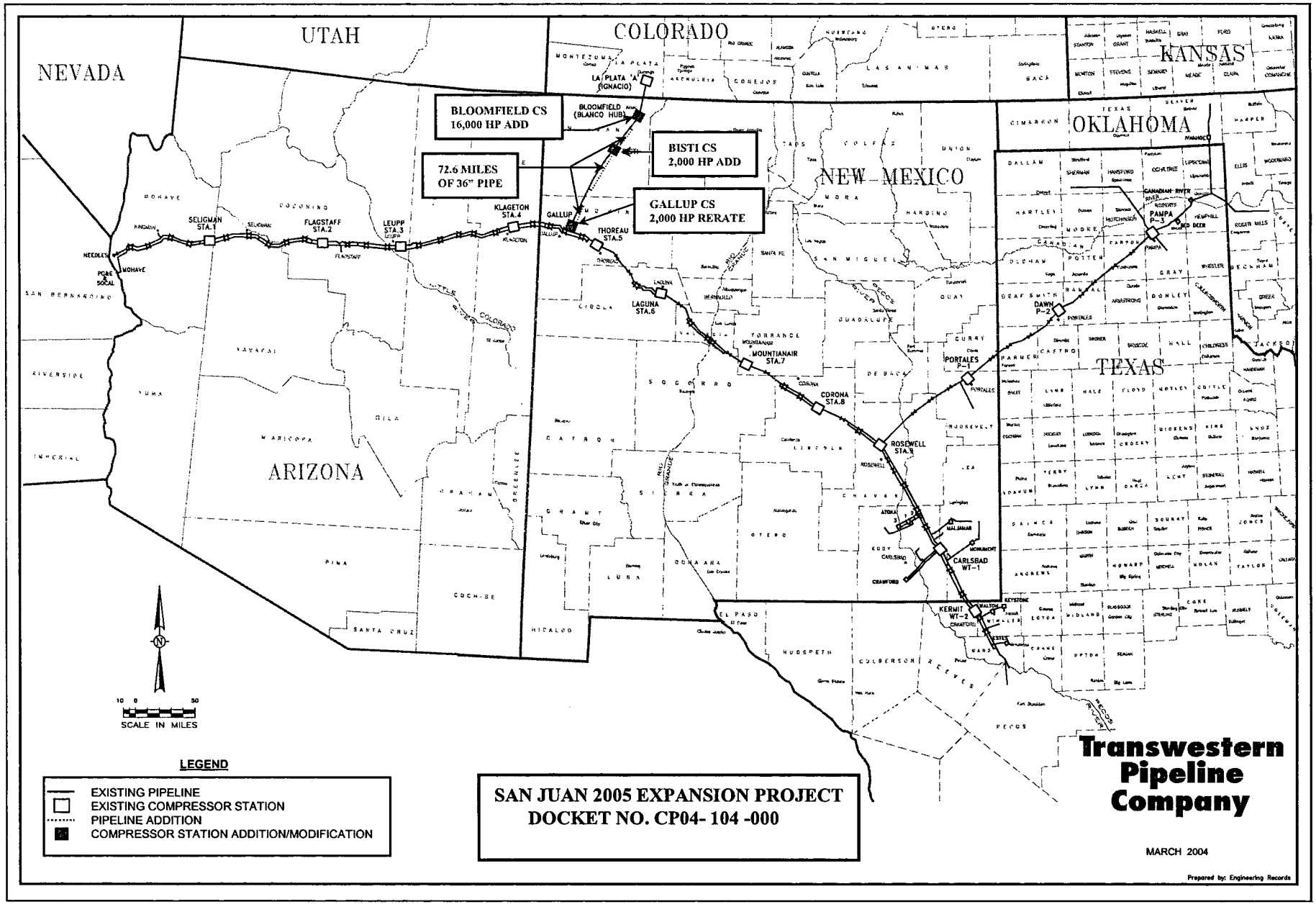
Enclosures (3)

SANJUAN2005AgencyLtr

TRANSWESTERN PIPELINE COMPANY

SAN JUAN 2005 EXPANSION PROJECT

SYSTEM MAP


NEVADA
UTAH
COLORADO
KANSAS
OKLAHOMA
NEW MEXICO
TEXAS
ARIZONA
BLOOMFIELD CS
16,000 HP ADD
72.6 MILES
OF 36" PIPE
BISTI CS
2,000 HP ADD
GALLUP CS
2,000 HP RERATE
LA PLATA 'A' (IGNACIO)
BLOOMFIELD (BLANCO HUB)
GALLUP
KLAGETON STA.4
THOREAU STA.5
LAGUNA STA.6
MOUNTAINAIR STA.7
CORONA STA.8
ROSWELL STA.9
CARLSBAD WT-1
KERMIT WT-2
SELIGMAN STA.1
FLAGSTAFF STA.2
LEUPP STA.3
NEEDLES
MOHAVE
PG&E
SOCAL
DAWN P-2
PORTALES P-1
PAMPA P-3
ATOKA
MALJAMAR
CRAWFORD
WALTON
SCALE IN MILES
LEGEND
EXISTING PIPELINE
EXISTING COMPRESSOR STATION
PIPELINE ADDITION
COMPRESSOR STATION ADDITION/MODIFICATION
SAN JUAN 2005 EXPANSION PROJECT
DOCKET NO. CP04- 104 -000
Transwestern Pipeline Company
MARCH 2004
Prepared by: Engineering Records

TRANSWESTERN PIPELINE COMPANY

SAN JUAN 2005 EXPANSION PROJECT

FERC NOTICE OF APPLICATION

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Transwestern Pipeline Company Docket No. CP04-104-000

NOTICE OF APPLICATION

(April 15, 2004)

Take notice that Transwestern Pipeline Company (Transwestern), **1331 Lamar Street Houston, TX 77010, filed in Docket No. CP04-104-000 on April 8, 2004,** an application pursuant to Sections 7(b) and 7(c) of the Natural Gas Act (NGA), to abandon and construct and operate pipeline and compression facilities (adding 72.6 miles of 36-inch diameter pipeline and 20,000 horsepower of compression) on Transwestern's San Juan Lateral in New Mexico in order to expand system capacity by 375,000 Dekatherms per day in order to alleviate supply and transportation constraints, all as more fully set forth in the application which is on file with the Commission and open to public inspection. This filing may be also viewed on the web at http://www.ferc.gov using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, call (202) 502-8659 or TTY, (202) 208-3676.

Any questions regarding this application should be directed to Stephen T. Veatch, Senior Director, Certificates and Regulatory Reporting, at (713) 853-6549.

There are two ways to become involved in the Commission's review of this project. First, any person wishing to obtain legal status by becoming a party to the proceedings for this project should, on or before the comment date stated below, file with the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, D.C. 20426, a motion to intervene in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.214 or 385.211) and the Regulations under the NGA (18 CFR 157.10). A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies of all documents filed by the applicant and by all other parties. A party must submit 14 copies of filings made with the Commission and must mail a copy to the applicant and to every other party in the proceeding. Only parties to the proceeding can ask for court review of Commission orders in the proceeding.

However, a person does not have to intervene in order to have comments considered. The second way to participate is by filing with the Secretary of the Commission, as soon as possible, an original and two copies of comments in support of

or in opposition to this project. The Commission will consider these comments in determining the appropriate action to be taken, but the filing of a comment alone will not serve to make the filer a party to the proceeding. The Commission's rules require that persons filing comments in opposition to the project provide copies of their protests only to the party or parties directly involved in the protest.

Persons who wish to comment only on the environmental review of this project should submit an original and two copies of their comments to the Secretary of the Commission. Environmental commenters will be placed on the Commission's environmental mailing list, will receive copies of the environmental documents, and will be notified of meetings associated with the Commission's environmental review process. Environmental commenters will not be required to serve copies of filed documents on all other parties. However, the non-party commenters will not receive copies of all documents filed by other parties or issued by the Commission (except for the mailing of environmental documents issued by the Commission) and will not have the right to seek court review of the Commission's final order.

Comments, protests and interventions may be filed electronically via the Internet in lieu of paper. See, 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site under the "e-Filing" link.

Comment Date: May 6, 2004

Magalie R. Salas
Secretary

Note: The information in bold above has been modified to reflect the correct address, docket number and date of filing.

TRANSWESTERN PIPELINE COMPANY

SAN JUAN 2005 EXPANSION PROJECT

LIBRARY AND CHAPTER HOUSE LOCATIONS

Transwestern Pipeline Company
List of Library Locations and Chapter Houses

Libraries

City of Farmington Public Library
2101 Farmington Avenue
Farmington, NM 87401

Navajo Nation Library
Highway 64 Loop Road
Window Rock, AZ 86515

Dine College – Crownpoint Library
Junction 371 and Navajo 9
Crownpoint, NM 87313

Gallup Public Library
111 W. Hill Avenue
Gallup, NM 87301

Chapter Houses

Burnham Chapter House
Church Rock Chapter House
Coyote Canyon Chapter House
Crownpoint Chapter House
Huerfano Chapter House
Nahodishgish Chapter House
Pinedale Chapter House
Standing Rock Chapter House
Tohatchi Chapter House
White Rock Chapter House

Transwestern Pipeline Company
660-A East Broadway, Suite 2
Bloomfield, NM 87413
505.634.0603

October 18, 2003

Dear Community Member:

We want to let you know about a project to expand Transwestern Pipeline's existing natural gas system. The proposed project, called the San Juan Pipeline 2005 Expansion, will add new pipeline capacity, parallel to our existing system, beginning at the Blanco Hub located near Bloomfield, New Mexico and run south to Transwestern's mainline at Gallup, New Mexico. Other system modifications will be made between Thoreau and Roswell, New Mexico.

As you may know, Transwestern owns and operates a 2,600-mile interstate natural gas transmission system, which runs between West Texas, Oklahoma, New Mexico, and Arizona. The system provides natural gas transportation services for electric generators, industrial users, and local distribution companies. Transwestern has been operating in New Mexico since 1960 and the San Juan area since the early 90's.

Most of America's new energy needs are fueled by clean burning natural gas. Energy producers have tapped new gas reserves in the Rockies and San Juan Basin to feed this demand. Because the existing pipelines are full, new pipeline infrastructure is required to transport this additional gas to market. Our proposed expansion will help bring natural gas where it is needed.

To learn more about Transwestern's proposed San Juan Pipeline 2005 Expansion please join us for one of the four community meetings listed below:

Monday, Nov. 3, 2003
6:00p.m. - 8:00p.m.
Ancient Cities Restaurant
513 West Highway 60
Mountainair, New Mexico

Tuesday, Nov. 4, 2003
6:00p.m. - 8:00p.m
Bloomfield Multicultural Center
333 S. 1st Street
Bloomfield, New Mexico

Wednesday, Nov. 5, 2003
6:00p.m. - 8:00p.m
Gallup Community Center
410 Bataan Veterans Drive
Gallup, New Mexico

Thursday, Nov. 6, 2003
2:00p.m. – 4:00p.m.
Crown Point Chapter House
Crown Point, New Mexico

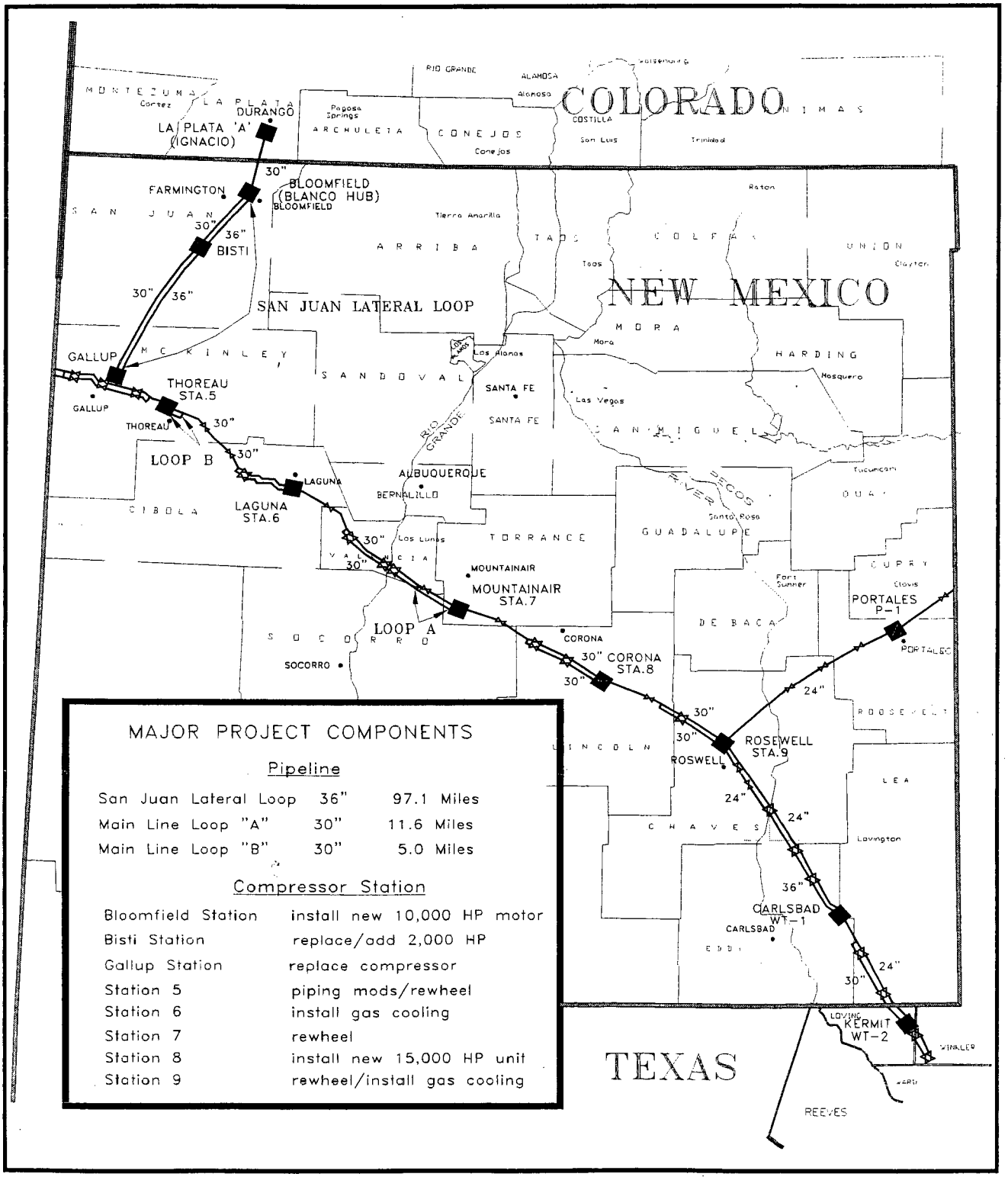
We look forward to keeping you informed and working with you on this project. If you are unable to attend one of these meetings, please contact us at 505.634.0603 with questions or visit our website http://www.crosscountryenergy.com/about/tw.shtml.

Sincerely,

Paulette U. Trepl

Paulette U. Trepl
Director, Right-of-Way

Tranwestern Pipeline Company
San Juan 2005 Expansion Project
Project Overview Map



MAJOR PROJECT COMPONENTS

Pipeline

San Juan Lateral Loop	36"	97.1 Miles
Main Line Loop "A"	30"	11.6 Miles
Main Line Loop "B"	30"	5.0 Miles

Compressor Station

Bloomfield Station	install new 10,000 HP motor
Bisti Station	replace/add 2,000 HP
Gallup Station	replace compressor
Station 5	piping mods/rewheel
Station 6	install gas cooling
Station 7	rewheel
Station 8	install new 15,000 HP unit
Station 9	rewheel/install gas cooling

FEDERAL ENERGY REGULATORY COMMISSION

ROUTING CODE PJ11-2

WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

FIRST CLASS

Martyne Kieling
NM Oil Conservation Division
1220 South St. St. Francis
Santa Fe, NM
87505

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Transwestern Pipeline Company — Docket No. PF03-8-000

NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL ASSESSMENT FOR TRANSWESTERN'S PROPOSED **SAN JUAN 2005 EXPANSION PROJECT** AND REQUEST FOR COMMENTS ON ENVIRONMENTAL ISSUES

(December 24, 2003)

The staff of the Federal Energy Regulatory Commission (FERC or Commission) will prepare an environmental assessment (EA) that will discuss the environmental impacts of Transwestern Pipeline Company's (Transwestern) proposed San Juan 2005 Expansion Project in New Mexico. This notice announces the opening of the scoping process we[1] will use to gather input from the public and interested agencies on the project. Your input will help us determine which issues need to be evaluated in the EA. The Commission will use the EA in its decision-making process to determine whether or not to authorize the project. Please note that the **scoping period will close on January 26, 2004**.

The San Juan 2005 Expansion Project is in the preliminary design stage. At this time no formal application has been filed with the FERC. For this project, the FERC staff is initiating its National Environmental Policy Act (NEPA) review prior to receiving the application. The purpose of the NEPA Pre-filing Process is to involve interested stakeholders early in project planning and to identify and resolve issues before an application is filed with the FERC. A docket number (PF03-8-000) has been established to place information filed by Transwestern and related documents issued by the Commission, into the public record.[2] Once a formal application is filed with the FERC, a new docket number will be established.

On November 3-6, 2003, the FERC staff held interagency meetings in Albuquerque, Bloomfield, and Gallup, New Mexico to discuss the project and the environmental review process with Transwestern and other key Federal, tribal, and state agencies. These agencies included: Navajo Nation Environmental Protection Agency, Navajo Nation Department of Fish and Wildlife, Navajo Nation Historic Preservation Office, U.S. Bureau of Land Management; Bureau of Indian Affairs, State of New Mexico Environment Department, and the New Mexico State Lands Office. Currently, all agencies above have expressed their intention to participate as cooperating agencies in the preparation of the EA.

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[1] "We," "us," and "our" refer to the environmental staffs of the FERC's Office of Energy Projects.

[2] To view information in the docket, follow the instructions for using the eLibrary link at the end of this notice.

This notice is being sent to landowners; Federal, state, Navajo Nation, and local government agencies; elected officials; environmental and public interest groups; Native American tribes; and local libraries and newspapers. We encourage government representatives to notify their constituents of this planned project and encourage them to comment on their areas of concern.

Some affected landowners may be contacted by a project representative about the acquisition of an easement to construct, operate, and maintain the proposed facilities. If they are, the company would seek to negotiate a mutually acceptable agreement. However, in the event that the project is certificated by the Commission, that approval conveys the right of eminent domain for securing easements for the pipeline. Therefore, if easement negotiations fail to produce an agreement, the company could initiate condemnation proceedings in accordance with state law.

Summary of the Proposed Project

Transwestern proposes to expand its natural gas system by the construction of approximately 72.6 miles of pipeline loop[3] (the San Juan Lateral Loop) and modifying facilities at seven existing compressor stations in New Mexico. More specifically, Transwestern requests Commission authorization to:

- Construct and operate approximately 63.2 miles of 36-inch diameter pipeline loop starting at approximate milepost (MP) 8.7 on the existing Transwestern San Juan Lateral, in San Juan County, New Mexico, extending south-southwest to the existing mainline valve (MLV) south of Navajo Highway 9 at about MP 71.9;

- Construct and operate an additional approximately 9.4 miles of 36-inch diameter pipeline loop starting at the existing MLV just south of Pinedale Road in McKinley County, New Mexico (about MP 87.7), and extending south-southwest to terminate at the existing Transwestern Gallup Compressor Station in McKinley County, New Mexico. The Gallup Compressor Station is located at approximate MP 97.1 of the existing San Juan Lateral;

- Bloomfield Compressor Station - Install and operate one, new 15,000 horsepower (HP) electric-drive compressor unit and associated facilities at its existing station, located in San Juan County, New Mexico;

- Bisti Compressor Station - Remove an existing 10,000 HP electric-drive compressor unit and replace it with a new 15,000 HP electric drive compressor

[3]A pipeline "loop" is a segment of pipe installed adjacent to an existing pipeline and connected to the existing pipeline at both ends. A loop increases the amount of gas that can move through that portion of the system.

unit (de-rated to run at 12,000 HP) at its existing station, located in San Juan County, New Mexico;

- Gallup Compressor Station - Remove an existing compressor unit (compressor only, not the motor) and replace it with a new compressor unit at its existing station in McKinley County, New Mexico;

- Compressor Station 5 - Rewheel an existing compressor unit and modify station piping at its existing station located near Thoreau, McKinley County, New Mexico;

- Compressor Station 6 - Install cylinder unloaders on an existing compressor unit at its existing station located near Laguna, Cibola County, New Mexico;

- Compressor Station 7 - Rewheel an existing compressor unit at its existing station located near Mountainair, Torrance County, New Mexico;

- Compressor Station 9 - Rewheel an existing compressor unit and install a new gas scrubber and associated station piping at its existing station located near Roswell, Chaves County, New Mexico;

- Install side valves at new tie-in locations and MLVs at various locations as required by U.S. Department of Transportation regulations.

A map depicting the proposed pipeline route and compressor stations is provided in appendix 1.[4]

Transwestern proposes to place the project in service by June 2005. To achieve this in-service date, Transwestern intends to request approval to begin construction of the pipeline facilities in July 2004.

Land Requirements

Construction of the proposed facilities would require about 1,082.1 acres of land. The construction right-of-way width for the pipeline would be 110 feet, and would be adjacent to existing rights-of-way for its entire length (25 feet overlap of the existing right-of-way and 85 feet new construction right-of-way). Transwestern would maintain approximately 220.1 acres of

[4]The appendices referenced in this notice are not being printed in the Federal Register. Copies are available on the Commission's Internet website (http://www.ferc.gov) at the "eLibrary" link or from the Commission's Public Reference and Files Maintenance Branch at 202.502.8371. For instructions on connecting to eLibrary, refer to the end of this notice. Copies of the appendices were sent to all those receiving this notice in the mail.

new permanent right-of-way (50 feet of permanent easement, of which 25 feet would be overlap of the existing right-of-way) for pipeline operation and maintenance following construction.

The EA Process

NEPA requires the Commission to take into account the environmental impacts that could result from an action whenever it considers the issuance of a Certificate of Public Convenience and Necessity. NEPA also requires us to discover and address issues and concerns the public may have about proposals. This process is referred to as "scoping". The main goal of the scoping process is to focus the analysis in the EA on the important environmental issues and reasonable alternatives. By this notice, we are requesting agency and public comments on the scope of the issues to be analyzed and presented in the EA. All scoping comments received will be considered during the preparation of the EA. To ensure your comments are considered, please carefully follow the instructions in the public participation section of this notice. The FERC will be the lead Federal agency in the preparation of the EA. The document will satisfy the requirements of NEPA.

Our independent analysis of the issues will be included in an EA. The EA will be mailed to Federal, Navajo Nation, state, and local government agencies; elected officials; environmental and public interest groups; Native American tribes; affected landowners; other interested parties; local libraries and newspapers; and the Commission's official service list for this proceeding. A 30-day comment period will be allotted for review of the EA. We will consider all comments on the EA and revise the document, before we make our recommendations to the Commission.

Public Participation

You can make a difference by providing us with your specific comments or concerns about the project. You should focus on the potential environmental effects of the proposal, reasonable alternatives routes to the proposal, and measures to avoid or lessen environmental impact. The more specific your comments, the more useful they will be. By becoming a commentor, your concerns will be addressed in the EA and considered by the Commission. To ensure that your comments are timely and properly recorded, please mail your comments so that they will be received in Washington, DC on or before **January 19, 2004,** and carefully follow these instructions:

- Send **an original and two** copies of your letter to:

  Magalie R. Salas, Secretary
  Federal Energy Regulatory Commission
  888 First St., N.E., Room 1A
  Washington, DC 20426;

- Label one copy of your comments for the attention of Gas Branch 2; and

- Reference Docket No. PF03-8-000 on the original and both copies.

Please note that we are continuing to experience delays in mail deliveries from the U.S. Postal Service. **Therefore, the Commission encourages electronic filing of comments.**

See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Internet website at http://www.ferc.gov under the "e-Filing" link and the link to the User's Guide. Prepare your submission in the same manner as you would if filing on paper and save it to a file on your hard drive. Before you can file comments you will need to create an free account by clicking on "Login to File" and then "New User Account." You will be asked to select the type of filing you are making. This filing is considered a "Comment on Filing."

Availability of Additional Information

Additional information about the project is available from the Commission's Office of External Affairs, at **1-866-208-FERC** or on the FERC Internet website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on "General Search" and enter the docket number excluding the last three digits in the Docket Number field. Be sure you have selected an appropriate date range. For assistance with eLibrary, the eLibrary helpline can be reached at 1-866-208-3676, TTY (202) 502-8659, or at FERCONLINESUPPORT@FERC.GOV. The eLibrary link on the FERC Internet website also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission now offers a free service called eSubscription which allows you too keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries and direct links to the documents. Go to www.ferc.gov/esubscribenow.htm.

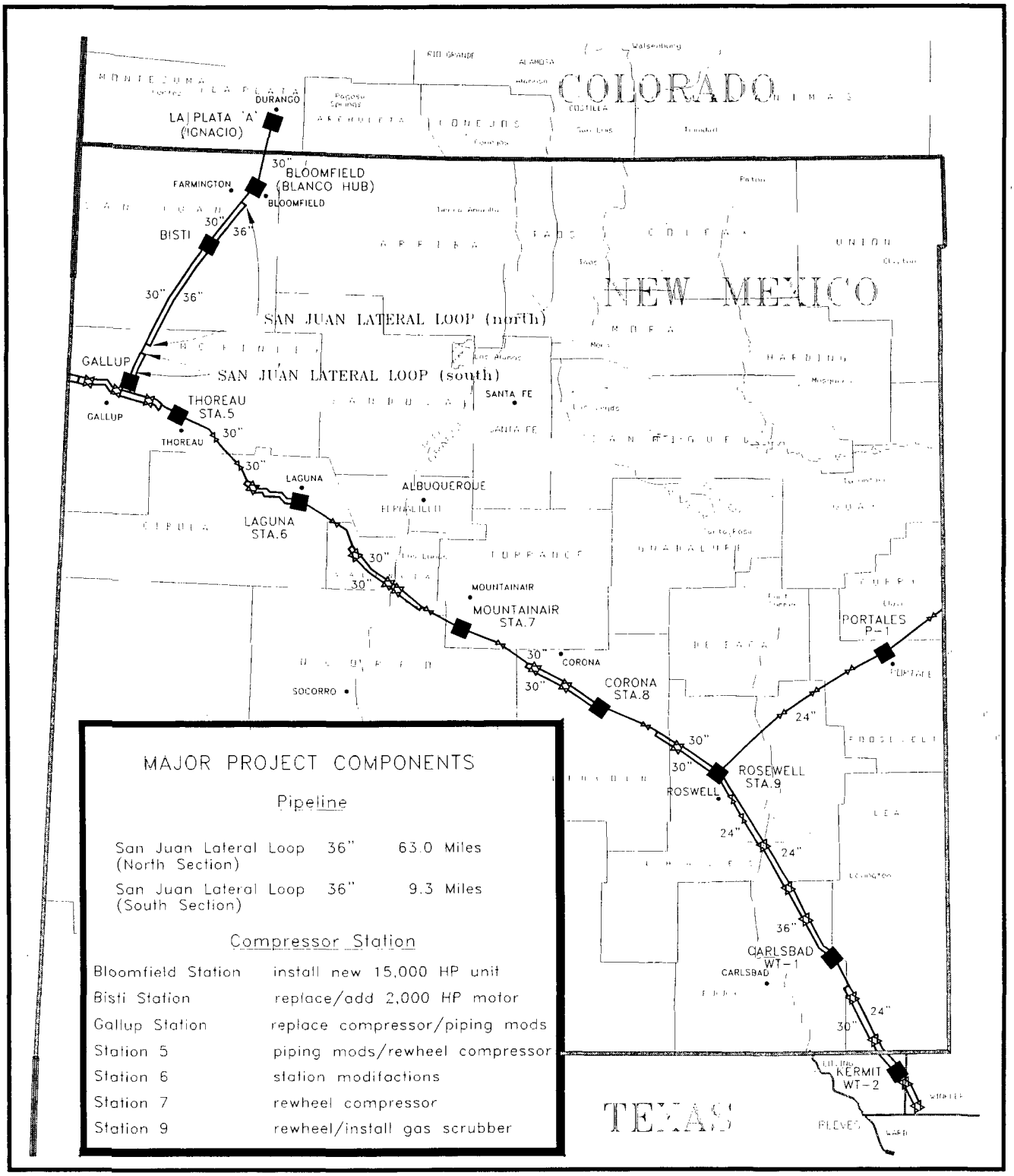
A fact sheet prepared by the FERC entitled "An Interstate Natural Gas Facility On My Land? What Do I Need To Know?" is available for viewing on the FERC Internet website (http://www.ferc.gov). This fact sheet addresses a number of typically asked questions, including the use of eminent domain and how to participate in the Commission's proceedings.

Finally, Transwestern has established an Internet website for this project at http://www.crosscountryenergy.com/about/tw.shtml. The website includes helpful information about the project.

Magalie R. Salas
Secretary

Appendix 1

Tranwestern Pipeline Company
San Juan 2005 Expansion Project
Project Overview Map



MAJOR PROJECT COMPONENTS

Pipeline

San Juan Lateral Loop (North Section)	36"	63.0 Miles
San Juan Lateral Loop (South Section)	36"	9.3 Miles

Compressor Station

Bloomfield Station	install new 15,000 HP unit
Bisti Station	replace/add 2,000 HP motor
Gallup Station	replace compressor/piping mods
Station 5	piping mods/rewheel compressor
Station 6	station modifactions
Station 7	rewheel compressor
Station 9	rewheel/install gas scrubber

Appendix 2

INFORMATION REQUEST

Docket No. PF03-8-000

Please keep my name on the mailing list for the San Juan 2005 Expansion Project

Name_____

Agency_____

Address_____

City_____**State**_____**Zip Code**_____

[ ] Please provide detailed maps for the facilities closest to the following area(s):

[ ]My mailing address.
[ ]My property.

(Requests for more than a single map location may be expedited by asking the company directly.)

(Be as specific as you can about the location(s) of your area(s) of interest. Please include any information that would help us accurately locate these area(s). For example: county, town, cross-streets, or landmarks.)

FROM_____

_____

_____

_____

ATTN: OEP - Gas 2, PJ - 11.2
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Docket No. PF03-8-000

Staple or Tape Here

Enron Transportation & Storage
Services Provided by Northern Natural Gas Company and Transwestern Pipeline Company
6381 North Main Street
Roswell, NM 88201
(505) 623-2761
Fax (505) 625-8060

November 4, 1999

Mr. Roger Anderson
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87504

Re: Renewal of the Hydrostatic Discharge Permit (HBP NM-001)

Dear Mr. Anderson:

Transwestern Pipeline Company (Transwestern), requests from the Oil Conservation Division (OCD), renewal of its hydrostatic test water discharge permit. This request has been submitted to your office as per Section 1-201 of the New Mexico Water Quality Control Commission Regulations. Transwestern received from the OCD on February 6, 1995 a five year authorization to discharge hydrostatic waters subject to conditions specified in that letter authorization which expires on December 8, 1999.

This permit renewal request applies to discharges of new water into new pipe which is to be used in the pressure testing of gathering and mainline pipe and ancillary appurtenances directly attached to the pipe.

Should your agency require additional information concerning this request, contact the undersigned at our Roswell Technical Operations office at (505) 625-8022.

Thank you for your time and consideration in this matter.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

xc: Butch Russell
file

Phone (505) 623-2761
FAX (505) 625-8060

Transwestern Pipeline Company
TECHNICAL OPERATIONS
P. O. Box 1717 • Roswell, New Mexico 88202-1717

December 8, 1994

Mr. Roger Anderson
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87504

Re: Renewal of the Hydrostatic Discharge Permit

Dear Mr. Anderson:

Transwestern Pipeline Company (Transwestern), requests from the Oil Conservation Division (OCD), renewal of the hydrostatic test water discharge permit. This request has been submitted to your office as per Section 1-201 of the New Mexico Water Quality Control Commission Regulations.

This permit request applies to discharges of water used in the pressure testing of gathering and mainline pipe and ancillary appurtenances directly attached to the pipe.

Contact our Roswell Technical Operations should you require any additional information.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

xc: Greg McIlwain
file

ENRON
Transwestern Pipeline Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 654-6161

November 28, 1988

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87504

Attn: Mr. Roger Anderson

Dear Mr. Anderson;

Transwestern Pipeline Company, and Enron Corp. subsidiary, operates a natural gas pipeline through the State of New Mexico. It is sometimes necessary to conduct hydrostatic testing on new pipe for replacement of existing sections of this pipeline system.

Transwestern would like to hereby make application for renewal of the permit issued by the Oil and Gas Conservation Commission for discharge of hydrostatic test water.

For whatever information you may need, please call me at (713) 853-7305.

Sincerely yours,

David Bays

David Bays
Environmental Affairs

cc: Mr. Bill Janacek
file

TRANSWESTERN
A SUBSIDIARY OF HOUSTON NATURAL GAS

TRANSWESTERN
PIPELINE COMPANY
P.O. Box 1188
Houston, Texas 77001
(713) 654-6161

August 1, 1985

Mr. David Boyer
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501

Dear Mr. Boyer:

Transwestern Pipeline Company would like to obtain a one year renewal of its permit to discharge hydrostatic test water from new pipelines, begining September 1, 1985. Transwestern will continue to satisfy the following permit requirements:

1. Monthly summaries of hydrostatic test water discharges shall be continued.

2. No discharges of hydrostatic test water will be made into any lake, river, stream, or their respective immediate tributaries that may be seasonal.

3. Discharges of hydrostatic test water shall be from newly constructed pipelines only.

4. Sixty (60) days advance notice will be given identifying the location of test, expected date of test, expected volume of discharge, and the water source to be used for hydrostatic testing of old pipe.

5. Only fresh water (10,000 ppm total dissolved solids or less) will be used for hydrostatic testing.

6. The Oil Conservation Division shall be notified 45 days in advance of any proposed hydrostatic test water discharges over 100,000 gallons.

Should you have any questions, please call me at (713) 654-6109.

Your very truly,

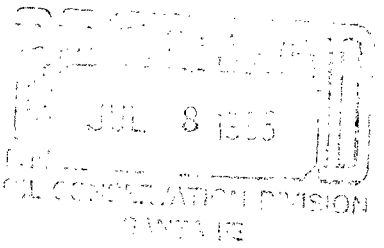
David Bays

David Bays
Manager,
Codes, Standards,
and Environment

TRANSWESTERN
A SUBSIDIARY OF HOUSTON NATURAL GAS

TRANSWESTERN
PIPELINE COMPANY
P.O. Box 1188
Houston, Texas 77001
(713) 654-6161

July 2, 1985



Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501

Dear Mr. Ramey:

As you may be aware Transwestern Pipeline Company is no longer a subsidiary of Texas Eastern Transmission Corp. Our Company was purchased by Houston Natural Gas during December 1984.

I have recently assumed the possition of Manager of Codes, Standards, and Environment for Transwestern Pipeline Co. In examining the Transwestern files transfered from our former owners, I have been unable to find any permit information concerning the dumping of hydrostatic test water in the State of New Mexico for any year more recent than 1983.

Would you please send me the information I need to re-apply for a water dumping permit so that I can bring both my records and the required filings up to date.

If you have any questions about this please call me at (713) 654-6109.

Yours very truly,

David Bays

David Bays
Manager, Codes, Standards,
and Environment

xc; Mr. C. L. Truby
file

TRANSWESTERN
Pipeline Company
A TEXAS EASTERN COMPANY

J. RICHARD STOKER
MANAGER
ENVIRONMENTAL PROTECTION DEPARTMENT
TECHNICAL SERVICES
ENGINEERING DIVISION

August 24, 1984
OUR REF: 320-84

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501

Dear Mr. Ramey:

Transwestern Pipeline Company would like to obtain a one year renewal of its permit to discharge hydrostatic test water from new pipelines beginning September 1, 1984. Transwestern will continue to satisfy the following permit conditions:

1. Monthly summaries of hydrostatic test water discharges shall be continued.

2. No discharges of hydrostatic test water will be made into any lake, river, stream or their respective immediate tributaries that may be seasonal.

3. Discharges of hydrostatic test water shall be from newly constructed pipelines only.

4. 60 days advance notice will be given identifying the location of test, expected date of the test, expected volume of discharge, and the water source to be used for hydrostatic testing of old pipe.

5. Only fresh water (10,000 ppm Total Dissolved Solids or better) shall be used for hydrostatic testing.

6. The Oil Conservation Division shall be notified 45 days in advance of any proposed hydrostatic test water discharges over 100,000 gallons.

Should you have any questions, please contact Al Garcia or myself at (713) 759-5384.

Very truly yours,

J. Richard Stoker

AMG/kp

TRANSWESTERN
Pipeline Company
A TEXAS EASTERN COMPANY

J. RICHARD STOKER
MANAGER
ENVIRONMENTAL PROTECTION
TECHNICAL SERVICES DIVISION

March 28, 1983
OUR REF: 141-83

Mr. Joe D. Ramey, Director
Oil Conservation Division
New Mexico Energy and Minerals Dept.
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

Thank you for your letter of March 9, 1983 which included the "Guidelines for Hydrostatic Test Dewatering." Transwestern would like to provide comments on the applicability and practicability of those guidelines, as well as to provide additional information on the test scheduled for McKinley County later this year.

The guidelines are not considered applicable to this test situation even though the quantity of water exceeds 100,000 gallons. Certainly there would be no involvement with organic contaminants since the pipe being tested has not been in service previously and organics would not be present. Other parameters, such as pH and temperature are not applicable due to a lack of any chemical reaction and the test being limited to ambient temperatures. The only parameter that would be of any relevance would be total solids, which sometimes results from small amounts of rust that may occur between manufacture and installation, although this is not contemplated to be significant.

The source water for the proposed test will be municipal water. Therefore, it seems inappropriate to require analysis of water that already is required to meet the standards of the Safe Drinking Water Act. Transwestern often elects to take source water samples and/or discharge water samples and have them analyzed. However, this is usually done for quality control, in-house purposes and should in no way be construed as a basis for a mandatory regulatory sampling scheme.

Some of the provisions in the dewater sampling program requirement appear to be unnecessary or impractical. A metering device for measuring dewater quantities would be unnecessary because the quantity will be known by the length of pipeline tested and verified by the quantity of water bought. Previous samples taken on similar size and length of pipeline sections using new pipe have shown very low levels of any polluting constituents. The inflexible requirement that all dewater be contained in unlined pits or ponds is inappropriate and not cost effective because of the quality and quantity of water being discharged, as well as the methods of dewater designed to avoid erosion and siltation. There should be no concern for residual water left in the pipeline because the subsequent pigging and purging operations remove all of the water. There is no need to test the impact of the water on underground waters because of the quality of the discharge and the widespread area of discharge of the water described below. The pipeline is steel and has an internal coating that is non-reactive to gas and water.

Transwestern uses one or more enviornmentally acceptable methods for discharging the water. This prevents pollution of surface and groundwater sources as well as avoids erosion and sedimentation problems. Transwestern would like to reemphasize that where new pipe is being tested with clean water, there is no likelihood that pollutants or erosion would occur.

If additional information or comments are required in assisting you with processing our permit application, feel free to contact me at (713) 759-5358 or Henry Rosenfield of this office at (713) 759-5379.

Very truly yours,

J. Richard Stoker

DEF/wp

TRANSWESTERN
Pipeline Company
A TEXAS EASTERN COMPANY

J. RICHARD STOKER
MANAGER
ENVIRONMENTAL PROTECTION
TECHNICAL SERVICES DIVISION

February 4, 1983

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

Transwestern Pipeline Company proposes to schedule a hydrostatic test of our 30-inch mainline in McKinley County, New Mexico in connection with a pipeline replacement required under DOT regulations this summer.

Transwestern Pipeline Company obtained a blanket permit from your department in September,1981 which was renewed on September 9, 1982 for one year to allow well connection and mainline tests meeting permit conditions to be conducted with only monthly reporting of the discharge. However, because the quantity of water for this test exceeds 100,000 gallons, the following information is being submitted prior to the test:

a) Discharge Information Sheet
b) 7 1/2-Minute U.S.G.S. Topographic Quad Map

We trust that you will find the information provided adequate for your review of our discharge plan. We would appreciate your early attention to this planned operation. If any questions arise, please contact David Fast at (713) 759-5321.

Very truly yours,

J. Richard Stoker

DEF/wp

Encolosures

TRANSWESTERN PIPELINE COMPANY

DISCHARGE INFORMATION SHEET

Test Location: McKinley County, near Thoreau, New Mexico

Approximate Test Date: June 15 to August 15, 1983

Water Source: Thoreau Municipal Water District

Discharge Point: Adjacent terrain with preventive measures for erosion control; not near any rivers or streams

Volume of Discharge: Approximately 112,000 gallons

Anticipated Quality of Water: No significant change from intake water since the water is clean and the pipe is new

FACTORS AFFECTING QUALITY:

The new pipeline will not have been in service before hydrostatic testing is conducted. Previous experience has shown that hydrostatic testing of new pipe does not significantly alter the quality of the water used. The new pipeline should not contain any gaseous, oily, or toxic substances, and no degradation of water quality is expected.

A #200 mesh screen will be utilized to filter the water before introduction into the pipeline. After testing for 12 hours, the water will be discharged through hay bales to filter out any possible contaminants and to control erosion as it leaves the pipeline maniforld.

TRANSWESTERN
Pipeline Company
A TEXAS EASTERN COMPANY

August 23, 1982
OUR REF: 437-82

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

Transwestern Pipeline Company would like to obtain a renewal of its permit to discharge hydrostatic test water from pipelines which expires on September 1, 1982.

When renewal is granted, please call Anita Cuevas at (713) 759-5318. If there are any questions, please advise.

Very truly yours,

Willard T. Young
Manager, Environmental Protection

AMG/jm

1-27-82

TRANSWESTERN
Pipeline Company
A TEXAS EASTERN COMPANY

January 22, 1982

Mr. Joe Ramey, Director
Energy and Mineral Department
Land Office Building
Old Santa Fe Trail
Santa Fe, NM 87501

Dear Mr. Ramey:

Transwestern Pipeline Company has filed a certificate application with the Federal Energy Regulatory Commission at Docket No. CP82-123 requesting authorization to construct pipeline and compressor facilities in the State of New Mexico. To aid in its timely review, Transwestern is submitting a copy of the application to the Energy and Mineral Department for their review.

Should you have any questions in regard to this application, please direct them to Mr. Sterling Dougherty, General Manager, Technical Services at the address below.

Yours truly,

E. H. Mowrey
Vice President

Enclosure
cc: Federal Energy Regulatory Commission
Mr. Larry Sauter - Environmental
Evaluation Branch

P.O. BOX 2521 HOUSTON, TEXAS 77001 (713) 759-3131

TEXAS EASTERN
Transmission Corporation

WILLARD T. YOUNG
MANAGER
ENVIRONMENTAL CONTROL
ENGINEERING SERVICES DIVISION

August 25, 1981
OUR REF: 463-81

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
P. O. Box 2088
Sante Fe, NM 87501

Dear Mr. Ramey:

Transwestern Pipeline Company would like to obtain a renewal of its permit to discharge hydrostatic test water from pipelines which expires on September 1, 1981.

If there are any questions, please contact Pat Shevlin at 713-759-5374.

Very truly yours,

Willard T. Young
Manager, Environmental Protection

PJS/jc

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

May 16, 1980

Texas Eastern Transmission Corporation
Box 2521
Houston, Texas 77001

Attention: Mr. Willard T. Young

Gentlemen:

Pursuant to your letter of April 18, 1980, permission is granted to discharge waters used in the hydrostatic testing of the Transwestern pipeline.

It is my understanding that only good quality (essentially fresh) waters will be utilized in the program, and very minor amounts of contaminants could be added as a result of the testing.

This permit will expire on September 1, 1981, and you are requested to report monthly on any tests taken during the preceding month.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

TEXAS EASTERN
Transmission Corporation

WILLARD T. YOUNG
MANAGER
ENVIRONMENTAL CONTROL
ENGINEERING SERVICES DIVISION

April 18, 1980

New Mexico Oil Conservation Commission
Mr. Joe D. Ramey
P. O. Box 2088
Santa Fe, NM 87501

Dear Mr. Ramey:

Transwestern Pipeline Company, a subsidiary of Texas Eastern Transmission Corporation, with its principal office located at 1221 McKinney, Houston, Texas owns and operates approximately 3,560 miles of interstate natural gas transmission pipelines extending from Texas, Kansas, and Oklahoma to the California-Arizona border. As a result of our efforts to fully comply with the regulations of the United States Department of Transportation (DOT), we are maintaining a constant on-going evaluation of the demographic changes occurring along our right-of-ways. Due to this evaluation process and our program for surveillance of the physical condition of our pipelines, various sections of our pipeline system periodically are subject to replacement or retesting. The vast majority of the replacements or retestings occur during our annual spring, summer, and fall construction programs. In addition, the construction of lateral pipelines connecting new gas wells to our interstate natural gas transmission pipelines is a recurring activity. Usually these lines are four to eight inches in diameter and vary in length from a fraction of a mile to six or more miles depending upon the location of the well with respect to the pipeline. Other activity results from replacements necessitated by damage from third parties, or Acts of God, and retests that are generally made necessary due to unexpected corrosion. This less numerous group, as may be inferred from their causes, may occur at any time and place along our right-of-ways.

Part of the DOT required procedures for putting these lines into service includes hydrostatically testing to confirm their integrity. The following procedures are normally adhered to during the hydrostatic testing activities:

(1) Only good quality water is utilized for the test of our pipelines from such sources as:

(a) farm ponds

(b) streams and rivers

(c) municipal drinking water systems

(d) industrial or commercial water systems.

(2) The pipe is of two categories:

(a) new pipe that has never been in service, and

(b) existing pipe that has recently been cleaned internally by the passage of pipeline "pigs" to remove accumulations of rust, scale water, and condensate.

(3) Before introduction into the pipe, the water from ponds, streams or rivers, is filtered through a screen (#200 mesh or smaller) to remove any suspended solid material.

(4) The water is usually held under high pressure in the pipeline test section for twenty-four (24) hours.

(5) The water is displaced from the line by the passage of pipeline "pigs" and discharged through haybales to control erosion and capture any unexpected contaminants in the water.

Based on past experience, little or no degradation of surface water occurred as a result of our activities. The procedure of hydrostatically testing natural gas transmission lines has proven rather innocuous to the environment. Actually hydrostatic testing is a fundamental responsibility for pipeline systems and an important quality control tool in achieving the existing outstanding safety records.

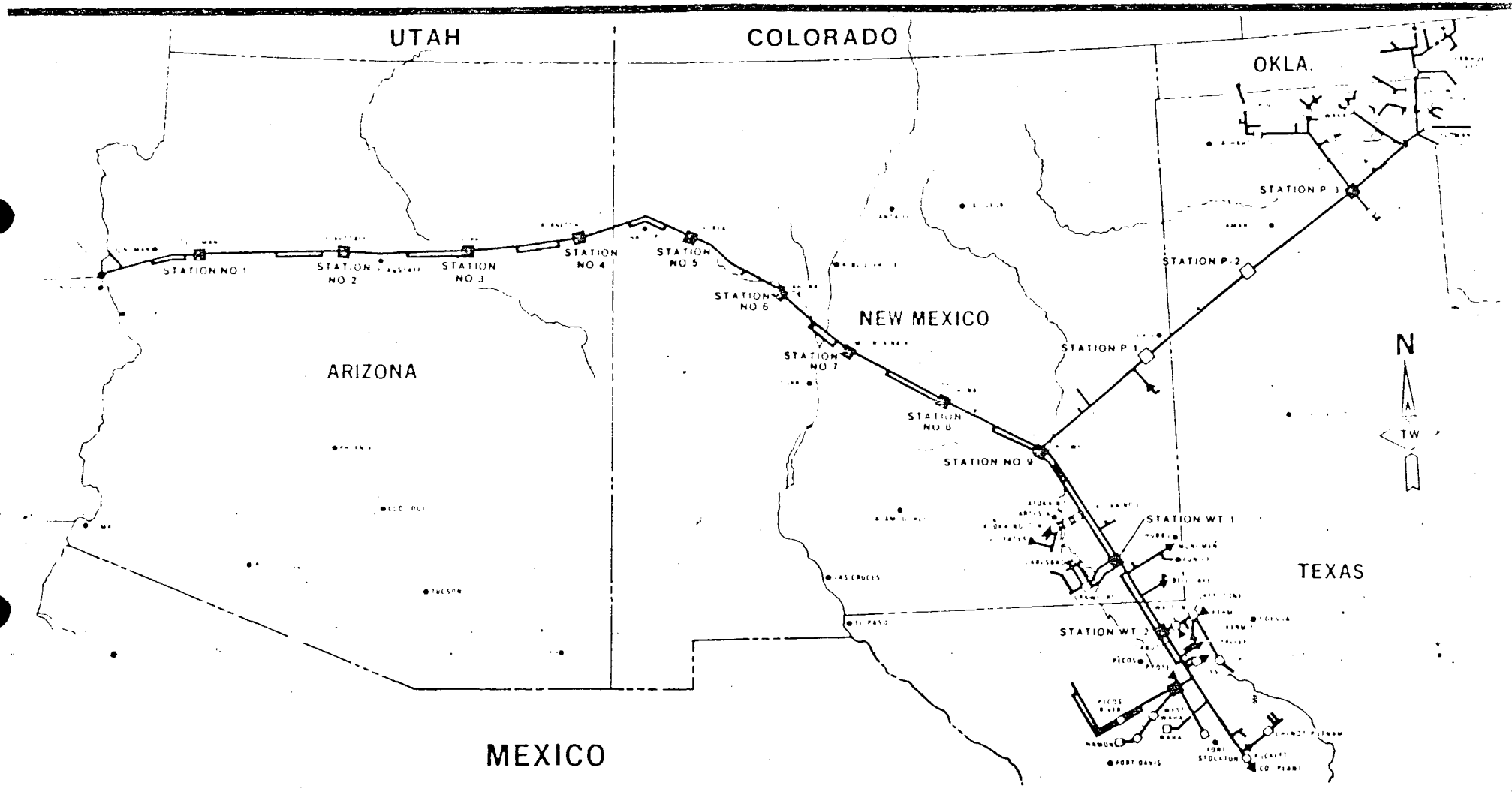
As a result of our past record and experience, we feel a blanket permit of at least one year's duration should be issued for hydrostatic test water discharge(s). From our experience we believe the blanket permit would be beneficial to the State, to the energy consuming public, and to Transwestern Pipeline Company. To assist in your evaluation please find attached a map of the appropriate portion of our natural gas transmission system. Also included for your information are examples of previously acquired blanket discharge permits. By issuing a blanket permit for the vital and repetitive discharges of hydrostatic test water, the efficiency of both the State and Transwestern Pipeline Company is improved, while the environment is given adequate protection. We trust that you will agree with our position and issue a blanket permit for the discharge of hydrostatic test water at unspecified locations along our pipeline system in the State of New Mexico.

If you have any questions concerning this matter, please contact me at your earliest convenience.

Very truly yours,

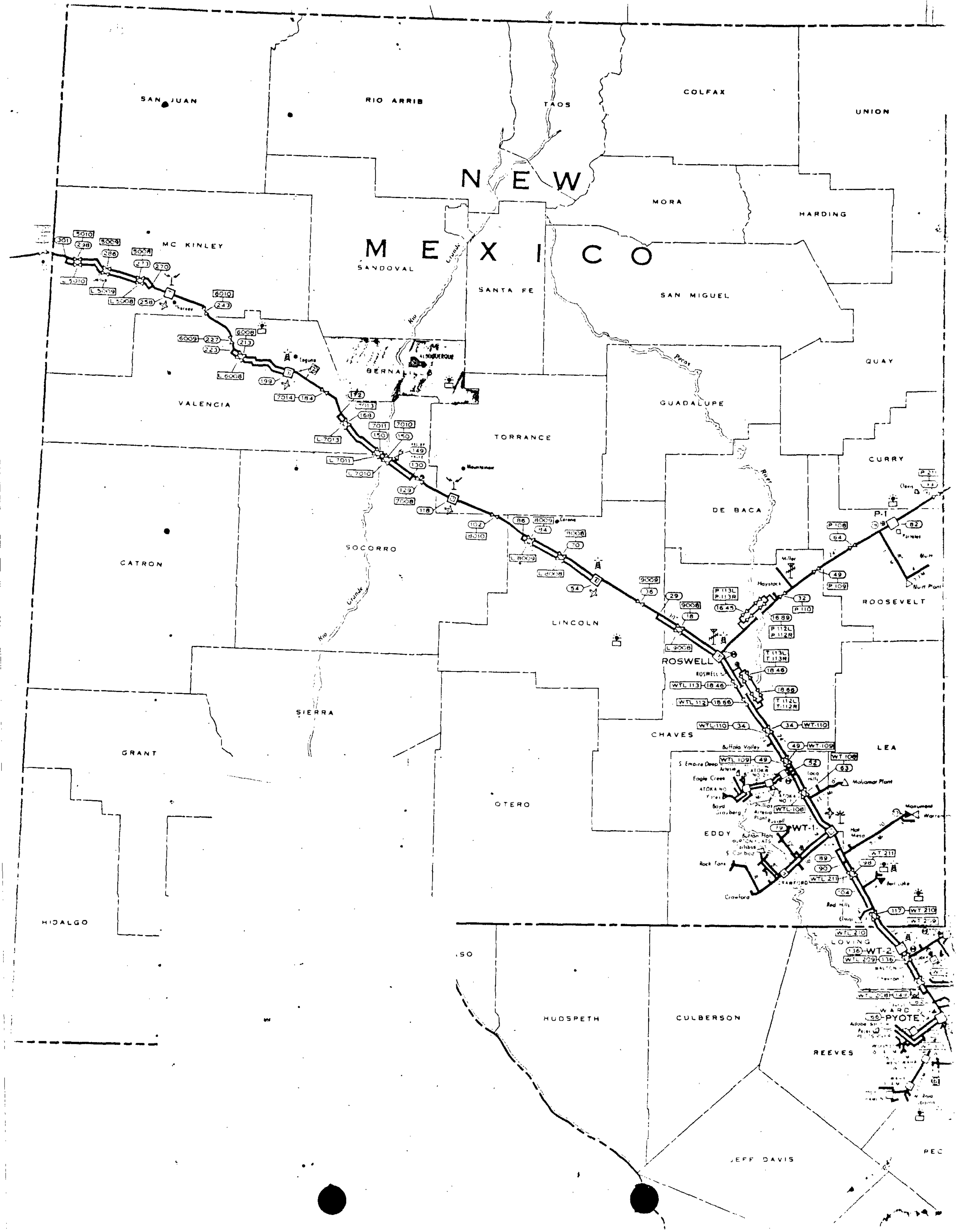
Willard T. Young

PS:wp



TRANSWESTERN PIPELINE COMPANY
SYSTEM MAP

APRIL


NEW MEXICO
SAN JUAN
RIO ARRIB
TAOS
COLFAX
UNION
MC KINLEY
SANDOVAL
SANTA FE
MORA
HARDING
SAN MIGUEL
QUAY
VALENCIA
BERNALILLO
ALBUQUERQUE
GUADALUPE
TORRANCE
CURRY
CATRON
SOCORRO
DE BACA
ROOSEVELT
LINCOLN
ROSWELL
CHAVES
LEA
SIERRA
GRANT
OTERO
EDDY
HIDALGO
LOVING
WARD
PYOTE
HUDSPETH
CULBERSON
REEVES
JEFF DAVIS
P-1
WT-1
WT-2
Mountainair
Corona
Haystack
Buffalo Valley
Crawford
Red Hills
Monument
Maljamar Plant
Rock Tank
Eagle Creek
Rio Grande
Pecos River