BUREAU OF RECLAMATION

Reach 24.1 Lybrook Lateral of the Navajo-Gallup Water Supply Project

Draft Environmental Assessment

Counselor Chapter, Rio Arriba and Sandoval Counties, New Mexico

Upper Colorado Basin

Navajo-Gallup Water Supply Project

New Mexico

Upper Colorado Basin: Interior Region 7

US Department of the Interior **July 2025**

THIS PAGE INTENTIONALLY BLANK

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

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

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

The Bureau of Land Management's mission is to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations.

The mission of the New Mexico State Land Office is to use state trust land to raise revenue for New Mexico public schools, hospitals, colleges, and other public institutions. The entities are the beneficiaries of revenue raised when the Land Office does business on state trust land.

THIS PAGE INTENTIONALLY BLANK

Reach 24.1 Lybrook Lateral of the Navajo-Gallup Water Supply Project

Draft Environmental Assessment

Counselor Chapter, Rio Arriba and Sandoval Counties, New Mexico
Interior Region 7, Upper Colorado Basin

Navajo-Gallup Water Supply Project

New Mexico

Upper Colorado Basin: Interior Region 7

Prepared by McIntyre Environmental LLC in conjunction with Reclamation's Upper Colorado Basin: Interior Region 7, Western Colorado Area Office.

Table of Contents

List of Tables

List of Appendices

Abbreviations and Acronyms

BA	Biological Assessment
BE	Biological Evaluation
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	best management practice
BP	Before Present
C	USFWS Candidate Species
CFR	Code of Federal Regulations
CH_4	Methane
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CWA	Clean Water Act
dBA	A-weighted decibels
E	USFWS Endangered Species
EA	Environmental Assessment
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FFO	Farmington Field Office
FHWA	Federal Highway Administration
FONNSI	Finding of No New Significant Impact
GHG	greenhouse gas
HDPE	high density polyethylene
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
MDWCA	Mutual Domestic Water Consumer Association
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESL	Navajo Endangered Species List
NGWSP	Navajo-Gallup Water Supply Project
NHPA	National Historic Preservation Act
NMAC	New Mexico Administrative Code
NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation

NMED	New Mexico Environment Department
NMNHP	New Mexico Natural Heritage Program
NMRPCS	New Mexico Rare Plant Conservation Strategy
NMSLO	New Mexico State Land Office
NNEPA	Navajo Nation Environmental Protection Agency
NNHHPD	Navajo Nation Heritage and Historic Preservation Department
NNHP	Navajo Natural Heritage Program
NNDFW	Navajo Nation Department of Fish and Wildlife
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTUA	Navajo Tribal Utility Authority
OHV	Off Highway Vehicle
PA	Programmatic Agreement
PL	Public Law
PLS	pure live seed
POD	Plan of Development
PR	Planning Record
PVC	polyvinyl chloride
Reclamation	United States Bureau of Reclamation
ROW	right-of-way
S	Sensitive Species
SDWA	Safe Drinking Water Act
SERI	Species of Economic and Recreational Importance
SGCN	Species of Greatest Conservation Need
SMA	Souder Miller Associates
SOC	Species of Concern
SS	New Mexico Rare Plant Conservation Strategy Species
T	USFWS Threatened Species
TCP	Traditional Cultural Property
US	United States
USACE	US Army Corps of Engineers
USC	United States Code
USFWS	US Fish and Wildlife Service
WCA	New Mexico Wildlife Conservation Act

CHAPTER 1 – INTRODUCTION

This Environmental Assessment (EA) has been prepared to disclose and evaluate the potential environmental effects of the United States (US) Bureau of Reclamation's (Reclamation) proposed Reach 24.1 Lybrook Lateral (Project or Proposed Action) of the Navajo Gallup Water Supply Project (NGWSP). This EA was developed in conjunction with the Bureau of Indian Affairs (BIA) Navajo Region, New Mexico State Land Office (NMSLO), and the Bureau of Land Management (BLM) Farmington Field Office (FFO) and in coordination with NGWSP cooperating agencies including the Navajo Nation. The NGWSP was authorized for construction by Omnibus Public Land Management Act of 2009 (Public Law [PL] 111-11). Reclamation prepared a Planning Report and Final Environmental Impact Statement (PR/FEIS) for the NGWSP, and the Record of Decision (ROD) for that document was signed by the Secretary of the Interior in July 2009. The 2009 NGWSP PR/FEIS provided an analysis of the overall NGWSP and did not consider the effects of the newly designed pipeline reaches and facility infrastructure associated with the Proposed Action. This EA tiers to, and incorporates by reference, the information and analysis from the 2009 NGWSP PR/FEIS (Reclamation 2009) to the extent practical.

The following proposed federal actions are evaluated in this EA:

- Acquisition of lands and rights-of-way (ROW) from the Navajo Nation Land Department, New Mexico State Lands Office (NMSLO), Bureau of Indian Affairs (BIA), and BLM.
- The provision of federal funds by Reclamation to the Navajo Nation (through Financial Assistance Agreement No. R18AC00045) to design and construct the Proposed Action.
- Construction of the Reach 24.1 Lybrook Lateral of the NGWSP's San Juan Lateral water pipeline, including its associated pump station and chlorination station on said ROW.

The Navajo Nation, Department of Natural Resources, has applied for ROW with the BIA Navajo Region/Navajo Nation, the NMSLO, and the BLM FFO to construct the Proposed Action. The Navajo Nation will assign ROW to the Navajo Tribal Utility Authority (NTUA) (an enterprise of the Navajo Nation) during the Project transfer process.

This document has been prepared in compliance with the National Environmental Policy Act (NEPA), as amended. If potentially significant impacts on environmental resources are identified, a supplement to the 2009 NGWSP PR/FEIS will be prepared. A Finding of No New Significant Impact (FONNSI) will be issued if no significant impacts are identified.

1.1 – Project Location and Legal Description

The Proposed Action is located in Rio Arriba and Sandoval Counties, New Mexico and located on Navajo Nation tribal trust and Indian Allotment lands, private land, and lands managed by the NMSLO and BLM FFO. The project area is in northwestern New Mexico, near the community of Lybrook and within the Counselor Chapter. The Proposed Action is approximately 7.0 miles west of Counselor, New Mexico. The project extends from the Lybrook Mutual Domestic water storage tank just north of US Highway 550 approximately 7 miles south to Phase II of the Eastern Navajo Water Pipeline segment of the NGWSP Cutter Lateral (Appendix A, Maps 1 and 2).

The legal description of the Proposed Action is:

- Township 23 North, Range 7 West, Sections 10, and 13-15;
- Township 23 North, Range 6 West, Sections 18, 19, and 29-32; and
- Township 22 North, Range 6 West, Section 6.

1.2 – Purpose and Need

Reclamation is the lead federal agency, the BLM and BIA are federal cooperating agencies with connected actions, and the Navajo Nation and NMSLO are non-federal cooperating agencies on the project.

Reclamation's purpose of the Proposed Action is to comply with its responsibility under the Omnibus Public Land Management Act of 2009 to construct the NGWSP as a component of the 2005 Navajo Nation San Juan River Basin Water Rights Settlement Agreement. Reclamation's need for the Proposed Action is to provide long-term supply, treatment, and transmission of municipal and industrial water to the Navajo Nation. The Proposed Action would result in enhanced water quality, reduced operational risk, increased operational flexibility, capital cost savings, and potential annual operating cost savings for the NGWSP.

The BIA's purpose of the Proposed Action is to comply with its authority under 25 CFR Part 169 to respond to the Navajo Nation's ROW applications. BIA's need for the Proposed Action is to allow the NTUA access to tribal trust and Indian Allotment lands to construct and operate the water pipeline and associated pumping plants, water storage facilities, and water treatment plant.

The BLM's purpose of the Proposed Action is to comply with BLM's authority under Title V of the Federal Land Policy and Management Act (43 United States Code [USC] 1761-1771, as amended), to respond to Navajo Nation's ROW applications. BLM's need for the Proposed Action is to allow NTUA access to public lands to construct and operate a portion of the Reach 24.1 Lybrook Lateral.

1.3 – Decisions to be Made

Reclamation will decide whether to or not to construct the NGWSP Reach 24.1 Lybrook Lateral water pipeline, including its associated pumping and chlorination stations. Reclamation will also decide whether or not to acquire lands and obtain ROW from the BIA, BLM, and NMSLO for the NGWSP Reach 24.1 Lybrook Lateral.

- Grant federal funds by Reclamation to the Navajo Nation (through Financial Assistance Agreement No. R18AC00045) to design and construct the Proposed Action.
- The BLM FFO will decide whether to approve an EA and sign a FONNSI and issue the ROWs associated with the Proposed Action.
- The BIA Navajo Region and Navajo Nation will decide whether to approve an EA and sign a FONNSI and issue the ROWs associated with the Proposed Action.
- The NMSLO will decide whether to approve and issue the ROWs associated with the Proposed Action.

1.4 – Background

The NGWSP is in varying stages of completion. The Cutter Lateral of the NGWSP is delivering water to Navajo communities along the US Highway 550 corridor as of 2020. The Reach 24.1 Lybrook Lateral is the final reach of the Cutter Lateral and is currently in the planning and development stage. The main trunk of the San Juan Lateral is being constructed south to north, with current construction activities near the Navajo communities of Little Water and Sanostee. Branches of the San Juan Lateral to deliver water to the communities of Crownpoint, New Mexico, and Window Rock, Arizona, are in the planning and construction phases of development, respectively. Other smaller reaches near the City of Gallup and the Shiprock Connection are also in the construction and/or planning phases of development.

The Congressionally mandated completion date for the NGWSP is December 31, 2024, and needs to be extended to accommodate the current project construction schedule. The completion deadline for the Navajo-Gallup Water Supply Project is being extended to December 31, 2029, through an agreement between the U.S. Department of the Interior, Navajo Nation, and State of New Mexico Interstate Stream Commission, collectively referred to as the settlement parties to the Navajo Nation's Water Right Settlement on the San Juan River Basin in New Mexico. The agreement awaits a final signature from the Department of Interior Secretary before it is officially authorized (Bureau of Reclamation 2024). A completion extension is authorized under PL 111-11 with the approval of the Navajo San Juan River Basin in New Mexico Water Rights Settlement Agreement signatory parties (Navajo Nation, State of New Mexico, and the US Department of the Interior). NGWSP cooperators have reduced schedule delay impacts to the City of Gallup by making Twin Lakes well water available to NGWSP facilities and looking into conjunctive groundwater funds to build additional wells in the area.

In April 2021, the Navajo Nation Environmental Protection Agency (NNEPA), New Mexico Environment Department (NMED), and the US Environmental Protection Agency (EPA) signed a Memorandum of Understanding (MOU) regarding the NGWSP. The MOU clarifies government oversight and regulatory roles and responsibilities of the agencies involved. Due to the length of the pipelines and resulting long retention times of water in the pipelines, agencies anticipate that byproducts of chlorination (disinfection byproducts) are likely to be formed within the transmission mains and the Consecutive Distribution System. Therefore, treatment, monitoring, and compliance are expected to be required at different places within the NGWSP project to produce consistently compliant and safe water as required by the Safe Drinking Water Act (SDWA). Per the SDWA, the Navajo Nation has primacy for drinking water systems within its jurisdiction and the NNEPA implements the Public Water Systems Supervision Program.

Regarding the Proposed Action, the NNEPA is the regulating entity for the Cutter Lateral components of the NGWSP within the formal Navajo Nation Reservation. The NMED is the regulating entity for Cutter Lateral components of the NGWSP on federal, state-, and privately-owned land outside the formal Navajo Nation Reservation in New Mexico. The Cutter Lateral Water Treatment Plant is subject to NMED's application requirements and Public Water Systems Supervision Program. Eventually, the Navajo Nation intends to obtain regulatory authority over all or additional components of the NGWSP, at which time the MOU would be terminated or modified accordingly.

1.5 – Relationship to Other Projects

1.5.1 – Future NGWSP Actions

Multiple projects associated with the NGWSP (listed below) are in preliminary planning phases and may require additional analysis under the NEPA as well as completion of consultation with various entities.

- San Juan River Water Quality Monitoring Station
    - A water quality monitoring station is planned at the existing US Geological Survey Fruitland Bridge station or a new station further upstream, but below the confluence of the Animas and San Juan Rivers, to provide data on high suspended-solids events in the San Juan River and help guide decision making on when to divert water to the San Juan Generating Station Reservoir.
- Reach 12.3
    - Would connect Reach 12.2 to Window Rock, Arizona.
- Shiprock Connection
    - Planned as a smaller-diameter lateral pipeline and connection along Navajo Route N36 that was the former alignment of the San Juan Lateral trunk pipeline.
- Various reaches and pumping plants associated with the City of Gallup, New Mexico.

1.6 – Scoping

Reclamation's NGWSP design and coordination efforts with project partners include day to day correspondence, biweekly and monthly coordination and design meetings, quarterly Project Construction Committee meetings, a quarterly newsletter that is posted on the NGWSP website and distributed to Chapter Houses and others on the Navajo Nation, and a Project Issue Notice system that documents major project decisions. Tribal outreach and Navajo Chapter House visits are frequently conducted by Reclamation's Navajo Outreach Coordinator and various staff members during planning periods and before major project activities and construction.

Initial ethnographic fieldwork for the proposed project was conducted between April and June 2019; ethnographic fieldwork for the realigned portion of the project area was conducted on April 29 and May 10, 2022. Additionally, on April 29 and May 10, 2022, Dinétahdóó Cultural Resources Management (DCRM), contacted three individuals regarding the Lybrook Mutual Domestic Water Consumer Association (MDWCA) Waterline Improvement Project-Phase II. Consultation was completed with the Navajo Counselor Chapter Manager on where the proposed waterline is proposed to be located. The chapter representative was briefed on the undertaking and was asked if he was aware of any Traditional Cultural Properties (TCPs) or unmarked graves along the waterline segment. No new TCPs or unmarked graves were identified through ethnographic interviews on this project.

Reclamation conducted various internal and external scoping efforts during the project's planning stages to identify the potential environmental and human-environment issues and concerns associated with implementing the Proposed Action or Alternatives. Scoping efforts were conducted with the following agencies:

- BIA Navajo Region and the Navajo Land Department. The project engineer, Souder Miller Associates (SMA) and Reclamation engaged in discussion with the BIA Navajo Region and the Navajo Land Department regarding acquisition of ROW across Navajo Nation Tribal Trust Indian Allotment lands located within the project area.

- BLM FFO. Reclamation engaged with the BLM FFO regarding the biological and cultural evaluations prepared for the Proposed Action and received input from the BLM FFO on potential impacts to resources located on BLM lands within the project area. SMA also submitted a ROW Application (SF-299) and a Plan of Development (POD) for the Proposed Action to the BLM FFO as an authorized agent on behalf of the Navajo Nation.
- Navajo Nation. Letters were submitted to the following Navajo Nation Departments at the beginning of the project.
    - Navajo Environmental Protection Agency;
        - Administration Department;
        - Air and Toxic Department;
        - Enforcement Department;
        - Surface and Groundwater Protection Department (Response received February 19, 2019 regarding the requirement for Section 401 and 402 permits);
        - Waste Regulatory and Compliance Department;
        - Water Management Branch\Water Resources Department;
    - Water Resources Department
        - Floodplain Section, Water Management Branch\
    - Navajo Nation Heritage and Historic Preservation Department (NNHHPD)
    - Navajo Natural Heritage Program (NNHP)
- State of New Mexico
    - New Mexico Department of Game and Fish (NMDGF). The NMDGF reviewed the biological evaluation (BE) prepared for this project and concurred that with the implementation of the mitigation measures proposed in the BE the project would be unlikely to affect wildlife or sensitive habitats.
    - New Mexico State Land Office. Permits were secured for survey purposes. A copy of the BE was submitted February 15, 2023.

1.6.1 – Resources Eliminated from Further Analysis

The following resources (Table 1) were determined to be previously analyzed in the 2009 NGWSP PR/FEIS with no further changes from the Proposed Action or are not applicable[1]. These resources are not analyzed in greater detail within this EA. Resources determined to be of potential significance and requiring further analysis are discussed in Section 3.2.

Table 1. Resources Eliminated from Further Analysis

Resource	Rationale for Elimination from Further Analysis
Indian Trust Assets	The 2009 NGWSP PR/FEIS described the affected environment pertaining to Indian Trust Assets (Chapter 5, pp V18-V32). Indian Trust Assets, or resources, are defined as legal interests in assets held in trust by the US Government for Native American Indian tribes or individual tribal members. Examples of Indian Trust Assets are lands, minerals, water rights, other natural resources, money, or claims. Secretarial Order 3175 and Reclamation policy requires the assessment of effects on Indian Trust Assets. Based on scoping for the 2009 NGWSP PR/FEIS, Indian Trust Assets potentially affected by the proposed action are land use (easements, including trust lands and tribal allotments, necessary for project construction and operation) and trees. The 2009 NGWSP PR/FEIS further details Navajo Nation water rights and major existing and future tribal uses of San Juan basin water, the Navajo Indian Irrigation Project, San Juan River Irrigation Project and the Navajo Nation Municipal Pipeline authorized under the Animas-La Plata Project. The 2009 NGWSP PR/FEIS also discusses the Jicarilla Apache Nation and Colorado Ute Tribes and their respective water rights settlements. Environmental consequences on Indian Trust Assets from the Proposed Action would not create any new significant site-specific effects nor contribute to cumulative significant impacts that are not already described in the 2009 NGWSP PR/FEIS and therefore, no further analysis is necessary.

[1] Executive Order 14154, Unleashing American Energy (Jan. 20, 2025), and a Presidential Memorandum, Ending Illegal Discrimination and Restoring Merit-Based Opportunity (Jan. 21, 2025), require theDepartment to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq.Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21,2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is alegal impossibility. The [bureau] verifies that it has complied with the requirements of NEPA, including theDepartment's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of theDepartmental Manual, consistent with the President's January 2025 Order and Memorandum. The [bureau]has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementingNEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistentwith the requirements of NEPA and Executive Order 14154.

Resource	Rationale for Elimination from Further Analysis
Public Health Land Standards	Standards for Public Land Health and Guidelines for Livestock Grazing Management for BLM lands in the State of New Mexico were passed in January 2001 (BLM 2001). Standards of land health are expressions of levels of physical and biological condition or degree of function required for healthy and sustainable lands and define minimum resource conditions that must be achieved. No impact to Public Health Land Standards would occur from implementing the Proposed Action and therefore, no further analysis is necessary.
Wild Horses and Burros	Wild horses and burros are present in the project area and were observed during field surveys performed in May 2022. However, there are no congressionally designated wild horse or burro herd management areas within 40 miles of the project area. Therefore, there would be no impact on herd management areas and no further analysis is necessary.
Geology and Solid and Fluid Minerals	The northern part of the project area is within an authorized communitization agreement area (NMNM105378725). Two authorized communitization agreements cover the NMSLO lands (NMNM105376409 and NMNM105376408) (BLM 2024a). A pending communitization agreement (NMNM105381744) is in the middle of the project area (BLM 2024a). The project area is adjacent to a fluid mineral participating area (NMNM105304207) (BLM 2024b). All of the BLM lands within the project area have active oil and gas leases on them (BLM 2024c). The Proposed Action is sited to avoid impacts to current oil and gas leasing activities and would not impact future potential oil and gas development and therefore, no further analysis is necessary. There are no currently pending notice of staking or Application for Permit to Drill projects that the Proposed Action intersects (BLM 2024d). There are no active or inactive mining claims in the project area. The Proposed Action would not affect solid mineral availability. Therefore, no further analysis is necessary.
Paleontology	The project area is in BLM areas mapped as Potential Fossil Yield Category 5 (Very High). Class 5 is for geologic formations that have a high potential to yield scientifically significant fossils. However, the alignment avoids paleontological special designated areas (SDAs), badland outcrops, and there are no known paleontological localities along or near the proposed alignment. The project area avoids the Lybrook Fossil Area which is to the south and west (City of Aztec 2020). The "accidental discovery" condition of approval/stipulation would be applied to the ROW grant if approved to minimize impacts to paleontological resources. "Any paleontological resource discovered by the Operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant scientific values. The Holder will be responsible for the cost of evaluation and any decision as to

Resource	Rationale for Elimination from Further Analysis
	proper mitigation measures will be made by the Authorized Officer after consulting with the Holder." Because the alignment avoids all areas of potential concern, no further analysis is necessary.
Air Quality and Noise	The Project Area is in attainment with National Ambient Air Quality Standards (NAAQS). Impacts to air quality, such as fugitive dust from construction activities from the Proposed Action, would be temporary (up to 18 months in duration). Project-specific design features (detailed in Section 4.2) have been established to minimize dust by limiting surface disturbance, requiring interim reclamation, and requiring dust control on dirt roads. Residual construction effects would be temporary and would rapidly disperse after construction is complete. Air quality impacts, specifically fugitive dust, were evaluated in the NGWSP PR/FEIS (Section V, pp V126-V128). Impacts to air quality under all the Action Alternatives were determined to be minor and not considered significant. Therefore, no further analysis is necessary. There are five or six private residences located within approximately 0.25-mile of the northern terminus of the pipeline. Current noise levels in residential areas are assumed to be a mean value of 40 A-weighted decibel (dBA) average noise level (EPA 1978). Construction noise levels would increase from 40 dBA to a range of 61 to 68 dBA depending on the location of the noise receptor or residence. Construction of the buried pipeline may temporarily increase daytime noise levels above background levels but would be of limited duration while proximate to these residences (up to 16 weeks). Rio Arriba Oil and Gas Ordinances would be implemented for noise. Noise impacts were also evaluated in the NGWSP PR/FEIS (Section V, pp V126-V128). Impacts to noise under all the Action Alternative were determined to be minor and not considered significant. Therefore, no further analysis is necessary.
Hydrologic Variability and Climate Change	Potential effects of climate change on the hydrology of the San Juan Basin and NGWSP were discussed in the 2009 NGWSP PR/FEIS (Section V, pp. V144-145). Conservation measures regarding climate change impacts to threatened and endangered fish were incorporated into the NGWSP's Biological Opinion and environmental commitments. No substantial changes to the impacts previously described in the 2009 NGWSP PR/FEIS would occur from implementing the Proposed Action, therefore, no further analysis is necessary.
Socioeconomics	Effects on socioeconomics from the NGWSP were analyzed in the 2009 NGWSP PR/FEIS (Section V, pp. V128-V133). While the construction phase may extend beyond the timeline analyzed in the PR/FEIS, no substantial changes to the impacts previously described in the 2009 NGWSP PR/FEIS would occur from implementing the Proposed Action, therefore. no further analysis is necessary.
Vegetation Resources	Vegetation was mapped during biological surveys performed in 2019 and 2021 (Terra Technologies 2022). A biological evaluation (BE) was prepared and is on file with Reclamation (Terra Technologies 2022). Vegetation was mapped and is

Resource	Rationale for Elimination from Further Analysis
	shown in Appendix A, Map 5 and in the table below. There are rock cliffs and outcrops along the northern part of the proposed route. The project area in the vicinity of Atkins Road is disturbed by oil and gas pipelines and heavy traffic.

Habitat Type	**Acreage in Permanent ROW**	**Acreage in Short Term ROW**
Pinyon Juniper Woodlands	12.6	4.5
Juniper Savannah/Potential Burrow Area	0.3	0
Sagebrush/Potential Burrow Area	2.9	0.1
Sagebrush-Grassland	10.1	2.9
Saltbush Scrub	0.5	0.8
Total Acreage	**26.4**	**8.3**

The project area east of Atkins Road is disturbed by oil and gas activity and livestock grazing. Photos 1-3 show typical habitat on the Tribal land. Pinyon pine (*Pinus edulis*), scattered juniper (*Juniperus osteosperma*), sagebrush (*Artemisia* spp.), grama grasses (*Bouteloua spp*), prickly pear (*Opuntia basilaris*), and Indian rice grass (*Oryzopsis hymenoides*) are present in the pinyon juniper habitat. In more-level valleys (Photo 3), sagebrush is dominant but other shrubs were also observed, including four-wing and rubber rabbitbrush, as well as grama grasses and prickly pear.

Vegetation on BLM land includes pinyon-juniper woodland forest on slopes and dense stands of sagebrush or mixed sagebrush/grassland on flats. There are rock cliffs and outcroppings along the northern part of the proposed route. The vegetation west of Atkins Road consists of sagebrush, rubber rabbitbrush (*Ericameria nauseosa*), juniper, pinyon pine, mountain mahogany (*Cercocarpus* spp.), grama grasses, prickly pear, yucca (*Yucca spp.*), Indian paintbrush, and Indian rice grass. The vegetation east of Atkins Road consists of sagebrush, rubber rabbitbrush, juniper, pinyon pine, mountain mahogany, grama grasses, kochia (*Bassia*), prickly pear, cholla (*Cylindropuntia* spp.), barrel cactus (*Echinocactus spp.*), yucca (*Yucca spp.*), and Indian rice grass. Gambel oak (*Quercus gambelii*) occurs in some areas. Pinyon-juniper habitat on BLM land east of Atkins Road is shown in Photo 3.

Vegetation on NMSLO land is predominantly sagebrush with pinyon-juniper woodland forest on slopes (Appendix A, Map 5). There are some small rock outcrops. The vegetation consists of sagebrush, rubber rabbitbrush, juniper,

Resource	Rationale for Elimination from Further Analysis
	pinyon pine, grama grasses, prickly pear, and Indian rice grass. The effects on special status plant species are analyzed in Section 3.2.4 of this Draft EA. The 2009 NGWSP PR/FEIS (Section V, pp V42-V50) described the affected environment of the NGWSP with vegetation resources. No substantial changes to the impacts previously described in the 2009 NGWSP PR/FEIS would occur from implementing the Proposed Action, therefore, no further analysis is necessary.
Aquatic Resources	The National Wetland Inventory (NWI) has mapped riverine habitat within the project area. These include R4SB7J and R4SBJ riverine systems. Several stock ponds lie along or near the alignment, but there is no wetland/riparian habitat associated with these (i.e., the banks are disturbed by livestock, are muddy and largely unvegetated, and ponds are diked and fairly small). There are no NWI wetlands identified in the footprint of the project area. There is one larger impoundment on private land; however, this pond has tall berms and somewhat denser vegetation on the margin with a few shrubs that appear to be tamarisk It is outside the project area and is on the far side of a road from the pipeline. There is one other pond that appears to have three small tamarisks next to an active oil/gas production pad; however, all the drainages within the project area are ephemeral and showed no active water when visited initially in November of 2019 and later in October of 2021 and May of 2022. All these drainages met the definition of ephemeral when evaluated using the rid Streamflow Duration Assessment Method. The PR/FEIS addressed intermittent drainages and waters of the U.S. in the Vegetation Section (Section V, pp. V43, V45, V47, and V48). It acknowledged the possible need for 404 permits (pp. V42 and V46). Wetlands were discussed on pp. V46 to V55. No substantial changes to the impacts previously described in the 2009 NGWSP PR/FEIS would occur from implementing the Proposed Action, therefore, no further analysis is necessary.
Wildlife (Terrestrial)	Effects on terrestrial wildlife from the NGWSP were analyzed in the 2009 NGWSP PR/FEIS (Section V, pp. V50-V56). Effects to small or big game were discussed in the Common Wildlife Species section (pp. V52 and V53) and addressed the amount of wildlife habitat that would be disturbed by the action alternatives. The majority of the habitat loss would be temporary. No substantial changes to the impacts previously described in the 2009 NGWSP PR/FEIS would occur from implementing the Proposed Action. There would be no permanent loss of key wildlife habitats beyond what was identified in the PR/FEIS, and no further analysis is needed. The effects on special status animal species are analyzed in Section 3.2.4 of this Draft EA. Therefore, no further analysis is necessary.
Migratory Birds	Habitat for migratory birds is present throughout the project area. During surveys conducted in October 2021, Say's phoebes (*Sayornis saya*), bushtits (*Psaltriparus minimus*), scrub jays (*Aphelocoma woodhouseii*), mountain bluebirds (*Sialia currucoides*), ravens (*Corvus corax*), sage thrasher (*Oreoscoptes montanus*), and horned larks (*Eremophila alpestris*) were observed on tribal lands. Avian species recorded on BLM lands were juniper titmouse (*Baeolophus ridgwayi*), a pair of

Resource	Rationale for Elimination from Further Analysis
	ravens, two pairs of gray flycatchers (*Empidonax wrightii*), a pair of unidentified passerines in the junipers, and a pair of unidentified falcons flying over. Bird activity was minimal during the Fall 2021 survey. If the project cannot be implemented outside of the breeding season (generally March 1 through August 15), then preconstruction surveys would be required within 48 hours of construction activities in accordance with requirements outlined in Section 4.2. Vegetation removal would occur during the winter prior to the breeding season, if possible, to reduce survey costs and potential delays in the event that a nest is found. This includes surveys in shrubs and grasses as well as in trees. Finding an active nest would require delay of construction activities until the young fledge, and/or putting a buffer around the nest to prevent disturbance. Temporal avoidance or preconstruction surveys would ensure the avoidance of significant impacts to migratory birds. Raptor surveys were conducted out to 0.25 miles from the alignment. A raptor nest in a cliff was found during the 2019 survey for the originally proposed alignment but appeared inactive and no birds were observed during several follow-on surveys. There would be no potential to affect nesting raptors since no raptor nests were observed. No substantial changes to the impacts previously described in the 2009 NGWSP PR/FEIS would occur from implementing the Proposed Action, therefore, no further analysis is necessary.
Special Designation Areas (SDAs) including Lands Wilderness Characteristics, Designated Wilderness, Areas of Critical Environmental Concern and Wild and Scenic Rivers.	The project area is not located in proximity to any of the three parcels determined to be eligible for Lands Wilderness Characteristics during the 2016 Lands Wilderness Characteristics Inventory. The project area is not in proximity to either the Bisti/De-Na-Zin or Ah-shi-sle-pah Designated Wilderness areas (BLM 2024d). There are no Areas of Critical Environmental Concern or Wild and Scenic Rivers present within or near the project area. Therefore, no further analysis is necessary.
Recreation Resources	There are numerous and varied dispersed outdoor recreation opportunities and activities occurring on the public lands within the project area, including hunting, horseback riding, mountain biking, backpacking, bird watching, rockhounding, vehicle camping, and Off Highway Vehicle (OHV) use (BLM 2003). There are no developed recreation sites within the project area. Impacts to recreation resources including general recreation were evaluated in the NGWSP PR/FEIS (Section V, pp V94 - V104). Impacts to general recreation under all the Action Alternatives were determined not to be significant. The project area is within NMDGF game management units seven which is established to manage big game hunting (NMDGF 2017). These GMUs vary in their priority for the management of general or trophy big game hunting. Hunting licenses are distributed by the NMDGF for federal, state and private lands. The

Resource	Rationale for Elimination from Further Analysis
	Navajo Nation Department of Fish and Wildlife (NNDFW) manages hunting on tribal trust and Indian Allotment lands. Impacts to recreation resources including hunting were evaluated in the NGWSP PR/FEIS (Section V, pp V94-V104). Hunting activities in the Project area were determined to be limited and impacts to hunting under all the Action Alternative were determined not to be significant. There would be no impact to hunting from the proposed action. Therefore, no further analysis is required.
Water Uses and Resources	Chapter 5 of the 2009 NGWSP PR/FEIS described the affected environment of the NGWSP with water uses and resources (pp V5-V18) detailing Navajo Reservoir capacity; San Juan River flow volumes and timing; Native American water rights; and Colorado River, La Plata River, and Animas-La Plata compacts. Approximately 15,000 gallons of water would be used during the construction period. Once construction has been completed, additional water would not be required. The Proposed Action would not create any new significant site-specific effects nor contribute to cumulative significant impacts to water uses and resources that are not already described in the 2009 NGWSP PR/FEIS. Therefore, no further analysis is necessary.
Water Quality	There are no perennial or intermittent waters in the project area. Over 60 ephemeral drainages with defined using the EPA's Streamflow Duration Assessment Method and are on file with Reclamation. Chapter 5 of the 2009 NGWSP PR/FEIS described the affected environment of the NGWSP with water quality (pp V32-V42). There would be the potential for construction-related disturbance to increase the amount of sediment that would be mobilized within ephemeral channels or enter the channel from directly adjacent areas. This would be a temporary effect that would be limited with the implementation of erosion control measures. The implementation of the design features outlined for soil and water would limit short-term and long-term effects to water quality. Reestablishment of permanent, perennial vegetation would decrease long-term soil-erosion effects and, consequently, effects to floodplains and surface and ground water resources. National Pollutant Discharge Elimination System (NPDES) permit compliance would require the maintenance of a Stormwater Pollution Prevention Plan (SWPPP) and the design, implementation, and maintenance of best management practices (BMPs), as needed, to protect water quality. Other BMPs outlined in Section 4.2 would also be implemented. The Proposed Action would not create any new significant site-specific effects nor contribute to cumulative significant impacts that are not already described in the 2009 NGWSP PR/FEIS (pp. V32-V42. Therefore, no further analysis is necessary.
Hazardous Materials	There are no brownfield, Superfund, or Toxic Release Inventory sites proximate to the project area. Any wastes created due to the Proposed Action would be

Resource	Rationale for Elimination from Further Analysis
	properly disposed of in accordance with a waste management plan. A Phase I Environmental Site Assessments would be prepared as part of this action to confirm there are no recognized environmental conditions in the Project area. Other BMPs outlined in Section 4.2 would also be implemented. No further analysis is necessary (EPA 2024a).

CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

Alternatives evaluated in this EA include the Proposed Action and the No Action Alternative.

2.1 – Comparison of Proposed Action to 2009 NGWSP PR/FEIS

Reach 24.1 of the Lybrook Lateral is annotated on the NGWSP Project Alignment Map (Appendix A, Map 3). There is not a detailed discussion of Reach 24.1 of the Lybrook Lateral in the NGWSP Final EIS or ROD.

2.2 – Alternatives Considered but Not Carried Forward

Reclamation initially considered a proposed alignment that was to begin along the westerly line of Section 1, R. 7 W., T. 22 N. Sandoval County running northerly until joining the current alignment in the SE1/4 of Section 13, R. 7 W., T. 23 N., Rio Arriba County. The alignment was reviewed with BLM field personnel. The initial alignment was abandoned to avoid crossing a private parcel where land acquisition negotiations were not successful.

2.3 – No Action Alternative

Under the No Action Alternative, ROW from the BIA Navajo Region and Navajo Land Department, BLM FFO, and NMSLO would not be acquired. Federal funds would not be granted by Reclamation to the Navajo Nation (through Financial Assistance Agreement No. R18AC00045) to design and construct the Proposed Action Reach 24.1 of the Lybrook Lateral and its associated pumping and chlorination stations would not be constructed.

2.4 – Proposed Action

Components of the Proposed Action are listed below and described further in Sections 2.4.1 through 2.4.8 of the EA:

- Grant federal funds by Reclamation to the Navajo Nation (through Financial Assistance Agreement No. R18AC00045) to design and construct the Proposed Action.

- Acquisition of lands and ROW from the Navajo Nation Land Department, NMSLO, BIA, and BLM.

- Construction of the Reach 24.1 Lybrook Lateral of the NGWSP's San Juan Lateral water pipeline, including its associated pump station and chlorination station on said ROW (Appendix A, Map 2).

2.4.1 – Land Acquisitions

The Navajo Nation, Department of Natural Resources, seeks to acquire ROWs from various land jurisdictions, including the BLM FFO, NMSLO, BIA and Navajo Land Office (Appendix A, Map 4). The Navajo Nation will assign ROW to NTUA (an enterprise of the Navajo Nation) during the Project transfer process. Acquired ROW widths by NTUA may vary depending on land ownership and management allowances, topography, or other factors. The pipeline corridor would generally include a 30-foot-wide permanent ROW centered on the pipeline. In locations where horizontal directional drilling is required, an additional 25 feet either side of the centerline at specific segments along the alignment or just on one side of the permanent Right of Way (ROW) to reduce the short-term ROW area footprint would be acquired. The final permanent ROW and/or short-term ROW has been and may be further restricted on one or both sides of the pipeline to avoid disturbance to sensitive cultural and environmental resources or not interfere with adjacent infrastructure. A 0.52-acre parcel of private land would be acquired by the Navajo Nation from a private owner where the water pipeline terminates at the Lybrook MDWCA water storage tank site on the downstream end. The acquisition area at the downstream end is necessary for the construction of the proposed waterline as proposed to be constructed at the base of the mesa between the existing tank site and the New Mexico Department of Transportation ROW. The initial construction footprint and final design are not yet finalized.

2.4.2 – NGWSP Reach 24.1 Lybrook Waterline

Reclamation proposes to construct approximately 7 miles of the Reach 24.1 Lybrook Lateral water pipeline from the Lybrook MDWCA water storage tank site just north of US Highway 550 approximately 7 miles south to Phase II of the Eastern Navajo Water Pipeline segment of the NGWSP Cutter Lateral. The water pipeline would be 4 inches in diameter and would be made of either high-density polyethylene (HDPE), or polyvinyl chloride (PVC), depending on pressure. Where possible, the pipeline alignment was modified to avoid sensitive cultural and environmental resources and parallels existing roads, two-tracks, and other linear infrastructure. Sections of the pipeline would be bored or use horizontal directional drilling to go under deeper washes, roads, or ditches.

The pipeline would have necessary appurtenances for operation and maintenance, such as air valves, blowoffs, access maintenance holes, and isolation valves. These features would be installed directly on the buried pipe and protected by buried concrete vaults. Surface markers or bollard posts would be located directly above the pipe at the surface to protect any air vents or concrete vault lids that extend to the surface. More information on construction is provided in section 2.4.5.

The Reach 24.1 Lybrook Lateral Project would require up to a maximum 30-foot-wide corridor for safe and efficient pipeline construction. The construction ROW and short-term ROW would be used to allow storage of topsoil and spoils, fill material, stockpiled pipe and other materials, vehicular access, and the staging and use of heavy construction equipment.

2.4.3 – Pumping Station and Chlorination Station

There are existing fenced tank sites at the upstream and downstream ends of the proposed alignment; a pump station and a chlorination station would be constructed at the upstream end to collect, stage, and optimally pump the required amount of water through the NGWSP pipeline system.

2.4.3.1 – Reach 24.1 Lybrook Pump Station (Upstream End)

The Reach 24.1 Lybrook pump station is proposed to be constructed at the Eastern Navajo Water Pipeline Phase 2 water tank site, also known as the Counselor Tank Site. It would be capable of pumping approximately 76 gallons per minute through the Reach 24.1 Lybrook Lateral water pipeline system. An approximately 16-foot-long by 10-foot-wide prefabricated concrete building would house the pump station

pumps. The pump station building would be constructed within the existing fenced area containing the Counselor Tank Site. The existing tank site is approximately 1.8 acres. A ROW for a 0.38-acre parcel to be used for flushing booster station piping for start-up actions and floor drain from booster station building operations would be acquired from the Navajo Nation.

2.4.3.2 – Reach 24.1 Lybrook Chlorination Station (Upstream End)

The beginning-of-line chlorination station is proposed to be constructed at the Eastern Navajo Water Pipeline Phase 2 water tank site, also known as the Counselor Tank Site. The initial construction footprint and final design of the chlorination station are not yet finalized; however, the chlorination station building would be a 16-foot by 10-foot concrete structure located adjacent to the two existing tanks. If located inside the existing fenced site; the existing approximately 240-foot by 160-foot fenced and graveled area would not be substantially changed with the construction of the chlorination station**.**

2.4.4 – Power Supply

The proposed undertaking would require electrical power service at the beginning-of-line pump and chlorination stations. The electrical power service would be provided by Jemez Mountains Electrical Cooperative. The proposed pump station and chlorination station are co-located at the existing NTUA Counselor Tank Site; electrical service already exists at this location. All power lines would be designed in accordance with *Navajo Nation Raptor Electrocution Prevention Regulations* (NNHP 2008).

2.4.5 – Construction

Construction would follow the general workflow outlined below. Project contractors would follow Reclamation Safety and Health Standards ("Yellow Book") and Occupational Safety and Health Administration requirements during construction, including subpart 29 CFR 1926.650-652 for trench safety. NGWSP construction contract specifications include safety and health requirements in accordance with Reclamation Safety and Health Standards as well as applicable Tribal and State safety and health regulations. Contractors are required to submit and follow a Safety Program that is in accordance with the above-mentioned standards and regulations.

The analyzed surface disturbance is summarized in Tables 2 and 3, based on current design. Disturbance associated with the short-term ROW would be limited since there would be limited locations where a short-term ROW would be established. Any disturbance with the short-term ROW would be short-term and would be reclaimed after construction. Disturbance associated with the ROW would be short-term and would be reclaimed after construction, with some long-term disturbance, up to 8 acres, from the ROW remaining for the project's life.

Table 2. Proposed Action Summarized Estimated Disturbance by Surface Ownership

Surface Ownership	ROW (acres)	Short-Term ROW (acres)	Total (acres)
BLM	21.59	5.4	27.0
Navajo Tribal Trust Lands	0.37	0.00	0.37
Indian Allotment Lands	0.96	1.33	2.3
NM State Lands	3.51	0.75	4.26

Surface Ownership	ROW (acres)	Short-Term ROW (acres)	Total (acres)
Privately Owned Lands	0.75	0.44	1.19
TOTAL PROJECT LANDS	27.19	7.92	35.11

Table 3. Proposed Action Summarized Estimated Disturbance by Project Component

Component	Short-Term Disturbance (acres)	Long-Term Disturbance (acres)
Pipelines	7.92	27.19
Directional Drilling Bore Pits	0.47	0
Water Treatment Plant and Pumping Plants	0	0
Access Roads	0.0	0
TOTAL	8.39	27.19

2.4.5.1 – Vegetation Clearing (Clearing and Grubbing)

Vegetation clearing would comply with the Migratory Bird Treaty Act (MBTA). Much of the project area occurs in pinyon-juniper woodland forest on slopes, and dense stands of sagebrush or mixed sagebrush/grassland on flats. Vegetation clearing and grubbing in these areas would remove any trash and waste material detrimental to reclamation. A number of pinyon-juniper trees and larger shrubs are scattered throughout the project area. Trees larger than 3 inches in diameter would be cut, de-limbed, and removed from the ROW or delivered to local residents for firewood use. Trees and shrubs smaller than 3 inches in diameter, slash, and brush would be chipped and spread in the project area or hauled to an appropriate disposal site. Chipped material would be distributed to not interfere with future reclamation efforts.

Removal of vegetation would not occur between March 15 and August 15 to avoid the potential effects on migratory nesting birds unless pre-construction surveys for migratory birds are performed.

2.4.5.2 – Topsoil Management

Reclamation may complete soil testing in the project area to help determine the characteristics of disturbed soils and the applicability of adding soil amendments in the reclamation process. Soil testing may include an analysis of pH, electrical conductivity, texture, topsoil depth and overall soil depth, carbonates (reactivity), organic matter, and Sodium Absorption Ratio, among others. Organic and/or inorganic amendments may be added to help with project reclamation. A "soil amendment" is a material added to a soil to improve its physical properties, such as water retention, permeability, water infiltration, drainage, aeration, nutrition, and structure.

Following clearing and grubbing, a minimum of 6 inches of topsoil (if present) would be stockpiled and stored on the edge of the pipeline ROW and plant facilities. Topsoil would be stored separately from subsurface materials. Stockpiled topsoil would not be compacted, driven on, have equipment stored on, or be otherwise disturbed during construction. To prevent fugitive dust, a dust palliative that is biodegradable,

water-based, and does not inhibit revegetation may be applied to stockpiled topsoil piles. Topsoil would be redistributed across the disturbed project areas before reseeding.

2.4.5.3 – Erosion Control and Stormwater Management

During construction, the project contractors would place erosion controls following each project's SWPPP as required by the EPA NPDES Construction General Permit. Reclamation and the project contractor would follow the general conditions of any permits obtained for the project. Standard BMPs for erosion control and stormwater management would be implemented during construction. Potential erosion control or water management features that may be used include water bars, sediment traps, check dams, erosion control blankets, and wattles, among others.

2.4.5.4 – Construction

Construction would be broken into three components: waterline, pump station, and chlorination station. Waterline construction would likely be the first component constructed and would be followed by the pump station and then the chlorination station. The latter two may be constructed concurrently. Project construction would roll out in the following manner:

a. Waterline.

b. Pump Station.

c. Chlorination Station.

Reclamation would complete pre-construction geotechnical testing of underlying soils and bedrock. Construction activities would be confined to established and approved ROWs and short-term ROWs.

Construction of the waterline trench would commence with clearing and grubbing of the waterline alignment. Construction of the pipeline trench would reach a maximum depth of 20 feet in some areas (drainage crossings) but would typically average 4 feet in depth. The trench would be approximately 30-inches wide but may vary depending on the depth of excavation, type of bedding, embedment requirements, and side slope safety requirements, including the use of trench boxes, benching, or other methods. Horizontal directional drilling and jack and boring would be used to pipe underneath deep washes, near roads and other infrastructure, and avoid otherwise sensitive resources. The alignment would be trenched, and the waterline would be installed. Waterline appurtenances would be installed next. These include gate vales, air release valves, and flush valves. The waterline would be filled, pressure tested, disinfected and flushed. Appurtenances such as vaults/valves/fixtures would be finalized. After installation, the ROW and any short-term ROW for the waterline would be graded and reseeded.

Pump station construction work would be completed inside the previously fenced area. This would include:

1. Clearing the building site which would include grading, excavation, and sub-foundation earthwork;

2. Trenching and installing waterline pipe to and from the booster station building;

3. Installing the building foundation and constructing the building;

4. Installing building piping, pumps, equipment, motor control center, and electrical service; and

5. Installing new fence segments as needed to enclose newly constructed facilities.

Construction of the chlorination station would be virtually identical to pump station construction.

New facilities would be lighted using dark-sky lighting techniques to minimize skyglow, glare, and light trespass; and use paint colors that match the surrounding environment. Surface water runoff and drainage from the tank sites would discharge to existing ditches/swales adjacent to the sites. Periodic discharges of chlorinated or non-chlorinated water from the tanks may occur when disinfecting, flushing, filling, or emptying the tanks and associated piping and would follow methods in the facilities' approved discharge, stormwater, and other permits.

NGWSP construction contract specifications would include sections about use of the site, cleaning and waste management, and disposal of excavated materials to properly document approved litter and waste removal requirements. Submittal of a waste production and disposal plan would be required by the construction contractor(s).

2.4.5.5 – Equipment

Construction of the proposed pipeline and plant facilities would use the following equipment:

1. For clearing and grubbing: backhoe, excavator, bulldozer, and scraper.
2. For general construction: trenching, pipelaying, water storage tank construction, site clearing/installation: backhoe, excavator, bulldozer, dump trucks, rollers, compaction machines, pickup truck, and scraper. A ripper may be used to break up sandstone and other hard features. No blasting is anticipated.
3. For horizontal directional drilling and jack and boring equipment and pumps would include: a horizontal drilling rig, drilling mud, reclamation equipment, pumps, control cab, vacuum trailer, excavators, storage tanks, and pipe cradles.
4. Site restoration: Primary equipment for site restoration will be backhoe, pickup, & drag rake or disk implement attachment for reseeding. Possibly may use 4-wheeler with drag rake to smooth alignment/reseed.

2.4.5.6 – Access

Reclamation and their project contractors would use existing access roads to access project construction areas with vehicles and heavy equipment. NGWSP construction contract specifications include sections on vehicular access and parking and traffic control, require the submittal of a traffic control plan that meets Federal Highway Administration (FHWA) and New Mexico Department of Transportation (NMDOT) reference standards, and require submittal of any relevant permits from local road entities. No new access roads would be constructed as the pipeline corridor would be used for vehicular travel during construction.

2.4.5.7 – Staging and Borrow Areas

Staging and borrow areas would generally be within the proposed pipeline and plant facility ROWs and short-term ROWs or use existing disturbed areas. Additional staging would be used at pipeline horizontal directional drilling and jack and bore locations to place pipe and equipment.

2.4.5.8 – Fencing

The proposed pumping station and chlorination station would have perimeter security fencing installed or upgraded. Existing livestock fences removed during construction would be braced and secured before being cut. Temporary fencing, cattle guards, and gates may be installed during construction at the discretion of Reclamation and grazing allotment holders to facilitate access. These features would be kept closed to manage livestock and unauthorized access in the project area. Gates may be permanently installed in select

areas to allow access for future operations and maintenance activities and would be kept locked unless otherwise agreed upon. Fences would be rebuilt to match or improve upon the existing adjacent fence.

2.4.6 – Operation, Maintenance, and Replacement

Reclamation would conduct periodic inspections and maintenance on NGWSP infrastructure and facilities to ensure properly functioning infrastructure and equipment as well as safe working and operating conditions for the NGWSP.

2.4.7 – Reclamation

Areas disturbed during construction of the Proposed Action, except for project footprints needed for the continuous operation and maintenance of the project (e.g., fenced tank sites), would be reclaimed and reseeded. Landowners, grazing allotment holders and ROW/lease holders would be notified of reclamation activities, with the BLM FFO, NMSLO, and Navajo Nation Land Department notified at least 48 hours before work begins.

2.4.7.1 – Site Recontouring and Soil Preparation

Drainage in the project area generally flows north. Areas that require recontouring would be recontoured to match pre-disturbance conditions and blend in with the surrounding landform. Subsoils would be redistributed evenly across the project area and would be ripped, tilled, disked on contour, or otherwise prepared for reseeding. Stockpiled topsoil free of trash and weeds would then be respread evenly across the project area. Final seedbed preparation would include raking or harrowing the top few inches of topsoil to promote a firm seedbed.

2.4.7.2 – Reseeding

The general NGWSP-specific goal for revegetation is to meet 70 percent of the pre-construction vegetative cover or better within 3 years of reseeding. If pre-disturbance vegetative cover is below 25 percent, the goal of revegetation is to meet pre-disturbance levels within that time frame.

Reseeding would be performed as soon as possible following construction and testing, and immediately after topsoil has been replaced and the site prepared. The general time frame for reseeding would be July 15 to November 15 and would coincide with conditions when ambient temperatures are above 38°F, when the ground is not snow covered or frozen, and when there is a greater potential for moisture. Reseeding in the winter and spring may be completed depending on suitable conditions. Seed would be native and certified as weed free.

A disk-type seed drill would primarily be used for reseeding with drill rows spaced 1 foot or less apart. Seed drilling would be performed on the contour, perpendicular to slopes to minimize runoff, rilling, and erosion. In areas where the slope is too steep to drill seed, hand broadcasting, mechanical broadcasting, hydroseeding, or other seeding methods may be utilized. Broadcast reseeding rates would be double that of drill seeding rates. Smaller seeds would be planted at a depth of 0.25 to 0.5 inch, whereas larger seeds would be planted at 1 to 2 inches. Improper planting depth can be especially problematic for successful reseeding and planting too shallow is generally better than planting too deep. Broadcast seeds would be covered in the appropriate depth of topsoil immediately after broadcasting using a hand rake or float.

One general seed mix (Table 4) is proposed to be used for the majority of the proposed project. Revegetating private land would include additional landowner-specific requests. Seed mixes will be developed using regional knowledge, the BLM FFO's Bare Soil Reclamation Procedures (BLM 2013), and the Navajo Nation/BIA Navajo Region's 2018 NGWSP Recommended Seed Species for Bare Soils/Invasive Weed Infested Sites (BIA 2018). Seed mixes and seeding rates may deviate from the tables

below based on the availability of seed and other materials at the time of reseeding, as well as further site-specific analysis in the project area.

Table 4. General Seed Mix

Common Name	Scientific Name	Variety	Season	Form	Pure Live Seed (PLS) lbs./acre*
Fourwing saltbush	*Atriplex canescens*	VNS	-	Shrub	3.0
Shadscale	*Atriplex confertifolia*	VNS	Cool	Shrub	2.0
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod	2.0
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Cool	Bunch	3.0
Western wheatgrass	*Pascopyrum smithii*	Arriba	Cool	Sod	2.0
Galleta	*Pleuraphis jamesii*	Viva or florets	Warm	Bunch/Sod	2.0
Purple threeawn	*Aristida purpurea*	VNS	Warm	Bunch	2.0
Sand dropseed	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.25
Alkali sacaton	*Sporobolus airoides*	VNS	Warm	Bunch	0.25
Scarlet globemallow	*Sphaeralcea coccinea*	VNS	Warm	Forb	0.25
Narrowleaf penstemon	*Penstemon angustifolius*	VNS	Cool	Forb	0.25
Rocky Mountain beeplant	*Cleome serrulata*	VNS	Warm	Forb	0.25
Hairy false goldenaster	*Heterotheca villosa*	VNS	Warm	Forb	0.25
Bailey's yucca	*Yucca baileyi*	VNS	-	Forb	0.25

Notes:
VNS=variety not specified.
*Based on 60 PLS per square foot, drill seeded. Double this rate (120 PLS per square foot) if broadcast or hydroseeded.

2.4.7.3 – Mulching

Approximately 1 to 2 tons/acre of certified weed-free straw or native grass hay mulch would be mechanically crimped into the soil within 24 hours of seeding. Mulching generally protects against erosion and can increase the chance of successful revegetation. A mulch component would be incorporated into the slurry mix if hydroseeding is used. Mulching materials and rates may deviate from the above based on the availability of materials at the time of reclamation, and further site-specific analysis in the project area.

2.4.7.4 – Noxious and Invasive Weed Control

Tamarix ramosissima (salt cedar) was found proximate to a few ephemeral drainages and an irrigation pond located on private land outside the project area. *T. ramosissima* should remain confined to the washes in which it occurs if measures are taken to prevent the spread of seeds. Following the protocol in Appendix C of the BLM FFO Bare Soil Reclamation Procedures (BLM 2013), the BLM FFO weed coordinator would review the noxious weed issues in the project area and submit onsite, specific requirements and instructions for weed treatments. The requirements and instructions would include the time frame of treatment, approved herbicides that may be used, required documentation to be submitted to the FFO after treatment, and any other site-specific instructions that may be applicable. Due to the seasonal nature of effective weed-treatment techniques, the operator may be required to treat the weeds before ground disturbance or may be required to treat the weeds after ground disturbance to avoid unreasonable delays.

2.4.7.5 – Monitoring, Reporting, and Adaptive Management

Site monitoring and reporting would follow methods described in Reclamation's Revegetation Plan for the NGWSP and/or the BLM FFO's 2013 Bare Soil Reclamation Procedures. Progress in the attainment of reclamation standards would be assessed, and adaptive management actions for the project would be adopted as necessary.

2.4.8 – Construction Timeframe

Project construction for the Proposed Action is anticipated to occur through 2027. Project features are in various stages of design. If the final design of project features changes from that described in this EA, Reclamation would initiate supplemental surveys, consultation(s), and NEPA for modified project features as appropriate. Table 5 gives a schedule breakdown for individual project features.

Table 5. Projected Construction Timeframe

Project Feature	Start	Finish
Reach 24.1 Lybrook Waterline	Winter 2026	Fall 2027
Reach 24.1 Lybrook Booster Station (Upstream End)	Spring 2026	Summer 2027
Reach 24.1 Lybrook Chlorination Station	Summer 2026	Winter 2027
Power Supply	Winter 2026	Fall 2026

2.5 – Permits and Authorizations

Authority to conduct water resources planning and land and facilities acquisition activities associated with this EA is in conformance with the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory

thereof and supplementary thereto, all of which acts are commonly known and referred to as Reclamation Laws, and particularly Section 10602 of PL 111-11, as amended. Authority to enter into contracts to convey non-project water in NGWSP facilities is in conformance with Section 10602(h) of PL 111-11. PL 92-199 of 1971 authorized Reclamation to conduct feasibility studies for the potential Gallup water resource development project in McKinley, Valencia, and San Juan Counties in New Mexico.

If the Proposed Action were selected, the following permits would be required prior to project implementation:

- NNEPA discharge permits; Construction Permit;
- Clean Water Act (CWA) NPDES construction general permit(s); and
- Approval by local Floodplain Administrator.

Compliance with multiple laws and Executive Orders is required before and during project implementation, including but not limited to:

2.5.1 – Natural Resource Protection Laws

- Clean Air Act, as amended (PL 88-206; 42 USC § 7401 et seq.)
- CWA, as amended (PL 107-303; 33 USC § 1251, et seq.)
- ESA, as amended (16 USC 1531-1544, 87 Stat. 884)
- MBTA, as amended (16 USC §§ 703-712; 50 CFR Part 21)
- Bald and Golden Eagle Protection Act of 1940 (16 USC 668- 668c)
- SDWA, as amended (42 USC § 300f et seq.)
- National Primary Drinking Water Regulations (40 CFR Part 141 and 142)
- National Secondary Drinking Water Regulations (40 CFR Part 143)
- Navajo Nation Safe Drinking Water Act (22 NNC § § 2501-2586)
- New Mexico Drinking Water Regulations (Title 20, Chapter 7, Part 10 of New Mexico Administrative Code)

2.5.2 – Cultural Resource Laws

- Antiquities Act of 1906, as amended (PL 52-209; 16 USC 431-433)
- American Indian Religious Freedom Act of 1978 (PL 95-431; 92 Stat. 469; 42 USC 1996)
- Archaeological Resources Protection Act of 1979 (PL 96-95; 93 Stat. 721; 16 USC § 470aa et seq.), as amended (PL 100-555; PL 100-588)
- Native American Graves Protection and Repatriation Act of 1990 (PL 101-601; 104 Stat. 3048; 25 USC 3001; 43 CFR Part 10)
- National Historic Preservation Act (NHPA) of 1966 (PL 89-665; 80 Stat. 915; 16 USC 470 et seq.), as amended (implemented under regulations of the Advisory Council on Historic Preservation (ACHP), 36 CFR Part 800)

- Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 Federal Register 44716)

2.5.3 – Paleontological Resource Laws

- Paleontological Resources Preservation Act of 2009 [Section 6301-6312 of the Omnibus Land Management Act of 2009 (PL 111-11 123 Stat. 991-1456)]

2.5.4 – Other Laws and Policies

- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act; 42 USC 4601-4655)
- Regulations of the Attorney General Governing the Review and Approval of Title for Federal Land Acquisitions (2016)
- Uniform Appraisal Standards for Federal Land Acquisitions (Interagency Land Acquisition Conference 2016)
- Reclamation Safety and Health Standards ("Yellow Book")
- Navajo Preference in Employment Act
- Federal contracting laws and policies

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 – Introduction

Section 3.2 discusses resources that may be affected by the Action Alternatives. For each resource, the potentially affected area and/or interests are identified, existing conditions described, and potential environmental consequences analyzed under the Action Alternatives. Section 3.2.8 includes a summary of environmental consequences. A list of environmental commitments follows in Section 4.2.

3.2 – Affected Environment and Environmental Consequences

3.2.1 – Grazing and Range

Affected Environment

There are 167 grazing allotments managed by the BLM FFO, with 351 grazing authorizations that permit cattle, sheep, and horse grazing. Of the 167 grazing allotments, there are four authorizations issued under Section 15 of the Taylor Grazing Act to the Navajo Tribe; these authorize grazing on 35 allotments. Most allotments contain a combination of federal, state, and private land. Periods of livestock use vary, from year-round to seasonal (BLM 2015). The project area crosses portions of four BLM grazing allotments:

- North Equus (1,942 acres);
- Eagle Rock (5,364 acres);
- Venado (14,306 acres); and
- Counselor Community (100,734 acres) (BLM 2024c).

It is also within the Navajo Nation's Counselor Grazing District (NN 2019). The NMSLO parcel, which the Proposed Action crosses, is part of an agricultural lease (GS22510000) with the Navajo Nation (NMSLO 2024). The project area is actively used for grazing. There are a number of range improvements within the project area including fences, gates, waterlines, and stock tanks.

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no need to acquire ROWs from the BLM, BIA or NMSLO for the construction of the Reach 24.1 Lybrook Lateral water pipeline, including its associated pumping and chlorination plants. There would be no ground disturbing activities or interruptions to grazing or range use.

Environmental Consequences of the Proposed Action

The majority of the proposed pipeline ROW (approximately 5.4 miles) would be within the Venado Allotment. Approximately 1.2 miles would be in the Eagle Rock Allotment with approximately 0.25 and 0.5 miles in the North Equus and the Counselor Community Allotments, respectively. There will be a temporary loss of approximately 19 acres of forage within the Venado Allotment and 4.4 acres within the Eagle Rock Allotment because of construction activities within these allotments. The Counselor

Community Allotment would have a temporary loss of approximately 1.8 acres and the North Equus Allotment would lose less than one acre. The loss of forage would be less than 1/10 of one percent of the total acreage of any one of these allotments. These temporary reductions would not alter the grazing allotments carrying capacity. The disturbed area along the proposed pipeline ROW would be reseeded with BLM-approved seed mixes composed of palatable grasses and shrubs as discussed in Sections 2.4.7 and 4.2. The disturbed area would be expected to revegetate within 1 to 2 years following reclamation and may result in an increase in available forage within the project area.

Construction of the pipelines could also temporarily restrict livestock movement and access to water due to the open trenches. As discussed in Section 2.4.5.8, temporary fencing, cattle guards, and gates may be installed during construction at the discretion of Reclamation and grazing allottees to facilitate access. These features would be kept closed to manage livestock and unauthorized access in the project area. Gates may be permanently installed in select areas to allow access for future operations and maintenance activities and would be kept locked unless otherwise agreed upon. Fences would be rebuilt to match or improve upon the existing adjacent fence. Up to a maximum of 500 feet of trench would be open at any one time. Temporary fences would be installed around open trenches when work crews are not present to prevent livestock or other wildlife from falling in. Thus, a maximum of 0.36 acres of grazing range would be temporarily unavailable to livestock at any one time. Grazing permittees would be contacted prior to any construction operations on their respective portions of the proposed reaches. All construction activities would be confined to permitted areas only. Effects to range and grazing livestock would be minor in both the short and long term.

BLM Standard Stipulations would be required for fencing protection during construction and replacing fences on pasture and allotment boundaries once construction in an area is completed. Effects to range and grazing livestock would be less than significant.

3.2.2 – Invasive Species and Noxious Weeds

Affected Environment

Several noxious weed species as listed by the State of New Mexico were observed (NMDA 2020). Class A species have limited distribution or are not currently present in New Mexico; no species on the Class A list were observed within the project area during the biological surveys. Class B species are limited to certain areas of the State, and in areas with severe infestations, management should be designed to contain the infestation and stop further spread. Class B species were not observed within the project area during the biological survey. Class C species are widespread throughout the State. Management decisions for these species should be determined at the local level, based on the feasibility of control and level of infestation (NMDA 2020). Cheatgrass (*Bromus tectorum*) was observed in some disturbed areas and Russian olive (*Elaeagnus angustifolia*) and salt cedar (*Tamarix spp.*) were observed in the riparian area discussed in Section 3.2.3.2 below. All three of these species are Class C species in the State of New Mexico.

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no impacts to invasive species and noxious weeds from the construction of the Reach 24.1 Lybrook Lateral water pipeline, including its associated pump station and chlorination building.

Environmental Consequences of the Proposed Action

The potential exists for invasive species and noxious weeds to be introduced into the project area or have existing weeds be spread further during construction and operation. Seeds of noxious weeds or invasive

species could unknowingly be carried on vehicles, heavy equipment, and on the clothing and shoes of personnel. Roads and pipelines can be a conduit for the spread of noxious weeds or invasive species (Gelbard and Belnap 2002). Disturbance could allow seeds of noxious weeds already present in the soil to germinate and grow without competition from native plant species. The establishment of invasive species could reduce the success of reclamation efforts and create a source of future colonization and degradation of adjacent, undisturbed areas. Reclamation and/or project cooperators and contractors would revegetate disturbed areas and implement other BMPs as outlined in Section 4.2 during construction and operation to prevent, control, and avoid further introduction and/or spread of noxious weeds. Preparation of an invasive plants/weeds management plan would be required prior to construction. A weed inventory would need to occur prior to construction. Reclamation and/or project cooperators and contractors would also comply with appropriate management techniques outlined in the *Navajo Nation Integrated Weed Management Plan* (BIA 2022). These measures would minimize the potential for the introduction of invasive species and noxious weeds and would limit impacts to those from invasive species and noxious weeds already in the project area. Thus, impacts on invasive species and noxious weeds from implementation of the Proposed Action would be minor and less than significant.

3.2.3 – Special Status Species

Affected Environment

Chapter 5 of the 2009 NGWSP PR/FEIS described the affected environment of the NGWSP with special status species outlined on pp V70-V93 and aquatic resources outlined on pp V56-V70. Special status species include federally listed threatened, endangered, or proposed species and those listed as threatened or endangered by the Navajo Nation and the State of New Mexico, and BLM sensitive species. A Biological Assessment (BA) was prepared in 2005 to analyze the effects of the NGWSP (Keller-Bliesner Engineering and Ecosystems Research Institute 2005).

Since the 2005 BA was prepared, there have been changes in agency species listings, with some species delisted and others listed. More details about species' life histories, habitat, distribution, and status in the project area can be found in the BE on file with Reclamation (Terra Technologies 2022). Information on federally listed threatened and endangered species potentially occurring in the area as well as biological resources compliance documentation for the State of New Mexico are provided in Appendices C and D.

Tables 6 and 7 lists USFWS, Navajo Nation (NNHP), BLM, and State of New Mexico special status species known or potentially occurring in the project area. Of the seven federally listed species known to occur or that have the potential to occur within the project area, all were eliminated from further consideration due to a lack of habitat within or proximate to the project area (Table 6). No USFWS designated critical habitat occurs within the project area. The Monarch butterfly (*Danaus plexippus*), while not federally listed, is a Candidate species. It does have the potential to occur in the project area but was not observed during surveys in 2019 or 2021 (Terra Technologies 2022).

Not including federally listed species, 38 other special status species have the potential to occur in the project area (Table 7). Fifteen of these species were determined to have no potential to occur due to a lack of habitat within or proximate to the project area. Pinyon jays *(Gymnarhinus cyanocephalus*) (BLM Sensitive and NMDFG Species of Greatest Conservation Need [SGCN]) were the only special status species observed in the project area during the biological surveys; however, habitat is present throughout the project area for a number of NNHP, BLM and State of New Mexico special status species (Table 7) including the Gunnison's prairie dog (*Cynomys gunnisoni*; BLM Sensitive) among several others. Habitat for burrowing owls (*Athene cunicularia* (Navajo Nation and BLM Sensitive) is present at two locations within the project area. Kangaroo rat (*Dipodomys spectablis*) burrows are common throughout the project area. No habitat for bat species was

observed within the project area. Although not observed, signs of mule deer and elk (tracks and scat) were observed in the project area.

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no ground disturbing activities and, thus, no impacts to special status species from the construction of the NGWSP Reach 24.1 Lybrook Lateral water pipeline, including its associated pumping and chlorination plants.

Environmental Consequences of the Proposed Action

Environmental consequences from the Proposed Action related to special status species would not create any new significant site-specific effects nor contribute to cumulative significant impacts that are not already described in the 2009 NGWSP PR/FEIS.

Federally Listed Species

The Proposed Action would not have any effect to any federally listed species or Designated Critical Habitat (Table 6).

Table 6. USFWS Threatened and Endangered Species

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
Mexican Spotted Owl	*Strix occidentalis lucida*	T	Canyons and forested area with mixed coniferous forest, but not pinyon/juniper.	No canyon habitat present. Forest is pinyon/juniper, which is not a preferred habitat type.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Yellow-Billed Cuckoo	*Coccyzus americanus*	T	Wetland/ Riparian.	No riparian habitat present.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Rio Grande Cutthroat Trout	*Oncorhynchus clarkii virginalis*	C	Endemic to the Rio Grande, Pecos, and possibly the Canadian River Basins in New Mexico and Colorado.	No permanent streams occur in project area.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
Razorback Sucker	*Xyrauchen texanu*	E	No depletions to upper Colorado River basin, therefore not relevant.	No riverine habitat present.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Monarch Butterfly	*Danaus plexippus*	PT	Prairies, meadows, grasslands and along roadsides, across most of North America. Feeds primarily on milkweed.	Habitat could exist. Animal not observed.	Revegetation should include milkweed species.	Due to the minor amount of habitat loss, there would be no effect to this species.
Suckley' Cuckoo Bumble Bee	*Bombus suckleyi*	PE	Prairies, grasslands, meadows, woodlands, and even agricultural and urban areas.	Not known to occur in this area.	No avoidance or environmental commitment measure is necessary.	There would no effects to this species.
Knowlton's Cactus	*Pediocactus knowltoni*	E	This species is endemic to San Juan County, NM near the Los Pinos River at elevations of 6,200 to 6,300 feet. There is one known population in an area of approximately 12 acres. It's preferred habitat is pinyon juniper and sagebrush communities with loamy, gravelly, alluvial	This habitat is widespread throughout the project area however, the project area is at a higher elevation and is not **proximate to** the area for **which this species is known.**	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			soils with cobbles.			

Notes: C = Candidate; E = Endangered; P = Proposed; T = Threatened;
Source: Information for Planning and Consultation (IPAC), June 2025. https://ecos.fws.gov/ipac/

Other Special Status Species

Environmental consequences from the Proposed Action were deemed to be similar to those described in the 2009 NGWSP PR/FEIS for several other special status species which are listed in Table 7.

Environmental consequences on other special status species potentially located within the project area are described below. While the project would result in temporary loss of 34.7. acres of habitat for some species as well as temporary displacement of some species during construction and reclamation activities, for the reasons described below, effects are considered negligible and not significant. If applicable, species-specific presence/absence surveys and additional measures developed by the NNDFW would be completed for certain species as further described in Section 4.2.

Clover's Cactus: The northern portion of the project area is within or adjacent to approximately 2.1 acres of suitable habitat for Clover's cactus. However, consultation with BLM and Navajo Nation biologists (Appendices E and G of Terra Technologies [2022]) indicates the project area is not suitable habitat for this species and focus surveys were not required. Habitat is not present for any other special status plant species.

Avian Species: Suitable nesting and/or foraging habitat is present or potentially present for 16 BLM/Navajo/State of New Mexico special status avian species. Of these, pinyon jays (*Gymnorhinus cyanocephalus*) were the only species observed during biological surveys. Given the minor scale of temporary habitat loss (a maximum of 17.1 acres of pinyon juniper habitat) and complying with the MBTA through temporal avoidance or preconstruction surveys, impacts to these species would not be significant.

Burrowing Owl: Potential habitat for the burrowing owl exists at two locations within the project area on BLM land. Given the minor scale of temporary habitat loss (a maximum of 16.3 acres of sagebrush and juniper savanna habitat) and complying with the MBTA through temporal avoidance or preconstruction surveys, impacts to these species would not be significant.

Raptors: The nearest known raptor nest is approximately 0.75 miles from the northern portion of the project site on BLM land in Section 22. However, the nest is one that was active but failed 4 years ago and has not been active since (Terra Technologies 2022). A raptor nest in a cliff was found but appeared inactive and no birds were observed during several surveys (Figure 11 of the BE [Terra Technologies 2022]). All power lines would be designed in accordance with *Navajo Nation Raptor Electrocution Prevention Regulations* (NNHP 2008). Given that raptor nests are not present within or near the project area, impacts to these species would not be significant.

Mammals: No habitat for bats was identified within the project area. No Gunnison's prairie dogs were observed during biological surveys. Although potentially present, the scale of prairie dog town removal (up to 16.3 acres of sagebrush and juniper savanna habitat) is minimal to the overall population in the region and is not significant. The scale of temporary habitat loss for other mammals, mule deer, and elk 17.1 acres

of pinyon juniper woodland), is minimal compared to the amount of habitat in the region and is not significant.

Table 7. BLM Sensitive Species, Navajo Nation Special Status Species and State of New Mexico Special Status Species

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
Plants						
Acoma Fleabane	*Erigeron acomanus*	BLM S	Sandy slopes and benches beneath sandstone cliffs of the Entrada Sandstone Formation in pinyon-juniper woodland; 6,900 to 7,100 feet.	Preferred habitat absent. Lybrook does not intersect any benches below sandstone cliffs or go within 200 feet of any slopes or benches below cliffs. Plant was not found in Spring 2019 surveys.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Aztec Gilia	*Aliciella Formosa*	BLM S, NNHP P (NESL G4)	Endemic to soils of the Nacimiento Formation. Salt desert scrub communities, 5,000 to 6,400 feet (NMRP 2019; Roth and Sivinski 2018).	The plant community is not correct, the soils are not derived from the Nacimiento Formation, and the project elevation is above 7,000 feet.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Clover's Cactus	*Sclerocactus cloveriae*	BLM S, NNHP P (NESL G-4), NMDFG WCA E, NMDGF SCGN/SERI-SS	Desert scrub and scattered juniper communities. On sandy clay hills of the Nacimiento Formation at 5,000 to 6,000 feet (NMRP 2019); other sources report it to 7,200 feet.	There is very limited (less than 1 acre) desert scrub, sandy openings, or scattered juniper habitat. Habitat is predominantly dense pinyon/juniper forest and dense sagebrush. Cactus was not found by BLM during a Spring 2021 survey	No avoidance or environmental commitment measure is necessary.	Approximately 2.1 acres of suitable habitat would be temporarily lost during construction. This habitat would be restored during the revegetation process.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
				although the northern portion of the project area is within or adjacent to a BLM special status species Habitat Conservation Area with suitable habitat.		There would be no effect to this species.
Clipped Wild Buckwheat	*Eriogonum lachnogynum var.colobum*	BLM S	Open sandy or gypseous limestone ridges and edges of mesas in pinyon-juniper woodland; about 6,820 to 7,540 feet. Presently known only from outcrops of Todilto limestone between Prewitt and Thoreau in McKinley County and limy gravelly soils on the rim of the Rio Grande Gorge in Taos County (NMRP 2019).	The Todilto limestone is a Jurassic stratum and is not found in the project area (Lucas and Heckert 2003). The project route does not intersect the preferred habitat of limestone ridges and mesa edges.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Gypsum Townsend's Aster	*Townsendia gypsophila*	NMDGF SGCN/SERI-SS	Occurs on gypsiferous soils in the Todilto and Summerville gypsum formations in central New Mexico, in the Ojito/White Mesa region, Sandoval County. This is south	. Project elevation exceeds typical range. Gypsiferous soils were not observed within project area. The elevation of the project area is slightly higher	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			of the project area. Occur at elevations of approximately 5,500 to 6,800 feet in pinyon-juniper woodland and Great Basin Desert scrub (Natureserve Explorer 2022; Roth and Sivinski 2015).	than that preferred by this species.		
Mancos Saltbush	*Proatriplex pleiantha*	BLM S	Barren, saltbrush badlands; on highly dissected and eroded gray shale and clay of the Mancos Formation, at elevations of 4,800 to 5,000 feet. (NMRP 2019).	The entire project area lies above 7,000 feet elevation. The project area is not saltbrush badlands, but pinyon/juniper and sagebrush communities.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Parishes Alkali Grass	*Puccinellia parishii*	BLM S	Alkaline springs and seeps, ephemeral wetland areas with consistently damp soils during late winter to spring. Can occur at the heads of drainages or on gentle slopes. Elevation found is 2,600 to 7,200 feet. Associated species *Distichlis*	No alkaline springs or seeps were found adjacent to or intersecting the proposed project area. No wet areas were found other than stock ponds. The species it grows with (i.e., sedges, bulrushes, and rushes) were not observed during Fall 2021	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			stricta (salt grass), *Sporobolus airoides* (alkali sacaton), *Carex* spp. (sedges), *Scirpus* spp. (bulrushes), *Juncus* spp. (rushes), *Eleocharis* spp. (spike rushes), and *Anemopsis californica* (yerba mansa) (NMRP 2019).	or Spring / Summer 2022 surveys.		
San Juan Milkweed	*Asclepias sanjuanensis*	BLM S, NNHP P (NESL G4)	Found in sandy or sandy loam soils in juniper savanna and Great Basin grassland plant communities. Known populations occur from 5,000 to 6,200 feet elevation (NMRP 2019) in an area south of Farmington but west of Lybrook.	The associated plant community is largely lacking as most of the juniper occur as dense pinyon/juniper forest. The entire project lies above the elevation from which this plant is known. The soils are silty and gravelly, and not sandy/sandy loam. Only one small area of juniper savanna was observed. Not reported by BLM during a Spring 2021 survey.	No avoidance or environmental commitment measure is necessary. Plant prefers disturbed conditions, and thus the project could be beneficial,	There would be no adverse effect to this species, and possibly a positive effect.
Sivinski's Blazing Star	*Mentzelia sivinskii*	BLM S	Knolls, slopes, and grassland roadsides, gypsum or brown clayey soils; 4,921 to	The entire project area lies above 7,000 feet elevation. No gypsum soils or clayey were	No avoidance or environmental	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			6,234 feet (FNA 2019). Known from an area NW of Lybrook (NMRP 2019).	observed on the project route.	commitment measure is necessary.	
Avian						
Bank Swallow	*Riparia riparia*	NMDGF SGCN/SERI-SCGN	Wetland/Riparian. Nests are in steep sand, dirt, or gravel banks, in burrows dug near the top of the bank (Cornell 2019).	No ponds or ravines within or immediately adjacent to project area on State of New Mexico land.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Burrowing Owl	*Athene cunicularia*	BLM S, NNHP P (NESL G4)	Burrowing owls are generally associated with dry, open, short-grass, treeless plains (NMDGF 2007). Ecological zones that support burrowing owls in New Mexico include Chihuahuan desert scrub, closed basin scrub, desert grassland, Great Basin Desert scrub, juniper savanna, lava beds, plains-mesa grassland, plains-mesa sand scrub, sand dunes,	Habitat throughout the project corridor was largely densely vegetated or forested, with only one area of juniper savanna and only in one area were burrows found. No animals were seen, but many burrows appeared to be banner tailed kangaroo rat (*Dipodomys spectabilis)* or other kangaroo rat burrows. Embankments and holes along cliff bases were scanned with binoculars for burrows with whitewash and other owl sign, but none was seen.	Temporal avoidance would be implemented. If work cannot be avoided during breeding season, (March 1 to August 15) the area with juniper savanna and burrows will be surveyed prior to construction. Survey protocols from NNDFW would be followed including mitigation measures if species is present.	There would be no effect to this species since pre-construction surveys would occur and construction stopped if present.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			urban, and farmland (NMDGF 2007)	This is not habitat favored by burrowing owls, which prefer to be able to see long distances. Owls were not seen or heard. Prairie dog colonies not present. Few areas with burrows observed. Preferred habitat is largely absent.		
Bendire's Thrasher	*Toxostoma bendirei*	BLM S	Breeds in northern New Mexico. Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland (Cornell 2019).	Project area is pinyon/juniper woodland and sagebrush flats with tall vegetation. This species could occur during breeding season.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15).* A pre-construction survey will be performed during breeding season. If this species is determined to be present during surveys the contractor would consult with BLM to determine appropriate avoidance measures.	There would be no effect to this species.
Chestnut-collared Longspur	*Calcarius ornatus*	BLM S	Grasslands with short vegetation, and prairies. Winters but	Short grass areas limited. Not likely to occur.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			not breeding in New Mexico (Cornell 2019).			
Clark's Nutcracker	*Nucifraga columbiana*	NMDGF SGCN/SERI-SCGN	Open coniferous forest, forest edge/clearings. Mostly in mountains but occurs in various habitats. Usually nests at elevations between 5,905 to 8,202 feet (Cornell 2019).	Not observed during 2019 and 2021 surveys but species could occur during breeding season.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15).* A pre-construction survey will be performed during breeding season. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine appropriate avoidance measures.	There would be no effect to this species.
Gray Vireo	*Vireo vicinior*	NMDGF SGCN/SERI-SCGN	Desert, shrubland/chaparral, conifer or mixed woodland. Breeding occurs in rocky hills covered with sparse bushes and scrub, in juniper, hackberry (*Celtis* spp.) and Grave's oak (*Q. gravesi*). In northwestern New Mexico, found at	Not observed during 2019 and 2021 surveys but species could occur during breeding season.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15).* A pre-construction survey will be performed during breeding season. If this species is determined to be present during surveys the contractor would consult with	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			elevations from 5,800 to 7,200 feet in broad-bottomed canyons (flat or gently sloped valleys) below or near ridge-top/rock outcrop/cliff head walls of canyons or gently sloped bowls in pinyon-juniper woodland (Cornell 2019).		NMDGF to determine appropriate avoidance measures.	
Juniper Titmouse	*Baeolophus ridgwayi*	NMDGF SGCN/SERI-SCGN	Pinyon-juniper woodlands. Nest constructed in natural tree cavity, in old woodpecker hole, or bird box; 3 to 40 feet above ground, standing snag/hollow tree (Cornell 2019).	Not observed during 2019 and 2021 surveys but species could occur during breeding season.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15).* A pre-construction survey will be performed during breeding season. If this species is determined to be present during surveys the contractor would consult with NMDFG to determine appropriate avoidance measures.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
Lewis's Woodpecker	*Melanerpes lewis*	NMDGF SGCN/SERI-SCGN	Open forests, mostly ponderosa, nests in standing snag/hollow tree (Cornell 2019).	Not observed during 2019 and 2021 surveys but species could occur during breeding season.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15).* A pre-construction survey will be performed during breeding season. If this species is determined to be present during surveys the contractor would consult with NMDFG to determine avoidance appropriate measures.	There would be no effect to this species.
Loggerhead Shrike	*Lanius ludovicianus*	NMDGF SGCN/SERI-SCGN	Desert, Grassland/herbaceous, Savanna, Shrubland/chaparral. Breeds in open country with scattered trees and shrubs, savanna, desert scrub. Suitable hunting perches are an important part of the habitat (Cornell 2019).	Not observed during 2019 and 2021 surveys but species could occur during breeding season.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15).* A pre-construction survey will be performed during breeding season. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
					appropriate avoidance measures.	
Virginia's Warbler	*Oreothlypis virginiae*	BLM S	Breeds in northern New Mexico. Inhabits pinyon pine and oak woodlands. Frequently are found in wet drainages (Cornell 2019). Also, dry mountainsides, oak canyons, brushy slopes (Audubon 2019). Nest on ground at downslope base of grass clumps, beneath rock or roots, often on steep slopes (Cornell 2019), incubating eggs for 11-14 days with nestlings in the nest for an additional 10-14 days.	Woodland habitat exists but no wet drainages. Known common breeder in New Mexico (Audubon 2019).	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to Aug 15)* unless along roadways, a pre-construction avian survey will be conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with BLM to determine appropriate avoidance measures.	There would be no effect to this species.
Mexican Whip-poor-will	*Antrostomus arizonae*	BLM S	Pine and oak mountain woodlands and canyons, mostly in the pine-oak zone at middle elevations, sometimes higher. Breeds in New Mexico; considered uncommon. Forages	Habitat is present.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to Aug 15)* unless along roadways, a pre-construction avian survey will be	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			nocturnally, especially at dusk and dawn.		conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with BLM to determine appropriate avoidance measures.	
Mountain Plover	*Charadrius montanus*	P; NESL G4	Typically nests in flat (<2^{o} slope) to slightly rolling expanses of grassland, semi-desert, or badland, in an area with short, sparse vegetation, large bare areas (often >1/3 of total area), and that is typically disturbed (e.g., grazed); may also nest in plowed or fallow cultivation fields. Nest is a scrape in dirt often next to a grass clump or old cow manure pile. Migration habitat is	No plovers were observed in April 2019 surveys, but species they often occur with (i.e., horned larks) were seen. The nearest known plover habitat is more than 15 miles to the west. Preferred habitat is largely absent. Vegetation tends to be tall and dense, and much of the area is sloped.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15)*, pre-construction avian surveys will be performed within 48 hours of disturbance. If this species is determined to be present during surveys the contractor would consult with NNHP to determine appropriate avoidance measures.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			similar to breeding habitat.			
Olive-Sided Flycatcher	*Contopus cooperi*	NMDGF SGCN/SERI-SCGN	Typically found in coniferous forest. Nest sites include dead standing trees. Require tall trees with open foraging areas (NMACP 2017).	No plovers were observed in April 2019 surveys, but species they often occur with (i.e., horned larks) were seen. The nearest known plover habitat is more than 15 miles to the west. Preferred habitat is largely absent. Vegetation tends to be tall and dense, and much of the area is sloped.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season (March 1 to Aug 15)*, pre-construction avian surveys will be performed within 48 hours of disturbance. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine appropriate avoidance measures.	There would be no effect to this species.
Pinyon Jay	*Gymnorhinus cyanocephalus*	BLM S, NMDGF SCGN/SERI SCGN	Pinyon-juniper woodland; in nonbreeding season, also occurs in scrub oak and sagebrush (Cornell 2019).	Habitat exists. Several pinyon jays were seen near project area north of BLM land on Tribal property.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to Aug 15)*, unless along roadways, a pre-construction avian survey will be conducted no more than 3 days prior to commencing	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
					construction activities. If this species is determined to be present during surveys the contractor would consult with BLM and NMDGF to determine appropriate avoidance measures.	
Pygmy Nuthatch	*Sitta pygmaea*	NMDGF SCGN/SERI SCGN	Pine forest and woodland, especially ponderosa pine, less frequently pinyon-juniper. Breeding pair digs a hole in dead wood or uses an abandoned woodpecker hole. Nest hole is usually 6 to 50 feet above ground. Standing snag/hollow tree (Cornell 2019).	Could potentially occur.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to Aug 15)*, unless along roadways, a pre-construction avian survey will be conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine appropriate avoidance measures.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
Western Bluebird	*Sialia mexicana*	NMDGF SCGN/SERI SCGN	Open woodlands, savanna, riparian woodlands, burned woodlands, also deserts in winter. Nests are in natural tree cavities, abandoned woodpecker holes. Standing snag/hollow tree (Cornell 2019).	Habitat exists.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to Aug 15)*, unless along roadways, a pre-construction avian survey will be conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine appropriate avoidance measures.	There would be no effect to this species.
Williamson's Sapsucker	*Sphyrapicus thyroideus*	NMDGF SCGN/SERI SCGN	Open forests, mostly ponderosa, nests in standing snag/hollow tree (Cornell 2019).	Habitat exists.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to Aug 15)*, unless along roadways, a pre-construction avian survey will be conducted no more than 3 days prior to commencing	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
					construction activities. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine appropriate avoidance measures.	
Raptors						
Ferruginous Hawk	*Buteo regalis*	NNHP (NESL G3)	Ferruginous Hawks nest in badlands, flat or rolling desert grasslands, and desert scrub. Most nests on Navajo Nation are on clay or rock pinnacles, small buttes, or short cliffs (<100 feet height); fewer are placed in top of juniper trees or on the ground, and there is one record of a nest on the crossarm of a transmission-line tower. Habitat surrounding nest site must support populations of their preferred prey items of cottontail rabbits,	Badlands occur nearby. The nearest known raptor nest is approximately 0.75 mile from the northern portion of the project site on BLM land in Section 22. However, the nest is one that was active but failed 4 years ago and has not been active since (Kendall personal communication 2020).	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to July 31)* unless along roadways, a pre-construction raptor survey will be conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with BLM, NMDGF, and NNHP to determine appropriate avoidance measures.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			jackrabbits, prairie dogs, ground squirrels, and gophers.			
Golden Eagle	*Aquila chrysaetos*	K; NESL G3	Nest on steep cliffs, typically >100 feet in height, although shorter cliffs (>30 feet) infrequently used. Nesting cliffs are normally directly adjacent to foraging habitat of desert grasslands or desert scrub, with only sparse shrubs if present, which provides primary prey of cottontail and jackrabbits. Nests usually placed in middle to upper parts of cliffs in sheltered ledges, potholes, or small caves which provide protection from the elements. GIS data provided by BLM indicates the nearest known golden eagle nest is approximately 7.5	Eagles were known in the area at one time (J. Kendall, BLM, personal communication with Dr. Fordham, 2019). A spotting scope was used to survey cliff faces in Spring 2019. Two large stick nests were found. No activity was noted. No flying adults were observed in 5 days of morning and/or evening surveys. There is already extensive truck traffic activity along the roads. There are numerous permanent structures, including oil/gas production facilities such as tanks and pump stations, or residences, off Atkins Road and to the north of the rerouted line, and also near the line south of tribal lands. GIS data provided by BLM indicates the nearest known golden eagle nest	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (January 15 to July 15)*, unless along roadways, a preconstruction raptor survey will be conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with USFWS, BLM, NMDGF, and NNHP to determine appropriate avoidance measures.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			miles northeast of the project area.	is approximately 7 miles northeast of the project area.		
Peregrine Falcon	*Falco peregrinus*	P; NESL G4	Nests on steep cliffs >100 feet tall (typically >150 feet) in a scrape on sheltered ledges or potholes. Foraging habitat quality is an important factor; often, but not always, extensive wetland and/or forest habitat is within the falcon's hunting range of <15 miles. Variability in topographic features, such as elevation and slope, may also indicate the availability of prey.	Habitat in cliffs is suitable. No active nests were found over five days of surveying in 2019. Possible falcons seen in general vicinity. GIS data provided by BLM indicates the nearest known peregrine falcon nest is approximately 10 miles north of the project area.	Temporal avoidance should be implemented. If work cannot be avoided during breeding season, (March 1 to July 31)*, unless along roadways, a preconstruction raptor survey will be conducted no more than 3 days prior to commencing construction activities. If this species is determined to be present during surveys the contractor would consult with BLM, NMDGF, and NNHP to determine appropriate avoidance measures.	There would be no effect to this species.
Mammals						
Cougar	*Puma concolor*	NMDGF SCNG/SERI-SER	Small part of normal home range.	Could occur.	No avoidance or environmental commitment measure is necessary.	This species could easily avoid construction activities for the period they are there.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
						There would be no effect to this species.
Elk	*Cervus canadensis nelsoni*	NMDGF SCNG/SERI-SER		Many elk tracks and scat observed.	Revegetate disturbed lands.	This species could easily avoid construction activities for the period they are there. There would be no effect to this species.
Gunnison's Prairie Dog	*Cynomys gunnisoni*	BLM S, NMDGF SCNG/SERI SCGN	Sagebrush ecosystem (USFWS 2019).	Habitat is present. Prairie dogs not observed although weather was suitable. Kangaroo rat burrows were common.	Pre-construction surveys would take place (March 1-June 1). Revegetate disturbed lands.	Given the amount of habitat available and the minor amount (13 acres) that would be disturbed impacts would be minimal to this species.
Kit Fox	*Vulpes macrotis*	P; NESL G4	Dens excavated in desert scrub or desert grasslands with soft, alluvial or silty-clay soils, and often with sparse saltbush, shadscale, greasewood, or sagebrush, and grasses.	Little desert scrub or desert grassland plant community observed. Preferred habitat largely absent. Animal not found. Potential burrows not found.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
Mule Deer	*Odocoileus hemionus*	NMDGF SCNG/SERI-SER		Many deer tracks and scat observed.	Revegetate disturbed lands.	This species could easily avoid construction activities for the period they are there. There would be no effect to this species.
Spotted Bat	*Euderma maculatum*	NMDGF SCNG/SERI SCGN	May occupy higher elevation coniferous stands in summer and migrate to lower elevations in late summer/early fall. Desert to montane coniferous, including open ponderosa pine, pinyon-juniper woodland, canyon bottoms, riparian and river corridors, meadows, open pasture, and hayfields. Active foraging may be mostly in open terrain, including forest clearings, meadows, and open wetlands, sometimes in open areas near buildings. Many bats in New Mexico were caught over	The spotted bat is unique among bat species in Region 2 in that it apparently does not depend heavily upon caves, abandoned mines, or buildings for roosting so this species could occur (USDA 2007).	Auditory surveys (3 nights) near cliffs and that water body. Cliffs are under tank to north, and the deep valley before Atkins road. If this species is determined to be present during surveys the contractor would consult with NMDGF to determine appropriate avoidance measures.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
			waterholes near a sandstone cliff with numerous vertical cracks. Roosts in cracks, crevices, caves, buildings near cliffs (Natureserve, 2018).			
Townsends Big Eared Bat	*Corynorhinus townsendii*	BLM S	Use a variety of habitats, almost always near caves, abandoned mines, or other roosting areas. Live in pine forests and arid desert scrub habitats (Nevada 2019).	Roosting habitat of cliff walls where caves might occur is outside of project area.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.
Northern Leopard Frog	*Rana pipiens*	BLM S	Requires wetland/stream habitat.	All livestock impoundments adjacent to the proposed route are isolated from perennial streams. The shorelines are heavily impacted by livestock and have no riparian vegetation. Drainages to a large ravine that contains intermittent standing water are crossed but there is no	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

Common Name	Scientific Name	Status	Habitat Type	Survey Results	Environmental Commitment	Effects Determination
				riparian habitat at these points.		
Insects						
Yuma Skipper	*Ochlodes yuma*	BLM S	Associated with beds of Common Reed (*Phragmites australis*) (Xerces 2019).	Habitat lacking on proposed Lybrook route. No reeds, riparian, or wetland habitat.	No avoidance or environmental commitment measure is necessary.	There would be no effect to this species.

*Survey windows may vary slightly depending on species, but this period generally encompasses all of them.

Notes:

E= Endangered; ESA = Federal Endangered Species Act; NMAC = N.M. Administrative Code; NMDGF = N.M. Department of Game and Fish; NMRPCS = N.M. Rare Plant Conservation Strategy; SERI = Species of Economic and Recreational Importance; SGCN = Species of Greatest Conservation Need; SOC = Species of Concern; SS = NM Rare Plant Conservation Strategy Species; T = threatened; USFWS =U.S. Fish and Wildlife Service; WCA = New Mexico Wildlife Conservation Act. BLM S = BLM Sensitive

3.2.4 – Floodplains

Affected Environment

The project alignment would cross two areas that are Federal Emergency Management Agency (FEMA) Flood Hazard Zone A (EPA 2024a). These are areas with a 1% Annual Chance Flood Hazard. Areas subject to inundation by the 1-percent-annual-chance flood event are generally determined using approximate methodologies. These are considered to be Special Flood Hazard Areas. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown on FEMA maps. The rest of the project area is within an Area of Minimal Flood Hazard (NRCS 2024).

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no impacts to floodplains from the construction of the Reach 24.1 Lybrook Lateral water pipeline, including its associated pumping and chlorination plants.

Environmental Consequences of the Proposed Action

The water pipeline would be constructed across two FEMA Hazard Zone A areas where the project runs east to west on Navajo Tribal Fee land. Approval by the local community Floodplain Administrator would be required before construction or development begins within any Special Flood Hazard Area. If FEMA has not defined the Special Flood Hazard Area within a community, the community shall require permits for all proposed construction or other development in the community including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas. Approval by the local community Floodplain Administrator is required to ensure that proposed development projects meet the requirements of the National Flood Insurance Program and the community's floodplain management ordinance (NMED 2024). Because the Proposed Action would meet these requirements, impacts to floodplains would be less than significant.

3.2.5 – Land Use

Affected Environment

Chapter 5 of the 2009 NGWSP PR/FEIS described the affected environment of the NGWSP with land use outlined on pages V104-V111.

The Proposed Action is located on Navajo Nation tribal trust and allotment lands and on lands managed by the NMSLO and BLM in Rio Arriba and Sandoval Counties, New Mexico. Project area land uses include electrical energy generation and transmission, residential and commercial development mainly along Atkins Road and the US Highway 550 corridor, grazing, and oil/natural gas development with associated roads. Lands at the northern end of the project area are tribal trust and allotment, while BLM land occupies the rest of the project area except for 1 mile that crosses NMSLO land. There are numerous BLM ROW within the project area.

Land use on BLM lands are guided by the FFO Resource Management Plan (BLM 2003). Land use on tribal trust and Indian allotment lands are guided by the Land Use Plan for the Counselor Chapter (NN 2002). NMSLO lands are open for agricultural uses including grazing, surface and subsurface energy development, mineral exploitation and recreational uses. The NMSLO parcel within the project area is the subject of a land exchange with the Navajo Nation (NMSLO 2024).

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no impacts to land use from the construction of the Reach 24.1 Lybrook Lateral water pipeline, including its associated pumping and chlorination plants.

Environmental Consequences of the Proposed Action

Environmental consequences from the Proposed Action related to land use would not create any new significant site-specific effects nor contribute to cumulative significant effects that are not already described in the 2009 NGWSP PR/FEIS.

The proposed water pipeline would require ROWs on Navajo Nation, BLM, and NMSLO managed lands. Construction of the proposed water pipeline would not interfere with active oil and gas operations or other ongoing activities. Once the pipeline and pumping and chlorination stations have been constructed, land uses would be unchanged from their current use. Land would continue to be used for grazing and range activities as well as recreational activities such as hunting. Reductions in forage would not modify current grazing allotment carrying capacity. The Proposed Action would not prohibit other land-use activities except for any ground-disturbing activities in the vicinity of the pipeline alignment. These impacts to land use would be short-term. There would be no significant impact to land use resulting from the Proposed Action.

3.2.6 – Off Highway Vehicle Activity

Affected Environment

Access to the Project area is provided by New Mexico State Highway 550. Atkins Road provides access to the Project area from Highway 550 and access to Cornfield Road where the alignment terminates in the south. There are numerous roads located throughout the Project area that have historically been open to the public. For the most part, this network of roads was generated by oil and gas development in the San Juan Basin as well as to provide access to private lands located on the periphery of the Project area. There are no OHV management units in or near the Project area. BLM lands in the Project area are designated as limited to maintained roads, designated trails, routes, and areas except where conditions are determined to be suitable for cross-country travel (BLM 2003).

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no impact to OHV resources and activities in the Project area.

Environmental Consequences of the Proposed Action

There would be short-term interruptions to Atkins Road and an unnamed dirt road which provides access to an oil and gas well pad during the construction period. The construction contractor would obtain a road crossing permit if required. These interruptions would only be for the time required to trench the road, install the water pipe and casing, if necessary, and cover the pipe and recompact the road. This would be less than one week, and therefore this impact would not rise to the level of significant. There would be no impact to other recreational activities.

3.2.7 – Cultural Resources

Affected Environment

Chapter 5 of the 2009 NGWSP PR/FEIS described the affected environment of the NGWSP with cultural resources outlined on pages V134-V142. Cultural resources are physical or other expressions of past human activity or occupation. Such resources include culturally significant landscapes, prehistoric and historic aged archaeological sites, and isolated artifacts or features, structures, human burials, sacred sites, and traditional cultural properties (TCPs). TCPs are sites or areas of important cultural value to existing communities, which may or may not have actual physical remnants associated with their existence.

Following Navajo Nation policies, contemporary or recently abandoned residences and features or areas (in-use areas) on Navajo Nation land are also considered historic sites. Additionally, a number of contemporary Native American Tribal Nations have ancestral and traditional ties to the proposed project area. Archaeological data provides some information about prehistoric and historic use of the region; however, each Tribe or community has its own account of the area's traditional use.

Legislation mandates that federal agencies such as Reclamation are responsible for identifying and protecting cultural resources. In compliance with Section 106 of the NHPA of 1966, as amended, and its implementing legislation, CFR Title 36 Part 800, Reclamation is required to assess cultural resources that could potentially be affected by the Proposed Action. Historic properties are defined as properties determined eligible for listing on the National Register of Historic Places (NRHP).

Two separate cultural-resources survey efforts were completed for the Proposed Action. Records searches were conducted with the NNHHPD in Window Rock, Arizona, and a Class I survey, Class III survey, and ethnographic fieldwork was conducted between 2019 and 2022. Statistical Research Inc. (SRI 2022) conducted fieldwork for the Proposed Action initially conducted from June 11 to July 5, 2019. A portion of the initial pipeline alignment was abandoned following the completion of archaeological and ethnographic assessments, and SRI was contracted in 2022 to perform archaeological and ethnographic assessments of the newly realigned segment of the pipeline.

Additional fieldwork was conducted for the realigned segment of the pipeline from April 26 to 28, 2022. The cultural resource survey resulted in the investigation of three archaeological sites (LA 74225, LA 88787, and LA 174706) in the retained segment of the 2019 alignment, all of which had been initially identified during Class I records review. The survey also resulted in the documentation of two isolated occurrences (IOs) in the retained segment of the 2019 alignment. Survey resulted in the investigation of seven archaeological sites in the realigned segment, four of which (LA 201765, 201766, 201767, and 207768) were newly discovered. None of the three previously recorded sites located in the area of the 2022 realignment were re-located (LA 38340, LA 69699, and LA 79365). The following documented sites are recommended eligible for listing in the NRHP under Criterion D, for their information potential: LA 74225, LA 88787, LA 201765, LA 201766, LA 201767, and LA 207768 (SRI 2022).

A summary of cultural sites, IOs, in-use sites, sites recommended eligible for inclusion in the NRHP, and management recommendations documented in and around the Proposed Action is summarized in Table 8. Table 8 gives a summary of sites inventoried for various past and current NGWSP project features near, but not necessarily within, the area of potential effect for the Proposed Action, as well as additional sites and burial locations Reclamation was informed of during ongoing consultation efforts.

Table 8. Sites Investigated within the Lybrook Reach 24.1 Project Area, by Land Jurisdiction

LA Site No.	Other Site No.	Cultural Affiliation(s)	Temporal Context(s)	Site Type	No. of Features	SRI NRHP-Eligibility Recommendations
Navajo Nation						
LA 69699		Navajo	Twentieth century	Campsite and specialized activity artifact scatter	1	Undetermined (not relocated)
LA 79769		Unknown; Navajo	Unknown; Dinétah/Gobernador phase	Artifact scatter	-	Undetermined (not relocated) Undetermined (not relocated)
LA 80353		Navajo	Twentieth century	Campsite and specialized activity artifact scatter	-	Undetermined (not relocated)
BLM						
LA 38340		Anasazi; Navajo	Pueblo II/Pueblo II period: Gobernador phase	Artifact scatter; campsite	3	Undetermined (not relocated)
LA 74225	SRI 543	Navajo; Unknown	Gobernador phase; Unspecified historical period	Campsite; artifact scatter	3	Eligible
LA 79365	DCA-90-345	Unknown	Unknown	Stain and scatter	1	Undetermined (not relocated)
LA 174706	SRI 539	Navajo	Dinétah/Gobernador phase	Artifact scatter	—	Not eligible
LA 201765	SRI 5020	Unknown	Unknown	Artifact scatter and specialized activity	—	Eligible

LA Site No.	Other Site No.	Cultural Affiliation(s)	Temporal Context(s)	Site Type	No. of Features	SRI NRHP-Eligibility Recommendations
LA 201766	SRI 5024	Navajo	Unknown	Specialized activity	2	Eligible
LA 201767	SRI 5030	Navajo	twentieth century	Residence and artifact scatter	3	Eligible
New Mexico State Land Office						
LA 201768	SRI 5040	Unknown	Unknown	Artifact scatter and campsite or specialized activity	2	Eligible
Private						
LA 88787	SRI 521	Navajo	Gobernador phase	Habitation and specialized activity	5	Eligible

SRI, 2022

Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed. There would be no impacts to cultural resources from the construction of the Reach 24.1 Lybrook Lateral water pipeline, including its associated pumping and chlorination plants.

Environmental Consequences of the Proposed Action

Environmental consequences from the Proposed Action related to cultural resources would not create any new significant site-specific effects nor contribute to cumulative significant effects that are not already described in the 2009 NGWSP PR/FEIS. Reclamation would obtain cultural resources clearance prior to construction on the Navajo Nation and other lands.

Reclamation developed a Programmatic Agreement with the ACHP, New Mexico SHPO, Navajo Nation, BLM, and BIA that defined the process regarding the consideration and management of effects on historic properties arising from the construction of the NGWSP (Reclamation 2011). Reclamation and the Programmatic Agreement consulting parties preferred approach to the mitigation of adverse effects resulting from the construction of the NGWSP to historic properties and TCPs within the project ROW is through avoidance. Invasive archaeological investigations are proposed only if there is no other way to avoid direct effects on identified sites. Reclamation would have contracts in place for archaeological monitoring and discovery mitigation during construction. Pursuant to Reclamation's Programmatic Agreement, the area of potential effect for direct physical effects on historic properties includes all lands within 125 feet of the initially planned 150-foot construction ROW for a total width of 400 feet.

Following stipulations in Sections IV and V of Reclamation's Programmatic Agreement, historic properties and TCPs would be, to the extent possible, avoided with the implementation of design features such as (but not limited to) reduction of construction areas, temporary barriers, and site monitoring. If historic properties and TCPS cannot be avoided, Reclamation or its contractors would prepare, in consultation with the consulting parties to the Programmatic Agreement, a treatment plan for all properties it determines are subject to adverse direct and indirect effects by the action, and treatment would be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and with the ACHP's guidelines.

SRI documented seven archaeological sites within the retained and realigned segments of the Reach 24.1 Lybrook Lateral project area; an additional five sites were attempted to be revisited but could not be relocated (Table 8). The following documented sites are recommended eligible for listing in the NRHP under Criterion D, for their information potential: LA 74225, LA 88787, LA 201765, LA 201766, LA 201767, and LA 201768. LA 174706 did not exhibit the information potential or integrity necessary to qualify for NRHP eligibility and was recommended by SRI to be not eligible for listing in the NRHP. The sites recommended eligible under Criterion D have good probability of yielding additional information regarding Navajo period research issues, including various themes related to settlement patterns, land use, subsistence, and technology, as well as providing information on prehistoric subsistence and related specialized activities (Table 9).

Table 9: SRIs Treatment Recommendations

Site Number	Land Status	Eligibility Recommendation	Distance from ROW/TCE	Management Recommendation
LA 38340	BLM (Farmington Field Office)	Undetermined (not relocated)	Unknown	No treatment recommended
LA 69699	Navajo Nation	Undetermined (not relocated)	Unknown	No treatment recommended
LA 74225	BLM (Farmington Field Office)	Eligible	8.5 m (28 feet)	Monitoring during construction
LA 79365	BLM (Farmington Field Office)	Undetermined (not relocated)	Unknown	No treatment recommended
LA 79769	Navajo Nation	Undetermined (not relocated)	Unknown	No treatment recommended
LA 80353	Navajo Nation	Undetermined (not relocated)	Unknown	No treatment recommended
LA 88787	Private	Eligible	Intersects with original planned facility footprint; facility has since been moved to avoid site	No treatment recommended
LA 174706	BLM (Farmington Field Office)	Not eligible*	57.9 m (190 feet)	No treatment recommended
LA 201765	BLM (Farmington Field Office)	Eligible	31.9 m (104 feet 7 inches)	No treatment recommended
LA 201766	BLM (Farmington Field Office)	Eligible	29.2 m (95.8 feet 10 inches)	Monitoring during construction
LA 201767	BLM (Farmington Field Office)	Eligible	7 m (22 feet 11 inches)	Monitoring during construction

Site Number	Land Status	Eligibility Recommendation	Distance from ROW/TCE	Management Recommendation
LA 201768	New Mexico State Land Office	Eligible	17.5 m (57 feet 6 inches)	Monitoring during construction

SRI, 2022

*Site eligibility was disputed by BLM during consultation and was changed in a subsequent report.

No archaeological testing or data recovery was recommended as necessary for construction of the Reach 24.1 Lybrook Lateral. Reclamation consulted on the 2022 SRI report but did not receive concurrence from the BLM and additional work was required. Reclamation continued consultation with consulting parties regarding a final revised cultural resources report in July 2023 (SRI 2023).

Reclamation determined seven of the eight sites documented were eligible for the NRHP: LA 74225, LA 88787, LA 174706, LA 201765, LA 201766, LA 201767, and LA 201768. All seven eligible sites are located outside the area of direct impacts, which comprises a 60-foot corridor including the permanent ROW and short-term ROW. Site LA 202712 was determined not eligible for listing in the NRHP. Four of the eligible sites (LA 74225, LA 201766, LA 201767, and LA 201768) were located less than 100 feet outside the area of direct impacts and therefore are required to be monitored during construction.

Consultation with Programmatic Agreement consulting parties on the eligibility of historic properties, finding of effect, and adequate completion of activities to resolve adverse effects to historic properties has occurred. Therefore, for the reasons described above, impacts to cultural resources would be insignificant.

3.2.8 – Summary

Table 10 summarizes environmental consequences of the Action Alternatives for the resources evaluated in the EA. As described in Chapter 3, environmental consequences of the Action Alternatives were not determined to be significant.

Table 10. Summary of Environmental Consequences for the Action Alternatives

Resource	Proposed Action
Grazing and Range (Section 3.2.1)	There will be a temporary loss of approximately 19 acres of forage within the Venado Allotment and 4.4 acres within the Eagle Rock Allotment as a result of construction activities within these allotments. The Counselor Community Allotment would have a temporary loss of approximately 1.8 acres and the North Equus Allotment would lose less than one acre. The loss of forage would be less than 1/10 of one percent of the total acreage of any one of these allotments. Reductions in forage would be short term and minor and would not modify current grazing allotment carrying capacity. All construction activities would be confined to the permitted areas only. Temporary fencing, cattle guards, and gates may be installed during construction at the discretion of Reclamation and grazing allottees to facilitate access. These features would be kept closed to manage livestock and unauthorized access in the project area. Fences would be rebuilt to match or improve upon the existing adjacent fence. Up to a maximum of 500 feet of trench would be open at any one time. Temporary

Resource	Proposed Action
	fences would be installed around open trenches when work crews are not present to prevent livestock or other wildlife from falling in. The effects to range and grazing livestock would be minor in both the short and long term.
Invasive Species (Section 3.2.2)	The potential exists for invasive species and noxious weeds to be introduced into the project area or have existing weeds be spread further during construction and operation. Seeds of noxious weeds or invasive species could unknowingly be carried on vehicles, heavy equipment, and on the clothing and shoes of personnel. Roads and pipelines can be a conduit for the spread of noxious weeds or invasive species (Gelbard and Belnap 2002). Disturbance could allow seeds of noxious weeds already present in the soil to germinate and grow without competition from native plant species. Reclamation and/or project cooperators and contractors would revegetate disturbed areas and implement other BMPs as outlined in Section 4.2 during construction and operation to prevent, control, and avoid further introduction and/or spread of noxious weeds. Thus, impacts on invasive species and noxious weeds from implementation of the Proposed Action would be minor and less than significant.
Special Status Species (Section 3.2.3) - Federally Listed Species	There would be no effect to federally listed threatened and endangered species. There would be no impacts to special status plants including the Clover's cactus. Approximately 2.1 acres of suitable habitat for the Clover's Cactus would be temporarily affected during construction, however, this habitat would be restored during the revegetation phase. Pinyon jays, as well as other sensitive avian species, could be affected if construction occurs during the breeding season. Construction would be timed to take place outside the breeding season. If construction could not occur outside of the breeding season, preconstruction surveys would be performed to identify and avoid nests till after the young have fledged and left the nest in accordance with BMPs outlined in Section 4.2. There is limited potential for burrowing owls to nest, however, preconstruction surveys would be performed prior to construction to confirm occupied nests are avoided in accordance with BMPs outlined in Section 4.2. Pre-construction surveys would be performed to avoid impacts to raptors in accordance with BMPs outlined in Section 4.2. All power lines would be designed in accordance with *Navajo Nation Raptor Electrocution Prevention Regulations* (NNHP 2008). Given that raptor nests are not present within or near the project area. There would be no impact to special status mammals from the Proposed Action. The removal of approximately 34.7 acres of known or potential habitat for multiple species would have temporary, minor impacts to special status species. However, the

Resource	Proposed Action
	development of a revegetation plan and other BMPs outlined in Section 4.2 would ensure this habitat is restored.
Floodplains (Section 3.2.4)	BLM typically does not allow surface occupancy in Special Flood Hazard areas. However, the Proposed Action would be a buried water pipeline with no surface features in these areas. Approval by the local community Floodplain Administrator would be required before construction or development begins within any Special Flood Hazard Area. to ensure that proposed development projects meet the requirements of the National Flood Insurance Program and the community's floodplain management ordinance (NMED 2024). Thus, impacts to floodplains would be less than significant.
Land Use (Section 3.2.5)	The proposed water pipeline would require ROWs from the Navajo Nation, BLM, and NMSLO managed lands. Construction of the proposed water pipeline would not interfere with active oil and gas operations or other ongoing activities. Once the pipeline and pumping and chlorination stations have been constructed, land uses would be unchanged from their current use. Land would continue to be used for grazing and range activities as well as recreational activities such as hunting. Reductions in forage would not modify current grazing allotment carrying capacity. The Proposed Action would not prohibit other land-use activities except for any ground-disturbing activities directly in the vicinity of the pipeline alignment. There would be no significant impact to land use resulting from the Proposed Action.
Off Highway Vehicle Activity (Section 3.2.6)	There would be short-term interruptions to Atkins Road and an unnamed dirt road which provides access to an oil and gas well pad during the construction period. The construction contractor would obtain a road crossing permit if required. These interruptions would only be for the period required to trench the road, install the water pipe and casing, if necessary, and cover the pipe and recompact the road. This would be less than one week. There would be no impact to other recreational activities.
Cultural Resources (Section 3.2.7)	Reclamation determined seven of the eight sites documented on the Reach 24.1 Lybrook Connection as eligible for the NRHP: LA 74225, LA 88787, LA 174706, LA 201765, LA 201766, LA 201767, and LA 201768. All seven eligible sites are located outside the area of direct impacts. Site LA 202712 was determined not eligible for listing in the NRHP. Four of the eligible sites (LA 74225, LA 201766, LA 201767, and LA 201768) were located less than 100 feet outside the area of direct impacts and therefore will be monitored during construction. No archaeological testing or data recovery was recommended as necessary for the construction of the Reach 24.1 Lybrook Lateral. Measures agreed to by Reclamation and consulting parties are the avoidance of the NRHP-eligible properties (LA 74225, LA 174706, LA 88787, LA 201765, LA 201766, LA 201767, and LA 201768), and archaeological monitoring of ground disturbing construction activities in the vicinity of LA 74225, LA 201766, LA 201767, and LA 201768.Therefore, for the reasons described above, impacts to cultural resources would be insignificant.

CHAPTER 4 – ENVIRONMENTAL COMMITMENTS

This chapter summarizes the design features, BMPs, conservation measures, and other requirements (collectively, "Environmental Commitments") developed to lessen the potential adverse insignificant effects of the Project. The actions in the following environmental commitment list would be implemented as an integral part of the Project and shall be included in any contractor bid specifications.

Note that in the event there is a change in the Project description, or any construction activities are proposed outside of the inventoried Project Area or the planned timeframes outlined in this EA, additional environmental review by Reclamation would be required to determine if the existing surveys and information are adequate to evaluate the changed project scope. Additional NEPA documentation may be required.

4.1 – 2009 NGWSP ROD

The ROD of the NGWSP PR/FEIS designates the environmental commitments for the NGWSP that would be followed (if applicable) for the Proposed Action. These environmental commitments were also described in Chapter VI (Environmental Commitments and Mitigation Measures) of the 2009 NGWSP PR/FEIS. These environmental commitments are hereby incorporated into the Proposed Action.

4.2 – Additional Environmental Commitments

Additional environmental commitments (in addition to those in the 2009 NGWSP ROD and PR/FEIS) were developed to lessen the potential adverse insignificant effects of the action alternatives and are listed in Table 11 below. This table summarizes and further details information previously mentioned or referenced in the EA.

Table 11. Additional Environmental Commitments

Type	Resource	Commitment	Authority
General BMP	Vegetation, Invasive Species and Noxious Weeds, Habitat, Grazing, Air Quality, and Wildlife	Construction limits (Approved ROW and TCEs) shall be clearly flagged or marked onsite to avoid unnecessary plant loss or ground disturbance. No grading or blading shall occur inside the project ROW other than that necessary within the actual construction footprint.	Public Land Permit Stipulations
General BMP	Vegetation, Invasive Species and Noxious	The general NGWSP-specific goal for revegetation is to meet 70 percent of the pre-construction vegetative cover	Public Land Permit Stipulations

Type	Resource	Commitment	Authority
	Weeds, Habitat, Grazing, Air Quality, and Wildlife	or better within 3 years of reseeding. If pre-disturbance vegetative cover is below 25 percent, the goal of revegetation is to meet pre-disturbance levels within that time frame. Reseeding would be performed as soon as possible following construction and testing, and immediately after topsoil has been replaced and the site prepared. The general time frame for reseeding would be July 15 to November 15 and would coincide with conditions when ambient temperatures are above 38°F, when the ground is not snow covered or frozen, and when there is a greater potential for moisture. Reseeding in the winter and spring may be completed depending on suitable conditions. Seed would be native and certified as weed free.	
General BMP	Vegetation, Invasive Species and Noxious Weeds, Habitat, Grazing, Air Quality, and Wildlife	Vegetation removal shall be confined to the smallest portion of the Project Area necessary for completion of the work.	Public Land Permit Stipulations
General BMP	Vegetation, Invasive Species and Noxious Weeds, Habitat, Grazing, Air Quality, and Wildlife	A disk-type seed drill would primarily be used for reseeding with drill rows spaced 1 foot or less apart. Seed drilling would be performed on the contour, perpendicular to slopes to minimize runoff, rilling, and erosion. In areas where the slope is too steep to drill seed, hand broadcasting, mechanical broadcasting, hydroseeding, or other seeding methods may be utilized. Broadcast reseeding rates would be double that of drill seeding rates. Smaller seeds would be planted at a depth of 0.25 to 0.5 inch, whereas larger seeds would be	Public Land Permit Stipulations

Type	Resource	Commitment	Authority
		planted at 1 to 2 inches. Improper planting depth can be especially problematic for successful reseeding and planting too shallow is generally better than planting too deep. Broadcast seeds would be covered in the appropriate depth of topsoil immediately after broadcasting using a hand rake or float.	
General BMP	Vegetation, Invasive Species and Noxious Weeds, Habitat, Grazing, Air Quality, and Wildlife	Revegetating private lands would include additional landowner-specific requests. Seed mixes will be developed using regional knowledge, the BLM FFO's Bare Soil Reclamation Procedures (BLM 2013), and the Navajo Nation/BIA Navajo Region's 2018 NGWSP Recommended Seed Species for Bare Soils/Invasive Weed Infested Sites (BIA 2018). Seed mixes and seeding rates may deviate from the tables below based on the availability of seed and other materials at the time of reseeding, as well as further site-specific analysis in the project area. Site monitoring and reporting would follow methods described in Reclamation's Revegetation Plan for the NGWSP and/or the BLM FFO's 2013 Bare Soil Reclamation Procedures.	Public Land Permit Stipulations BLM FFO Bare Ground Reclamation Procedures Navajo Nation/BIA Navajo Region's 2018 NGWSP Recommended Seed Species for Bare Soils/Invasive Weed Infested Sites
General BMP	Vegetation, Wildlife	Where tree cutting is required, usable trees shall be removed and left on the roadside for local residents to collect and use as firewood or delivered to a nearby Navajo Chapter House. Smaller woody plants not suitable for use as firewood shall be chipped and spread on the ROW during the revegetation process.	Public Land Permit Stipulations
General BMP	Invasive Species and Noxious Weeds	Prior to construction, vegetative material ("slash") shall be removed by mowing or chopping, and either reserved for mulch onsite, or hauled to	Public Land Permit Stipulations;

Type	Resource	Commitment	Authority
		the County landfill or to a staging area to be processed (burned, chipped, and/or mulched). Stumps shall be grubbed and hauled to the County landfill or a proposed staging area to be burned. Slash processing would only occur on public lands in accordance with permit stipulations. No burning shall occur on federal public lands.	
General NEPA Requirement	General Wildlife including Migratory Birds	The contractor will provide a qualified wildlife biologist to conduct pre-construction survey(s) for migratory bird nests if work is to be performed during the active bird breeding season between May 15 and July 31. a. In the event an active bird nest or species habitat is discovered, the contractor's wildlife biologist will flag the required buffer zone around the nest. The buffer zone is typically a 165 ft radius around the nest. This buffer zone will not be barricaded by the Owner's surveyor. b. The contractor's wildlife biologist will monitor the nest and notify the Contractor when work may commence within the buffer zone. c. The Contractor shall not encroach within the flagged buffer zone until notified by the Owner's wildlife biologist. 4. The Contractor shall notify the Engineer at least 10 workdays prior to commencing ground disturbing activities and is responsible to coordinate scheduling with the wildlife biologist to perform the pre-construction surveys. Reclamation or their project contractor would survey prairie dog burrows and	Migratory Bird Treaty Act of 1918 Navajo Natural Heritage Program.

Type	Resource	Commitment	Authority
		towns prior to construction to document if they are actively occupied or are inactive. Clearing and grubbing and topsoil removal activities would not occur in actively occupied prairie dog areas during the breeding and reproduction season (March 1 to June 1) when young are not able to vacate the burrow.	
General BMP	Special Status Species	If threatened or endangered species are discovered during construction, construction activities shall be halted in that area and the contractor will move work as necessary until Reclamation has consulted with FWS to ensure that adequate measures are in place to avoid or reduce impacts to the species. The Owner will provide, at no cost to the Contractor, a qualified wildlife biologist to conduct pre-construction survey(s) for burrowing owls during the breeding season (March 1-August15). a. If active burrowing owl nests are observed, all construction activity within a ¼mile (per NNHP guidelines) will cease until the nest is no longer active as determined by a wildlife biologist.	Navajo Natural Heritage Program.
General BMP	Raptors	The Owner will provide, at no cost to the Contractor, a qualified wildlife biologist to conduct pre-construction survey(s) for raptor nest(s). Raptor nesting season occurs between January 15 to August 15. a. If any nests are observed, all NNHP species specific avoidance measures should be followed. b. Power pole installations should incorporate Avian Protection Plan	Navajo Natural Heritage Program

Type	Resource	Commitment	Authority
		guidelines to protect raptors from being electrocuted.	
General BMP	Raptors	All power lines would be designed in accordance with *Navajo Nation Raptor Electrocution Prevention Regulations*	Navajo Natural Heritage Program
General BMP	Invasive Species and Noxious Weeds	Weed control shall be implemented by the Applicant or its contractor in accordance with the most current public lands permit stipulations. Noxious weed presence shall be monitored subject to agreements between the Applicant, BLM, NMSLO, Navajo Nation, and individual landowner.	Public Land Permit Stipulations
General BMP	Invasive Species and Noxious Weeds	Preparation of an invasive plants/weeds management plan would be required prior to construction. A weed inventory would need to occur prior to construction.	Public Land Permit Stipulations
General BMP	Invasive Species and Noxious Weeds	Compliance with appropriate management techniques outlined in the *Navajo Nation Integrated Weed Management Plan*	Bureau of Indian Affairs Navajo Region
General BMP	Invasive Species and Noxious Weeds	Following the protocol in Appendix D of the BLM FFO Bare Soil Reclamation Procedures (BLM 2013), the BLM FFO weed coordinator would review the noxious weed issues in the project area and submit onsite, specific requirements and instructions for weed treatments.	BLM FFO Bare Soil Reclamation Procedures
General BMP	Noxious Weeds and Invasive Species	Preparation of an invasive plants/weeds management plan would be required prior to construction. A weed inventory would need to occur prior to construction.	BLM FFO Bare Soil Reclamation Procedures

Type			
General BMP	Floodplains	Obtain a Special Flood Hazard Area permit.	Local Floodplain Administrator
General BMP	Hazardous Materials	Reclamation will assess hazardous materials present in the vicinity of the Proposed Action, and remediation efforts (if necessary) will be implemented before project construction.	Public Land Permit Stipulations
Construction Contractor Requirement	Air Quality and Noise	Prior to commencing construction, the Applicant would prepare a Dust Control Plan identifying all sources of particulate matter 10 microns or less in diameter (PM_{10}) emissions and associated control measures during the construction and operational phases of the project. The Dust Control Plan would meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control. The Applicant would implement all applicable standard BMPs for construction combustion equipment for the reduction of excess oxides of Nitrogen (NO_X) emissions. Each project proponent shall use all available EPA Tier 3 or better construction equipment. Oil and gas operators are required to minimize noise at facilities and set specific noise production standards of between 55 and 100 decibels depending on the time of day, whether the facility is temporary or permanent, and whether the noise will last longer than 15 minutes.	Clean Air Act of 1963 and 5 CCR 1001-5 Part I.B.10 (Allowable Emissions), Part II.A (Air Pollutant Emission Notices for New, Modified, and Existing Sources), Part II.D (Exemptions from Air Pollutant Emission Notice Requirements § 6.15 Noise of the Rio Arriba Oil and Gas Ordinance.

Type	Resource	Commitment	Authority
General BMP	Cultural Resources	Reclamation and the Programmatic Agreement work group's preferred approach to the mitigation of adverse effects resulting from the construction of the NGWSP to historic properties and TCPs within the project ROW is through avoidance. Invasive archaeological investigations are proposed only if there is no other way to avoid direct effects on identified sites. Reclamation would have contracts in place for archaeological monitoring and discovery mitigation during construction. Pursuant to Reclamation's Programmatic Agreement, the area of potential effect for direct physical effects on historic properties includes all lands within 125 feet of the initially planned 150-foot construction ROW for a total width of 400 feet. Following stipulations in Sections IV and V of Reclamation's Programmatic Agreement, historic properties and TCPs would be, to the extent possible, avoided with the implementation of design features such as (but not limited to) reduction of construction areas, temporary barriers, and site monitoring. If historic properties and TCPS cannot be avoided, Reclamation or its contractors would prepare, in consultation with the consulting parties to the Programmatic Agreement, a treatment plan for all properties it determines are subject to adverse direct and indirect effects by the action, and treatment would be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and with the ACHP's guidelines.	Archaeological Resources Protection Act

Type	Resource	Commitment	Authority
General BMP	Public Health and Safety	The construction contractor shall transport, handle, and store any fuels, lubricants, or other hazardous substances involved with the Project in an appropriate manner that prevents them from contaminating soil and water resources.	Clean Water Act of 1972 as amended.
General BMP	Public Health and Safety	Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.	Clean Water Act of 1972 as amended.
Construction Contractor Plan or Certification Requirement	Public Health and Safety	A Spill Response Plan shall be prepared in advance of construction by the contractor for areas of work where spilled contaminants could flow into water bodies.	Clean Water Act of 1972 as amended.
Construction Contractor Plan or Certification Requirement	Public Health and Safety	Project contractors would follow Reclamation Safety and Health Standards ("Yellow Book") and Occupational Safety and Health Administration requirements during construction, including subpart 29 CFR 1926.650-652 for trench safety. NGWSP construction contract specifications include safety and health requirements in accordance with Reclamation Safety and Health Standards as well as applicable Tribal and State safety and health regulations. Contractors are required to submit and follow a Safety Program that is in accordance with the above-mentioned standards and regulations.	Public Land Permit Stipulations;
Construction Contractor Plan or Certification Requirement	Public Health and Safety	Preparation of a Traffic Control Plan meeting FHWA and NMDOT standards. Coordination with Rio Arriba and Sandoval Counties Department of Public Works	Public Land Permit Stipulations;

Type	Resource	Commitment	Authority
General NEPA Compliance	Paleontology	Any paleontological resource discovered by the Operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper control measures will be made by the Authorized Officer after consulting with the Holder.	Paleontological Resources Preservation Act of 2009
Construction Contractor Plan or Certification Requirement	Water Quality	A Stormwater Management Plan shall be prepared and submitted to CDPHE by the construction contractor prior to construction disturbance.	Clean Water Act of 1972 as amended
Construction Contractor Plan or Certification Requirement	Water Quality	A CWA Section 402 Storm Water Discharge Permit compliant with the National Pollutant Discharge Elimination System (NPDES) shall be obtained from NMED by the construction contractor prior to construction disturbance (regardless of whether dewatering would take place during construction).	Clean Water Act of 1972 as amended
Construction Contractor Plan or Certification Requirement	Water Quality Public Health and Safety	Waste production and disposal plan,	Public Land Permit Stipulations
General BMP	Water Quality	Straw wattles, silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures shall be used to prevent erosion from entering water bodies during construction.	Clean Water Act of 1972 as amended

4.3 – NNDFW Conditions of Compliance

The NNDFW issued a Biological Resources Compliance Form (BRCF; 21ttes101; Appendix C) on August 2, 2023, that approved the Proposed Action with Avoidance Measures 1 and 2 for erosion control and reseeding. These measures serve to lessen the potential adverse insignificant effects of the action alternative described in the EA.

CHAPTER 5 – CONSULTATION AND COORDINATION

5.1 – Introduction

Reclamation's public involvement process presents the public with opportunities to obtain information about a given project and allows interested parties to participate in the project through written comments. Section 5.2 discusses public involvement activities taken to date for the Proposed Action.

5.2 – Public Involvement

In compliance with NEPA, the Draft EA will be made available for public review and comment for a 30-day period. The Draft EA will be hosted on Reclamation's Upper Colorado Basin website that houses environmental documents (www.usbr.gov/uc/DocLibrary/ea.html). The NGWSP website (https://www.usbr.gov/uc/progact/navajo-gallup/index.html) provides additional information on the overall status of the NGWSP. Reclamation will announce the availability of the Draft EA for public comment via a distribution a letter to the individuals, organizations, and agencies listed in Appendix D notifying them of the Proposed Action, availability of the Draft EA, and details on how to comment on the project. Publicly available electronic versions of the EA meet the technical standards of Section 508 of the Rehabilitation Act of 1973, so that the documents can be accessed by people with disabilities using accessibility software tools.

Public comments received during the comment period and comments responses will be included in the Final EA.

CHAPTER 6 – PREPARERS

The following list (Table 12) contains the individuals who participated in preparing this EA.

Table 12. List of Preparers

Name	Title	Areas of Responsibility
Lucas Kline	Natural Resource Specialist (former)	NEPA, Biological Resources, Threatened and Endangered Species
Jenny Ward	Environmental Group Chief	EA Review
Kristin Bowen	Cultural Group Chief (former)	Archaeology, Cultural Resources
Zac Nelson	Regional Archaeologist	Archaeology, Cultural Resources
Bart Deming	Construction Engineer	Action Alternatives, NGWSP Design
Leonard Notah	Planner and Environmental Specialist (BIA Navajo Region)	NEPA
Whitney Thomas	Planning & Environmental Coordinator (BLM FFO) (former)	NEPA
David McIntyre	Project Manager (McIntyre Environmental)	NEPA
Carolyn Fordham	Biologist (Terra Technologies)	Biological Resources
David Unruh	Cultural Resources (SRI)	Cultural Resources

CHAPTER 7 – REFERENCES

Audubon. 2019. Guide to North American Birds. https://www.audubon.org/field-guide/bird/.

City of Aztec, New Mexico. 2020. Lybrook Fossil Area. March.

Cornell Lab of Ornithology. 2019. All About Birds. Online: https://www.allaboutbirds.org/.

Counselor Chapter. 2021. A Cultural, Spiritual and Health Impact Assessment Of Oil Drilling Operations in the Navajo Nation area of Counselor, Torreon and Ojo Encino Chapters. July 15.

DiTomaso, J. 2000. Invasive weeds in rangelands: species impacts and management. Weed Science. 488:255-265. Available at: https://doi.org/10.1614/0043-1745(2000)048[0255:IWIRSI]2.0.CO;2.

Flora of North America (FNA). 2019. Accessed April 14, 2019. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250101853.

Gelbard, J. L., and J. Belnap. 2002. Roads as Conduits for Exotic Plant Invasions in a Semiarid Landscape. Conservation Biology. Vol 17 No. 2. Available at: https://doi.org/10.1046/j.1523-1739.2003.01408.x.

Keller-Bliesner Engineering, LLC and Ecosystems Research Institute. 2005. Biological Assessment Navajo Gallup Water Supply Project. Prepared for the Bureau of Reclamation, Durango, CO. Logan, UT.

Kendall, J. 2019. Personal communication between J. Kendall (BLM) with Dr. Fordham.

Kendall, J. 2020. Personal communication between J. Kendall (BLM) with Dr. Fordham.

Lucas, S.G. and A.B. Heckert. 2003. Jurassic Stratigraphy in West-Central New Mexico. New Mexico Geological Society Guidebook, 54th Field Conference, Geology of the Zuni Plateau, 2003, p. 289-301.

Natureserve Explorer. 2018. Euderma maculatum. Spotted Bat. March 2018. http://explorer.natureserve.org/servlet/NatureServe?searchName=Euderma+maculatum.

Natureserve Explorer. 2022. *Townsendia gypsophila*. Gypsum Townsend's Aster. January 2022. https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.130655/Townsendia_gypsophila

Navajo Nation.

_____. 2002. Land Use Plan Counselor Chapter.

_____. 2019. Grazing Districts Map.

_____. 2022. Navajo Nation Integrated Weed Management Plan FINAL. August

Nevada Department of Wildlife. 2019. Townsend's Big Eared Bat. http://www.ndow.org/Species/Furbearer/Townsends_Big-eared_Bat/.

New Mexico Avian Conservation Partners (NMACP). 2017. Olive-sided Flycatcher (Contopus cooperi) http://avianconservationpartners-nm.org/wp-content/uploads/2017/01/Olive-sided-Flycatcher.pdf .

New Mexico Interagency Climate Change Task Force. 2019. New Mexico Climate Strategy Initial Recommendations and Status Update.

State of New Mexico

Department of Agriculture (NMDA). 2020. Memorandum: New Mexico Noxious Weed List Update. Available at: https://www.nmda.nmsu.edu/wp-content/uploads/2020/07/Weed-List-memo-and-weed-list-2020.pdf.

Department of Game and Fish (NMDGF). 2007. Guidelines and Recommendations for Burrowing Owl Surveys and Mitigation. July 2007.

NMDGF. 2017. Game Management Unit 7.

Environmental Department (NMED). 2022. Oil and Gas Greenhouse Gas Inventory for 2020.

NMED. 2024. https://www.nmdhsem.org/preparedness-bureau/mitigation/floodplain/. Accessed September 9.

New Mexico Rare Plant Technical Council (NMRP). 2019. Accessed April 14, 2019. http://nmrareplants.unm.edu/

New Mexico State Land Office (NMSLO). 2024. https://mapservice.nmstatelands.org/LandStatus/. Accessed May 14.

Roth, D. 2012. Erigeron acomanus (Acoma fleabane) Status Report. New Mexico Forestry Division Energy, Minerals, and Natural Resources Department for USFWS, Albuquerque, NM.

Roth, D. and R. Sivinski. 2015. Survey & Status Report for Rare Gypsophilic Plants In The Ojito/White Mesa Area Of Sandoval County, New Mexico. Report Prepared for BLM Rio Puerco Field Office. December.

Terra Technologies. 2022. Field Work Report Lybrook Northern and Reroute May.

US Bureau of Reclamation. 2024 Navajo Gallup Water Supply Project Newsletter. Volume 4. August.

US Bureau of Indian Affairs (BIA). 2018. Navajo Nation/BIA Navajo Region's 2018 NGWSP Recommended Seed Species for Bare Soils/Invasive Weed Infested Sites.

US Bureau of Land Management (BLM). 2001. Approval of Standards and Guidelines and Final Decision regarding the Resource Management Plan Amendments. January.

BLM. 2003. Farmington Proposed Resource Management Plan and Final Environmental Impact Statement Volume 1. March.

BLM. 2013. BLM Farmington Field Office Bare Soil Reclamation Procedures.

BLM. 2015. Mancos-Gallup Resource Management Plan Amendment and Environmental Impact Statement Assessment of the Management Situation March.

BLM. 2024a. BLM Energy and Minerals Data Compiled by the National Operations Center. Accessed May 10, 2024.

BLM. 2024b. BLM Energy and Minerals Data Compiled by the National Operations Center. Accessed May 10, 2024.

BLM. 2024c. Grazing and Range Data Compiled by the National Operations Center. Accessed May 15, 2024.

BLM. 2024d. Bureau of Land Management interdisciplinary team checklist.

Reclamation. 2009. Volume 1 Planning Report and Final Environmental Impact Statement. Navajo-Gallup Water Supply Project. New Mexico-Arizona. Prepared by the US Department of the Interior, Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah.

Reclamation. 2011. Programmatic Agreement Among the Bureau of Reclamation, The Advisory Council on Historic Preservation, The New Mexico State Historic Preservation Officer, The Navajo Nation, The Bureau of Land Management, and The Bureau of Indian Affairs Regarding the Consideration and Management of Effects on Historic Properties Arising from Construction of the Navajo-Gallup Water Supply Project, New Mexico.

Reclamation. 2019. Revegetation Plan for the Navajo Gallup Water Supply Project. Western Colorado Area Office. Durango, CO.

US Department of Agriculture (USDA). 2007. Spotted Bat (Euderma maculatum): A Technical Conservation Assessment. Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project. October 31.

US Environmental Protection Agency (EPA). 1978. Protective Noise Levels: Condense Version of Levels Document. EPA 550/9-79-100 (November 1978). Washington, D.C.: U.S. Environmental Protection Agency, Office of Noise Abatement and Control.

EPA. 2024a. www.NEPAassist.gov. Accessed May 10, 2024.

EPA. 2024b. Rio Arriba County EJ Screen Community Report. Accessed May 13.

EPA. 2024c. Sandoval County EJ Screen Community Report. Accessed May 13.

EPA. 2024d. Rio Arriba Blockgroup EJ Screen Community Report. Accessed May 13.

EPA. 2024e. Sandoval Blockgroup EJ Screen Community Report. Accessed May 13.

USFWS. 2019. Endangered Species/Mammals/Mountain-Prairie Region. Gunnison's Prairie Dog. https://www.fws.gov/mountain-prairie/es/gunnisonPrairieDog.php.

USFWS. 2025. iPAC Resource List. June 24.

Statistical Research Inc. (SRI).

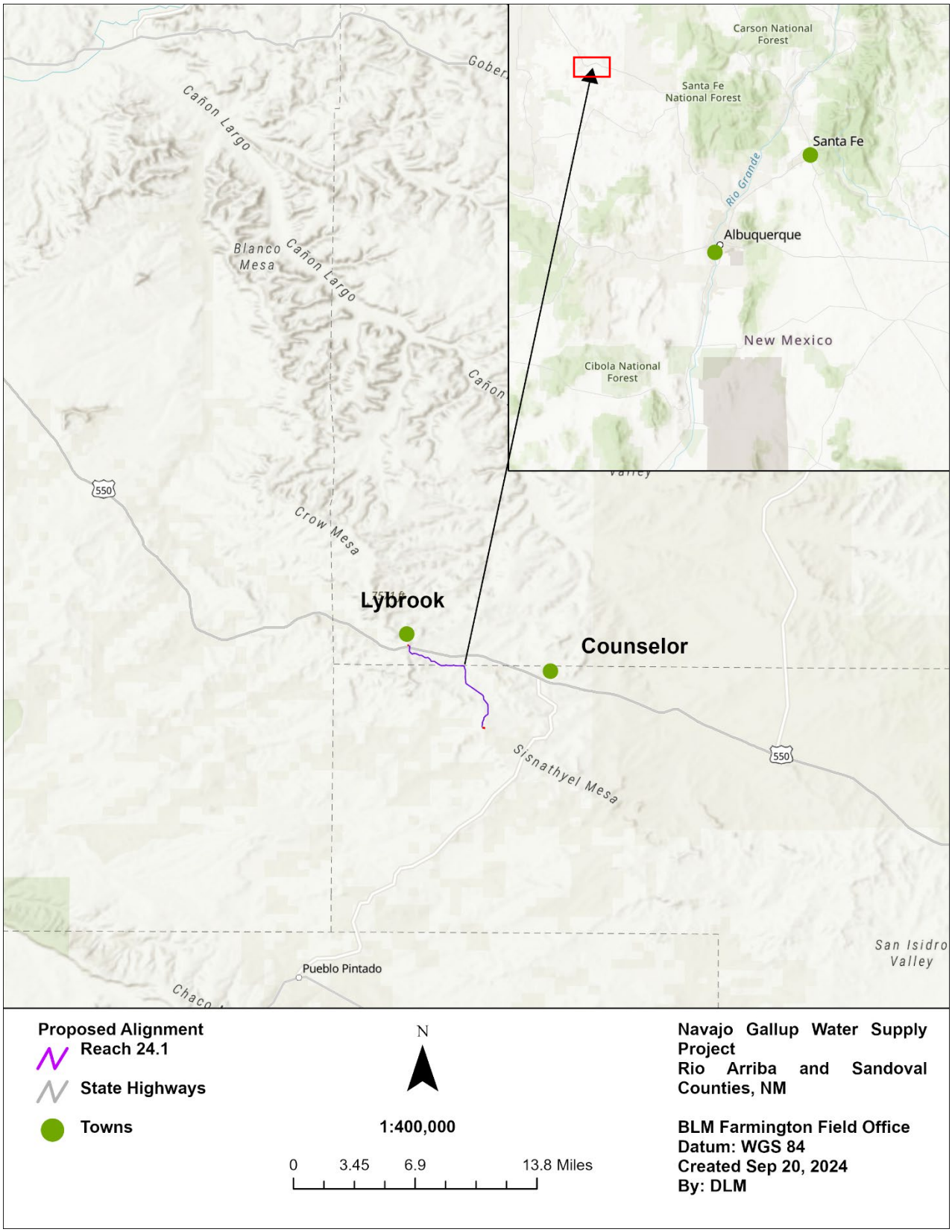
2022. Navajo-Gallup Water Supply Project: A Cultural Resource Survey and Inventory for Reach 24.1 Lybrook of the Cutter Lateral, Rio Arriba and Sandoval Counties, New Mexico.

2023. Navajo-Gallup Water Supply Project: A Cultural Resource Survey and Inventory for Realignment in Reach 24.1 Lybrook of the Cutter Lateral, Rio Arriba and Sandoval Counties, New Mexico.

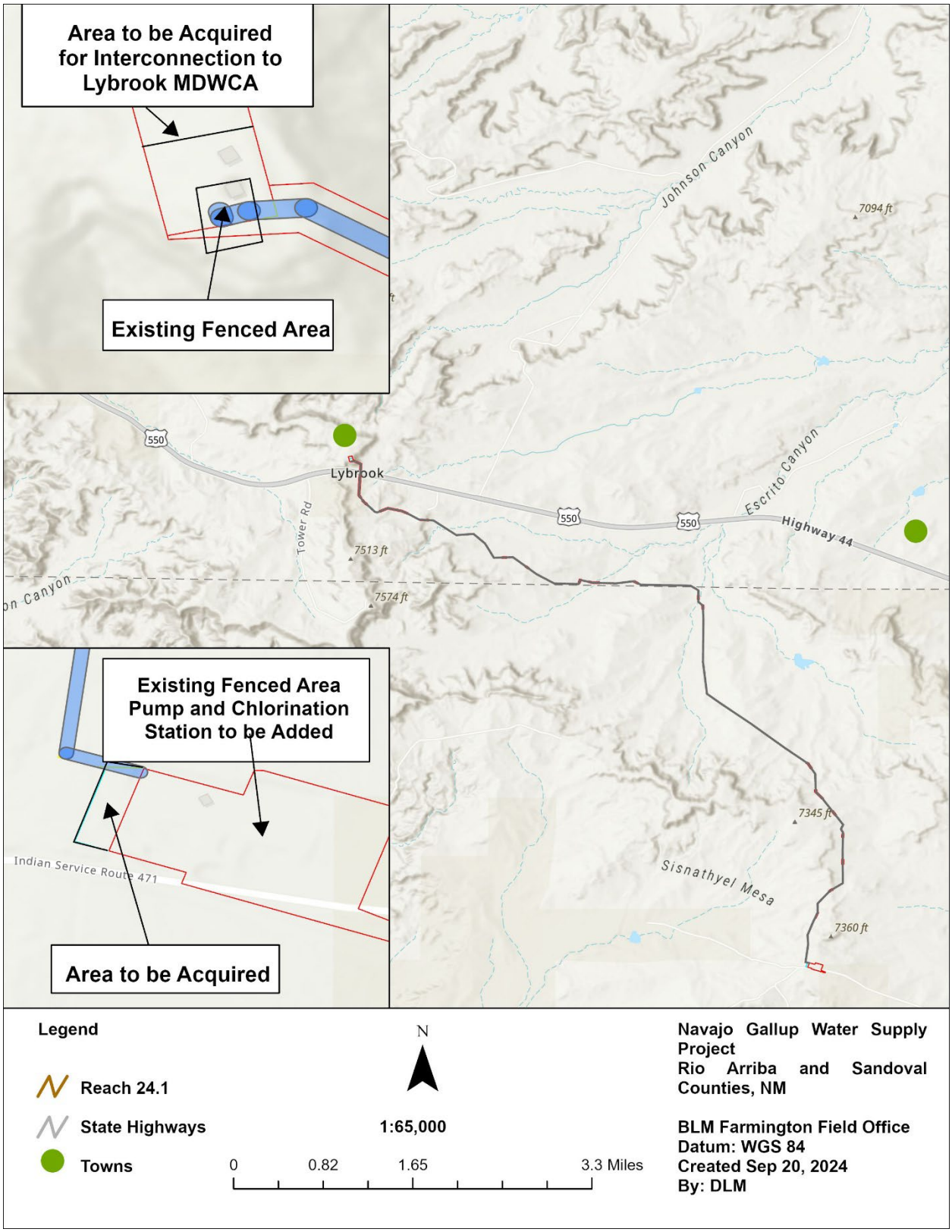
Xerces Society. 2019. Skippers: Yuma Skipper (Ochlodes yuma). Accessed April 14, 2019. https://xerces.org/yuma-skipper/.

.

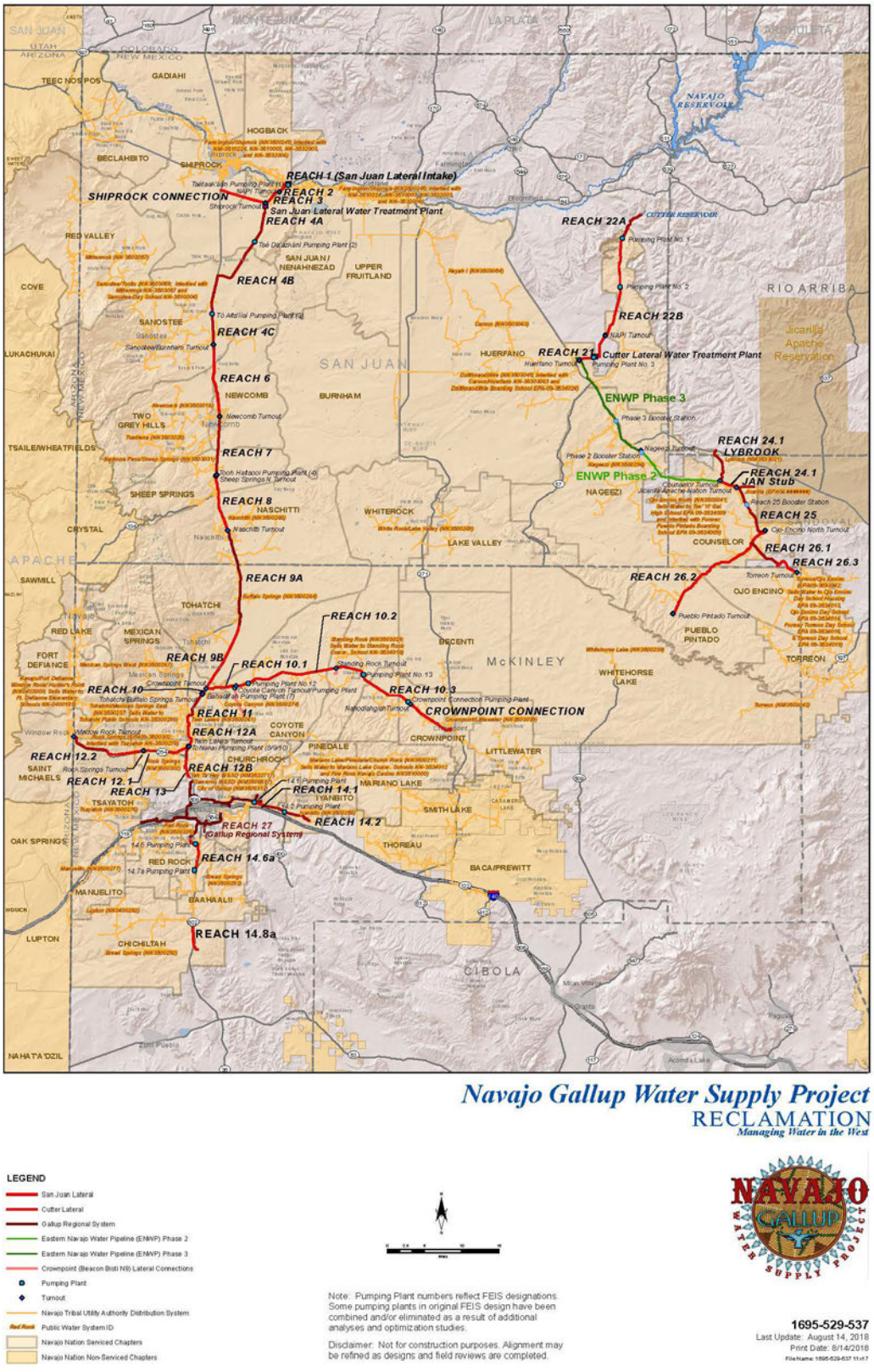
APPENDIX A – MAPS



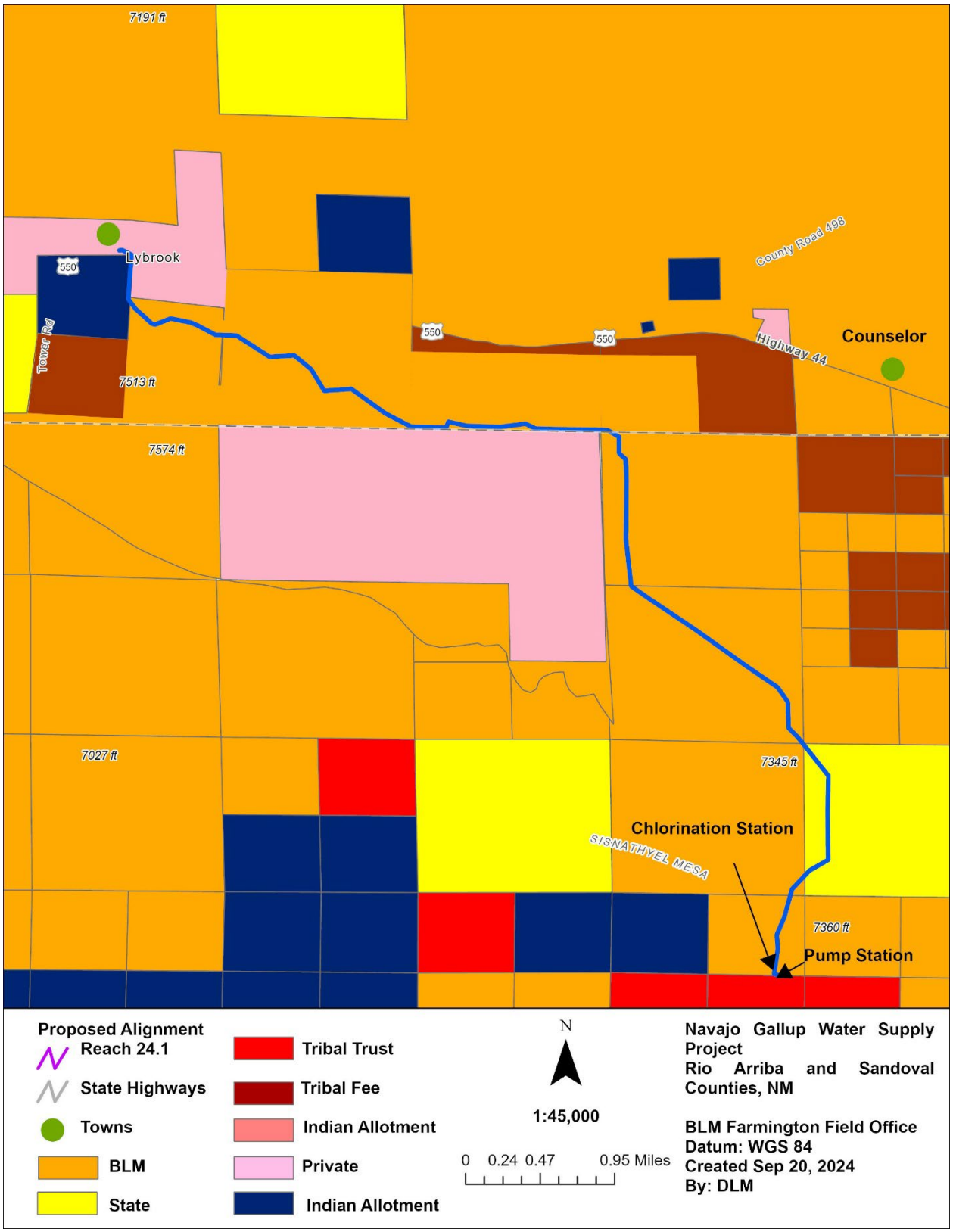
Map 1. Vicinity map showing the project location in Rio Arriba and Sandoval Counties, NM



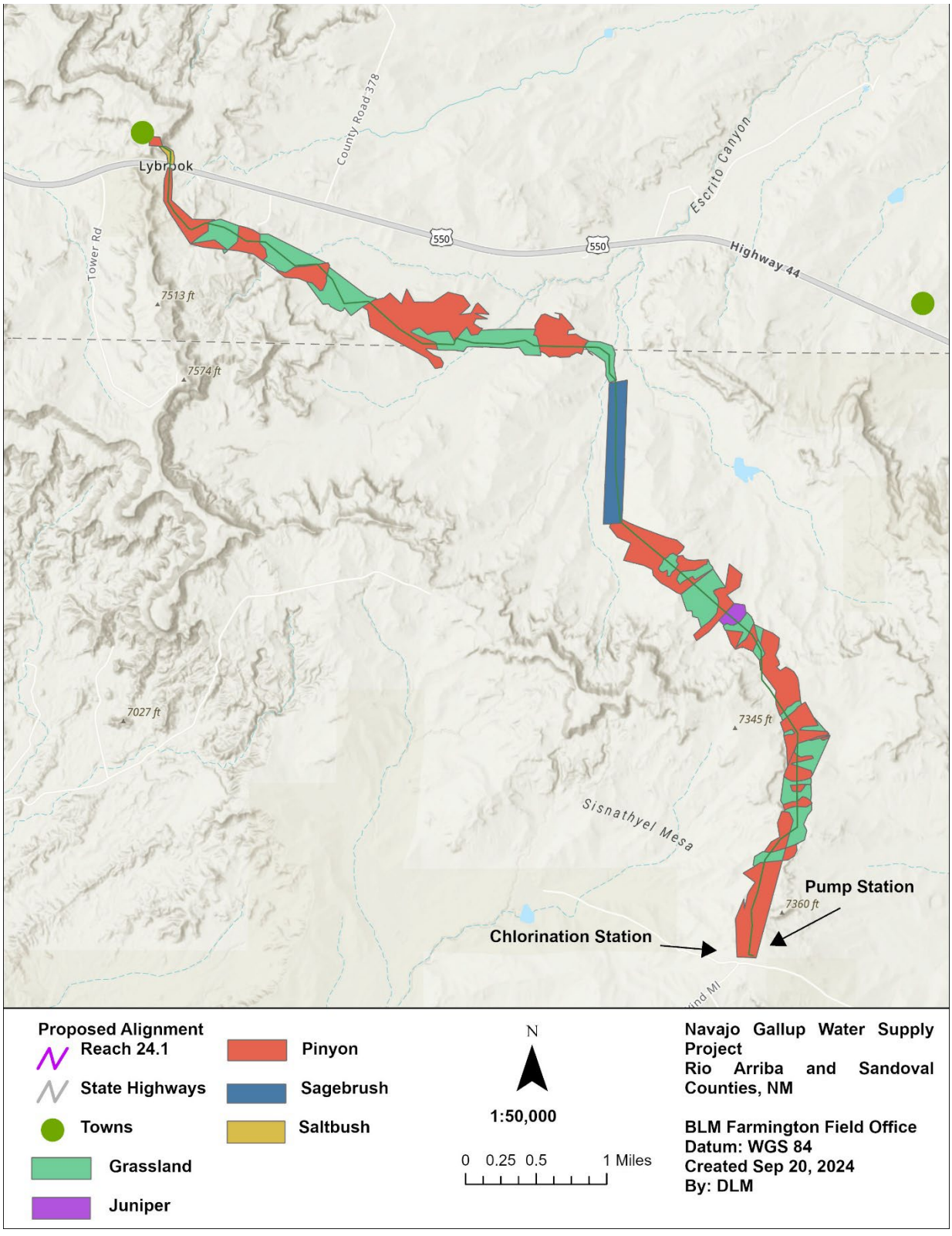
Map 2. Preferred Alternative for Reach 24.1 Lybrook Lateral



Map 3. Proposed NGWSP Pipeline Alignments



Map 4. Reach 24.1 Lybrook Lateral Land Ownership



Map 5. Project Area Vegetation Communities

Photo 1. Habitat Below the Water Tank North of Route 550 on Tribal Land Looking Southeast

Photo 2. Pinyon-Juniper Habitat with Woodrat Midden near Proposed Line Looking North.

Photo 3. Sagebrush Habitat East of Atkins Road with Pinyon-Juniper Woodland on Ridge to East.

APPENDIX B – IPAC SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542

In Reply Refer To: 06/24/2025 18:48:47 UTC
Project Code: 2025-0113411
Project Name: Navajo Gallup Water Supply Project Reach 24.1 Lybrook Connection

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the ESA is to provide a means whereby threatened and endangered species and

the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA; 42 USC 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico State agencies. These lists, along with species information, can be found at the following websites.

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: https://www.emnrd.nm.gov/sfd/rare-plants/

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

In addition to responsibilities to protect threatened and endangered species under the ESA, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 CFR 10.12 and 16 USC 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a Federal nexus) or a Bird/Eagle Conservation Plan (when there is no Federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds. We also recommend review of the Birds of Conservation Concern list (https://www.fws.gov/media/birds-conservation-concern-2021) to fully evaluate the effects to the birds at your site. This list identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent top conservation priorities for the Service, and are potentially threatened by disturbance, habitat impacts, or other project development activities.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 thereby provides additional protection for both migratory birds and migratory bird habitat. Please visit https://www.fws.gov/partner/council-conservation-migratory-birds for information regarding the implementation of Executive Order 13186.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico

Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State protected and at-risk species fish, wildlife, and plants.

For further consultation with the Service we recommend submitting inquiries or assessments electronically to our incoming email box at nmesfo@fws.gov, where it will be more promptly routed to the appropriate biologist for review.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

PROJECT SUMMARY

Project Code: 2025-0113411
Project Name: Navajo Gallup Water Supply Project Reach 24.1 Lybrook Connection
Project Type: Tribal Construction
Project Description: Reach 24.1 Lybrook Connection of the Navajo Gallup Water Supply Project. This is a water delivery piping project.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.201260000000005,-107.51178163905428,14z

Counties: Rio Arriba and Sandoval counties, New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

FISHES

NAME	STATUS
Colorado Pikeminnow *Ptychocheilus lucius* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. Species profile: https://ecos.fws.gov/ecp/species/3531	Endangered
Razorback Sucker *Xyrauchen texanus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. Species profile: https://ecos.fws.gov/ecp/species/530	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

FLOWERING PLANTS

NAME	STATUS
Knowlton's Cactus *Pediocactus knowltonii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1590	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act (MBTA). Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

---

1. The Migratory Birds Treaty Act of 1918.

2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Broad-tailed Hummingbird *Selasphorus platycercus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11935	Breeds May 25 to Aug 21
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

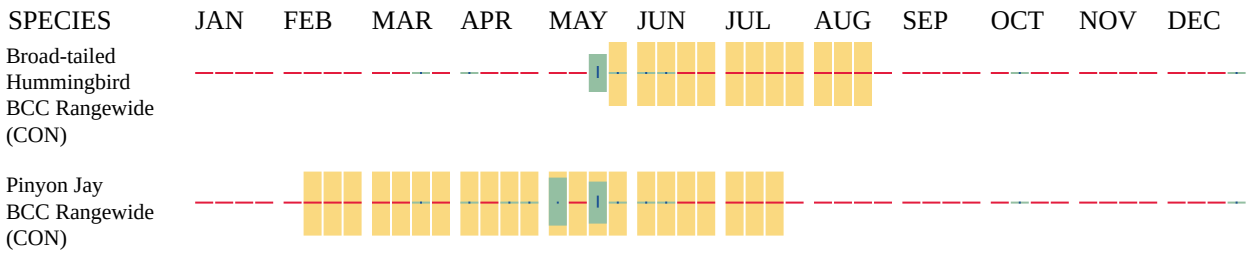
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

IPAC USER CONTACT INFORMATION

Agency: Bureau of Reclamation
Name: Jennifer Ward
Address: 554 W Gunnison Ave Suite 221
City: Grand Junction
State: CO
Zip: 81501-5711
Email jward@usbr.gov
Phone: 9702480651

You have indicated that your project falls under or receives funding through the following special project authorities:

- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)

APPENDIX C – BIOLOGICAL RESOURCES COMPLIANCE DOCUMENTATION

NNDFW Review No. 21ttes101

BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH & WILDLIFE
P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal & Federal laws protecting biological resources including the Navajo Endangered Species & Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection & National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish & Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: 24.1 Lybrook

DESCRIPTION: Drinking Water Lateral Realignment: Navajo Nation Water Resources Department is proposing to construct approximately 7.29 miles of water pipeline associated with the Reach 24.1 Lybrook Lateral of the Navajo-Gallup Water Supply Project (NGWSP), located in Rio Arriba & Sandoval Counties, New Mexico.

LOCATION: Lybrook, NM.
Line begins at the Navajo boundary southside of SR - 550 BOP: 36°13'8.12"N, 107°32'9.80"W. Line ends south of 550, near three vertical standing tanks at 36°10'3.63"N, 107°30'8.94"W.

REPRESENTATIVE: Carolyn L. Fordham, Terra Technologies Environmental Services

ACTION AGENCY: Navajo Nation Water Resources Department

B.R. REPORT TITLE/ DATE/PREPARER: Request for Biological Review & Compliance/ 25 JAN 2023/ Terra Technologies Environmental Services

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3, Low Wildlife Sensitivity

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED:

Aztec Gilia (*Aliciella Formosa*) NESL G3
Golden Eagle (*Aquila chrysaetos*) NESL G3
San Juan Milkweed (*Asclepias sanjuanensis*) NESL G4
Burrowing Owl (*Athene cunicularia*) NESL G4
Mountain Plover (*Charadrius montanus*) NESL G4
Brack Hardwall Cactus (*Sclerocactus cloveriae ssp. bacchii*) NESL G3

FEDERALLY-LISTED SPECIES POTENTIALLY IMPACTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES:

1. NNHP recommends that the project sponsor shall implement Best Management Practices for erosion control and invasive weed prevention and mitigation. NNHP also recommends that temporary

disturbances areas shall be reseeded with a native species mix that matches the species in surrounding non-disturbed areas.

2. All areas disturbed by the construction of the project shall be revegetated with a locally-appropriate native seed mix that is free of invasive, noxious and undesirable plant species. Revegetation of the disturbed areas shall also include proper watering, mulching/straw and erosion controls so that the post construction areas is restored to suitable wildlife habitat.

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: T. Kim Yazzie/25 APR 2023

COPIES TO: (add categories as necessary)

☐ _____ ☐ _____

2 NTC § 164 Recommendation:

☒**Approval:**
24.1 Lybrook

☐ **Conditional Approval (with memo):**

☐ **Pending (with memo):**

☐ **Disapproval (with memo):**

☐ **Categorical Exclusion (with request letter):**

☐ **None (with memo):**

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

Signature: David Mikesic Date 8/2/2023

*I understand & & accept the conditions of compliance, & acknowledge that lack of signature may be grounds for the Department not recommending the above-described project for approval to the Tribal Decision-maker.

Representative's signature Date

DR. BUU NYGREN PRESIDENT
RICHELLE MONTOYA VICE PRESIDENT

The Navajo Nation | Yideeskąądi Nitsáhákees

MEMORANDUM

TO : David Mikesic, Zoologist
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

FROM : Gloria M. Tom, Department Manager III
Department of Fish and Wildlife
DIVISION OF NATURAL RESOURCES

DATE : July 31, 2023

SUBJECT : DELEGATION OF AUTHORITY

I will be on leave beginning Tuesday, August 01, 2023 through Monday, August 07, 2023. I am hereby delegating you to act in the capacity of the Director, Department of Fish and Wildlife, effective at 8:00 a.m. on Tuesday, August 01, 2023. This delegation shall end at 5:00 p.m. on Monday, August 07, 2023.

Your authority will cover the review and signing off of all routine documents pertaining to the Department of Fish and Wildlife, except for issues that you feel should have the attention of the Director.

ACKNOWLEDGEMENT

David Mikesic 7/31/23
David Mikesic, Zoologist
Department of Fish and Wildlife

cc: DFWL File

Post Office Box 7440 • Window Rock, Arizona 86515 • Phone: (928) 871-7100 • Fax: (928) 871-4025

APPENDIX D – ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

- Navajo-Gallup Water Supply Project Cooperating Agencies
    - Bureau of Indian Affairs Navajo Region
    - Indian Health Service Navajo Area
    - Navajo Nation
        - Department of Water Resources
        - Heritage and Historic Preservation Department
        - Environmental Protection Agency
        - Department of Natural Resources
        - Water Rights Commission
        - Navajo Tribal Utility Authority
        - Department of Fish and Wildlife
- Cooperating Federal Agencies (Proposed Action)
    - Bureau of Land Management Farmington Field Office
- Associated State Agencies
    - New Mexico Environment Department
    - New Mexico State Lands Office
    - New Mexico Department of Transportation
    - New Mexico Historic Preservation Department
    - New Mexico Energy, Minerals, and Natural Resources Department Forestry Division
- Local Government / Navajo Nation Chapters
    - Counselor and Nageezi Chapters of the Navajo Nation
- Agencies and Tribes Participating in the NGWSP Cultural Programmatic Agreement (if not already listed)
    - Signatories
        - Advisory Council on Historic Preservation
        - New Mexico State Historic Preservation Office
- Other Entities
    - Souder, Miller & Associates
- Allotment holders
- Adjacent landowners