U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

Dry Piney Helium and Carbon Sequestration Project

DOI-BLM-WY-D010-2025-0046-EA

December 2025

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U.S. Department of the Interior
Bureau of Land Management

High Desert District

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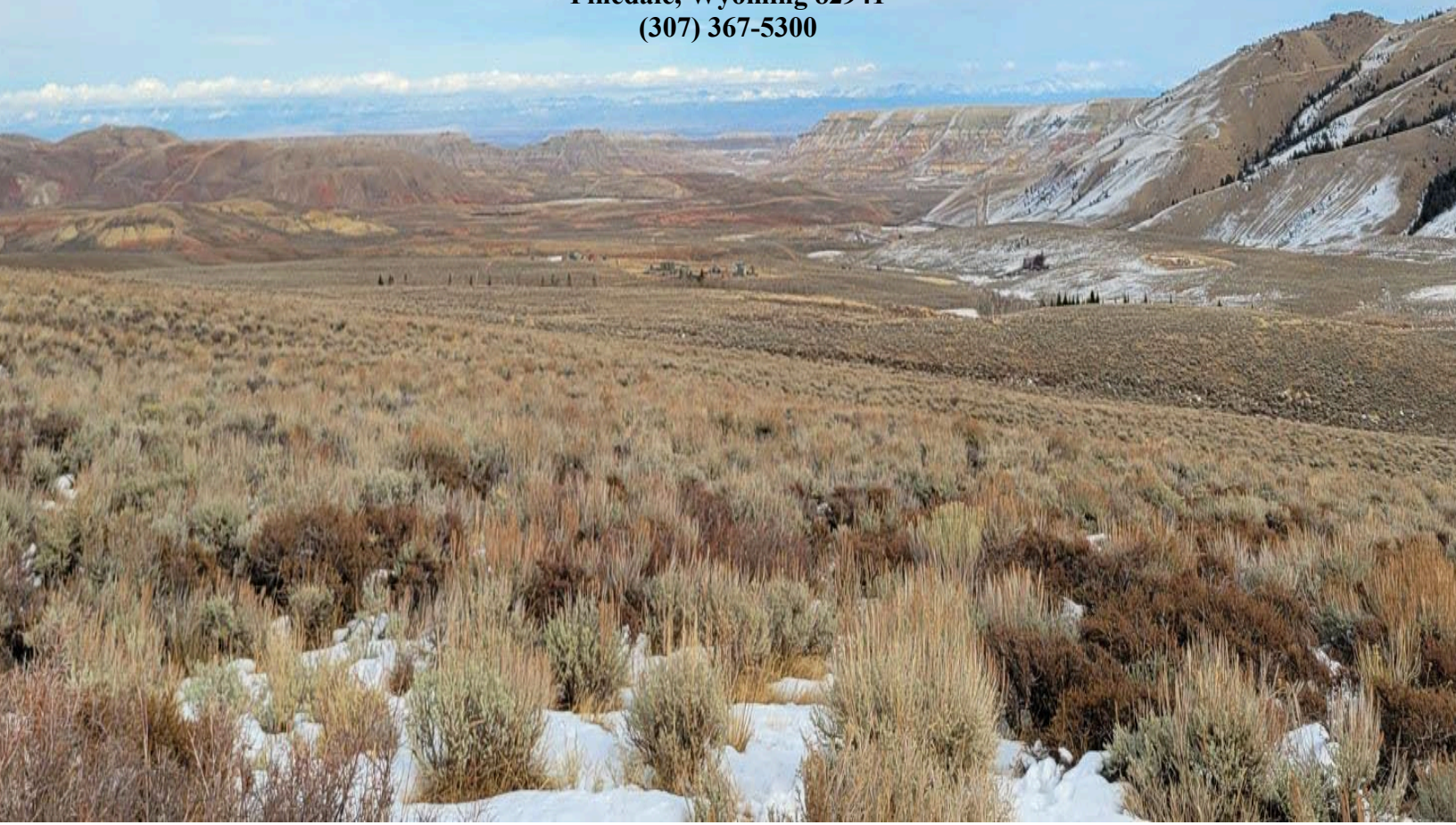

The Bureau of Land Management's mission is to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

DOI-BLM-WY-D010-2025-0046-EA

I have considered the factors mandated by the National Environmental Policy Act (NEPA). This environmental assessment represents the Bureau of Land Management's (BLM's) good-faith effort to fulfill NEPA's requirements by prioritizing documentation of the most important relevant considerations within the statutorily mandated page limits and timeline. This prioritization reflects the BLM's expert judgment; and any considerations addressed briefly or left unaddressed are, in the BLM's judgment, comparatively non-substantive and would not meaningfully inform the BLM's consideration of environmental effects and the decision to be made. The EA is substantially complete, considers the factors mandated by NEPA, and, in my judgment, contains analysis adequate to inform the BLM's decision regarding the proposed action.

Responsible Official: STEWART COGSWELL Digitally signed by STEWART COGSWELL Date: 2025.12.16 15:23:06 -07'00' Date: _____

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ABBREVIATIONS

AADT	annual average daily traffic
AGI	acid-gas injection
AO	Authorized Officer
APD	Application for Permit to Drill
ATW	additional temporary workspaces
BLM	Bureau of Land Management
BMP	best management practice
BSO	BSO Operating LLC
CAA	Clean Air Act
CDC	U.S. Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COA	conditions of approval
dBA	A-weighted decibel
DEQ	Wyoming Department of Environmental Quality
EA	environmental assessment
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
H_2S	hydrogen sulfide
HAPs	hazardous air pollutants
HSPPP	*Dry Piney Helium and Carbon Sequestration Project, Sublette County, Wyoming Hydrogen Sulfide Public Protection Plan*
MMBtu/hr	million metric British Thermal Units per hour
MMscfd	million standard cubic feet per day
MT	metric tons
N	North
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_2	nitrogen dioxide
NOx	nitrogen oxides
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Administration

Pb	lead
PFO	Pinedale Field Office
PM_{10}	particulate matter with a diameter of 10 microns or less
$PM_{2.5}$	particulate matter with a diameter of 2.5 microns or less
POD	Plan of Development
ppb	parts per billion
ppm	parts per million
project	Dry Piney Helium and Carbon Sequestration Project
R	Range
RFFA	reasonably foreseeable future actions
RMP	resource management plans
ROE	radius of exposure
ROW	right-of-way
SCADA	supervisory control and data acquisition
SCFH	standard cubic feet per hour
SF-299	Standard Form 299
SO_2	sulfur dioxide
SWCA	SWCA Environmental Consultants
SWPPP	stormwater pollution prevention plan
T	Township
TUP	temporary use permits
US 189	U.S. Highway 189
USC	United States Code
VOC	volatile organic compounds
W	West
WAAQS	Wyoming Ambient Air Quality Standards
WAQSR	Wyoming Air Quality Standards and Regulations
WGFD	Wyoming Game and Fish Department
WOGCC	Wyoming Oil and Gas Commission
WOTUS	waters of the United States
WVC	wildlife-vehicle collision
WY 235	Wyoming State Highway 235
WYDOT	Wyoming Department of Transportation
$\mu g/m^3$	microgram per cubic meter

1 INTRODUCTION

The Bureau of Land Management (BLM) Pinedale Field Office (PFO) has prepared this environmental assessment (EA) (DOI-BLM-WY-D010-2025-0046-EA), to analyze and disclose the site-specific environmental consequences of BSO Operating LLC's (BSO's) proposal for 12 rights-of-way (ROW) grants and seven Applications for Permit to Drill (APDs) for the Dry Piney Helium and Carbon Sequestration Project (project) in and immediately adjacent to the Dry Piney Unit, approximately 10 miles northwest of La Barge in Sublette County, Wyoming (Figure 1-1).

BSO has submitted 12 Applications for Transportation and Utility Systems and Facilities on Federal Lands (Standard Form 299 [SF-299]) to the BLM PFO, for the project-related transportation and utility ROW, which would include two pipeline corridors: the Gas Gathering Pipeline System and Utility Corridor and the Residue Gas and Acid-Gas Injection (AGI) Corridor.

There are seven SF-299s associated with the Gas Gathering Pipeline System and Utility Corridor, including one for each of the following: fiber-optic cables, a 16-inch gas pipeline, a 4-inch pipeline for methane fuel, a 4-inch pipeline for gas, a 4-inch pipeline for produced water, a 4-inch pipeline for methanol, and for extra workspace and temporary use areas associated with this corridor. There are three SF-299s associated with the Residue Gas and AGI Corridor: one for a 10-inch carbon-steel pipeline for residue natural gas; one for a 12-inch pipeline for carbon dioxide (CO_2) and hydrogen sulfide (H_2S) waste, co-located until branching off near a compressor station; and one for the extra workspace and temporary use areas, to be addressed as temporary use permits (TUPs) and short-term ROWs during construction of the pipelines.

In addition, BSO submitted seven APDs for wells accessing federal minerals. The three wells on the Wrangler Well Pad include DPU 4-35, DPU 6-34, and DPU 10-3, associated with federal mineral leases WYW-20778 and WYW-8140. Wells DPU 10-10, DPA 6-11, and DPU 5-14 are located on the Puncher Well Pad, each linked to federal mineral lease WYW-92223. The Wrangler Well Pad is located in SW¼SW¼ Section 35, Township (T) 28 North (N), Range (R) 114 West (W), and the Puncher Well Pad is located in SW¼SW¼ Section 11, T28N, R114W. Both well pads are on private lands. Furthermore, BSO plans to directionally drill one production well, DPU 2-2, from the existing Kenai Well Pad on state lands, accessing federal minerals under federal mineral lease WYW-8140.

No new roads would be constructed; however, the project would use and enhance existing roads on BLM-managed lands. BSO is requesting two ROWs for the use of existing BLM-managed roads including segments of the Main Access Road and Wexpro Road located in Sections 1, 2, 11, and 12, T27N R114W and segments of Black Canyon Road and Tract 53, in Sections 26, 25, 28, 32, 29, 31, and 32, T28N R113W (see Figure 1-1). In addition, BSO has submitted one ROW to enhance small segments of Graphite Hollow Road (BLM 5321) in Section 1, T27N, R114W, and an unnamed road from Graphite Hollow Road in SWSW Section 12, T27N, R114W extending northwest into Section 1 T27N, R114W (see Figure 1-1).

Other components of BSO's larger development plans include a natural gas processing plant and a well pad including production wells and acid disposal wells. These components would be built on private and state lands. These components do not require BLM authorization; however, the BLM will analyze their reasonably foreseeable effects as part of this EA. Additionally, as of March 31, 2025, two production well pads on state lands have already been constructed under the jurisdiction of the Wyoming Oil and Gas Conservation Commission. Table 1-1 describes the level of National Environmental Policy Act (NEPA) analysis required for each project component.

Table 1-1. Project Components Level of NEPA Analysis

Project Component	Level of NEPA Analysis
Pipeline ROW	Proposed Action
Road ROW	Proposed Action
Federal APDs	Proposed Action
Wrangler and Puncher Well Pads	Connected action
Natural gas processing facility (including power generation)	Reasonably foreseeable future action
Kenai and Popeye well pads	Existing infrastructure (included in affected environment)
Acid disposal wells	Reasonably foreseeable future action

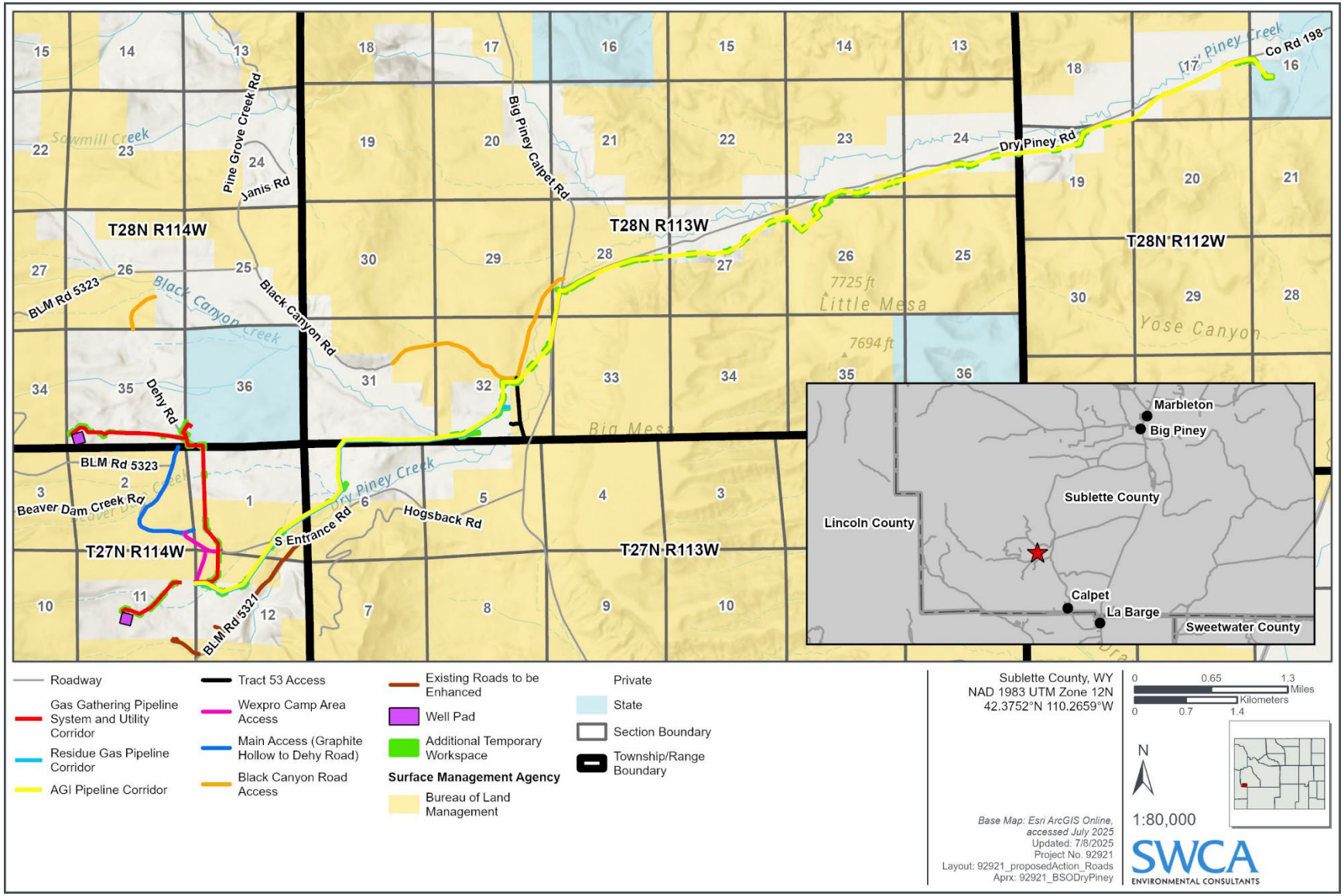

Figure 1-1. Proposed and connected actions overview.

1.1 Purpose and Need for Action

1.1.1 Purpose

The purpose of the proposal is for the BLM to respond to the various SF-299 applications for ROW grants submitted by BSO to construct, operate, and maintain pipelines and additional temporary workspaces, and to enhance segments of existing BLM-managed roads. BLM is also responding to seven APDs for wells accessing federal mineral resources from three well pads located on private and state lands.

1.1.2 Need

The need for the action is established by the BLM's responsibility to respond to a request for the ROW grants under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA), as amended (43 United States Code [USC] §§ 1701 et seq.) and the Mineral Leasing Act of 1920 (MLA), as amended (30 USC §§ 181 et seq.) and the APDs under the authority of the MLA. The BLM is required to manage oil and gas operations on federal lands and ensure compliance with applicable laws, regulations, and policies. The APD and SF-299 applications would be processed in accordance with 43 Code of Federal Regulations (CFR) Parts 2800, 2880, and 43 CFR Part 3160.

1.1.3 Decisions to be Made

BLM would determine whether to approve the ROW grants for the proposed infrastructure on BLM-managed lands, as well as the permits to drill accessing federal minerals, and, if approved, under what specific terms and conditions. Six of the permits to drill accessing federal minerals are located on two well pads that would be built on private and state lands; however, these well pads would not be built without BLM approval of the APDs and are therefore considered connected actions.

BSO also intends to construct and operate five disposal wells located on an existing pad on state lands and a natural gas processing and power generation facility located on private lands. Whereas these actions are not part of the decision-making process regarding the approval or denial of the applications, they are included in this EA as reasonably foreseeable future actions (RFFAs) (Section 3.2).

1.2 Land Use Plan Conformance

The BLM-managed lands are administered with direction provided in land use plans that establish the goals and objectives for the management of the resources and land uses. BLM resource management plans (RMPs) are prepared in accordance with the FLPMA. The BLM PFO is responsible for managing the federal lands affected by this project, and the Proposed Resource Management Plan and Final Environmental Impact Statement for Public Lands Administered by the Bureau of Land Management Pinedale Field Office Pinedale, Wyoming (BLM 2008) is the applicable RMP.

The RMP provides guidance for the management of 922,880 acres of public land surface administered by the BLM in Sublette and Lincoln Counties in western Wyoming. The purpose of the RMP is to provide allocation of land use that includes resource protection and opportunities for recreation, mineral resource development, livestock grazing, and other land use activities. The RMP provides a comprehensive framework pursuant to the multiple-use and sustained-yield mandate of the FLPMA for publicly managed lands within the jurisdiction of the BLM PFO.

The Proposed Action and alternatives listed in this EA are in conformance with the following RMP decisions (objectives, terms, and conditions):

- Lands and Realty Management Goal: Provide for use of public lands in accordance with federal regulations where compatible with other resources.
- Lands and Realty Objectives: Respond to community needs for expansion and economic development and process ROW applications in a timely manner, applying appropriate mitigation to protect resource values.
- Mineral and Energy Resources Goal: Provide opportunities for mineral exploration and development under the mining and mineral leasing laws subject to legal requirements to protect other resource values and land uses.
- Objective: To consolidate oil and gas exploration and leasing, to already intensively developed fields minimizing impact to other resource values and land uses (BLM 2008).

The RMP provides specific lease stipulations, best management practices (BMPs), goals, objectives, and management direction that apply to a variety of resources and activities on BLM-managed lands. To ensure compliance with the RMP and all applicable laws, regulations, and policies, the BLM applies appropriate mitigation measures during the permitting stage to provide appropriate protective conditions for BLM-managed land and resources.

All well pads and the gas gathering pipeline system, as well as portions of the acid gas disposal pipeline corridor for the project, would be located in areas designated as Intensively Developed Fields (BLM 2008). The remainder of the acid gas disposal pipeline corridor would extend into Traditional Leasing Areas. The RMP designates areas "intensively developed" when bottom hole well density exceeds one well per 160 acres and a surface density of four well pads per 160-acre section. Currently, the BLM PFO has designated the following fields as Intensively Developed Fields: Jonah, Pinedale Anticline, Big Piney-LaBarge, Deer Hills, and Camp/Castle Creek. (All other areas open for oil and gas activities are designated Traditional Leasing Areas.) The project coincides with the Big Piney-LaBarge Intensively Developed Field. The significance of these designations is the BLM's use of timing stipulations and conditions of approval (COAs) for surface-disturbing and disruptive activities. While both Traditional Leasing Areas and Intensively Developed Fields are subject to standard lease stipulations, appropriate no surface occupancy (NSO), and controlled surface use (CSU) stipulations, Traditional Leasing Areas are additionally subject to timing limitations and conditions of approval. The analysis contained in this EA determined that the work schedule has been designed in conformance with no surface occupancy and timing stipulations within the Traditional Leasing Areas.

1.3 Relationships to Statutes, Regulations, and Other NEPA Documents

The Proposed Action is within federal, state, and private lands and is subject to federal, state, and local permitting requirements. The Proposed Action would comply with all applicable federal, state, and local laws, plans, and permits required for this type of activity. Table 1-2 provides a list of the federal, state, and local permits and approvals required. BSO would obtain all necessary federal, state, and local permits and approvals before construction begins. The ROW grants would be issued pursuant to 43 CFR Part 2800 and 43 CFR Part 2880 under the authorities of the FLPMA and the MLA for the construction, operation, maintenance, and termination of the Proposed Action. The ROW grants would be subject to the terms and conditions in 43 CFR Part 2800 and 43 CFR Part 2880 and the mitigations set forth in the project Plan of Development (POD) (SWCA Environmental Consultants [SWCA] 2025a). The seven APDs would be issued pursuant to 43 CFR Part 3160 and 43 CFR Part 3170 of the Federal Onshore Oil

and Gas Leasing Reform Act of 1987 for the exploration and development of federal minerals. The APDs would be subject to the terms and conditions outlined in 43 CFR Part 3160, 43 CFR Part 3170, and the mitigations set forth in the drilling plan and master development plan (SWCA 2024). Appendix C outlines the terms and conditions that would be applied to the ROW grants and APDs.

Table 1-2. Permits and Approvals Required

Issuing Agency/Program/Permit Name	Permits/Approvals/Authorizing Actions	Component Requiring Authorization
Federal permits, approvals, and authorizing actions		
BLM		
NEPA/EA[1]	EA development, review, and approval; issuance of decision record	All Proposed Action components and connected actions
Comply with federal cultural resources legislation	Current cultural resources use permit; valid fieldwork authorization; BLM acceptance of archaeological report; BLM determines eligibility of cultural resources for listing in the National Register of Historic Places and potential to affect historic properties; State Historic Preservation Office concurrence with BLM determinations	Entirety of Proposed Action area
Comply with federal paleontological legislation	Current paleontological use permit; valid fieldwork authorization; BLM accepts paleontological report	BLM-managed surface lands
Endangered Species Act	Informal or formal consultation with the U.S. Fish and Wildlife Service for threatened and endangered species	All Proposed Action components
ROW grants and TUPs	ROW grants consist of commercial-scale ROW; permanent pipeline and roads ROW; temporary road ROW; TUPs consist of temporary workspace	All Proposed Action components
Application for Permit to Drill (APD)	APDs consist of permit to drill wells to develop federal minerals	Proposed Action federal wells
Notice to proceed (NTP)	Following issuance of a ROW grants and approval of the project's POD, the Authorized Officer would issue a notice to proceed with project development and mitigation activities (as necessary) for BLM-managed lands, including an NTP contingent on approval of a pore space ROW grant allowing the use of BLM-administered federal pore space associated with disposal of CO_2 and other substances at the non-federal injection wells.	All Proposed Action components on BLM-managed lands
U.S. Environmental Protection Agency		
Clean Water Act	Spill prevention, control, and countermeasure plans	Transfer and storage of fuels and oils
Hazardous waste	Hazardous waste generator license	For storage on-site, less than 90 days of hazardous waste generated from maintenance activities

[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 the Department to strictly adhere to 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 a legal impossibility. The BLM verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum.

Issuing Agency/Program/Permit Name	Permits/Approvals/Authorizing Actions	Component Requiring Authorization
State Permits, Approvals, and Authorizing Actions		
Wyoming Department of Environmental Quality		
Air Quality Division New Source Review	Prior to construction, facilities must obtain appropriate air quality permits if air contaminants are to be released	Air quality emission sources
Air Quality Division Title V Permit	Sources that meet air quality contaminant limits, as defined in Wyoming Air Quality Standards and Regulations Chapter 6, Section 3, are required to obtain a Title V operating permit	Air quality emission sources
Industrial Siting Council Section 109 Permit	Major industrial facilities with an estimated cost greater than $283,166,876 must assess project socioeconomic and environmental impacts and may be required to obtain a permit	Project development and economic impacts of the project
Land Quality Division: Drilling Notification	Approval must be obtained for exploration drilling prior to commencement of activity	Exploration area where drilling is to take place
Water Quality Division Short-Term Water Quality Standard for Turbidity – 318 Authorization	Construction activities that would cause short-term or temporary violations of a state water quality standard for turbidity	Stream crossings near stream activities that would discharge stormwater to stream
Water Quality Division General Industrial Stormwater Permit	Permit required to discharge stormwater runoff from industrial site; a stormwater pollution prevention plan (SWPPP) will be required for this permit to ensure that all permit requirements are met	Stormwater runoff associated with industrial site
Water Quality Division SWPPP	Development and implementation of SWPPP must be completed prior to disturbance or industrial activity	Project stormwater control
Water Quality Division General Permit for Temporary Discharges Involving Construction Activities	Permit required when dewatering from construction activity is needed or if discharges due to hydrostatic testing of pipes or tanks would take place	Activities associated with construction dewatering or hydrostatic testing
Wyoming Department of Transportation		
Transport permits	Permit for oversize, over-length, and overweight vehicle loads	Transportation of equipment and materials on state highways
Wyoming Oil and Gas Conservation Commission		
Underground Injection Control (UIC) Permit	Permit required to drill disposal wells on State lands	Class II Disposal Wells

1.4 Scoping, Public Involvement, and Issues

1.4.1 Summary of Scoping and Public Involvement

Scoping is an important part of the NEPA process and determines the scope of key issues related to a proposed action. The BLM internally scoped the proposal in February 2025 and met with cooperators on April 29, 2025. Details on cooperators and Tribes invited to participate are provided in Section 4.

A formal public scoping notice and press release for this Proposed Action was published on March 7, 2025. The goal of scoping was to gain public understanding and participation in the analysis and decision-making process for the Proposed Action. Comments were solicited during the public scoping period for the EA (March 7–22, 2025), and a public scoping meeting was held on March 11, 2025, in Big Piney. The public scoping meeting was attended by 22 members of the public. The BLM received a total of 26 public comment submissions during the public scoping period.

Analysis based on scoping comments have been incorporated into this document as appropriate. All comments received are provided in Appendix A.

1.4.2 Issues Identified for Detailed Analysis

Site-specific resource concerns were identified by BLM and the public through the preliminary review process conducted during the scoping period (see Appendix A). The BLM focused its analysis on issues that are truly relevant to the action in question--issues that have a cause-and-effect relationship with the Proposed Action, are within the scope of analysis, and are amenable to scientific analysis. The issues discussed below are analyzed in this EA because of the results of the scoping process.

1.4.2.1 ISSUE 1 – AIR QUALITY

How would construction, operation and maintenance, and reclamation activities of the pipelines, two well pads, and road enhancements affect air quality?

1.4.2.2 ISSUE 2 – CULTURAL RESOURCES

How would disturbance from the construction, operation and maintenance, and reclamation activities of the pipelines, two well pads, and road enhancements affect cultural resources, including cultural sites and historic properties?

1.4.2.3 ISSUE 3 – PUBLIC HEALTH AND SAFETY ASSOCIATED WITH TRANSPORTATION

How would the construction and operation of the project affect regional traffic?

1.4.2.4 ISSUE 4 – MULE DEER

How would vegetation removal, increased human presence and traffic, and installation of pipelines, two well pads, as well as road improvements affect resident mule deer, mule deer habitat, and their habitat use, including crucial winter range?

1.4.2.5 ISSUE 5 – SOCIOECONOMICS

How would the installation of the pipelines and two well pads, and the production of federal minerals affect Sublette and Lincoln Counties' economies?

1.4.2.6 ISSUE 6 – PUBLIC HEALTH AND SAFETY ASSOCIATED WITH HYDROGEN SULFIDE

How would construction and operation of a H_2S pipeline in an area previously without H_2S infrastructure impact public safety, including workers, public residences, or other areas accessed by the public?

1.4.3 Issues Eliminated from Detailed Analysis

During the scoping process, the following resources were determined to not be present within or adjacent to the Proposed Action project area (see Figure 1-1): prime or unique farmlands, special designation areas including areas of critical environmental concern, wild and scenic rivers, wilderness and wilderness study areas, lands with wilderness characteristics, and wild horse and burro herd management areas.

In addition, the BLM determined that the following resources are present and/or issues are applicable within or adjacent to the area of the Proposed Action but not affected to a degree that detailed analysis is required at this time: fish habitat, fuels and fire management, geology/mineral resources/energy production, invasive species and noxious weeds, land access, livestock and grazing, migratory birds and eagles, paleontology, recreation, greater sage-grouse (Centrocercus urophasianus) habitat, soils, general vegetation, special-status plant species, wastes, water resources, wetlands, general wildlife, and woodland and forestry.

Details on the listed resources are provided in the interdisciplinary team checklist of issues and resources considered (Appendix B).

2 PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative 1 – No Action Alternative

Under the No Action Alternative, the BLM would not issue any ROW grants or federal APDs. However, BSO would proceed with an alternative project layout to develop their mineral leases. The development of the pipelines and well pads would be entirely on state and private lands. Additional production wells on state and fee minerals would ensure a sufficient supply of feedstock for the natural gas processing plant (Figure 2-1).

The Wrangler Well Pad would be built in Section 35 of T28N, R114W on private land. The existing Kenai Well Pad is located on state land in Section 36 of T28N, R114W. All production wells would access state or fee minerals and BSO would submit new APDS to the Wyoming Oil and Gas Commission for these wells.

A pipeline corridor would go through state or private lands and start at the Wrangler Well Pad, go to the Kenai Well Pad, and then go to the natural gas processing plant in Section 35 and 36 of T28N, R114W; Section 1 of T27N, R114W; and Section 5 and 6 of T27N, R113W.

BSO holds existing road ROWs within the project area, specifically from EOG Resources (WYW-087793) and QEP Resources (WYW-150234). This arrangement permits the use of existing roads

from Calpet Road across BLM-managed lands to access both private and state parcels. Produced materials from the natural gas processing plant would be trucked off-site using the existing roads where BSO has ROWs.

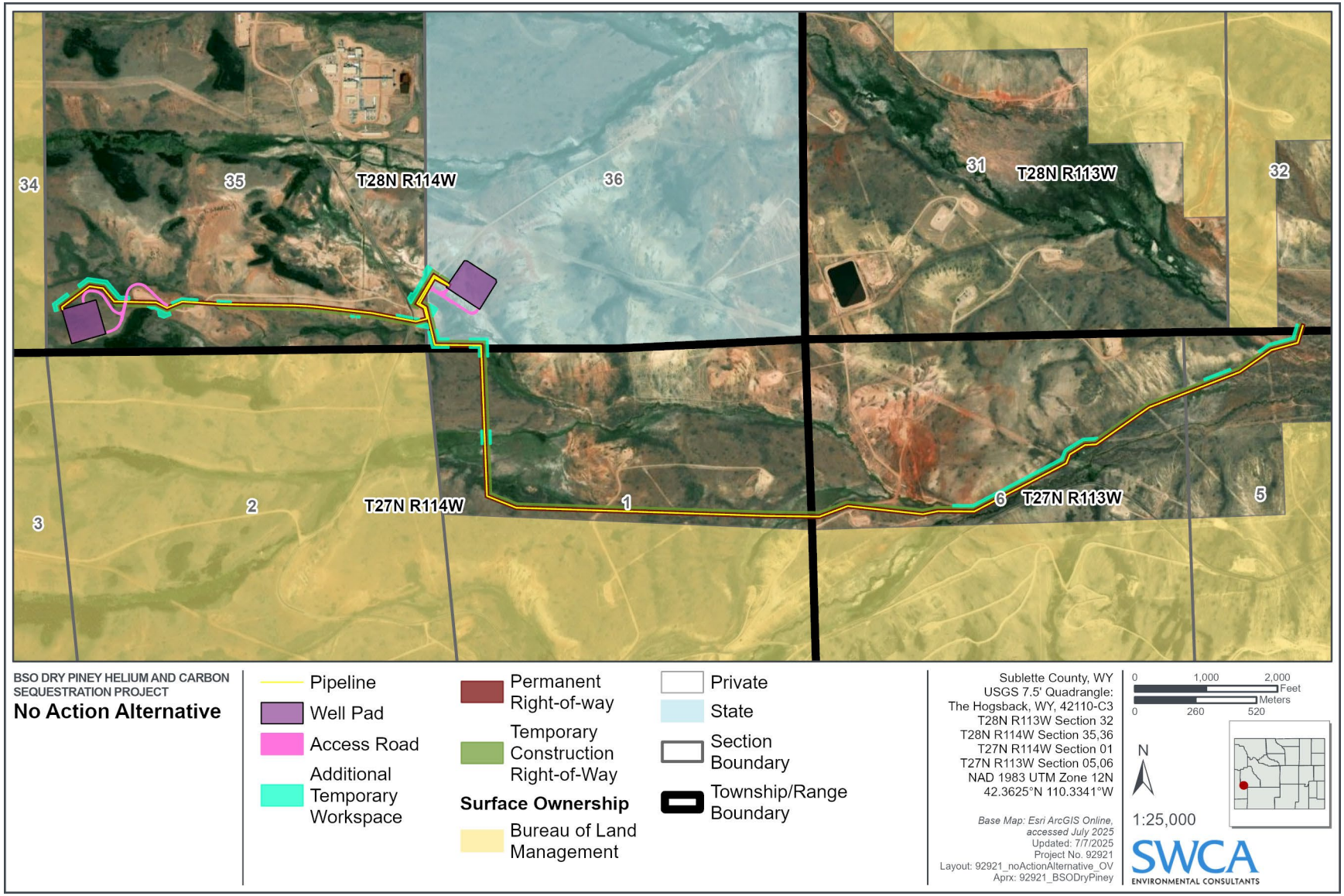

Figure 2-1. No Action Alternative.

2.2 Alternative 2 – Proposed Action

The Proposed Action includes BSO's submission of 12 SF-299 applications to the BLM for 12 ROWs necessary to construct, operate, and maintain various pipelines and additional temporary workspaces on BLM-managed lands, and for the use and enhancement of existing BLM-managed roads. In addition to the ROW applications, the Proposed Action includes BSO's submission of seven APDs for wells accessing federal minerals. Public Land Survey System (PLSS) information, which provides precise location details, is available in the POD (SWCA 2025a).

2.2.1 Pipeline Rights-of-Way

Two distinct pipeline corridors would be constructed: the Gas Gathering Pipeline System and Utility Corridor, and the Residue Gas and AGI Pipeline Corridor. These corridors are designed to 1) transport gas and utilities from well pads to a central gas processing plant, and 2) transfer processed gas to market and CO_2 injection sites.

The Gas Gathering Pipeline System and Utility Corridor would include fiber-optic communication cables, a 16-inch-diameter gas pipeline, a 4-inch-diameter methane fuel gas pipeline, a 4-inch-diameter produced water pipeline, and a 4-inch-diameter methanol supply pipeline. This corridor would span approximately 3.6 miles, with 0.75 mile on BLM-managed lands, 0.4 mile on state lands, and 2.4 miles on private lands.

The Residue Gas and AGI Pipeline Corridor would feature a 10-inch-diameter carbon-steel pipeline for residue natural gas and a 12-inch-diameter carbon-steel pipeline for the CO_2 and H_2S waste stream. These pipelines would be co-located until the residue gas pipeline branches off to connect with an existing third-party pipeline near the Williams Saddle Ridge Compressor Station for commercial sale. The residue gas pipeline extends approximately 3.6 miles with 1.2 miles on BLM-managed lands, and 2.4 miles on private lands. This corridor would extend approximately 11.6 miles, crossing 4.5 miles on BLM-managed lands, 0.2 mile on state lands, and 6.8 miles on private lands.

Table 2-1 lists the surface disturbance of the Proposed Action components on BLM, state, and private lands.

Table 2-1. Pipeline Right-of-Way Disturbance

Proposed Action Component	Surface Disturbance (acres)			
	BLM	State	Private	Total
Gas Gathering Pipeline System and Utility Corridor temporary ROW	7.8	3.8	25.1	**36.7**
Gas Gathering Pipeline System and Utility Corridor permanent ROW	4.6	2.2	14.5	**21.3**
Residue Gas and AGI Pipeline Corridor temporary ROW	52.6	2.7	90.4	**145.7**
Residue Gas and AGI Pipeline Corridor permanent ROW	34.3	1.4	55.2	**90.9**

2.2.1.1 PRECONSTRUCTION ACTIVITIES

Preconstruction activities would involve detailed surveying and staking to clearly delineate project boundaries, including additional temporary workspaces (ATWs), the ROW center line, and construction boundaries. Stakes would be placed every 300 feet or within line of sight, marking the permanent ROW, temporary storage areas for topsoil or spoil, and restricted zones such as wetlands and sensitive areas. These markers would also indicate transitional zones for soil salvage depths as per the reclamation plan

included in the POD (SWCA 2025a). Pipe delivery would be staged directly off trucks, with smaller equipment used for stringing to efficiently navigate the steep topography within the ROW.

ATWs would be needed during the construction of both pipeline corridors for spoil storage areas and workspace where terrain or other features would require additional room outside the ROWs. These areas would be stripped of vegetation and topsoil to create level and safe construction conditions, except when used for topsoil storage, where vegetation and topsoil would remain intact. The Gas Gathering Pipeline System and Utility Corridor ATWs would be approximately 8.8 total acres with 1.7 acres on BLM-managed lands, 5.9 acres on private lands, and 1.1 acres on state lands. The Residue Gas and AGI (AGI) Pipeline Corridor ATWs would be approximately 21.1 total acres with 9.4 acres on BLM-managed lands, 10.9 acres on private lands, and 0.8 acre on state lands.

2.2.1.2 CONSTRUCTION ACTIVITIES

Construction of the pipelines is anticipated to take approximately 6 months and begin in early 2026. The estimated type and number of each piece of equipment required for construction is listed below. It is assumed that all equipment would be in operation for 10 hours per day, 6 days per week, during the construction schedule.

- Trenchers – 1
- Benders – 2
- Truck-mounted welding equipment – 4
- Tracked/rubber backhoe – 10
- Air compressor – 2
- Sanitary units – 4
- Excavators – 5
- Tractors – 4
- Dozer side booms – 10
- Dozers – 5
- Cranes – 1
- Boring machines – 1
- Skid steer loaders – 4
- Semi-trucks – 1
- Compactors – 4
- Pickup trucks – 40
- Water trucks – 4
- Dump trucks – 1
- Stringing trucks – 8
- Telehandler – 4
- Horizontal directional drilling drill rigs – 1
- Graders – 2
- Pipe-bending machines – 2

Pipeline construction would involve selective clearing and grading of the multiple pipeline and additional temporary workspace ROW for safe vehicle passage, with adjustments made to protect sensitive resources. Topsoil would be salvaged and stockpiled within the multiple pipeline and additional temporary workspace ROW, then segregated from subsoil to aid reclamation. Vegetation would be removed using a brush hog, leaving roots intact, and mixed with topsoil to prevent erosion and enhance stability. Postconstruction, topsoil and vegetation would be redistributed according to the reclamation plan.

Trenching would begin with a hydrovac truck to locate existing pipelines and utilities, followed by traditional excavator and wheel trencher methods to excavate the trench to a depth ensuring a minimum pipeline cover of 4 to 6 feet. Safety bell holes with benching would be created in accordance with Occupational Safety and Health Administration (OSHA) requirements, and trench breakers would be installed at strategic intervals to prevent washouts, with spacing adjusted for varying slope gradients.

Pipeline installation would involve stringing pipe segments onto skids using track hoes and side booms, followed by welding the segments together using side boom tractors and a tractor-mounted welding rig. Each weld would be visually inspected and x-rayed to ensure compliance with American Petroleum Institute Standard 1104 and CFR codes, with protective coatings applied to field joints to guard against corrosion.

The lowering crew would use side boom tractors, track hoes, and roller cradles to lift the welded pipe off the skids and lower it into the trench. Before backfilling, the trench and pipeline would be inspected to ensure depth compliance, debris-free bottoms, and proper pipe bending. Excavated subsoils would be used for backfilling, compacted to eliminate voids, and crowned to allow for natural subsidence.

Pressure testing would involve hydrostatically testing the pipeline using pressurized water to meet code requirements, with test water hauled in and out of the project area for disposal. Cleaning operations would use air-propelled wire-brush pigs to remove debris, followed by compressed air to propel cleaning pigs through each test section, ensuring internal quality. Coordination with landowners would address fence crossings, minimize disturbances, and ensure repairs meet BLM standards.

For road crossings, bores would be used to traverse major paved roadways, allowing pipe sections to be fed through boreholes without disrupting the surface. An alternate open-cut method may be employed for traversing improved gravel roads. The size of entry and exit sites would depend on the drill diameter and required equipment, with surface disturbances limited to workspaces for pipe laydown and equipment operation.

Water crossings would involve either open-cut or bore methods, depending on the water body, which includes streams, rivers, canals, and ponds. All crossings would comply with state and federal requirements, with necessary permits obtained from the U.S. Army Corps of Engineers for work in waters of the United States (WOTUS).

2.2.1.3 DUST ABATEMENT

For dust abatement and soil compaction during construction, water would be sourced from a third party (Mountain States Water, located in Big Piney, Wyoming) near La Barge, Wyoming.

2.2.1.4 OPERATION AND MAINTENANCE

Pipeline operations would run continuously, 24/7, year-round, following construction completion. Maintenance would include routine ROW monitoring, inspections, and leak detection, adhering to industry standards and codes. BSO would use supervisory control and data acquisition (SCADA) systems for remote pressure and flow monitoring, enabling quick response to any unusual pressure declines or mass imbalances. These systems would also allow for remote control and shut-in of pipeline safety valves as needed, with regular testing to ensure reliability.

Visual inspections of pipelines and ROWs would be conducted routinely, following code requirements and BSO protocols. Corrosion control programs would be established to maintain pipeline integrity and external coating, ensuring long-term operational safety. Monitoring and leak detection for pipelines carrying H_2S would follow detailed procedures outlined in Appendix G of the POD (SWCA 2025a).

2.2.1.5 RECLAMATION

Reclamation would commence immediately after pipeline construction, aiming to restore disturbed areas to their original condition or to better suit land management needs. All construction equipment and debris would be removed, and areas would be reclaimed to support activities such as livestock grazing and/or

wildlife habitat. Once a pipeline is deemed no longer useful, aboveground infrastructure would be removed, and with BLM approval, underground pipelines would be drained, purged, capped, and left in place to preserve reclaimed soils and vegetation.

The pipeline would be cleaned with inert gas, and all contents disposed of off-site per regulations. Reclamation efforts would be managed and monitored by BSO, with annual reports submitted to BLM for BLM-managed lands. Earthwork for reclamation would be completed within 6 months postconstruction, ensuring all non-essential surface areas are reclaimed. Reclamation would be implemented, managed, and monitored by BSO, with results reported annually to the BLM for BLM-managed lands. In accordance with 43 CFR Subpart 3171, BSO would complete earthwork for reclamation within 6 months of the completion of construction. All surface areas not needed for field operations would be reclaimed.

2.2.2 Existing Roads on BLM-Managed Lands

BSO is requesting a ROW for the use of existing BLM-managed road segments of the Main Access Road and Wexpro Road and another ROW for the use of existing road segments of Black Canyon Road and Tract 53 (Figure 1-1).

BSO plans to enhance three segments of existing roads on BLM-managed lands by resurfacing to accommodate truck or tractor-trailer traffic for delivering large equipment during construction of the project. Specifically, BSO plans to resurface approximately 0.5 mile of Graphite Hollow Road (BLM 5321), extending south from its intersection with the paved Deadline Ridge (BLM 5322, also known as South Entrance Road), and 0.5 mile of unnamed road from Graphite Hollow Road in SWSW Section 12 T27N, R114W extending northwest into Section 1, T27N, R114W (Figure 1-1). Resurfacing would be contained within the existing road surface, and no disturbance outside the existing road grade would occur.

2.2.2.1 TRAFFIC ON ROADS

As all access roads used for the project are existing, they would remain in use during the life of the project and would remain in use after the conclusion of operations and reclamation. During the peak construction phase, approximately 75 vehicles would enter the site per day. This peak construction period would only occur for a few months, and the remainder of the construction activities are expected to generate fewer vehicle trips.

During project operations, three vehicles are expected to enter the site per day, and approximately two to three tractor-trailer trucks of helium product would be transported per day.

2.2.3 Wells Accessing Federal Minerals

2.2.3.1 DRILLING ACTIVITIES

The first section of the wellbores would be drilled with freshwater spud mud and surface casing would be set at least 100 feet into the Hillard Formation and cemented to surface. The next section of the wellbores would be a 12¼-inch directional hole drilled to the intermediate casing point with oil-based mud. Next, 10¾-inch casing would be set and cemented approximately 150 feet into the Ankareh Formation to surface. The final section of the wellbores would be a 9⅝-inch directional hole drilled to total depth with oil-based mud. A 7⅝-inch production casing would be set from total depth to surface and cemented from total depth to the bottom of cement in the intermediate casing string. For more detailed information, see the Master Drilling Plan (IPT Well Solutions 2025).

2.2.3.2 WATER USE

For dust abatement and compaction during location construction, and for drilling fluids during the drilling process, water would be sourced from a third party (Mountain States Water, located in Big Piney, Wyoming) that is permitted to sell water. For cementing and boiler operations while drilling, BSO would acquire water from a municipal source in Marbleton, Wyoming. It is estimated that each well would use approximately 236,250 gallons of water for drilling fluids and 94,500 gallons for cementing and boiler operations. Each pad would require an estimated 23,625 gallons for compaction and dust control during construction. Therefore, each well pad would require an estimated 708,750 gallons for drilling fluids and 23,625 gallons for construction sourced from Mountain States Water, and 283,500 gallons for cementing and boiler operations sourced from the municipality of Marbleton, Wyoming.

2.2.3.3 RECLAMATION

No plugging and abandonment of the wells would occur until after the well has been drilled, completed, and production tested, unless extenuating circumstances arise. Full authorization would be sought from the BLM PFO Petroleum Engineer and Wyoming Oil and Gas Commission as sundries prior to actual plugging operations being initiated with written reports submitted as follow up. A notice of intent to abandon would be filed with the BLM PFO no later than the fifth business day after oral approval.

2.2.4 Applicant-Committed Environmental Protection Measures

BSO would implement, to the extent possible, the use of BMPs to mitigate environmental concerns in the planning phase, allowing for smoother analysis and possibly faster project approval by avoiding and minimizing impacts to resources (Table 2-2).

Table 2-2. Applicant-Committed Environmental Protection Measures

Resource	Applicant-Committed Measures
Air Quality	• BSO will develop a fugitive dust control plan (see POD Appendix A). • Necessary air quality permits to construct, test, and operate facilities will be obtained from the Wyoming Department of Environmental Quality (DEQ) Air Quality Division. All internal combustion equipment will be kept in good working order. Best available control technology will be implemented as required by DEQ Air Quality Division.
Cultural	• BSO will locate infrastructure to avoid known cultural resources to the extent possible. If avoidance is not feasible and adverse effects are anticipated for the project, a data recovery plan will be prepared with the purposes of mitigating adverse effects to historic properties. • BSO will conduct a Class III cultural resources inventory before construction. • BSO will implement an unanticipated discoveries plan for the project (see POD Appendix C). If archaeological materials are uncovered during construction, work will stop immediately in the area, and the unanticipated discovery plan will be implemented. • BSO will inform their employees, contractors, and subcontractors about relevant federal regulations intended to protect archaeological and cultural resources. All personnel will be informed that collecting artifacts (including arrowheads) is a violation of federal law and that employees engaged in this activity may be subject to disciplinary action, which could include dismissal.
Hazardous and Solid Wastes	• BSO will implement a spill response plan and adhere to it (see Section 4). • BSO will use portable sanitation facilities staked to the ground, or otherwise secured, to prevent from tipping over; place dumpsters at each construction site to collect and store garbage and refuse; ensure that all refuse and garbage is transported to a state-approved sanitary landfill for disposal; institute a hazard communication program for its employees; and require subcontractor programs in accordance with OSHA (29 CFR § 1910.1200).

Resource	Applicant-Committed Measures
	• In accordance with 29 CFR § 1910.1200, a safety data sheet for chemicals or hazardous materials, as applicable, brought on-site will be kept on file at the BSO field office. • As applicable, chemical and hazardous materials will be inventoried and reported in accordance with the SARA Title III (40 CFR Parts 350-372). If quantities exceeding 10,000 pounds or the threshold planning quantity are to be produced or stored, the appropriate Section 311 and 312 forms will be submitted at the required times to the state and county emergency management coordinators and local fire departments. Any hazardous wastes, as defined by the Resource Conservation and Recovery Act of 1976, as amended, will be transported and/or disposed of in accordance with all applicable federal, state, and local regulations.
Livestock	• BSO will maintain effective communication and coordinate surface-disturbing activities with affected livestock grazing permittees to minimize the effects of the surface disturbance on other approved operations. • BSO will avoid rangeland improvements by 500 feet unless no other alternative is available, and impacts can be mitigated in accordance with the BLM Authorized Officer (AO). • Construction will be conducted to allow natural movement of livestock. When possible, pipeline construction will be completed while cattle are not on the allotment. Gaps will be provided in the trenching process to allow cows to move. • Facilities that could be hazardous to livestock will be fenced to keep livestock out, and the fences will be maintained in functioning condition.
Noxious Weeds	• BSO will monitor noxious weed occurrence in the project area and implement a noxious weed control program in cooperation with the BLM and Sublette County to ensure noxious weed invasion does not become a problem (see POD Appendix B). • BSO will develop a Pesticide Use Plan which will include a Pesticide Application Record and a Pesticide Use Report in accordance with BLM guidance and label requirements. • BSO will be responsible for the control of all noxious weed infestations within project surface disturbances. • When applicable BSO will inspect and wash vehicles to minimize the transportation of noxious weed seeds • Herbicide applications will be kept at least 500 feet from known Special-Status Plant Species populations or other distance deemed safe by the BLM AO.
Paleontological	• Following BLM guidelines, BSO will conduct field surveys for the portions of the project area on BLM-managed lands that are within Potential Fossil Yield Classification 3 and 5 geologic units. • BSO will locate infrastructure to avoid and minimize impact to known paleontological resources to the extent possible • BSO will implement an unanticipated discoveries plan for the Proposed Action (see POD Appendix E).
Pipelines	• Where feasible, pipeline ROWs will be located adjacent to access roads to minimize ROW disturbance widths, or they will be routed directly to minimize disturbance lengths. • Clearing of pipeline ROWs will be accomplished with the least degree of disturbance to topsoil. All topsoil removed will be stockpiled (windrowed) and respread over the disturbance after construction and backfilling are completed. Vegetation removed from the ROW will also be respread to provide protection, nutrient recycling, and a seed source. Temporary disturbances that do not require major excavation (e.g., small pipelines and communication lines) may be stripped of vegetation to ground level using mechanical treatment, leaving topsoil intact and root mass relatively undisturbed. • All excavations will be backfilled to preconstruction condition (in a similar sequence and density) with normal surface drainage. • Backfill over the trench will be compacted (not to extend above the original ground level after the fill has settled) by wheel or other compacting methods to promote soil stabilization. Compaction will occur at two levels (3 feet above pipe and 6–12 inches below surface). BMPs (i.e., water bars, mulching, and terracing) will be employed as needed to minimize erosion. • Pipeline trenches will not be allowed to be open longer than 10 days after initial surface disturbance. Pipeline gates with soft plugs will be required every 0.25 mile along the corridor to mitigate impacts to livestock, wildlife, and public safety. • BSO will contact the BLM AO's field representative no earlier than 15 days and no later than 3 working days before commencement of construction. Construction under adverse conditions may require additional mitigation measures.

Resource	Applicant-Committed Measures
Roads and Transportation	• BSO will develop a traffic study to understand where potential impacts might occur (see POD Appendix I). • Existing roads will be used to the maximum extent possible and upgraded as necessary. • Additional gravel to be used for the road enhancements will be certified weed free. • During saturated soil conditions, vehicular activity will be confined to roads designed and constructed for all-weather access (e.g., paved, graveled, and "mag-water" surfaced roads). • BSO will regularly maintain all lease roads in a safe, usable condition. A regular maintenance program will include, but not be limited to, blading, ditching, culvert installation, drainage installation, surfacing, and cattleguards, as needed. For roads traversing BLM-managed lands, maintenance of the road will be in compliance with the standards contained in the BLM Roads Design Handbook (9113-1) (BLM 2011) and in the latest version of The Gold Book (Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development) (BLM 2007). • BSO will adhere to the stipulations in the ROW grants.
Safety	• BSO will develop an Emergency Response Plan in addition to the Hydrogen Sulfide Public Protection Plan • BSO will post signage within 500 feet, but not less than 200 feet of all wells and within 50 feet of all storage tanks. • No smoking signs will be posted in all project areas to help control potential ignition sources. • Well sites and the natural gas processing facility will be enclosed by a minimum 5-foot high chain link, five-stranded barbed wire, or comparable type of fence and a locked gate that limits access by unauthorized individuals while allowing personnel to enter and exit as necessary and in accordance with 43 CFR Subpart 3176 and surface use leases and agreements. • Temporary H_2S warning and danger signs will be used in areas of high traffic including but not limited to U.S. Highway 189 and Dry Piney Road.
Soils	• BSO will provide a reclamation plan approved by the BLM for each individual ROW that traverses BLM-managed lands (see POD Appendix B). • Soil retention measures, such as silt fence, straw wattles, contour furrows, erosion-control blanket, or straw mulch shall be implemented on erosive soils at the time of disturbance. • Erosion-control devices that cover the soil surface (e.g., erosion-control blanket, straw mulch, or hydromulching) will be applied following seeding to improve seed-to-soil contact. • Areas of difficult soils exist within the project area, including sodic soils with elevated sodium and very gravelly soils with 35% to 60% rock fragment content by volume in surface depths that may impair revegetation. o Topsoil will be salvaged where possible on each individual ROW. o Topsoil and subsoil suitability and salvage depths will be established based on DEQ Land Quality Division's suitability criteria provided in Table 2 of Guideline No. 1A Topsoil and Subsoil to improve reclamation (DEQ Land Quality Division 2015). o Soil samples will be analyzed to determine reclamation potential, appropriate revegetation species, and nutrient deficiencies. • BSO will implement minimal handling of salvaged topsoil material practices. • BSO will stockpile salvaged topsoil separately from sub and fill material to avoid mixing of resources. • BSO will avoid adverse impacts to soils by: o Minimizing disturbance and avoiding construction with frozen or wet soil material, where possible. o Avoiding areas with high erosion potential (e.g., unstable soil, dunal areas, slopes greater than 25%, floodplains), where possible. o Salvaging and selectively handling topsoil from disturbed areas, where possible. o Leaving the soil intact (scalping only) during pipeline construction, where possible. o Adequately protecting stockpiled topsoil and promptly replacing it on the surface during reclamation. o Promptly revegetating disturbed areas using suitable species. o Using appropriate erosion and sediment control techniques, including, but not limited to, diversion terraces, riprap, mulch, netting, blanket, and soil stabilizers. o Constructing barriers will be used as appropriate in certain areas to minimize wind and water erosion and sedimentation before vegetation establishment.

Resource	Applicant-Committed Measures
	• Notice of any spill or leakage, as defined in BLM Notice to Lessees (NTL) 3A (U.S. Department of the Interior Geological Survey Conservation Division 1979), will be reported immediately by BSO to the BLM AO and other such federal and state officials (e.g., DEQ) as required by law.
Site Stabilization and Revegetation	• Disturbed channel beds will be reshaped to their approximate original configuration. • Streams, wetlands, and riparian areas disturbed during project construction will be restored to as near pre-project conditions as practical, and, if impermeable soils contributed to wetland formation, soils will be compacted to reestablish impermeability. • Reclamation will begin on disturbed wetland areas immediately after completion of project activities. • Disturbances will be reclaimed or managed for zero sediment discharge. All excavations and pits will be closed by backfilling and contouring to conform to surrounding terrain. The surface use plan will include objectives for successful reclamation, such as soil stabilization, plant community composition, and desired vegetation density and diversity. • Terraces or elongated water breaks will be constructed after slope reduction. • All reclamation will be accomplished as soon as possible after the disturbance occurs, with efforts continuing until a satisfactory revegetation cover is established and the site is stabilized (3–5 years). • Only areas needed for construction will be allowed to be disturbed. • On all areas to be reclaimed, seed mixtures will be site specific and composed of native species. On BLM-managed lands, seed mixes will be approved by BLM. Seed mixtures also will include species that promote soil stability. A pre-disturbance species composition list will be developed for each project component that encompasses an area in which several different plant communities are present. Livestock palatability and wildlife habitat needs will be given consideration in seed mix formulation. • If deemed necessary, an approved sterile seed mix could be considered for use in site stabilization during reclamation. • Interseeding, secondary seeding, or staggered seeding may be required to accomplish revegetation objectives. During rehabilitation of areas in important wildlife habitat, provisions will be made for the establishment of native browse and forb species, if determined to be beneficial for the habitat affected. Follow-up seeding or corrective erosion-control measures may be required for areas of surface disturbance that experience reclamation failure. • Any seed, mulch, and mineral material (e.g., sand and gravel) used will be certified weed free and free from mold or fungi. Mulch may include native hay, small-grain straw, wood fiber, live mulch, cotton, jute, synthetic netting, and rock. Straw mulch will contain fibers long enough to facilitate crimping and provide the greatest cover. • Slope, grade, and other construction control stakes (e.g., exterior boundary, center line) will be placed, as necessary, to ensure construction in accordance with the surface use plan. The cut and fill slopes and spoil storage areas will be marked with a stake and/or lath at a minimum of 50-foot intervals. The tops of the stakes or laths will be painted or flagged in a distinctive color. All boundary stakes and/or laths will be maintained in place until final construction cleanup is completed. If stakes are disturbed, they will be replaced before proceeding with construction.
Visual Resource	• BSO will paint all aboveground production facilities with appropriate colors (Carlsbad Canyon, Shale Green or Desert Brown, or other specified standard environmental color) specified by the BLM to blend with adjacent terrain, except for structures that require safety coloration in accordance with OSHA requirements. • BSO will use existing topography to screen roads, pipeline corridors, drill rigs, wells, and production facilities from view, where practical. • BSO will avoid the introduction of new, linear visual intrusions on the landscape. New roads and pipeline corridors, to the extent practicable, will follow contours and use topography as screening. New pipelines will be co-located with existing roads and existing pipeline corridors, and, wherever possible, new cross county pipeline corridors will be avoided.
Watershed	• BSO will prepare a stormwater pollution prevention plan for the project as required by DEQ National Pollution Discharge Elimination System permit requirements (see POD Appendix D). • BSO will control sediment from all construction sites (see POD Appendix D). • Erosion from surface-disturbing activities will be controlled effectively and will not be allowed to be transported to stream systems (see POD Appendix D).

Resource	Applicant-Committed Measures
Wetlands	• BSO will evaluate all project facility sites for occurrence of WOTUS, special aquatic sites, and wetlands, in accordance with U.S. Army Corps of Engineers requirements. All project activities will be located outside these sensitive areas, where practical. • Any disturbances to wetlands, riparian areas, streams, ephemeral/intermittent stream channels and/or WOTUS that cannot be avoided will be coordinated with the U.S. Army Corps of Engineers, and Clean Water Act Section 404 permits will be secured as necessary before disturbance.
Wildlife – General	• Surface-disturbing activities will be avoided in crucial big game winter ranges from November 15 through April 30. • If surface-disturbing activities are necessary in these areas during this November 15 through April 30 period, BSO will coordinate with the BLM and/or Wyoming Game and Fish Department as applicable to avoid and minimize any disturbance to big game. • Road and pipeline routes will be selected and designed to avoid disturbances to areas of high wildlife value (e.g., raptor nest sites, wetland areas), where feasible, and otherwise mitigated to the greatest extent possible. • On BLM-managed lands, wildlife-proof fencing will be used on reclaimed areas in accordance with standards specified in BLM Fencing Handbook 1741-1 (BLM 1989), if it is determined that wildlife species are impeding successful vegetation establishment. **The use of fencing for any project purpose, including reclamation, is subject to case-by-case evaluation and must receive approval from the PFO Authorized Officer.** • ROW reclamation activities will be carried out upon completion of construction to restore habitat (see POD Appendix B).
Wildlife – Threatened, Endangered, and Special-Status	• U.S. Fish and Wildlife Service and Wyoming Game and Fish Department consultation and coordination will be conducted for all mitigation activities related to Endangered Species Act–listed threatened and endangered species and their habitats. • Evaluation of impacts to golden eagles and migratory birds, as well as any BLM sensitive species, will be completed as part of the environmental analysis and mitigated to the greatest extent possible. Clearing of vegetation will occur outside of the breeding and nesting season (typically March 1–July 31 for migratory birds). • If, while conducting operations, substantial unanticipated environmental effects to listed, proposed, or candidate species are observed (whether effects are direct or indirect), formal consultation with the U.S. Fish and Wildlife Service may be initiated immediately in addition to cessation of all such operations.

2.3 Connected Actions

The BLM will consider the construction and operation of the Puncher and Wrangler Well Pads and associated access roads as connected actions, contingent upon the approval of the federal APDs (Figure 1-1). Although these pads are situated on private lands, the wells would produce federal minerals covered under the APDs. As outlined in Permanent Instruction Memorandum 2018-014 (BLM 2014), these federal actions are classified under Situation 3: New Proposed Well Pad for Federal Well(s), with no existing surface disturbance. Denial of these federal APDs would affect the proposed non-federal actions, confirming their connected status.

2.3.1 Connected Action Components

The Puncher Well Pad, located on private land owned by BSO in SW¼SW¼ Section 11, T28N, R114W, would host three production wells (DPU 10-10, DP 6-11, and DPU 5-14) accessing federal minerals under mineral lease WYW-92223. It would temporarily disturb up to 7.0 acres, including topsoil storage and spoils piles, with permanent disturbance reduced to 5.7 acres following interim reclamation. Compliance with 053-9 Wyoming Code R. § 9-2 H2S and 43 CFR Subpart 3176 requires two egress routes, prompting BSO to construct a 0.5-mile primary and a 0.2-mile secondary access road to the Puncher Well Pad. An overview is shown in Figure 1-1.

The Wrangler Well Pad, located on private land owned by JF Ranch, Inc., in SW¼SW¼ Section 35, T28N, R114W, would be established through a surface use agreement with JF Ranch, Inc. It would host three production wells (DPU 4-35, DPU 6-34, and DPU 10-3) accessing federal minerals under mineral leases WYW-20778 and WYW-8140. Figure 1-1 provides an overview of the Wrangler Well Pad. The pad would temporarily disturb up to 7.31 acres, including topsoil storage and spoils piles, with permanent disturbance reduced to 5.69 acres following interim reclamation. Compliance with 053-9 Wyoming Code R. § 9-2 H2S and 43 CFR Subpart 3176 requires two egress routes, prompting BSO to construct a 0.3-mile primary and a 0.2-mile secondary access road.

2.3.2 Construction Activities

Construction of the well pads and associated well pad access roads is anticipated to take approximately 3 months (Table 2-3). The well pads and access roads would likely be constructed in parallel so the same workforce would complete both well pads and access roads. Construction would be limited to areas necessary for construction activities and equipment traffic.

Table 2-3. Construction Personnel Requirements for Infrastructure

Project Component	Quarter 3 2025
Wrangler Well Pad and access roads	10–12
Puncher Well Pad and access roads	10–12
Total workforce	10–12

Typical equipment for well pad and access road construction includes pickup and semi-trucks with dump trailers, loaders, various-sized dozers, scrapers, road graders, water trucks and compactors. Equipment typically used for well pads and access road reclamation includes dozers, road graders, and loaders. An estimate of the type and number of each piece of equipment required for construction is listed below. It is assumed that all equipment would be in operation for 12 hours per day, 6 days per week, during the construction schedule.

- Pickup trucks – four to six, making two roundtrips daily for crew transport
- Semi-trucks and dump trailers – two to three, primarily for hauling road base and gravel material to location for pad and road surfacing
- Loaders – one to two, to help distribute road base and transport fill across well pad
- Dozers – one or two of various sizes for initial grading and surface roughening of cut/fill slopes
- Scrapers – three for initial grading and moving material from cut areas to fill areas
- Road graders – one for finish grade and to distribute and level surfacing material
- Water trucks – one to two to haul and distribute water for compaction requirements on fill and final surfacing materials
- Compactors – one to two to compact final grade and ensure surfacing meets compaction requirements

The construction materials required for the well pads and associated access roads would primarily consist of road base and gravel sourced from the Hughs' Sims Pit, a private certified weed-free pit south of La Barge, Wyoming. Other local sources of construction materials from the La Barge or Big Piney area may

be used in the future. These materials are intended to create a hard, stabilized surface for well pads and access roads, enabling safe operations and minimizing potential stormwater-induced erosion.

2.3.3 Operations and Maintenance

Upon cessation of the drilling and completion phase of the wells on the Puncher and Wrangler Well Pads, BSO would begin any possible interim reclamation of disturbance not required for long-term production operations. Slopes and exposed soils without compacted surfacing material would be reclaimed or stabilized in accordance with the reclamation plan included in the POD (SWCA 2025a). Any roadways and building entry points would be maintained for safe usage including snow removal and normal grading operations, as necessary. Noxious weeds would be controlled as per the noxious weed plan included in the POD (SWCA 2025a). Well pads would require periodic snow removal operations after measurable precipitation events, but access during winter months would likely be by snow cat or other tracked vehicle rather than plowing access roads for normal vehicular traffic. Equipment on well pads can be monitored remotely to the extent practicable. Produced water would be piped via buried pipeline to a water disposal well near the natural gas processing facility thereby reducing water hauling traffic. Methane fuel gas to supply on-site generators would be supplied via pipeline from the natural gas processing facility, as would methanol used to prevent freezing of raw gas gathering pipelines. All signage, including H_2S warning signs, no smoking signs and tank signs would be kept in legible condition.

2.3.4 Reclamation

Some facilities would reach the end of their operational life throughout the life of the project, whereas other facilities would remain in use until field production is complete. When BSO determines that a well or other facility is no longer needed, the well would be plugged and abandoned, or the facility would be removed and the area would undergo final reclamation in accordance with BLM, Wyoming Department of Environmental Quality (DEQ), and Wyoming Oil and Gas Commission (WOGCC) requirements, as applicable.

All production wells would be abandoned according to applicable regulations. Aboveground well pad, pipeline, and water disposal facilities, including buildings, tanks, pig launchers and receivers, and associated hardware, would be dismantled, removed from land surface managed by the BLM, and salvaged and re-used or disposed of at approved sites.

Concrete foundations, pads, footings, or helical piles would be broken up and removed or buried on-site. Aggregate used for well pads and roads would also be removed or buried on-site.

When reclamation is deemed successful by BSO and the landowner, BSO would submit a sundry notice, notice of intent final abandonment notice for the wells to the BLM. When the final abandonment notice is approved by the BLM, the wells would be released from the bond. Bond release would occur as per 43 CFR Subpart 3104.

Upon abandonment of well sites, access roads would be reclaimed or repurposed, as requested by the landowner. BSO would commence access road reclamation as soon as practical after final abandonment of well sites. Road reclamation would include the removal of cattleguards, sediment control structures, and signs. Drainage-crossing side-slopes would be reduced to no more than the original slope prior to construction activity to reduce bank erosion and produce stable side-slopes. Revegetation of roads would follow the requirements of the land management agency or landowner, including using approved seed mixes and weed control measures as needed. Barriers would be used to discourage travel on the reclaimed roads and pipelines until permanent reclamation is deemed successful.

2.4 Alternatives Considered but Not Analyzed in Detail

Prior to initiating the NEPA process, BSO engaged in coordination with the BLM to evaluate an alternative project footprint that incorporated the co-location of infrastructure with previously developed areas and existing disturbance. In collaboration with the BLM and the Wyoming Game and Fish Department (WGFD), BSO revised the proposed footprint to the current Proposed Action. This revision prioritized the use of existing infrastructure where feasible, the use of private lands, when possible, the limitation of facilities on BLM-managed lands, and the minimization of the overall project footprint. The project layout changes include the following significant changes: the natural gas processing plant has been relocated outside the mule deer (*Odocoileus hemionus*) crucial winter range. In the highly erosive Tract 53 area, the necessity for new access roads has been eliminated. Furthermore, the acid-gas disposal well pad has been repositioned outside the Birch Creek Unit. The overhead electric transmission line from La Barge to the natural gas processing plant site has been removed. Additionally, the plan reduces the number of production well pads from four to three by eliminating the Section 1 pad and its associated roads. The new water disposal well pad has been strategically relocated to an existing pad adjacent to the natural gas processing plant, optimizing land use. The gas gathering pipeline system has also been streamlined and consolidated, enhancing operational efficiency and minimizing the project's overall footprint. These changes reduced the overall project footprint and avoided and reduced impacts to sensitive resources within the project vicinity.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This chapter provides a description of the potentially affected environment, including any reasonable foreseeable future actions for the area, which could be affected by the Proposed Action, followed by the consequences that would be expected to occur upon the implementation of the Proposed Action. This chapter provides the baseline for the environment and the comparison of the impacts/consequences in terms of effects. This chapter is organized by issues identified for detailed analysis.

3.2 Reasonably Foreseeable Future Actions

3.2.1 BSO Operating

3.2.1.1 NATURAL GAS PROCESSING FACILITY

The natural gas processing facility, on private lands, would be designed to process 400 million standard cubic feet per day (MMscfd) of raw gas from production wells into saleable helium and natural (residue) gas (Figure 3-1). The facility would include two processing trains, each of which would contain the following process technologies/systems to treat the raw gas and produce salable products (helium and natural gas) and waste streams (acid gas and produced water):

- Inlet separation of gas and water
- Dehydration using triethylene glycol and molecular sieve
- Mercury removal

- CO_2 and H_2S removal using Honeywell Universal Oil Products–licensed Bulk Fractionation, pressure swing adsorption, and temperature swing adsorption technologies
- Nitrogen rejection and helium recovery, liquefaction, and storage technology and equipment by Chart Industries
- Compression and sale of residue natural gas
- Pumping for disposal of produced water and sequestration of CO_2
- Utilities (heat medium, instrument air, flare, etc.)
- Power generation

The natural gas processing facility also includes a power generation facility. It would consist of renewable, natural gas–fired, and/or diesel-powered equipment, including turbines, generators, and solar packs. Emission control devices would be implemented to limit the facility's consideration as a minor source for emissions, and BSO possesses the necessary air emissions credits to offset BSO-generated emissions in the Upper Green River Basin Ozone Nonattainment Designation Area.

3.2.1.2 CLASS II DISPOSAL WELLS

BSO has submitted five Class II disposal well applications to the Wyoming Oil and Gas Conservation Commission to dispose of waste fluid (non-gaseous supercritical liquid of combined CO_2 and H_2S but with zero water) from the natural gas processing plant into the Madison and Bighorn geological formations. The existing well pad and proposed Class II disposal wells are located on state land and disposal would be into state-owned subsurface. One application has been approved, and four are pending final authorization (BSO 2025b). Pending final authorization, disposal operations are anticipated to begin in late 2028.

The supercritical waste fluid would be delivered via buried pipeline from the natural gas processing facility and would be connected through aboveground piping and manifold system that would distribute the waste fluid to the individual well heads. Each well would be capable of receiving 80 million cubic feet per day of waste fluid, with an anticipated average daily injection rate of approximately 60 million cubic feet per day. Over the 50-year active project life a total of 5.25 trillion cubic feet of CO_2 and H_2S would be disposed of. This would be followed by 50 years of no disposal activity to achieve the stabilized 100-year plume (BSO 2025b). Each well would be drilled through and completed in either the Madison Formation or the Bighorn Formation and would range in total measured depth from approximately 14,750 feet to 15,055 depending on which formation is targeted and the deviation of the wellbore drilled from the existing well pad to reduce surface disturbance. All internal metallurgy coming into contact with the waste fluid, including the wellhead and downhole tubulars, would be chromium and/or nickel-based corrosion resistant alloys. The CO_2 would be permanently sequestered and a Monitoring, Reporting, and Verification plan would be submitted to the U.S. Environmental Protection Agency (EPA) for approval.

Based on dispersion modeling done as part of the Wyoming Oil and Gas Conservation Commission application process, the disposal plume will eventually enter into federally managed pore space after injection operations begin. Prior to use and occupancy of BLM-administered federal pore space in the vicinity of the injection wells, BSO must obtain a pore space ROW grant from the BLM. A separate NEPA document would be prepared and decision made for that action.

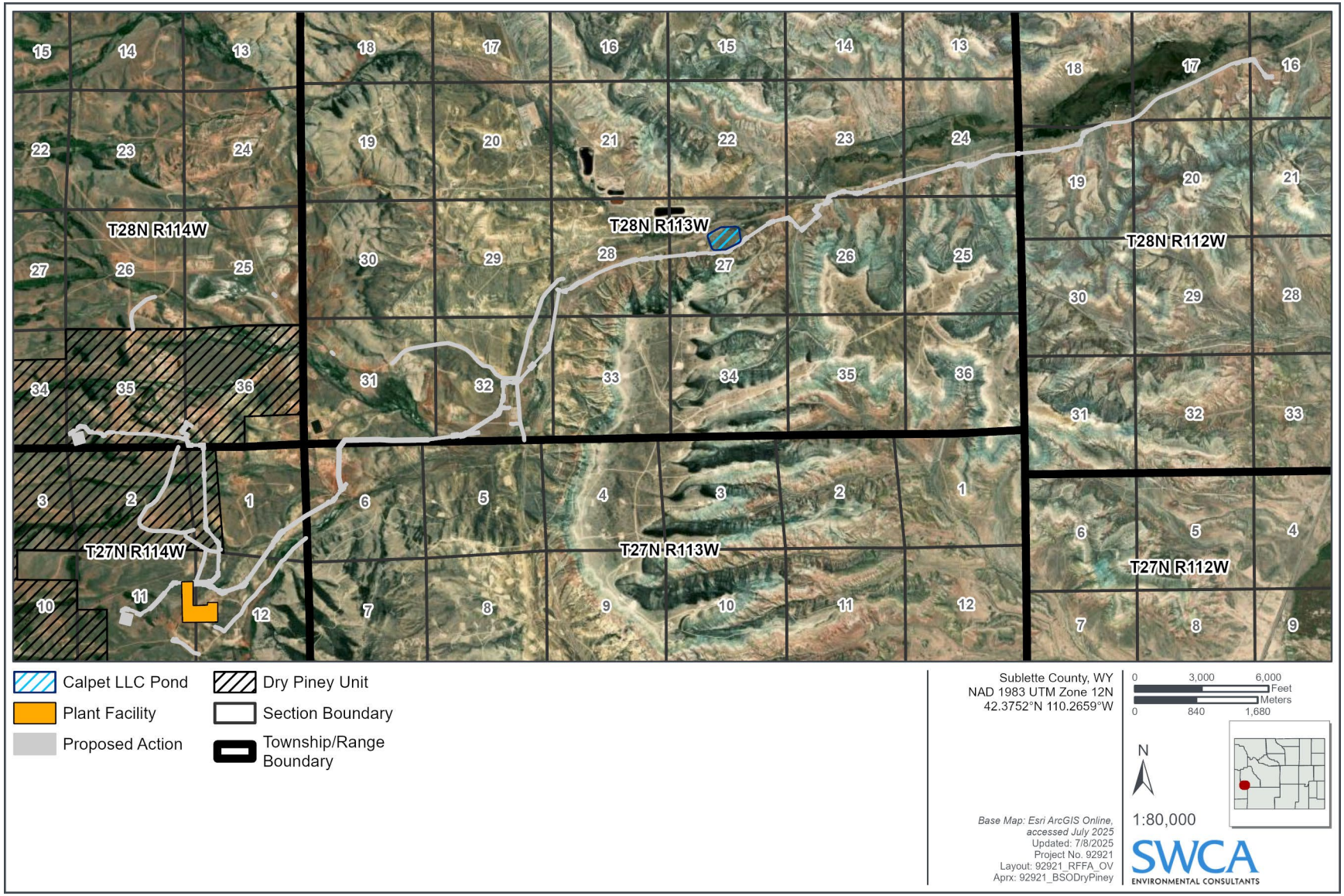

Figure 3-1. Reasonably foreseeable future actions overview.

3.2.2 Landowner Pond

Calpet LLC is planning to add a new pond within Tracts 48 and 49 of Section 27 and Tract 49 of Section 28, T28N, R113W. To accommodate this expansion, the county road in the area has already been relocated.

3.2.3 Ongoing Agricultural Grazing

Agricultural grazing continues to be a prevalent activity in the vicinity.

3.2.4 Ongoing Oil and Gas Development

The Dry Piney Unit remains active as an existing oil and gas field, with ongoing development activities aimed at resource extraction.

3.3 How would construction, operation and maintenance, and reclamation activities of the pipelines, two well pads, and road enhancements affect air quality?

3.3.1 Affected Environment

The entirety of the analysis area is a region extending 50 kilometers (km) from the Proposed Action and connected actions components. Air quality in the region is characterized by standards set by the Clean Air Act (CAA). The CAA was implemented to ensure acceptable and nonhazardous air quality for the United States public. Subsequently, the EPA established the National Ambient Air Quality Standards (NAAQS). NAAQS are limits of atmospheric concentrations for certain air pollutants considered harmful to public health and the environment, referred to as criteria pollutants. The criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with a diameter of 10 microns or less (PM_{10}), particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), ozone (O_3), and lead (Pb) (EPA 2025). Unlike the rest of the criteria pollutants, ground-level ozone is typically not directly emitted into the atmosphere from an emissions source. Instead, ozone is formed when emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs) combine in the presence of sunlight.

The NAAQS include both primary and secondary standards (Table 3-1). The primary standards set limits that are protective of human health, and the secondary standards set limits that protect the public welfare (including visibility and the health of vegetation and animals). The NAAQS are defined in terms of threshold ambient concentrations measured as an average over a specified period. Criteria pollutants known to cause acute health effects have short-term emission limits; criteria pollutants known to cause chronic health effects have long-term emission limits.

If the air quality in a geographic area meets the NAAQS, it is called an attainment area. Areas that do not meet the NAAQS are called nonattainment areas and require developing comprehensive state plans to reduce pollutant concentrations. The project is located in Sublette County, which is currently designated as being in marginal nonattainment for ozone according to the 2008 Ozone Standard (EPA 2025a). Sublette County is designated as being in attainment with the NAAQS for all other pollutants for which there are standards.

The CAA requires each state to produce and regularly update a state implementation plan to ensure that the state meets the NAAQS. The Wyoming State Implementation Plan includes stringent state statutes, air

quality permit programs, regulations that establish emissions standards, and detailed plans for bringing problematic areas into attainment or avoiding nonattainment with ambient standards. Under the provisions of the CAA, any state can have requirements that are more stringent than the national requirements. The WDEQ has implemented the Wyoming Ambient Air Quality Standards (WAAQS). The WAAQS are the same as the NAAQS except for PM_{10} (see Table 3-1). The WDEQ has an annual emission standard for PM_{10} of 50 microgram per cubic meter ($\mu g/m^3$) (WDEQ 2017).

Table 3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS		WAAQS
		Primary	Secondary	
CO	8 hours	9 ppm	–	Same as NAAQS
	1 hour	35 ppm	–	Same as NAAQS
NO_2	Annual	53 ppb	53 ppb	Same as NAAQS
	1 hour	100 ppb	–	Same as NAAQS
O_3	8 hours	0.070 ppm	0.070 ppm	Same as NAAQS
Pb	Rolling 3-month average	0.15 $\mu g/m^3$	0.15 $\mu g/m^3$	Same as NAAQS
$PM_{2.5}$	Annual	9.0 $\mu g/m^3$	15.0 $\mu g/m^3$	Same as NAAQS
	24 hours	35 $\mu g/m^3$	35 $\mu g/m^3$	Same as NAAQS
PM_{10}	Annual	–	–	50 $\mu g/m^3$
	24 hours	150 $\mu g/m^3$	150 $\mu g/m^3$	Same as NAAQS
SO_2	3 hours	–	10 ppb	Same as NAAQS
	1 hour	75 ppb	–	Same as NAAQS

Sources: EPA (2025); WDEQ (2017).
Note: $\mu g/m^3$ = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million.

Visibility

In 1999, the EPA announced an effort to improve air quality and visibility in 156 national parks and wilderness areas designated as Class I, known as the Regional Haze Rule (EPA 2025b). Regional haze reduces long-range visibility over a wide region. Section 169A of the CAA sets forth a national goal for visibility. States are required to demonstrate reasonable progress toward the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution."

National parks larger than 6,000 acres and national wilderness areas larger than 5,000 acres in existence when the 1977 amendments to the CAA were enacted have been designated as Class I areas. These areas have additional protection for air quality and visibility by monitoring and limiting adverse impacts to air quality–related values. All other areas are considered Class II areas. The nearest Class I area to the air quality analysis area is the Bridger Wilderness, approximately 40 miles (64.4 km) northeast of the project, which is outside the analysis area of 50 km.

Greenhouse Gases

GHGs influence the global climate by increasing the amount of solar energy retained by land, water bodies, and the atmosphere. GHGs can have long atmospheric lifetimes, which allow them to become well mixed and uniformly distributed over the entirety of the Earth's surface, no matter their point of origin. For this reason, there are no NAAQS for GHG.

A discussion of past, current, and projected future climate impacts is provided in Chapters 4, 8, and 9 of the *2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends* (BLM 2024) (Annual GHG Report). These chapters describe currently observed climate impacts globally, nationally, and in each state; and they present a range of projected impact scenarios depending on future GHG emission levels.

For the purposes of this EA, GHG emissions estimates are compared to totals from the No Action Alternative and the proposed, connected and RFFAs to global, U.S., state, and county GHG emissions for perspective. The projected GHG emissions can be compared to modeled emissions that have been shown to have definitive or quantifiable impacts on the climate to provide context of their potential contribution to climate change. Table 3-2 shows the total estimated GHG emissions from fossil fuels at the global, national, and state scales over the last 6 years. Emissions are shown in megatonnes (Mt) per year of carbon dioxide equivalent (CO_2e). Chapter 3 of the Annual GHG Report contains additional information on GHGs and an explanation of CO_2e. State and national energy-related CO_2e emissions include emissions from fossil fuel use across all sectors (residential, commercial, industrial, transportation, and electricity generation) and are released at the location where the fossil fuels are consumed.

Table 3-2. Global and U.S. Fossil Fuel GHG Emissions 2018 - 2022 (Mt CO_2/yr)

Scale	2018	2019	2020	2021	2022
Global	37,716.20	37,911.40	35,962.90	37,500.00	38,522.00
United States	4,989.80	4,855.90	4,344.90	4,639.10	4,699.40
State	62.62	57.81	54.47	53.22	NA

Source: Annual GHG Report, Chapter 9, Table 9-2 (Global); Chapter 5, Table 5-1 (U.S.) and Table 5-2 (State).
Mt (megatonne) = 1 million metric tons
NA = Not Available

Additional information on current state, national, and global GHG emissions, as well as the methodology and parameters for estimating emissions from BLM fossil fuel authorizations and RFFAs GHG emissions is included in the Annual GHG Report (Chapters 5, 6, and 7).

3.3.2 Environmental Effects – No Action Alternative

3.3.2.1 CONSTRUCTION

Under the No Action Alternative, development would still occur but would not require the issuance of new BLM ROWs or federal APDs (see Section 2.1), would not be located on BLM-managed land (see Section 2.1) and would instead be located on private or state land. The No Action Alternative would result in a slightly shorter overall length of pipeline, and as a result, smaller emissions relative to the Proposed Action and connected actions.

Construction activities associated with the pipelines and well pad would produce criteria air pollutant emissions, hazardous air pollutant emissions, and GHG emissions from various sources such as land clearing/grading, construction activities, engine exhaust from construction equipment, equipment delivery trucks, and construction worker vehicle exhaust. Construction activities would also produce fugitive air emissions from wind erosion from disturbed areas and vehicle travel on unpaved roads. Table 3-3 presents the total construction emissions from the No Action Alternative and the Sublette County 2020 annual emissions.

Table 3-3. No Action Alternative Construction Emissions

Emission Source	Emissions (tons)							Emissions (MT)
	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_2e
No Action Alternative, Year 1 Total	13.32	6.58	0.01	2.68	0.42	0.59	0.13	2,653
Sublette County 2020 Annual Emissions Inventory*†	8,032	2,409	69	14,600	2,092	17,385	1,958	76,434,332
Maximum annual (Year 2) percentage of Sublette County 2020 annual emissions inventory	**0.17%**	**0.27%**	**0.01%**	**0.02%**	**0.02%**	**<0.01%**	**0.01%**	**<0.01%**

Note: MT = metric tons; HAPs = hazardous air pollutants; CO_2e = carbon dioxide equivalent.

* Source: EPA (2025c).

† 2020 is the most recent year for which the complete triennial emission inventory data have been released.

A comparison of the construction emissions to the annual emissions for Sublette County demonstrates that these emissions would represent a small fraction of the current county-wide emissions, with NO_x emissions representing the largest percentage as compared to county emissions at approximately 0.27% of Sublette County's emission inventory during construction.

3.3.2.2 OPERATION

Operational emissions are based on vehicle emissions due to workers performing routine maintenance and inspection along the length of the pipeline, as well as the operation of two well pads. Operational emissions from the No Action Alternative are presented in Table 3-4.

Table 3-4. No Action Alternative Operational Emissions

Emission Unit	Type of Equipment	Potential to Emit (tons/year)							Potential to Emit (MT/year)
		CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_2e
Worker commuting for maintenance/inspection		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1
Choke heater	Three 7.3 MMBtu/hr NG-fired heaters	7.90	9.40	0.06	0.71	0.71	0.52	0.18	2,091
Flare	Two flare purges at 435 SCFH	0.01	0.01	0.02	0.00	0.00	0.01	0.00	5
Flare pilot	Two flare pilots at 65 SCFH each	0.20	0.10	0.00	0.00	0.00	0.15	0.00	79
Electrical generator	45-kilowatts, Tier 4	17.29	1.98	0.21	0.20	0.20	0.94	2.90	3,926
Total (one well pad)		**25.41**	**11.50**	**0.29**	**0.91**	**0.91**	**1.61**	**3.08**	**6,103**
Total (two well pads)		**50.82**	**22.99**	**0.58**	**1.82**	**1.82**	**3.22**	**6.16**	**12,207**
Sublette County 2020 annual emissions inventory[*†]		8,032	2,409	69	14,600	2,092	17,385	1,958	76,434,332
Potential to emit percentage of Sublette County 2022 annual emissions inventory		**0.63%**	**0.95%**	**0.84%**	**0.01%**	**0.09%**	**0.02%**	**0.31%**	**0.02%**

Note: MT = metric tons; HAPs = hazardous air pollutants; CO_2e = carbon dioxide equivalent; MMBtu/hr = million metric British Thermal Units per hour; SCFH = standard cubic feet per hour

[*] Source: EPA (2025c).

[†] 2020 is the most recent year for which the complete triennial emission inventory data have been released.

Overall, the pollutants emitted from operational activities would be less than 0.95% or less of Sublette County's 2020 emission inventory. The largest percentage of county emissions of a criteria pollutant during construction would be NO_x emissions. Compared to the Proposed Action, these emissions would be slightly lower due to the anticipated shorter length of pipeline.

Under the No Action Alternative, the BLM would not authorize the APDs, and new wells described in the Proposed Action would not be drilled on BLM-managed land. No direct or indirect GHG emissions would occur from activities on BLM-managed land.

3.3.3 Environmental Effects – Proposed Action

3.3.3.1 CONSTRUCTION

Construction activities associated with the pipelines, well pads, and road enhancements would produce air pollutant and GHG emissions from equipment exhaust, delivery truck exhaust, and vehicle exhaust from construction worker travel to and from the designated corridors. Construction activities would also produce air emissions from wind erosion dust from disturbed areas and fugitive dust from soil disturbance and travel on unpaved roads. Table 3-5 summarizes the estimated annual construction-related emissions. Construction is scheduled to last approximately 6 months.

Overall, the pollutants emitted from construction activities would be 0.6% or less of Sublette County's 2020 emission inventory. The largest percentage of county emissions of a criteria pollutant during construction would be NO_x emissions. Construction activities would generate a maximum of 5,608 metric tons of CO_2e per year.

Table 3-5. Proposed and Connected Action Construction Emissions

Emission Source	Emissions (tons)							Emissions (MT)
	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_2e
Year 1 construction emissions, Proposed Action								
Construction equipment (off-road)	26.3	11.3	0.01	0.3	0.3	1.2	0.2	4,378
Worker commuting and on-road construction equipment	0.9	0.8	<0.1	4.2	0.5	0.1	<0.1	207
Fugitive dust from construction operations	–	–	–	8.0	0.8	–	–	–
Year 1 Proposed Action, total	**27.2**	**12.1**	**<0.1**	**12.5**	**1.6**	**1.3**	**0.3**	**4,586**
Year 1 construction emissions, Connected Action								
Construction equipment (off-road)	3.2	2.2	<0.1	0.1	<0.1	0.1	<0.1	966
Worker commuting and on-road construction equipment	0.1	0.2	<0.1	1.0	0.1	<0.1	<0.1	57
Fugitive dust from construction operations	–	–	–	0.9	0.1	–	–	–
Year 1 Connected Action, total	**3.3**	**2.4**	**<0.1**	**2.0**	**0.3**	**0.2**	**<0.1**	**1,023**

Emission Source	Emissions (tons)							Emissions (MT)
	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_2e
Year 1 total	30.5	14.5	<0.1	14.5	1.9	1.4	0.3	5,608
Sublette County 2020 annual emissions inventory*†	8,032	2,409	69	14,600	2,092	17,385	1,958	76,434
Year 1 percentage of Sublette County 2020 annual emissions inventory (%)	**0.4**	**0.6**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**

Note: MT = metric tons; HAPs = hazardous air pollutants; CO_2e = carbon dioxide equivalent.

* Source: EPA (2025c).

† 2020 is the most recent year for which the complete triennial emission inventory data have been released.

3.3.3.2 OPERATION

Operational emissions from the operation and maintenance of the pipeline ROWs would result from vehicle exhaust and fugitive dust from workers traveling on paved and unpaved roads along the pipeline for routine inspections and maintenance. These emissions are summarized in Table 3-6.

Table 3-6. Proposed Action Operational Emissions

Emission Source	Emissions (tons)							Emissions (MT)
	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_2e
Worker commuting for maintenance/inspection	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	1
Sublette County 2020 annual emissions inventory*†	8,032	2,409	69	14,600	2,092	17,385	1,958	76,434,332
Maximum annual percentage of Sublette County 2020 annual emissions inventory	**4.73E-05**	**1.06E-04**	**4.60E-06**	**8.32E-05**	**6.31E-05**	**2.08E-06**	**9.28E-07**	**6.96E-07**

Note: MT = metric tons; HAPs = hazardous air pollutants; CO_2e = carbon dioxide equivalent.

* Source: EPA (2025c).

† 2020 is the most recent year for which the complete triennial emission inventory data have been released.

Overall, the pollutants emitted from operational activities would be less than 0.01% or less of Sublette County's 2020 emission inventory. The largest percentage of county emissions of a criteria pollutant during construction would be NO_x emissions. Compared to the No Action Alternative, these emissions would be slightly higher due to the anticipated longer length of pipeline.

Additionally operational emissions would result from the operation of the seven federal wells. Based on the current design, combustion emissions would result from the operation of three 7.3 million British thermal unit per hour choke heaters, two 435 standard cubic feet per hour (SCFH) flares, two 65 SCFH flare pilots and one 450-kilowatt Tier 4 electrical generator at each of the two well pads. The emissions from the operation of these wells are summarized in Table 3-7.

Table 3-7. Connected Action Operational Emissions

Emission Unit	Type of Equipment	Potential to Emit (tons/year)							Potential to Emit (MT/year)
		CO	**NO_X**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**VOC**	**HAPs**	**CO_2e**
Worker commuting for maintenance/inspection		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1
Choke heater	Three 7.3 MMBtu/hr NG-fired heaters	7.90	9.40	0.06	0.71	0.71	0.52	0.18	2,091
Flare	Two flare purges at 435 SCFH	0.01	0.01	0.02	0.00	0.00	0.01	0.00	5
Flare pilot	Two flare pilots at 65 SCFH each	0.20	0.10	0.00	0.00	0.00	0.15	0.00	79
Electrical generator	450-kilowatt, Tier 4	17.29	1.98	0.21	0.20	0.20	0.94	2.90	3,926
Total (one well pad)		**25.41**	**11.50**	**0.29**	**0.91**	**0.91**	**1.61**	**3.08**	**6,103**
Total (two well pads)		**50.82**	**22.99**	**0.58**	**1.82**	**1.82**	**3.22**	**6.16**	**12,207**
Sublette County 2020 annual emissions inventory[*†]		8,032	2,409	69	14,600	2,092	17,385	1,958	76,434,332
Potential to emit percentage of Sublette County 2022 annual emissions inventory		**0.63%**	**0.95%**	**0.84%**	**0.01%**	**0.09%**	**0.02%**	**0.31%**	**0.02%**

Note: MT = metric tons; HAPs = hazardous air pollutants; CO_2e = carbon dioxide equivalent.

[*] Source: EPA (2025c).

[†] 2020 is the most recent year for which the complete triennial emission inventory data have been released.

Overall, the pollutants emitted from operations would be 1% or less of Sublette County's 2020 emission inventory on an annual basis. The criteria pollutant potential emissions that represents the largest percentage of Sublette county emissions would be NO_x emissions, which accounts for less than 1% of the total annual Sublette County emissions inventory. Operations would generate a maximum of 12,203 metric tons of CO_2e emissions per year, which represents less than 0.02% of the total Sublette County emissions inventory.

Impacts would primarily occur due to the development of the natural gas processing facility, on private lands, that would be designed to process 400 MMscfd of raw gas from production wells into saleable helium and natural (residue) gas. The natural gas processing facility would also include a power generation facility. It would consist of renewable, natural gas-fired, and/or diesel-powered equipment, including turbines, generators, and solar packs. Emissions control devices would be implemented to limit the facility's consideration as a minor source for emissions, and BSO possesses the necessary air emissions credits to offset BSO-generated emissions in the Upper Green River Basin Ozone Nonattainment Designation Area.

The emissions from construction of the natural gas processing facility and the power generation facility have been quantified based on the current design and construction schedule. A summary of the emissions due to construction of these facilities are presented below in Table 3-8.

Table 3-8. Associated Construction Emissions for Reasonably Foreseeable Future Actions

Emission Source	Emissions (tons)							Emissions (MT)
	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_2e
RFFA, Year 1 total	33.22	12.04	0.02	15.08	2.13	1.43	0.27	4,940
Sublette County 2022 annual emissions inventory[*†]	8,032	2,409	69	14,600	2,092	17,385	1,958	76,434,332
Annual percentage of Sublette County 2020 annual emissions inventory	0.41	0.50	0.02	0.10	0.10	0.01	0.01	0.01

[*] Source: EPA (2025c).

[†] 2020 is the most recent year for which the complete triennial emission inventory data have been released.

The annual emissions due to construction of the natural gas processing facility was compared to the Annual Emissions Inventory for Sublette County. The impacts would represent a small fraction of the current annual emissions for Sublette County. NO_x emissions represent the largest percentage as compared to Sublette County's annual emissions and are only approximately 1.6%. Similar to construction emissions associated with the Proposed Action and connected actions, any impacts would be temporary and transient and would not result in a persisting impact to air quality in the region.

Operation of the natural gas processing facility and the power generation facility would be regulated under the authority of WDEQ and would comply with all applicable federal and state air regulations. Federal and state air regulations are protective of ambient air standards and are intended to ensure that operation of any new, proposed air emission source would not cause or contribute to an exceedance of the NAAQS. All air emission sources would comply with any applicable federal New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants. All air emission sources would comply with state general emission standards in accordance with Chapter 3 of Wyoming Air Quality Standards and Regulations (WAQSR) and state air permitting requirements in accordance with Chapter 6 of WAQSR. All air emission sources would comply with WDEQ's Interim Policy on Demonstration of Compliance with WAQSR Chapter 6, Section 2(c)(ii) for sources in Sublette County.

Additional RFFAs include a planned landowner pond, as well as ongoing oil and gas development and associated infrastructure. The landowner pond is planned for a future date and is expected to generate tailpipe emissions from construction equipment and fugitive dust emissions from earthmoving activities and on-road and off-road travel. These emissions are expected to be minimal and would only have the potential to temporarily cumulate with project emissions. Similarly, it is expected that other oil and gas developments would potentially cumulate with the operation of the project. Of these, future well pads, pipelines, and supporting infrastructure such as transmission lines and substations could result in tailpipe emissions from construction equipment and fugitive dust emissions from earthmoving activities and from on-road and off-road travel. Operational emissions from well pads could result in similar emissions to those described in Section 3.3.3.2.

3.4 How would disturbance from the construction, operation and maintenance, and reclamation activities of the pipelines, two well pads, and road enhancements affect cultural resources, including cultural sites and historic properties?

3.4.1 Affected Environment

The analysis area for direct and indirect impacts to cultural resources is no less than a 100-foot buffer around the pipeline and access road improvement ROWs and connected well pad construction footprints. This includes a 400-foot corridor centered on the proposed AGI pipeline corridor. This area is used because it is also the minimum area of potential effect for cultural resources under state protocol between the BLM and Wyoming State Historic Preservation Office regarding meeting the responsibilities under the National Historic Preservation Act (BLM and Wyoming State Historic Preservation Office 2014). This area is used to assess effects on cultural resources, including historic properties (those eligible for the National Register of Historic Places [NRHP]), and places of potential Tribal significance. The analysis area includes federal, state, and private lands and provides information to determine the potential to encounter cultural resources within the project area on the ground surface or subsurface. The analysis area does not consider visual impacts of the project to the setting of historic properties due to the lack of intact historic settings based on current and ongoing development within and adjacent to the analysis area and the nature of the Proposed Action, which includes limited aboveground infrastructure.

The analysis area is in the northwestern portion of the Green River Basin and crosses the terraces and adjacent toe slopes along Dry Piney Creek as it flows east out of Deadline Ridge, part of the Overthrust Belt. Human occupation in the analysis area occurred for minimally the past 11,500 radiocarbon years before present with potential evidence of greater time depth based on the presence of Pleistocene faunal remains in association with cultural material at the Harrower site (48SU867). Human use of the intermountain basin resources continues throughout prehistory in varying degrees of intensity and duration, often dictated by paleoclimatic conditions. Overall, the generally accepted Wyoming Basin cultural chronology, which includes the Green River Basin, consists of seven prehistoric phases categorized by adaptive strategies and technological developments characteristic of Wyoming Basin cultural dynamics (McNees et al. 2006). Common precontact sites consist of campsites or habitations, including house pits and occupations of stabilized sand dunes; lithic artifact scatters; and lithic procurement sites. To a lesser degree, stone features such as stone circles, alignments, and cairns occur. Cultural resources within the analysis area are predominantly precontact in nature and consist of hearths and other thermal features, some with associated faunal remains and lithic artifacts, and lithic artifact

scatters. Historic resources are less common but include cabin and dugout remains, a grave marker, and debris scatters.

A Class III cultural resources inventory was conducted by SWCA for the analysis area. This investigation encountered eight previously identified cultural sites and eight newly identified cultural sites. Previously identified sites include the Harrower site (48SU867), a resource eligible for the NRHP under Criterion D based on extensive buried cultural deposits with the potential to provide important information on precontact economy and subsistence. 48SU867 includes a historic homestead and extensive multi-component precontact occupations. Site 48SU1318 is also eligible for the NRHP under Criterion D and consists of hearths and lithics. Previously identified sites also include the following non-significant resources: lithic artifact scatters (48SU883 and 48SU884), hearth and/or thermal features and lithic artifacts (48SU1430, 48SU2830, and 48SU6761), and a historic can scatter with thermal features and lithic artifacts (48SU1432).

Newly identified sites consist of a historic grave marker (48SU7957), thermal features and lithic artifacts (48SU7955, 48SU7956, 48SU7958, and 48SU7959), and lithic artifact scatters (48SU7960, 48SU7961, and 48SU7962). Site 48SU7955 is recommended eligible for the NRHP under Criterion D due to data potential. Site 48SU7957 is recommended eligible for the NRHP under Criteria A and D. The remaining sites are recommended not eligible for the NRHP. In general, toe slopes and creek terraces in the analysis area contain a high density of precontact sites, and these environments are often conducive to the burial and preservation of cultural materials.

3.4.2 Environmental Effects – No Action Alternative

Under the No Action Alternative, development would still occur but would not require the issuance of new BLM ROWs or federal APDs (see Section 2.1). Under this alternative, the well pads and pipelines would be constructed on private and state land that would be accessed using existing BLM ROWs along existing roads. During construction of pipelines, the No Action Alternative would impact known cultural resources and historic properties, particularly the Harrower site (48SU867), would be bisected by pipeline construction. Construction would destroy more than 10 acres across the site by removing surface and subsurface components, including areas that are considered contributing to the eligibility of the site. Portions of non-eligible precontact sites 48SU6761, 48SU7961, and 48SU7962 would also be partially damaged or destroyed by ground-disturbing activities during construction. Other impacts to previously unidentified cultural sites are unknown due to the location on private surface and lack of previous cultural resources inventory. However, these impacts would not require federal permitting and therefore would not be considered under Section 106 of the National Historic Preservation Act or NEPA.

3.4.3 Environmental Effects – Proposed Action

Under the Proposed Action, six sites would be impacted by project development. Sites 48SU1432, 48SU7954, 48SU7956, 48SU7960, 48SU7961, and 48SU7962 would be impacted by construction of the pipeline corridors. The Proposed Action would result in permanent damage of these six sites due to removal of cultural materials by heavy equipment from ground-disturbing activities during construction. However, none of the six sites are eligible for the NRHP. In addition, sites 48SU7955 and 48SU7957 are eligible for the NRHP and within the analysis area; however, the sites lie outside the project disturbance footprint and impacts to the sites would be avoided. The Harrower site (48SU867) and eligible site 48SU1318 are avoided by the proposed action. The remaining sites (48SU883, 48SU884, 48SU1430, 48SU2830, 48SU6761, 48SU7958, and 48SU7959) are not eligible for the NRHP and would be avoided during project construction.

No identified places of Tribal significance are known within the area of analysis; therefore, no sites of Tribal significance would be impacted directly by the Proposed Action. No visual impacts are anticipated from the Proposed Action due to the limited aboveground infrastructure, current and ongoing development, and absence of historic properties or places of Tribal importance with intact settings.

The Proposed Action would implement construction monitoring to minimize potential for further impacts to cultural resources that may be encountered during ground-disturbing activities. Construction monitoring would occur in the proximity of NRHP-eligible sites.

No known cultural resources would be impacted by the proposed connected actions.

The impacts analysis area consists of the cultural analysis area its overlap with the area of impact for projects listed under Section 3.2. The impacts of past, present, and RFFAs on cultural resources, including historic properties or sites of Tribal significance, may negatively impact the cultural landscape. These impacts can occur when development of an area results in the removal of a substantial number of cultural resources, that when considered together, could degrade the physical historical record of the area. The RFFAs listed under Section 3.2 involve surface-disturbing activities that have potential to result in impacts to cultural sites. The BSO natural gas processing facility would not impact cultural sites and is not anticipated to have negative effects. The landowner pond is outside the cultural analysis area. Continued grazing and ongoing oil and gas development would likely have continued effects on cultural resources in the analysis area, but these are not expected to be substantial. Grazing activities can impact surface-exposed cultural sites, and where they overlap the cultural analysis area, impacts are minimal when compared to the broader landscape. In addition, development of oil and gas in the impacts analysis area would be subject to federal agency review if federal lands or minerals are involved.

3.5 How would the construction and operation of the project affect regional traffic?

3.5.1 Affected Environment

The transportation system in the vicinity of the project area consists of a network of roads that are maintained by Sublette County, the Wyoming Department of Transportation (WYDOT), the BLM, or private landowners, or are existing roads on public land that provide access to the public and are not actively maintained by Sublette County. BSO plans to use existing roads on BLM-managed lands for access to project facilities and infrastructure. Roads would be used for the purpose of construction, operations, and maintenance of project facilities. Project traffic would primarily consist of pickup trucks for employee commuting but would also include tractor-trailers and construction equipment. The analysis area for travel and transportation resources on this project includes 58 miles of roads.

The project area is accessed from Big Piney, Wyoming, by traveling approximately 5 miles south on U.S. Highway 189 (US 189) and turning southwest on Big Piney Calpet Road/ Wyoming State Highway 235 (WY 235) for approximately 18 miles, then turning west onto the South Entrance Road (BLM 5322) that accesses the project area. The project area would be accessed using existing county, BLM, and modified private access roads (see Figure 1-1). The project area could also be accessed from the north or south on other existing roads depending on the sources or destinations of the transportation. However, the US 189 and WY 235 would remain essentially the same. The primary existing access routes are as follows:

- From the north: Access and transportation is via US 189 south to Dry Piney Road. After turning onto Dry Piney Road, the route turns southwest on Big Piney Calpet Road/WY 235. After traveling for approximately 2 miles, the route turns to the right (west) onto South Entrance Road (BLM 5322), where the primary mine access road is encountered.

- From the south: Travel north from La Barge, Wyoming, on Calpet Road for approximately 4 miles until the road turns into Big Piney Calpet Road/WY 235. Continue for approximately 13 miles until the route turns to the left (west) onto South Entrance Road (BLM 5322), where the primary mine access road is located.

Big Piney Calpet Road/WY 235 is a two-lane, paved major collector road maintained by Sublette County. The road begins at US 189 and heads south/southwest, ending with a connection to Calpet Road. US 189 is a two-lane, minor paved arterial highway maintained by WYDOT. On US 189, average annual daily traffic (AADT) volumes between Big Piney and La Barge were between 818 (traveling south) and 1,357 (traveling north) vehicles per day as shown in Table 3-9. Estimated AADT on Big Piney Calpet Road/WY 235 was between 60 vehicles per day. Estimated AADT on Dry Piney Road was approximately 60 vehicles per day (WYDOT 2025a).

Table 3-9. Current and Historical Traffic Volume in the Analysis Area

Category	Station	AADT 2015	AADT 2024	Percent (%) Change (2015-2024)	10-Year Projection
US 189	SB205/206	1,782	1,357	31.3% (-)	1,274
Big Piney Calpet Road/WY 235	SBRLOC	46*	60	30.4% (+)	+84
Dry Piney Road	SB0184	1,746	28	98.4% (-)	39

Source: WYDOT (2025a)
Notes: (-) = decrease in traffic; (+) = increase in traffic
AADT is from 2022 (instead of 2025) when analysis started. No data before 2022.

Car accident crash data are available from WYDOT between 2022 and 2024. During this time, a total of 22 traffic crashes occurred on US 189 between Big Piney and La Barge as shown in Table 3-9 (WYDOT 2025b). Three crashes occurred on Big Piney Caplet Road/WY 235 (Table 3-10). The AADT during this period averaged between 28 and 1,357 vehicles per day on both roadways. Speed limits (Table 3-11) on each road are developed by the state, county, BLM, or private landowner.

Table 3-10. Crash Rates Between 2022 and 2024 in the Analysis Area

Category	AADT 2022–2024	Total Crashes 2022–2024	Total Crash Rate (%) (3-year average)
US 189	1,357	22	0.0162
Big Piney Calpet Road/WY 235	28	3	0.1071
Dry Piney Road	60	0	0.0

Source: WYDOT (2025b)

Table 3-11. Speed Limits in the Analysis Area

Category	Type of Road	Speed Limit (mph)	Ownership
US 189	2-lane divided highway	70	Federal
Big Piney Calpet Road/WY 235	2-lane divided highway	55	State
Dry Piney Road	Local road	35	County
South Entrance Road	BLM road	35	BLM (BSO ROW)
BLM Road 5321	BLM road	35	BLM (BSO ROW)

Source: WWC Engineering (2025)

3.5.2 Environmental Effects – No Action Alternative

Under the No Action Alternative, development would still occur but would not require the issuance of new BLM ROWs or federal APDs (see Section 2.1). Project traffic would still occur but only on roadways where BSO holds existing ROWs, including those specifically from EOG Resources (WYW087793) and QEP Resources (WYW-150234). This arrangement permits the use of existing roads from Big Piney Calpet Road/WY 235 across BLM-managed lands to access both private and state parcels.

The project area would be accessed by traveling from Big Piney, Wyoming, for approximately 5 miles, heading south on US 189 and turning southwest on Big Piney Calpet Road/WY 235, then traveling approximately 1.5 miles south to the existing access road (Black Canyon Road) to the project site.

Estimated increases in traffic volumes during construction would increase AADT on Big Piney Calpet Road/WY 235 by an estimated 125%, and by approximately 6% along US 189 immediately north and south of the project area. Estimated crash levels would be assumed to rise in relation to increased traffic levels. However, few crashes have been reported relative to the total amount of traffic, resulting in a crash rate of less than 1% in the analysis area. As such, any increase in the risk of traffic accidents would be negligible and proportional to the overall increase in traffic. The large increase in traffic associated with the construction period would be temporary and estimated to last a few months, with the peak increase being the construction phase (75 AADT) and dropping during the 30 years of the operations and maintenance periods of the project (3 AADT).

Project traffic would adhere to the posted speed limit within the project area to minimize the risk of collisions. Also, during saturated soil conditions, vehicular activity would be confined to roads designed and constructed for all-weather access (e.g., paved, graveled, and “mag-water” surfaced roads).

3.5.3 Environmental Effects – Proposed Action

Traffic generated by the project would include BSO employees and contract worker commuting traffic, material and equipment deliveries, as well as product transportation off-site. The project would add an estimated 75 AADT to US 189 during the construction phase of the project. It is expected that the peak vehicle AADT would occur during the construction period with operation, and maintenance phases having substantially less AADT of traffic equivalent to three employees commuting to and from the project site. Due to the limited number of daily vehicle trips associated with operation and maintenance activities, the impact of traffic during these phases on roads proposed for the project are anticipated to be minimal (WWC Engineering 2025).

Project traffic would adhere to the posted speed limit within the project area to minimize the risk of collisions and to adhere to the same rules during saturated soil conditions, which would be the same as the No Action Alternative.

Traffic generated by the project would include BSO employees and contract worker commuting traffic, material and equipment deliveries, and product transportation off-site. The project would still add an estimated 75 AADT to US 189 during the construction phase of the project and approximately 3 AADT during the operations/maintenance phase, which would be the same as the No Action Alternative.

The full BSO natural gas processing plant would add an estimated 160 AADT to the Proposed Action construction of 75 AADT to US 189 during the construction phase of the project (WWC Engineering 2025). It was assumed that approximately 70% of the traffic would turn north from Big Piney Calpet Road/WY 235 onto US 189 and continue to Big Piney, while the remaining 30% of traffic would continue from Big Piney Calpet Road/WY 235 and continue to La Barge. It is expected that the operation

and maintenance phase for the plant would result in traffic equivalent to 50 employees (50 AADT). Due to the limited number of daily vehicle trips associated with operational activities, the impact of traffic during the operational phase on nearby roads is anticipated to be minimal (WWC Engineering 2025).

Other impacts to traffic and the road network would include further oil and gas development. These activities would have impacts on the transportation system by increasing traffic on the surrounding road network. Traffic generation would depend on the size and intensity of operations of the facilities.

3.6 How would vegetation removal, increased human presence and traffic, and installation of pipelines, two well pads, as well as road improvements affect resident mule deer, mule deer habitat, and their habitat use, including crucial winter range?

3.6.1 Affected Environment

The analysis area for direct and indirect impacts to mule deer is a 1.3-mile buffer around all pipeline ROWs, road ROWs and enhancements, and well pads and their disturbance areas for each alternative (Figure 3-2 and Figure 3-3). This analysis area was chosen based on published literature estimating the area of influence that oil and gas development has on mule deer (Sawyer et al. 2017). The analysis of impacts on mule deer focuses on potential impacts to habitat availability, habitat use, and direct mortality. Habitat availability may be impacted directly through habitat loss after the construction of infrastructure, whereas habitat usage may be impacted through behavioral avoidance of disturbance during construction and operations. Direct mortality may be a result of vehicle collisions from construction traffic. The existing habitat availability, habitat use, and traffic data are summarized below.

The analysis area is in an area used by the Wyoming Range mule deer herd. According to the WGFD's 2023 Jackson Region Job Completion Report, the estimated population of this herd averaged 29,458 individuals from 2018 to 2022. The population dropped to an estimated 10,341 individuals in 2023 after a particularly harsh winter but increased to 11,447 individuals in 2024. The Wyoming Range is split into herd units for management purposes. The analysis area is within Unit 143 with an estimated population of 4,098 individuals in 2022 (WGFD 2023).

3.6.1.1 HABITAT AVAILABILITY

WGFD has identified and delineated crucial winter ranges necessary for sustaining stable and robust big game populations. To minimize disturbances during sensitive periods, WGFD has implemented seasonal timing restrictions within parturition areas and crucial winter ranges that big game species rely on for rearing offspring and surviving harsh winter conditions. Crucial winter range is present within the analysis area. The availability of suitable mule deer habitat within and outside crucial winter range is influenced by permanent infrastructure development, which can lead to irreversible habitat loss.

3.6.1.2 HABITAT USE

The Governor of Wyoming has designated mule deer migration corridors to support conservation efforts (Executive Order 2020-1 [2020]). There are no designated mule deer migration corridors in the analysis area. However, ongoing research indicates that the analysis area lies within known mule deer seasonal movement areas connecting crucial winter ranges. Mule deer in the Wyoming Range herd migrate seasonally in spring and fall between summer ranges in higher elevation montane habitats in the

Wyoming and Salt River mountain ranges and lower elevation winter ranges in sagebrush (*Artemisia* spp.) habitat. Sagebrush in the analysis area provides both forage and cover habitat for mule deer.

Review of WGFD collar data collected from December 2022 to June 2025 indicates that mule deer use of the analysis area is greatest during the winter months, typically November through April. The analysis area is also used during spring (March–May) and fall (August–October) seasonal movements, both for stopovers (lasting between 1 week and up to a month) and relatively quick movements (lasting less than a week). Over the entire collar data period, 116 collared deer wintered in the analysis area, 36 stopped over during spring seasonal movements, and 45 moved quickly through the analysis area in the spring. Few collared deer stopped over or moved quickly through the analysis area in the fall, with only two collared deer recorded over the entire data period. Only three collared deer were recorded in the analysis area during the summer. All summer usage was in June, and the mule deer remained in the area for less than 24 hours. Note that the collared mule deer represent only a sample of the total mule deer population in the Wyoming Range Herd and that the actual number of mule deer using the analysis area is higher. Describing collared mule deer use is useful to demonstrate a relative use of the area across seasons, as well as to demonstrate where mule deer are likely to use the area (see Figure 3-2).

The WGFD collar data indicates that mule deer use of the analysis area varies by location and season of the year. Most winter use occurs in the eastern two-thirds of the analysis area with concentrations in the approximate center of the analysis area. Use also occurs during winter in the southwestern portion of the analysis area (see Figure 3-2). The entire analysis area is used during spring with one concentration in the same area that has high use during winter (see Figure 3-2). Summer use appears to be limited in the analysis area and restricted to the western edge of the area (see Figure 3-2). Fall use appears to be concentrated in the eastern quarter of the analysis area (see Figure 3-2).

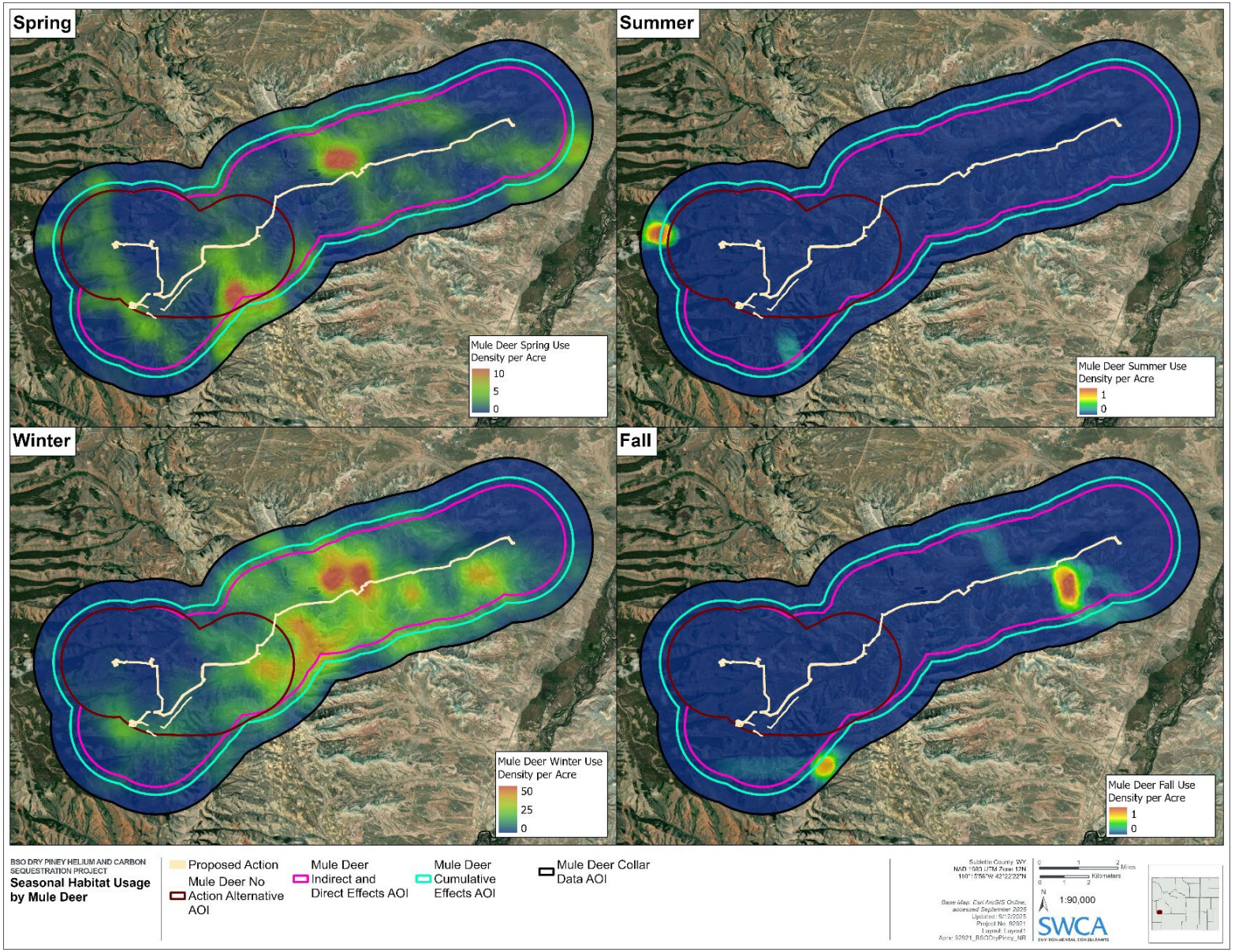

Figure 3-2. Mule deer use of the analysis area by season.

Mule deer have strong fidelity to habitat use across generations and individuals are reluctant to use new routes between seasonal ranges (Sawyer et al. 2019). Mule deer, unlike other large herbivores such as elk, appear to have little or no adaptability as to whether or where they move seasonally. Resident deer in Wyoming remained residents, and deer that exhibited seasonal movements continued to move across seasons, regardless of age, reproductive status, or number of years monitored (Sawyer et al. 2019).

Research shows that ungulates, including mule deer, that can successfully follow the green waves of newly emergent vegetation have increased body fat levels compared to their residential counterparts (Middleton et al. 2018). Body fat is an important correlation of successful reproduction and general individual fitness, therefore increased barriers to seasonal movements that hinder access to newly emergent vegetation could lead to population affects at a broader scale.

Mule deer show strong fidelity (>80%) to seasonal movement routes across seasons and years and this rigid behavior can influence individual's probability of survival. Mule deer moving outside their traditional routes had 30% lower survival rates than individuals moving along their traditional routes (Sawyer et al. 2019).

Mule deer habitat usage is influenced by the existence of anthropogenic infrastructure and facilities, as well as noise from construction and operations. Typical ambient noise levels in the analysis area average 40 A-weighted decibels (dBA) depending on time of day and proximity to frequently traveled county roads and state highways.

In addition to distance, noise levels are also attenuated by geographical conditions such as terrain, vegetation, and atmospheric conditions. Construction noise is usually made up of intermittent peaks and continuous lower levels of noise from equipment. The noise impacts from construction would depend on the type of equipment used, the mode of operation of the equipment, the length of time the equipment is in use, and the amount of equipment used simultaneously.

Studies have shown that mule deer typically avoid energy infrastructure in response to increased human activity and noise. A 15-year study found that mule deer moved an average of 1.3 miles away from construction disturbance and maintained that distance well into the operational period after initial construction activities cease (Sawyer et al. 2017).

3.6.1.3 VEHICLE COLLISIONS

The analysis area contains a network of paved and unpaved roads including US 189, WY 235, also known as Big Piney Calpet Road, Dry Piney Road, private roads, and road segments crossing BLM-managed lands. A full description of the current and historical vehicle traffic, road use patterns, and road conditions is provided in Section 3.5 above.

Current traffic volumes and road use within the analysis area impacts mule deer directly through wildlife-vehicle collisions (WVCs). According to data from the 2022 to 2024 crash report from WYDOT, between the segments of US 189 and WY 235 within the analysis area there were 15 WVCs, 13 of which involved mule deer (WYDOT 2025b). Across Wyoming, mule deer are the most impacted species by WVCs, with approximately 5,500 individuals, equating to 1.5% to 3% of the state's mule deer population, killed annually from road collisions. Additionally, WVCs in Wyoming increase as traffic volumes rise, particularly on roads with heavier daily use (Riginos 2022).

3.6.2 Environmental Effects – No Action Alternative

Under the No Action Alternative, development would still occur but would not require the issuance of new BLM ROWs or federal APDs (see Section 2.1). The analysis area for the No Action Alternative is 9,886 acres based on a 1.3-mile buffer around all project components and ROWs.

3.6.2.1 HABITAT AVAILABILITY

Removal of vegetation associated with the pipeline installations would have subsequent impacts on the availability of forage and cover habitat for mule deer, including within crucial winter range. Within the analysis area, there is a total of 2,208 acres of crucial winter range (see Figure 3-3). Table 3-12 summarizes the total acres of temporary and permanent impacts to mule deer habitat, including crucial winter range. Following construction, some areas of temporary disturbance would be reclaimed to restore habitat (see Table 2-2). Table 3-12 summarizes the total acres that would be restored following completion of construction.

The areas of permanent impacts would no longer be available as suitable foraging habitat within the analysis area. The areas of temporary impacts and those that would be restored following construction would return as available forage for mule deer. After restoration of areas following construction, the estimated total loss of crucial winter range would be 2 acres. However, see Section 3.6.2.2 for a discussion of changes in habitat use that may result in a loss of functional habitat availability.

Table 3-12. Habitat Availability for Mule Deer Under the No Action Alternative

Category	Total Acres	Temporary Impacts (acres)	Permanent Impacts (acres)
All suitable habitat	7,994	43	34
Crucial winter range	2,208	4	2

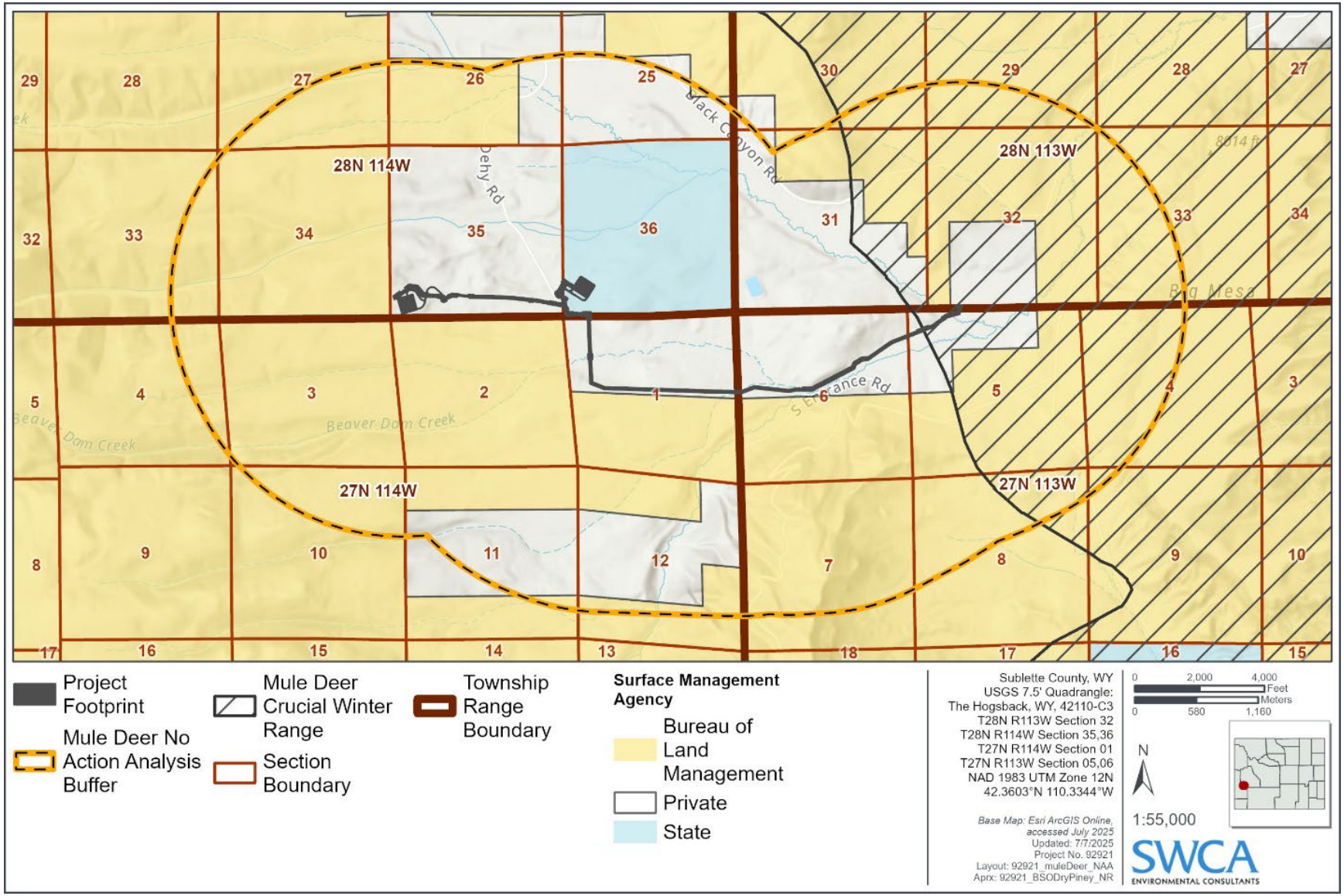

Figure 3-3. Mule deer No Action Alternative analysis area.

3.6.2.2 HABITAT USE

Equipment noise and human activity during construction would affect the availability of forage as mule deer have been found to avoid areas containing otherwise suitable forage while construction activities occur (Ditmer 2023; Northrup et al. 2021). Noise generated from construction and future maintenance activities would result from the operation of equipment and vehicles. The noise level would range from heavy truck traffic to the use of earthmoving equipment. These activities produce noise ranging from 80 to 88 dBA at a reference distance of 50 feet (Table 3-13). Noise is expected to vary regularly throughout the construction period and would likely be attenuated closer to the preconstruction ambient level of 40 decibels at the limits of the analysis area.

Table 3-13. Construction Noise Levels

Equipment Type	Measured L_{max} Noise Level at 50 Feet (dBA)*
Air compressor	82
Backhoe	85
Bulldozer	88
Heavy truck	88
Front end loader	83
Grader	85
Scraper	87
Tractor	80

Source: U.S. Department of Transportation (2006)

*L_{max} = maximum instantaneous sound level as measure during a specific time period

These noise impacts would only occur during construction, outside of November 15 through April 30, to avoid impacts to mule deer during the crucial winter habitat use periods, when the most mule deer are present (see Table 2-2; Figure 3-4). However, mule deer may avoid the area even after construction is complete due to the presence of new infrastructure (Sawyer et al. 2017), which could result in a permanent change in habitat use.

Mule deer most commonly use the analysis area in the winter (see Figure 3-4). Any construction impacts would take place outside of the winter season, when fewer mule deer are present, limiting direct impacts to mule deer when they are most vulnerable to habitat displacement. Mule deer that are present in the analysis area during construction would likely be displaced due to the increased levels of noise, vehicles (including construction vehicles), and human presence. Assuming mule deer are displaced by a similar 1.3-mile distance as reported in Sawyer et al. (2017), this could result in a functional loss of all suitable habitat within the analysis area (7,994 acres, 2,208 of which are crucial winter range; see Table 3-12). When wintering mule deer return to the project area, they would encounter new infrastructure that was not previously present. It is possible this new infrastructure could cause long-term avoidance or changes of habitat use of the analysis area by mule deer. However, given the use of the analysis area under existing conditions, which includes extraction infrastructure, it seems likely that mule deer have previously habituated to disturbance in the analysis area, and would be expected to return to similar use levels as seen under current conditions (Figure 3-4).

3.6.2.3 VEHICLE COLLISIONS

Traffic generated by the No Action Alternative would include BSO employee and new contract worker commuter traffic, material deliveries, and product transport off-site. It is expected that peak traffic would

occur during the construction phase of the project with an estimated 75 additional AADT accessing the analysis area on US 189.

Traffic volumes are estimated to increase the most on Big Piney Calpet Road/WY 235, with an estimated 125% increase while US 189 is estimated to see a 6% increase in traffic (See Section 3.5.2). During the maintenance phase, after construction is completed, the number of additional trips generated during morning peak hour traffic decreases considerably to the equivalent of three employees traveling to and from the project site. A full description of the projected vehicle traffic, road use patterns, and anticipated changes to road conditions is provided in Section 3.5.

Increases in traffic are associated with increases in WVCs (Riginos 2022). An increase in vehicle traffic in the analysis area associated with the No Action Alternative construction phase could increase the risk of WVCs compared to existing conditions, which can lead to increased mortality for mule deer. During the maintenance phase, increased risk of WVCs would be minimal due to the significant reduction in increased traffic to near-existing levels.

Traffic speed limits for commuter and construction traffic would be implemented to limit WVCs within the analysis area (see Table 3-10). This would limit the potential increase in WVCs and impacts on mule deer.

3.6.3 Environmental Effects – Proposed Action

The analysis area for the Proposed Action is 26,308 acres based on a 1.3-mile buffer around all project components and ROWs.

3.6.3.1 HABITAT AVAILABILITY

The total acres of impacts on mule deer habitat and crucial winter range are summarized in Table 3-14. The Proposed Action has 100 additional acres of temporary crucial winter range loss compared to the No Action Alternative. Following construction, temporary impact areas would be restored, resulting in a total of 58 acres of permanent crucial winter range lost, 56 acres more than the No Action Alternative (Table 3-14; see Table 3-12). While the total acres vary by alternative, the impacts on mule deer from a reduction in habitat availability would be as described under the No Action Alternative.

Table 3-14. Habitat Availability for Mule Deer Under the Proposed Action

Category	Total Acres	Temporary Impacts (acres)	Permanent Impacts (acres)
All suitable habitat	20,793	193	114
Crucial winter range	15,934	114	58

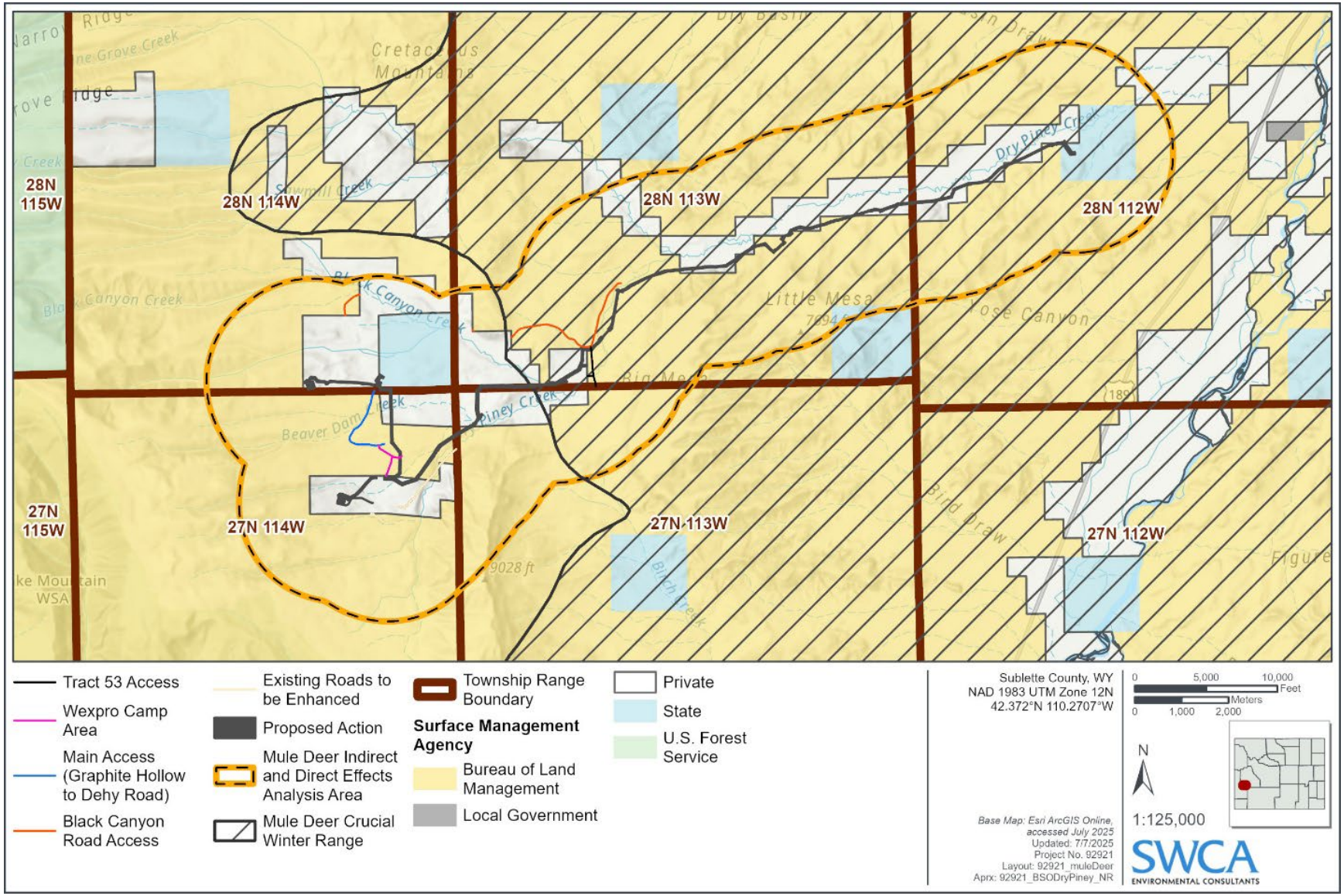

Figure 3-4. Mule deer Proposed Action Alternative analysis area.

3.6.3.2 HABITAT USE

The type of impacts to habitat use for mule deer would be as described under the No Action. Mule deer are likely to be displaced from the analysis area during construction, and may avoid the analysis area for an extended period of time after new infrastructure is built. However, as described under the No Action, avoiding construction impacts during the winter, when mule deer are utilizing the analysis area and crucial winter range, would limit impacts to mule deer habitat use; mule deer have previously habituated to extraction infrastructure in the analysis area and are expected to do so in the future. Assuming that mule deer are displaced by a similar 1.3-mile distance, as reported in Sawyer et al. (2017), this could result in a functional loss of all suitable habitat within the analysis area (20,793 acres, 15,934 of which are crucial winter range; see Table 3-14).

3.6.3.3 VEHICLE COLLISIONS

Traffic volumes generated by the Proposed Action would be identical to the elevated traffic volumes generated by the No Action Alternative discussed in Section 3.6.2.3. Therefore, potential WVCs would be the same as the No Action.

The effects analysis area is the mule deer habitat analysis area, a 1.3-mile buffer around all pipeline ROWs, road ROWs and enhancements, and well pads and their disturbance areas, covering all proposed actions and connected ongoing oil and gas development. This effects analysis on mule deer focuses on the impacts to habitat availability, habitat use, and direct mortality from vehicle collisions.

The impacts to mule deer habitat availability in the analysis area include the loss of habitat from the Proposed Action, the natural gas processing facility, and the landowner pond. Together, these actions would result in a loss of an additional 42 acres of suitable habitat for the natural gas processing facility and 28 acres for the landowner pond within the analysis area. Together these habitat losses add up to approximately 180 acres of permanent suitable habitat loss and 86 acres of permanent crucial winter range loss. The effects of this habitat loss amount to approximately < 1% (.04) of crucial winter range surrounding the analysis area.

Mule deer habitat use within the analysis area is influenced by anthropogenic infrastructure and facilities, as well as noise from construction and operations. Mule deer have been shown to avoid construction areas that otherwise contain suitable foraging areas. A 15-year study found that mule deer moved an average of 1.3 miles away from construction disturbance and maintained that distance well into the operational period long after initial construction activities cease (Sawyer et al 2017). The additional infrastructure and associated noise from construction and operation may result in avoidance of the analysis area by mule deer.

Impacts to mule deer from vehicles are influenced by the additional AADT from the construction and operation phases of the Proposed Action, as well as all connected actions, the natural gas processing facility, and the landowner pond (Table 3-15).

Table 3-15. Vehicle Traffic in the Analysis Area

Category	AADT 2022–2024	AADT During Construction Phase	AADT During Operational Phase
US 189	1,357	1,432	1,360
Big Piney Calpet Road/WY 235	28	103	31
Dry Piney Road	60	135	63

The impacts to mule deer include elevated risks of WVCs during construction of the Proposed Action and connected actions, as well as the natural gas processing facility and landowner pond, compared to existing conditions, as increased traffic is associated with increased WVCs (Riginos 2022). Increases in WVCs within the analysis area would likely lead to increased mortality for mule deer. However, following the 3-month construction phase, increases in AADT during the operations phase would drop down to just three vehicles above existing conditions. Therefore, increased risks of WVCs to mule deer during this phase would be minimal in the long term.

3.7 How would the installation of the pipelines and two well pads, and the production of federal minerals affect Sublette and Lincoln Counties' economies?

3.7.1 Affected Environment

The socioeconomic analysis area consists of Sublette and Lincoln Counties, Wyoming. This analysis area was selected because impacts would occur within communities near the project location; the counties contain representative geographies proximal to the project area along potential transportation and access routes. Data for the State of Wyoming are reported for some socioeconomic indicators for context. Socioeconomic impacts are generally concentrated in communities where a transient workforce finds temporary accommodations, spends money, and accesses public services.

3.7.1.1 POPULATION

Table 3-16 reports the total population (number of residents) and population density (number of residents per square mile) within the socioeconomic analysis area. Demographic information for the state of Wyoming is also included for reference. All areas are predominantly rural, with population densities well below the national average. Lincoln County has a density of 5.0 persons per square mile, and Sublette County has a much lower density of just 1.8 persons per square mile—both below the statewide average of 5.9. Population centers throughout the socioeconomic analysis area include the city of Kemmerer and the towns of Diamondville, Pinedale, Marbleton, and Big Piney. Lincoln County has experienced population growth over the period of 2010 to 2023, while the population of Sublette County has declined over the same period.

Table 3-16. Population

Category	Sublette County	Lincoln County	Combined Area	Wyoming
Population (2023)	8,806	20,158	28,964	579,761
Population (2010)	9,322	17,447	26,769	545,579
Population change (2010–2023)	-516	2,711	2,195	34,182
Population percentage change (2010–2023)	-5.5%	15.5%	8.2%	6.3%
2023 population density (residents per square mile)	1.8	4.9	3.2	6.0

Source: U.S. Department of Commerce (2024)

3.7.1.2 EMPLOYMENT AND INCOME

Table 3-17 presents data on labor force, employment, unemployment rates, income, and poverty for Sublette and Lincoln Counties and for Wyoming overall. As a whole, the two-county socioeconomic analysis area had lower unemployment and higher median household income in 2023 than the state of Wyoming. This reflects relatively strong labor market conditions in both counties, particularly Sublette County, where the unemployment rate was 1.82% compared to the statewide rate of 3.74%. Median household income in both counties also exceeded the state median, with Lincoln County slightly higher at $86,092 compared to $82,791 in Sublette County and $74,815 statewide.

Per capita income diverged more sharply between the counties. Sublette County's per capita income was substantially higher than both the state and Lincoln County, consistent with its lower poverty rate. Just 6.6% of families in Sublette County were below the poverty level in 2023, compared to 7.2% in Lincoln County and 7.1% statewide.

Table 3-17. Employment and Income

Category	Sublette County	Lincoln County	Combined Area	Wyoming
People (2023)	8,746	20,047	28,793	565,918
Families (2023)	2,428	5,198	7,626	148,988
People below poverty	731 (8.4%)	1,418 (7.1%)	2,149 (7.5%)	60,704 (10.7%)
Families below poverty	161 (6.6%)	373 (7.2%)	534 (7.0%)	10,566 (7.1%)
Per capita income (2023 $)	$57,348	$40,375	N/R	$41,006
Median household income (2023 $)	$82,791	$86,092	N/R	$74,815
Labor force (2023)	4,452	10,102	14,554	297,053
Employment (2023)	4,371	9,900	14,271	285,935
Unemployment rate (2023)	1.82%	2.00%	1.94%	3.74%

Source: U.S. Department of Commerce (2024)
Note: N/R = not reported

Table 3-18 shows employment by industry in 2023. As in the state overall, employment in educational services, health care, and social assistance represented the largest sector in the two-county area, with 18.2% of workers employed in that category. However, notable differences between counties are evident. In Sublette County, nearly one-quarter (22.4%) of employed persons worked in agriculture, forestry, fishing, hunting, and mining, more than twice the state average and three times the share in Lincoln County. By contrast, Lincoln County had higher concentrations of employment in construction (13.3%) and retail trade (12.7%), both of which were above the state average.

Lincoln County also had a significantly higher share of its workforce employed in manufacturing (6.2%) compared to Sublette County (1.6%), while Sublette County had more than four times the share of workers employed in finance, insurance, and real estate services (12.7% compared to 2.7% in Lincoln County).

These differences reflect variation in the economic base of each county. Sublette County's employment is more heavily concentrated in extractive industries and financial services, whereas Lincoln County's workforce is more distributed across construction, manufacturing, and health care sectors. The two-county area as a whole is generally aligned with broader statewide industry trends, though certain sectors—particularly mining and construction—are more prominent locally.

Table 3-18. Employment by Industry

Category	Sublette County, Wyoming	Lincoln County, Wyoming	Combined Area	Wyoming
Civilian employees > 16 years (2023)	4,371	9,900	14,271	285,935
Agriculture, forestry, fishing and hunting, mining	981 (22.4%)	704 (7.1%)	1,685 (11.8%)	27,173 (9.5%)
Construction	293 (6.7%)	1,312 (13.3%)	1,605 (11.2%)	24,880 (8.7%)
Manufacturing	69 (1.6%)	612 (6.2%)	681 (4.8%)	12,594 (4.4%)
Wholesale trade	15 (0.3%)	132 (1.3%)	147 (1.0%)	4,785 (1.7%)
Retail trade	374 (8.6%)	1,260 (12.7%)	1,634 (11.4%)	31,063 (10.9%)
Transport, warehousing, and utilities	358 (8.2%)	601 (6.1%)	959 (6.7%)	17,605 (6.2%)
Information	68 (1.6%)	127 (1.3%)	195 (1.4%)	4,279 (1.5%)
Finance and insurance, real estate	556 (12.7%)	272 (2.7%)	828 (5.8%)	13,414 (4.7%)
Professional management, administration, and waste management	289 (6.6%)	909 (9.2%)	1,198 (8.4%)	20,912 (7.3%)
Education, health care, and social assistance	486 (11.1%)	2,111 (21.3%)	2,597 (18.2%)	70,707 (24.7%)
Arts, entertainment, recreation, accommodations, and food	432 (9.9%)	618 (6.2%)	1,050 (7.4%)	26,256 (9.2%)
Other services, except public administration	182 (4.2%)	645 (6.5%)	827 (5.8%)	13,800 (4.8%)
Public administration	268 (6.1%)	597 (6.0%)	865 (6.1%)	18,467 (6.5%)

Source: U.S. Department of Commerce (2024)

3.7.1.3 HOUSING

Table 3-19 presents 2023 housing characteristics for Sublette and Lincoln Counties and the state of Wyoming. Housing vacancy rates in the two-county area were notably higher than the state average. Sublette County reported a vacancy rate of 29.0%, more than twice the statewide rate of 13.4%. Lincoln County's vacancy rate was 19.4%. These elevated vacancy rates are largely attributable to the prevalence of seasonal, recreational, or occasional-use housing, which accounted for 15.4% of all housing units in Sublette County and 10.8% in Lincoln County, compared to just 5.2% statewide.

Median gross rent was higher in Sublette County than in Lincoln County or Wyoming overall, at $1,116 per month compared to $868 and $968, respectively. Median monthly mortgage costs were also slightly higher in Sublette County ($1,778) than in Lincoln County ($1,625), and both were near or above the state average of $1,691.

Vacant units available for rent accounted for just more than 1% of the housing stock in each county, slightly below the statewide rate of 2.1%. Units designated for migrant workers represented 1.2% of all housing units in Sublette County but were not present in Lincoln County, according to U.S. Census estimates.

In addition to residential housing, temporary lodging such as hotels, motels, and RV parks provide important short-term accommodations for non-local construction workers. Within the portion of the analysis area that is within commuting distance of the project, an inventory identified 22 hotels and motels offering a total of 847 rooms, and 13 RV parks with 360 sites. These facilities are concentrated in Kemmerer and Pinedale, the area's primary commercial centers.

Based on occupancy estimates from property operators and supporting data from AirDNA (2025), an assumed 75% occupancy rate during peak season yields an estimated 303 hotel or motel rooms and RV sites available during periods of high demand.

Table 3-19. Housing

Category	Sublette County	Lincoln County	Combined Area	Wyoming
Median monthly mortgage cost (2023)*	$1,778	$1,625	N/R	$1,691
Median gross rent (2023)*	$1,116	$868	N/R	$968
Total housing units (2023)*	5,239	9,763	15,002	275,131
Occupied	3,719 (71.0%)	7,872 (80.6%)	11,591 (77.3%)	238,176 (86.6%)
Vacant	1,520 (29.0%)	1,891 (19.4%)	3,411 (22.7%)	36,955 (13.4%)
For rent	67 (1.3%)	100 (1.0%)	167 (1.1%)	5,781 (2.1%)
Rented, not occupied	26 (0.5%)	12 (0.1%)	38 (0.3%)	681 (0.2%)
For sale only	40 (0.8%)	61 (0.6%)	101 (0.7%)	1,648 (0.6%)
Sold, not occupied	0 (0.0%)	46 (0.5%)	46 (0.3%)	554 (0.2%)
Seasonal, recreational, occasional	806 (15.4%)	1,055 (10.8%)	1,861 (12.4%)	14,225 (5.2%)
For migrant workers	65 (1.2%)	0 (0.0%)	65 (0.4%)	362 (0.1%)
Other vacant	516 (9.8%)	617 (6.3%)	1,133 (7.6%)	13,704 (5.0%)
Number of hotels or motels*	16	6	22	N/R
Number of RV parks or campgrounds*	8	5	13	N/R

Source: U.S. Department of Commerce (2024)

Note: N/R = not reported

* Hotel/motel and RV park counts reflect establishments within commuting distance of the project and do not include establishments located in parts of Lincoln or Sublette Counties that fall outside the commutable portion of the socioeconomic analysis area.

3.7.1.4 TAXES AND REVENUES

Tax and revenue data provide context for the types and scale of fiscal contributions that could result from the project. Table 3-20 summarizes key tax revenue sources for Sublette and Lincoln Counties in fiscal year 2024, including property, sales, use, and lodging taxes, as well as production and severance taxes from mineral extraction.

Sublette County generates a large share of its revenue from property and mineral-related taxes. In 2024, the county's total assessed property value was $3.84 billion, of which $3.38 billion (88%) was state-assessed mineral property, primarily tied to oil and natural gas development. This resulted in $236.5 million in property tax revenue, accounting for approximately 11.5% of all property tax collections in Wyoming that year. Sublette County also received $194.5 million in production (ad valorem) tax from natural gas and contributed an estimated $189.8 million in severance tax to the state, equal to 25% of statewide severance tax revenue. Property tax revenues in Sublette County increased by 57% between 2019 and 2024, reflecting the influence of mineral production volumes and commodity prices.

Lincoln County, while not as reliant on mineral production, generated higher revenues from sales and lodging taxes than Sublette County in 2024. The county collected $32.8 million in sales tax and $1.1 million in lodging tax, compared to $17.0 million and $0.7 million in Sublette County, respectively. This reflects Lincoln County's larger permanent population and greater commercial activity, including the tourism and retail sectors. Use tax collections also outpaced Sublette County, totaling $6.1 million in

Lincoln County and $2.3 million in Sublette County. These trends indicate that Lincoln County's tax base is more diversified, while Sublette County is more sensitive to fluctuations in energy sector activity.

Table 3-20 provides a summary of major tax revenue sources in the two-county socioeconomic analysis area.

Table 3-20. County Taxes and Revenues in Fiscal Year 2024 (millions of dollars)

Revenue Source	Sublette County	Lincoln County	Combined Total
Property tax	$236.5	–	–
Sales tax	$17.0	$32.8	$49.8
Use tax	$2.3	$6.1	$8.4
Lodging tax	$0.7	$1.1	$1.8
Production (ad valorem) tax	$194.5	–	–
Severance tax (state share from Sublette County production)	$189.8	–	–

Sources: Wyoming Department of Revenue (2024); Wyoming Economic Analysis Division (2024)

Note: Property tax and production tax data are not available for Lincoln County in 2024. Dashes (–) indicate data not reported at the county level or not applicable.

3.7.1.5 PUBLIC SERVICES

Table 3-21 summarizes key public service providers in Sublette and Lincoln Counties, including fire and police departments, sworn officers, emergency care hospitals, and public schools. These services, in conjunction with workforce and population estimates, help contextualize the capacity of the local area to accommodate any temporary increase in demand related to the project.

Public service providers in the two-county area are generally concentrated in incorporated communities such as Pinedale, Big Piney, Marbleton, Kemmerer, and Diamondville. Fire protection is provided primarily by volunteer departments, including Sublette County Unified Fire (with six battalions) and the South Lincoln Fire District. Law enforcement services are provided by the Sublette and Lincoln County Sheriff's Offices, with supplemental coverage by municipal police departments in Kemmerer, Diamondville, and La Barge.

Each county has at least one emergency care hospital: South Lincoln Medical Center in Kemmerer and the soon-to-open Sublette County Health in Pinedale, which would be the county's first hospital facility. Both facilities are supported by local ambulance services and regional air medical transport as needed.

The area is served by three public school districts: Lincoln County School District #1, Sublette County School District #1, and Sublette County School District #9. School enrollment in Lincoln County School District #1 and Sublette County School District #1 have remained relatively stable, while Sublette County School District #9 has experienced a long-term enrollment decline.

Table 3-21. Number of Key Public Service Providers

Public Service Provider Type	Lincoln County	Sublette County
Fire stations	2	6
Police departments	3	0
Police officers	31	7

Public Service Provider Type	Lincoln County	Sublette County
Emergency care hospitals	1	1 (opening 2025)
Public schools	3	9

Sources: City of Kemmerer (2025); Lincoln County Sheriff's Office (2025); South Lincoln Medical Center (2025); Sublette County Hospital District (2025); Sublette County Sheriff's Office (2025); Town of Diamondville (2025); Town of La Barge (2025); Wyoming Department of Education (2024); Wyoming Division of Criminal Investigation (2025); Wyoming State Fire Marshal (2025)

Note: Values reflect public service providers located within the portion of Lincoln and Sublette Counties that serve the area of analysis for this project. These figures do not represent all providers countywide.

3.7.2 Environmental Effects – No Action Alternative

Under the No Action Alternative, development would still occur but would not require the issuance of new BLM ROWs or federal APDs (see Section 2.1) because the project would still proceed entirely on private and state lands. As described in Section 2.1, the pipelines and well pads would be constructed in roughly the same region. As a result, the No Action Alternative would rely on the same labor markets, housing markets, and service infrastructure as the Proposed Action. Therefore, socioeconomic impacts would generally be similar in nature, extent, and distribution.

The temporary construction workforce under the No Action Alternative is expected to be the same as under the Proposed Action, approximately 50 to 75 workers, with a total temporary population increase of up to 77 people when accounting for workers accompanied by family members. As such, impacts to housing demand, employment and income generation, and public services (e.g., schools, emergency response, and infrastructure use) would be comparable to the Proposed Action and concentrated in the same towns and counties discussed throughout this analysis. Local spending by non-local workers and project-related purchases would continue to generate sales and use tax revenues for local governments.

However, because the development would avoid BLM-managed lands, the project would not generate any federal mineral royalties under the No Action Alternative. This would reduce the overall fiscal contributions of the project relative to the Proposed Action. Federal royalties are typically allocated to both federal and state governments and can represent a substantial source of revenue for infrastructure, education, or other services. Their absence under the No Action Alternative would represent a loss of these potential revenue streams.

3.7.3 Environmental Effects – Proposed Action

3.7.3.1 POPULATION AND DEMOGRAPHICS

Construction of the Proposed Action is expected to require a peak workforce of approximately 50 to 75 workers during the second and third quarters of 2026. It is anticipated that roughly 5% of workers would be hired locally, while the remaining 95% would be non-local and temporarily relocate to the socioeconomic analysis area. Given the short duration and modest scale of construction activity, the resulting temporary population increase is expected to be limited.

To estimate total population impacts, it is assumed that most non-local workers would be unaccompanied. However, based on standard assumptions used in recent infrastructure projects, 5% of non-local workers are expected to be accompanied by family members. Each accompanied worker is assumed to bring an average of 1.5 additional individuals (Statista 2023). Applying these assumptions, the total temporary population increase, including non-local workers and accompanying household members, is estimated to range from approximately 51 to 77 individuals**.** This represents a temporary increase of less than 0.3% relative to the 2020 population of the socioeconomic analysis area (28,793).

During operations, the pipeline system would be monitored remotely using SCADA systems. While no dedicated full-time staff are expected to reside in the area, existing personnel would occasionally travel to the site for inspection, maintenance, or response. These periodic site visits are not expected to result in any measurable long-term population increase in the socioeconomic analysis area.

3.7.3.2 EMPLOYMENT AND INCOME

Construction of the Proposed Action is expected to support approximately 50 to 75 temporary jobs during the 2026 construction season. A small portion of the workforce is anticipated to be hired locally, while the majority of workers would be drawn from outside the socioeconomic analysis area due to the specialized skills required. These non-local workers would temporarily relocate to the region, creating modest short-term economic activity for local businesses that provide lodging, food services, and other amenities.

Given the limited duration and scale of construction activity, the employment generated by the Proposed Action is not expected to materially alter unemployment rates, wage levels, or the distribution of employment across sectors in the socioeconomic analysis area.

During operations, the Proposed Action would not require dedicated full-time staff. Instead, the pipeline system would be monitored remotely via SCADA systems, with occasional site visits conducted by existing personnel. Therefore, operations-phase employment is not expected to generate meaningful changes in income or labor market dynamics in the socioeconomic analysis area.

3.7.3.3 HOUSING

Construction of the Proposed Action is anticipated to require 50 to 75 workers during the 2026 construction season. Of these, the majority are expected to be non-local and would require temporary accommodations in the surrounding region. Lodging options within serviceable communities, such as Pinedale, Marbleton, Big Piney, and Kemmerer, include a combined total of approximately 847 hotel and motel rooms and 360 RV sites, with an estimated peak season availability of around 303 units assuming 75% occupancy.

If all 75 workers require temporary accommodations and assuming the same proportional lodging preferences used in other recent energy infrastructure projects (20% in rental housing, 25% in RVs, and 55% in hotels or motels), this would equate to an estimated demand for approximately 15 rental units, 19 RV sites, and 41 hotel or motel rooms. These needs represent a small share of the available temporary housing stock in the serviceable area and can be accommodated under typical seasonal conditions.

The Proposed Action is not expected to require a dedicated on-site workforce during operations. Operational monitoring would be handled remotely, with occasional field visits by existing personnel. Therefore, no long-term increase in demand for permanent housing from the Proposed Action is anticipated.

3.7.3.4 TAXES AND REVENUE

Construction of the Proposed Action is expected to generate short-term fiscal impacts through the collection of sales and use taxes tied to workforce spending on taxable goods and services. The construction workforce, ranging from 50 to 75 workers during the 2026 construction season, would result in an anticipated temporary population increase of approximately 51 to 77 individuals (including accompanying family members) and would contribute to local economic activity in Lincoln and Sublette Counties.

Non-local workers and their families are expected to spend money on lodging, food, fuel, household goods, and recreational items during their stay in the area. These purchases would be subject to state and local sales and use taxes where applicable. Wyoming imposes a 4.0% statewide sales and use tax (Wyoming Statutes [WS] 39-15-103, 39-16-104). In Lincoln County, an additional 1.0% general purpose option tax applies, resulting in a total rate of 5.0%. Sublette County does not currently impose a local option sales tax; therefore, the total rate remains 4.0%. As a result, the specific location of worker accommodations and spending would influence the distribution and magnitude of tax revenues across jurisdictions.

Taxable spending by the construction workforce would include meals at restaurants, grocery and convenience store purchases, hardware or work-related supplies, and other day-to-day necessities. While some non-local workers may qualify for the state's lodging tax exemption for stays exceeding 30 consecutive days (WS 39-15-105(a)(viii)), most other goods and services consumed locally are expected to generate taxable transactions. Even at a modest per diem level, workforce expenditures can accumulate significantly during a multi-month construction period. For example, a per diem of $100 to $125 across 50 to 75 workers over several months could result in hundreds of thousands of dollars in local sales, generating thousands in sales tax revenue for the state and eligible local governments.

Local governments receive a share of the state's 4.0% sales tax based on a statutory distribution formula that allocates revenues to counties and municipalities in proportion to their population and point-of-sale location (WS 39-15-111, 39-16-111). In Lincoln County, the additional 1.0% general purpose option tax is retained entirely within the county and distributed among the county and its municipalities (such as Kemmerer, Diamondville, and La Barge). These revenues support a variety of local public services, such as street maintenance, emergency response, and community programs. While the scale of revenue from the Proposed Action would be modest relative to larger industrial developments, it may still provide a meaningful supplemental source of funding in small, rural communities with limited commercial tax bases.

During operations, the Proposed Action is not expected to require permanent on-site staff. However, the pipeline infrastructure would enable the extraction and delivery of natural gas and helium from federally managed leases. As such, the continued operation of the system is expected to generate long-term public revenue in the form of federal mineral royalties, severance taxes, and ad valorem (production) taxes.

Federal mineral royalties are collected on the gross revenue from the sale of federally managed resources such as helium and natural gas. Forty-eight percent (48%) of these royalties are returned to the state of origin, Wyoming, where they are distributed by the State Treasurer to counties, school districts, and other public entities in accordance with state statutes. These revenues are a critical source of funding for public education and infrastructure in producing counties, particularly in Sublette County, where the producing wells are located.

Severance taxes, collected by the state, are levied as a percentage of the value of extracted resources. Production (ad valorem) taxes on the value of minerals produced are assessed annually by county assessors and substitute for traditional property taxes on mineral assets. These production taxes are retained by counties and redistributed to local taxing entities such as school districts, special service districts (e.g., hospitals, pest control), and county general funds.

The precise value of these long-term revenue streams would depend on several factors, including the volume of production, market pricing for helium and natural gas, and applicable deductions for transportation and processing. While these values are not estimated in this EA, they are expected to provide recurring public revenue to Sublette County and the state.

In summary, although the workforce and duration of activity under the Proposed Action are limited, construction is expected to generate short-term fiscal impacts via sales and use tax revenues in communities where spending occurs. Over the longer term, operations facilitated by the Proposed Action would contribute to broader tax and royalty revenue streams from natural gas and helium development on federal lands, including federal mineral royalty distributions, severance taxes, and production taxes that support local schools, governments, and infrastructure in Sublette County.

3.7.3.5 PUBLIC SERVICES

The temporary population increase associated with project construction is estimated to range from approximately 51 to 77 individuals, including non-local workers and a small number of accompanying family members. This increase could result in a temporary, localized rise in demand for public services, including education, fire protection, law enforcement, and emergency medical services.

Public education services in Lincoln and Sublette Counties may experience minimal new demand. Although most non-local workers are expected to relocate without dependents, up to 5% may relocate with family. Based on regional demographic averages and 2020–2021 enrollment data, this could result in a total school enrollment increase of fewer than five students, distributed across school districts with available capacity. School districts in the socioeconomic analysis area currently operate below capacity and could absorb this minor, temporary increase without disruption (Wyoming Department of Education 2024).

Fire protection services in the project area are provided by a combination of county and municipal departments, including volunteer departments. Based on the estimated temporary population increase and standard resident-to-provider ratios, the increase in demand is equivalent to less than one full-time firefighter. Existing resources and mutual aid agreements are expected to be sufficient to respond to any increased demand (Wyoming State Fire Marshal 2025).

Law enforcement services may also experience a marginal increase in service demand. Both the Sublette County and Lincoln County Sheriff's Offices currently maintain sufficient staffing to serve their jurisdictions, including incorporated towns such as Kemmerer, La Barge, and Diamondville (City of Kemmerer 2025; Lincoln County Sheriff's Office 2025; Sublette County Sheriff's Office 2025; Town of Diamondville 2025; Town of La Barge 2025). The temporary workforce increase is not expected to meaningfully affect crime rates or service capacity (Wyoming Division of Criminal Investigation 2025).

Emergency medical services (EMS) and hospital-based care are expected to remain adequate. South Lincoln Medical Center and Sublette County Hospital District both operate with available inpatient and emergency capacity, and EMS response coverage across both counties is well established (South Lincoln Medical Center 2025; Sublette County Hospital District 2025).

No permanent workforce is expected to be associated with operations of this project component. Therefore, there would be no long-term in-migration of workers or dependents, and no anticipated impact on public services during operations.

As described in Section 3.2, several RFFAs are anticipated to overlap temporally and geographically with construction of this project. These include the BSO gas processing facility; construction of a landowner pond; ongoing agricultural grazing; and continued oil and gas development within the Dry Piney Unit. While not all future projects in the area have publicly available workforce projections, the known RFFAs are expected to collectively contribute to socioeconomic impacts.

The BSO Project is expected to require a peak construction workforce of up to 318 workers, including 302 non-local workers, resulting in a temporary population increase of approximately 325 individuals,

including a small number of accompanying household members. The workforce associated with this EA-specific project component, up to 75 non-local workers, is included in that total.

Although specific workforce numbers are not available for all other RFFAs, construction of this project is expected to occur concurrently with other development activities in the area, which would contribute to additive increases in labor demand, temporary housing occupancy, public service use, and local economic activity. The combined effect of overlapping workforces from multiple projects, even those with modest staffing needs, may lead to localized service strain and temporary resource shortages.

Effects may include the following:

- Temporary housing demand: While this project's demand would be modest, the combined workforce for BSO and other concurrent development may lead to short-term shortages of temporary housing during peak construction seasons, particularly in summer months. The broader BSO Workforce Housing Plan is expected to mitigate this impact across the various project components and RFFAs.
- Public services: Emergency services, fire protection, and law enforcement agencies may experience increased call volumes or longer response times due to decreased level of service from the aggregate population influx.
- Local economic stimulation: Spending by workers on lodging, food, fuel, and other services would support local businesses and may generate short-term tax revenues for affected jurisdictions. Combined tax and revenue generation would depend on the scale of aggregate expenditures across overlapping projects, and are expected to contribute to state and local fiscal streams. For the full BSO Project, construction-phase expenditures are projected to generate over $30 million in combined state and local sales and use tax revenues, primarily impacting Sublette County and the state. In addition, long-term operations are expected to yield more than $2.4 billion in severance taxes, ad valorem (production) taxes, and federal mineral royalties over a 40-year operational period (BSO 2025a). Other RFFAs, including the ongoing development of federal, state, and fee minerals in the region, are also expected to generate fiscal returns, as mineral production continues to serve as a primary source of public revenue and economic stability in the socioeconomic analysis area.
- Infrastructure and utilities: Should any temporary housing be developed in response to workforce needs, utility systems may experience localized increases in usage. However, such impacts are expected to remain within the service capacities of affected communities, and any necessary upgrades would be limited in scope and duration.

Overall, the temporary workforce associated with this project and overlapping RFFAs is expected to increase short-term demand for housing, services, and infrastructure. While this may result in localized service strain, it would also bring economic activity to the region, including increased worker spending, short-term business growth, and enhanced tax revenues that support county and state programs.

3.8 How would construction and operation of an H_2S pipeline in an area previously without H_2S infrastructure impact public safety, including workers, public residences, or other areas accessed by the public?

3.8.1 Affected Environment

The analysis area for impacts to public health and safety from the presence of H_2S pipelines in an area previously without H_2S infrastructure captures a radius of exposure (ROE) of up to 500 parts per million (ppm) from any federal, state, county, or municipal road or highway owned and principally maintained for public use. The analysis area also encompasses a 100 ppm ROE from any occupied residence, school, church, park, or place of business. In general, this amounts to a radial buffer of approximately 3,350 feet from pipeline or well pad infrastructure for the 100 ppm ROE and 585 feet for the 500 ppm buffer. For further reference, see Attachment C to the *Dry Piney Helium and Carbon Sequestration Project, Sublette County, Wyoming Hydrogen Sulfide Public Protection Plan* (HSPPP) (SWCA 2025b). The analysis area is used to assess effects on public health and safety from the operation and maintenance of a hydrogen sulfide pipeline.

The analysis area is immediately adjacent to and includes the Dry Piney Unit oil and gas field, an area with established oil and gas exploration, development, transportation, and processing operations with accompanying pipelines, drilling rigs, pumpjacks, traffic, and other related activities. As noted in Section 3.7, population density in the surrounding areas is lower than the national and state averages, with Sublette County averaging 1.8 persons per square mile. However, the introduction of H_2S facilities, including pipelines and disposal wells, into an area where such infrastructure has not previously existed presents a new risk profile for both public and worker safety.

Approximately 48 miles of public roads are present in the analysis area. Two county roads (Big Piney Road and Dry Piney Road) intersect the analysis area, and numerous access roads exist which are used to reach the existing oil and gas facilities in the area. Analysis of potential transportation and travel impacts can be found in Section 3.5. A number of structures are present in the analysis area, primarily associated with existing oil and gas exploration activities; of the 40 total structures in the analysis area, 19 are classified as industrial structures, six are classified as agricultural structures, six are classified as residential, and nine are unclassified. There are no towns, schools, or other public buildings in the analysis area.

H_2S is regulated in a variety of ways by the EPA, the Food and Drug Administration, and OSHA (Malone-Rubright et al. 2018). The gas is colorless, flammable, and extremely hazardous with a “rotten egg” smell and is produced by the breakdown of organic matter and occurs naturally in swamps, bogs, and volcanoes, and in crude petroleum and natural gas (U.S. Centers for Disease Control and Prevention [CDC] 2017; OSHA 2025). It can also be produced by industrial activities associated with petroleum refineries, natural gas plants, kraft paper mills, manure treatment facilities, wastewater treatment facilities, and similar facilities (CDC 2017). Given the nature of the Proposed Action and associated construction activities, there is a potential to encounter H_2S (SWCA 2025b) in the analysis area.

As stated above, H_2S can be produced from natural or industrial sources. Background air concentrations of H_2S from natural sources typically range between 0.00011 and 0.00033 ppm; in urban areas, air concentrations are generally less than 0.001 ppm (CDC 2017). Exposure limits for workers are set by OSHA, which are enforceable by the Occupational Safety and Health Act of 1970. According to OSHA,

the odor threshold (when H_2S first becomes noticeable) for H_2S is between 0.01 and 1.5 ppm; the odor becomes more offensive between 3 and 5 ppm, and prolonged exposure between 2 and 5 ppm, may cause nausea, tearing of the eyes, headaches, loss of sleep, or airway problems in some asthma patients (OSHA 2025). More serious health risks occur at higher concentrations of exposure (Table 3-22). When exposed to greater concentrations of H_2S, or when continuously exposed to low levels of H_2S, a person may lose their ability to smell the gas even though it is still present.

Table 3-22. Acute Symptoms of H_2S Exposure by Concentration

Concentration (ppm)	Symptoms/Effects
0.00011–0.00033	N/A (typical background concentrations)
0.01–1.5	Odor threshold (when rotten egg smell is first noticeable to some). Becomes more offensive at 3–5 ppm; becomes sickeningly sweet above 30 ppm.
2.0–2.5	Prolonged exposure may cause nausea, tearing of the eyes, headaches, or loss of sleep. Airway problems (bronchial constriction) in some asthma patients.
20	Possible fatigue, loss of appetite, headache, irritability, poor memory, dizziness.
50–100	Slight conjunctivitis ("gas eye") and respiratory tract irritation after 1 hour. May cause digestive upset and loss of appetite.
100	Coughing, eye irritation, loss of smell after 2–15 minutes (olfactory fatigue). Altered breathing, drowsiness after 15–30 minutes. Throat irritation after 1 hour. Gradual increase in severity of symptoms over several hours. Death may occur after 48 hours.
100–150	Loss of smell (olfactory fatigue or paralysis).
200–300	Marked conjunctivitis and respiratory tract irritation after 1 hour. Pulmonary edema may occur from prolonged exposure.
500–700	Staggering, collapse in 5 minutes. Serious damage to the eyes in 30 minutes. Death after 30–60 minutes.
700–1,000	Rapid unconsciousness, "knockdown" or immediate collapse within 1–2 breaths, breathing stops, death within minutes.
1,000–2,000	Nearly instant death.

Source: OSHA (2025)

In addition to health risks from inhalation of the gas, H_2S is highly flammable and can be explosive; if ignited, the gas burns to produce toxic vapors. Physical contact with liquid H_2S results in frostbite (OSHA 2025).

3.8.2 Environmental Effects – No Action Alternative

Under the No Action Alternative, development would still occur but would not require the issuance of new BLM ROWs or federal APDs and would not be located on BLM-managed lands (see Section 2.1). Under this alternative, approximately 22 miles of public roads, six agricultural structures, 19 industrial structures, two residential structures, and five unclassified structures intersect the analysis area. The overall population in the analysis area is low (see Section 3.7), and the roads are moderately trafficked (see Section 3.5). Seasonal recreation users (i.e., hunting, wildlife viewing), may occasionally be in the vicinity of the analysis area, however, these users have limited access to project infrastructure and are warned of possible hazardous conditions by signs throughout the area.

Impacts to workers or members of the public exposed to H_2S would vary depending on the severity of the leak and length of exposure to H_2S gas, with lower health risks at lower levels and durations of exposure gradually increasing in severity with increased exposure times and concentrations of H_2S (see Table 3-23). For instance, a smaller leak (0.01–1.5 ppm) with minimal exposure time could cause

offensive smells, or with prolonged exposure (2.0–2.25 ppm), some nausea, tearing of the eyes, headaches, or loss of sleep. Leaks with a slightly higher concentration (20 ppm) could induce fatigue, loss of appetite, headache, irritability, poor memory, and dizziness. Between exposure levels of 50 and 150 ppm, health risks begin to become more serious and could include slight conjunctivitis, respiratory tract irritation, coughing, loss of smell, altered breathing and drowsiness. These symptoms would gradually increase in severity over continued exposure time; death could occur if exposed to these concentrations for a duration of longer than 48 hours. Potential health impacts become more severe, and appear more quickly, above concentrations of 200 ppm, with the most severe risks occurring rapidly at exposure to concentrations between 500 and 1,000 ppm (staggering, collapse or rapid unconsciousness, and death).

Given the potential risk of exposure to H_2S in the analysis area, and as a means of minimizing risks to public health, BSO developed an HSPPP (SWCA 2025b) which provides principes and procedures necessary to avoid H_2S release where possible and establish response procedures in the event a release does occur. The HSPPP considers the guidance and standards provided by public health agencies such as OSHA and the CDC, as well as 43 CFR Subpart 3176, which identifies BLM national requirements and minimum standards of performance expected from operators when conducting operations involving oil or gas that are known or could reasonably be expected to contain H_2S. The HSPPP covers a ROE of up to 500 ppm from any municipal road or highway that is owned and principally maintained by federal, state, or county agencies.

While a large-scale, high-concentration leak of H_2S could have serious health effects on workers or people in the vicinity of the leak, (see Table 3-22), under the No Action Alternative the policies and procedures contained in the HSPPP would be followed to prevent potential H_2S releases and direct the response procedures in the event of a potential release. As noted in Table 2-2, BSO has committed to safety measures including safety signage posted within 500 feet of all wells and within 50 feet of all storage tanks; prohibition on smoking in project areas to control potential ignition sources; durable fencing surrounding all well sites and the processing facility; and temporary H_2S warning and danger signs placed in areas of high traffic. In addition to these measures, the HSPPP contains plans for implementing monitoring and alerting systems, emergency response procedures and contacts, and additional health, safety, and environmental policies and standards.

Compliance with applicable regulations setting exposure limits for workers, combined with the monitoring, alert-system, emergency-shutdown, and response procedures set forth in the HSPPP would reduce the likelihood of adverse effects to public health and safety. Implementation of the HSPPP would occur in accordance with 43 CFR Subpart 3176, OSHA 29 CFR Part 1910, and American National Standards Institute Z390.1-2010. Based on project design, implementation of design features and BMPs, and compliance with federal and state regulations, impacts from H_2S would mostly be avoided and minimized.

3.8.3 Environmental Effects – Proposed Action

Under the Proposed Action, development would occur on approximately 75 acres of BLM-managed lands. Under this alternative, 48 miles of public roads, six agricultural structures, 19 industrial structures, six residential structures, and nine unclassified structures intersect the analysis area. Seasonal recreation users (i.e., hunting, wildlife viewing) may occasionally be in the vicinity of the analysis area. These users would have limited access to project infrastructure, and signs throughout the area would warn of possible hazardous conditions. Impacts would be the same as described in the No Action Alternative, except that four additional residential structures would be present, and five additional unclassified structures would be present.

Potential impacts would be the same as described in the No Action Alternative and vary depending on the concentration of gas and length of exposure. As with the No Action Alternative, the policies and procedures in the HSPPP would be followed to minimize and prevent adverse health impacts from potential H_2S leaks. Implementation of health, safety, and environmental policies and standards regarding H_2S would occur in accordance with 43 CFR Subpart 3176, OSHA 29 CFR Part 1910, and American National Standards Institute Z390.1-2010. Based on project design, implementation of design features and BMPs, and compliance with federal and state regulations, impacts from H_2S would mostly be avoided and minimized.

As discussed in Section 3.8.1, H_2S is a naturally occurring gas that may be released by industrial activities, such as oil and gas production. Because the analysis area is located in an area with ongoing oil and gas production, the analysis area for public health and safety is the same as the analysis area used above, including the adjacent Dry Piney Unit oil and gas field.

The Proposed Action, when combined with nearby and ongoing oil and gas production, could increase the potential for a H_2S leak in the analysis area. However, the incremental contribution of the Proposed Action on the impacts to public health and safety from a potential H_2S leak is anticipated to be minimal if all applicable laws, regulations, safeguards, and procedures are followed.

Operations involving subsurface disposal of fluids, such as CO_2 and H_2S, to deep geologic formations is a standard practice in oil and gas exploration. Based on numerical simulations conducted for the State Class II disposal well permit applications and MRV Plan, the predicted temporal and spatial extent of the disposal fluids indicate that, over the 50- and 100-year modeling periods, the disposal plume will migrate into adjacent BLM-managed pore space and subsurface mineral estate (Figure 3-5) (BSO 2025b). The BLM cannot determine the exact location and nature of the disposal plume; however, such migration has the potential to impact existing or future BLM oil and gas mineral leases (leases). There are 33 producing leases (held by actual production or held by allocated production) that overlap the modeled 50-year plume and an additional 27 producing leases (held by actual production or held by allocated production) that overlap the modeled 100-year plume. There are a total of 24 non-producing leases of which 8 are deemed closed that are within the modeled 100-year plume. The disposal plume could affect production rates from and potentially increase costs for active or planned leases; however, disposal intervals would range from approximately 14,750 feet to 15,055 feet true vertical depth for all five disposal wells which is deeper than typical oil and gas wells in the area, which are usually drilled at depths of 4,000 to 10,000 feet. Therefore, the likelihood of future conflicts with existing mineral leases is low. There is no anticipated impact to existing helium production wells. The 100-year plume is approximately 5.8 miles and 4 miles to the east and west respectively from the nearest existing and/or planned helium production well. Additionally, due to the depths of disposal there would be no impacts to other types of minerals that could be present in the area such as trona or sands and gravels.

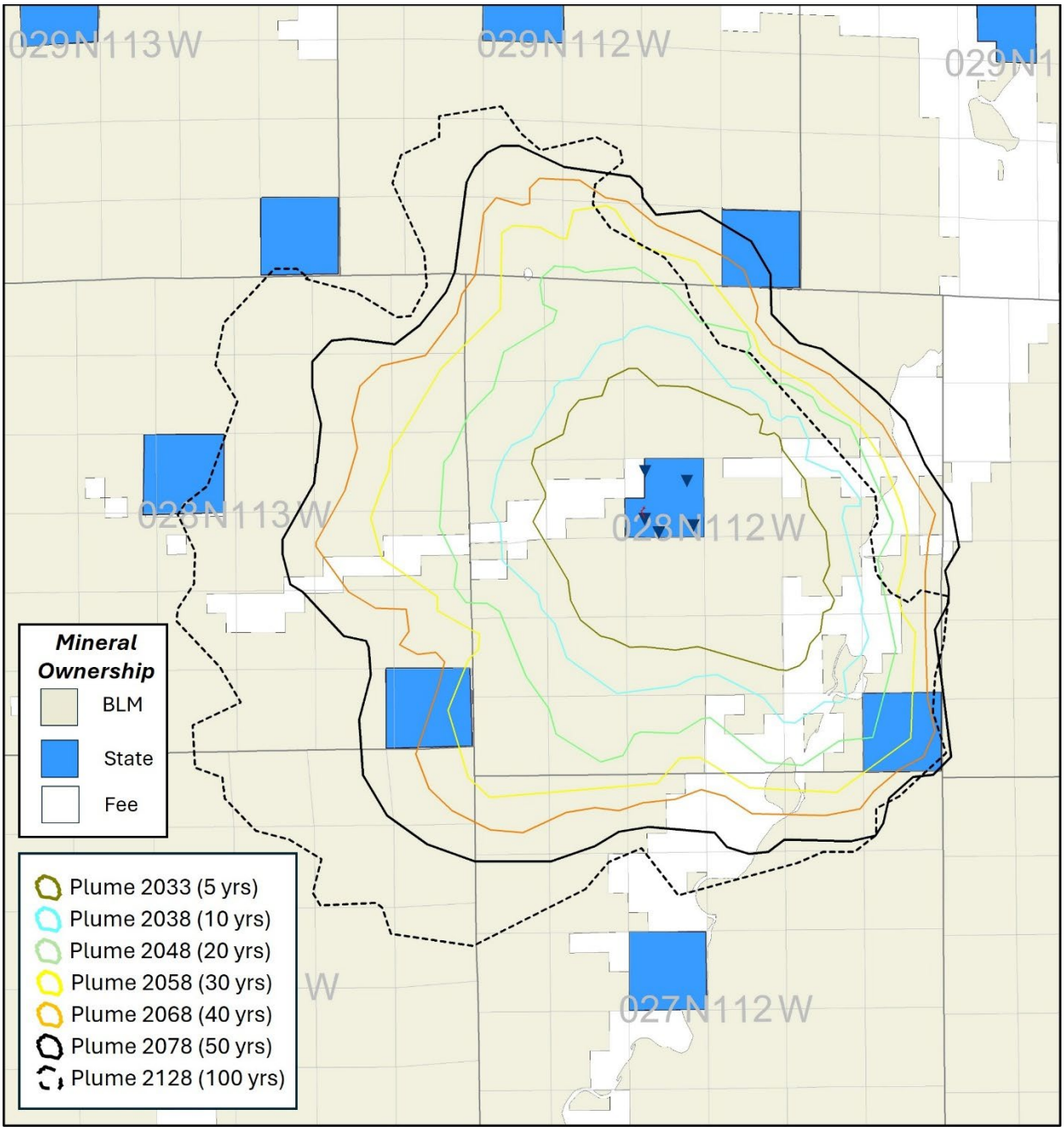

Figure 3-5. BSO Disposal Well Plume and Mineral Estate Overlap.

4 CONSULTATION AND COORDINATION

The BLM PFO initiated tribal consultation for the BSO Dry Piney Helium and Carbon Sequestration Project by sending letters on March 3, 2025, to the leadership and Tribal Historic Preservation Officers (THPOs) of interested tribes. Follow-up emails were sent on March 12 and 19, 2025.

The Northern Arapaho Tribe responded, requesting a site visit and tribal monitoring for all eligible cultural sites potentially impacted by the project. In response, BLM coordinated with the project's environmental consultants and the operator to avoid all eligible sites. In August 2025, the project was rerouted to ensure complete avoidance of these sites.

On August 19, 2025, BLM provided an update to all consulted tribes, including a revised project report showing no impacts to eligible sites. As the determination of effect was revised from "Adverse Effect" to "No Historic Properties Affected," no further formal consultation letters were issued.

Subsequent outreach efforts included follow-up calls and emails. One additional tribe, the Comanche Nation, responded in September 2025, concurring with the updated determination and declining further consultation.

In October 2025, the BLM PFO concurred with the Wyoming State Office Tribal Liaison that the outreach conducted for this project constituted a good faith effort and was consistent with applicable laws, regulations, and policy. This determination aligns with the BLMs responsibilities under:

- Section 106 of the National Historic Preservation Act (NHPA), which requires federal agencies to consult with Tribal Nations when undertakings may affect historic properties of cultural significance to Tribes (36 CFR § 800.2(c)(2)).
- BLM Manual Section 1780 and Handbook H-8160-1, which provide procedural guidance for Native American consultation and emphasize the need for early, ongoing, and documented good faith efforts (BLM H-8160-1).

Tribes contacted for consultation included:

- Comanche Nation
- Ute Tribe of the Uintah and Ouray Reservation
- Northern Arapaho Tribe
- Shoshone-Bannock Tribe of the Fort Hall Reservation
- Blackfeet Tribal Business Council
- Eastern Shoshone Tribe of the Wind River Reservation
- Fort Belknap Reservation
- Crow Creek Sioux

The following agencies and organizations were consulted with and invited to participate as cooperating agencies for the Dry Piney Helium and Carbon Sequestration Project through Memorandum of Understanding with the BLM PFO. The cooperating agencies participated in the NEPA process by contributing technical expertise, reviewing draft documents, and providing input on issues within its jurisdiction, including soil, water, vegetation, and wildlife resources. A cooperating agency meeting was held on April 29, 2025, with several updates and review periods throughout the project lifespan, to facilitate coordination and ensure early and meaningful involvement. This collaboration supported the development of a thorough and informed EA.

- Sublette County Conservation District
- Sublette County
- Town of La Barge
- Lincoln County

- Wyoming Game and Fish Department
- Wyoming Oil and Gas Conservation Commission
- Wyoming Department of Environmental Quality
- Wyoming State Engineering Office

5 LIST OF PREPARERS

Table 5-1 lists the individuals responsible for preparing, reviewing, and disseminating this EA. The BLM, as lead agency, provided overall guidance to ensure this EA process is consistent with all applicable regulations and requirements.

Table 5-1. List of Preparers and Technical Specialists

Name	Agency/ Organization	Responsibility
Travis Chewning	BLM - PFO	Project Manager
Brian Roberts	BLM - PFO	Water Resources, Vegetation, Air Quality, Minerals
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Shannon Groves	BLM - PFO	Cultural/Native American Concerns
Mark Thonhoff	BLM - PFO	Wildlife
Alex Gardiner	BLM - PFO	Fisheries
Ross Dary	BLM - PFO	Fire and Fuels
Colton Maurer	BLM - PFO	Socioeconomics
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Amanda Nicodemus	SWCA	Project Manager
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Bill Karl	SWCA	Air Quality
Naomi Ollie	SWCA	Cultural Resources
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Stephanie Trapp	SWCA	Mule Deer
Mitchell Stallman	SWCA	Socioeconomics
Emily Waters	SWCA	Public Health and Safety

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APPENDIX A

Scoping Comments

Organization	Comments
Public	I am completely in support of this project. The USA, Wyoming and Sublette County all will benefit.
Public	I am writing in support of the proposed project. The U.S. is in desperate need of an additional source of safe, secure, and environmentally responsible helium supply and this project is an excellent opportunity to satisfy all those goals. The helium resource on the LaBarge platform is well understood and is currently being underexploited by Exxon. The current project will add additional take points in the reservoir near the crest of the dome (the area with the highest helium concentration) and responsibly process the raw gas to extract helium, returning the residual gases, primarily CO2, to be safely geologically sequestered on the flank of the structure. In addition to its familiar use in party balloons, helium is a strategically important gas, used extensively in manufacturing of microchips, optical fibers, in advanced welding techniques, combined with oxygen as a diving gas and in hyperbaric medicine, in liquid form as a coolant for the strong magnets found in magnetic resonance imaging (MRI) machines, and many other crucial applications. Having a safe, secure, responsibly developed DOMESTIC source of helium is vital to our national security and our economy. The sequestration of CO2 produced by this project is an important ancillary benefit. In addition to the obvious benefit of avoiding release of additional CO2 into the atmosphere, sequestration will help advance technologies that can be utilized by other CO2 producers including power plants, cement manufacturers and chemical manufacturers. Continued evolution of technology should help drive down initial capital costs and lower long term operating costs as practical experience is gained through this project. Finally, this project will provide substantial economic benefits in the form of good-paying jobs during construction and operation and substantial tax and royalty payments through its long predicted life. I strongly support this project and urge its careful consideration and prompt approval.
Public	I fully support the approval of the proposed Dry Piney Helium and Carbon Sequestration Project so that it can proceed as soon as possible. The Dry Piney area has been an oil and gas development area since the 1940s and Exxon has been conducting helium extraction operations from wells in the immediate since the 1980s. The United States need to develop new sources of helium production rather than becoming increasingly dependent on foreign sources. With the proposed injection and sequestration of CO2 and acid gas there is no reason to require extended permitting reviews and delays. In addition to resulting in the production of needed helium, the significant expenditures and investment required to get this project completed will result in real economic benefits to the citizens of Wyoming and the State of Wyoming. Thank you for the opportunity to comment and I hope the project receives timely approval.
Public	I very much support this project and urge that it be approved expeditiously. Helium is a strategic resource of great importance to the U.S. economy and to our national security. Other helium sources are either in regions of the world that are politically unstable (such as the Middle East) or potentially hostile to the United States (Russia). Adding a significant, secure helium resource base here in the U.S. is highly desirable to ensure that adequate domestic availability of this critically important element will exist in the future. I urge that this project be approved, and that the approval process be expedited.
Public	I support a finding of no significant impact (FONSI) on Blue Spruce Operating, LLC's proposed Dry Piney Helium and Carbon Sequestration project. The economic benefits far outweigh the environmental impacts, the latter of which the proponent has put forward a mitigation plan that represents best practice for projects of this scale. Helium gas is an essential resource used in MRI machines (for cooling superconducting magnets), AI/ data centers, quantum computing, welding, space exploration (NASA for cryogenics, purge gas, other) and many industrial applications. Global demand has been projected to grow by 30% or more through 2030, with China alone importing 15% of global supply. Two decades ago the US supplied roughly 80% of worldwide helium market from helium gas extracted as a byproduct of natural gas production, primarily in the Hugoton-Panhandle field in Kansas and Oklahoma. The US remains the largest helium producer but new sources are needed to meet growing demand, with significant national security considerations. The project sponsors have also put forward an acid gas carbon sequestration plan that advances the potential for commercialization of technologies that must be part of any long-term decarbonization plan for the US and the rest of the world. The project will sequester up to 4.5 million tonnes of CO2 per year, and produce 80 million cubic feet per day of clean-burning natural gas, which as a substitute for coal in electric power generation has enabled the US to lead the world in reducing CO2 emissions over the past two decades. The project's environmental impacts - primarily surface disturbances that are temporary - are responsibly addressed with a mitigation plan that protects important wildlife habitat. The project sponsors have a proven track record, working with the BLM and other federal and state agencies, in the responsible

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	development and implementation of energy projects in Wyoming, for example, the Pinedale BLM office's Pinedale Anticline natural gas project Record of Decision in 2008, at the time a major breakthrough in protecting sensitive wildlife habitat on a large scale natural gas development project. The project also generates temporary construction jobs and permanent, relatively high-paying jobs for the longer term. I urge the BLM to reach a FONSI for the Dry Piney Helium and Acid gas sequestration project.
Public	Submitting on behalf of Greg Eiden, who submitted his comment to me via email. I disapprove highly of the project due to the crucial winter range for Elk and Deer populations on the public and private lands. The towns don't have infrastructure to handle construction employees like the Exxon project of crime brought to the areas. Then the sour gases involve is being brought pretty close towns and nearby ranch's and this is just a few of the reasons this is bad idea, and I hope BLM will take this seriously and not just profit because if not handle right the gases alone are deadly for man and animals so, please do not ok project!!!!! Thanks
Public	There is no benefit to this project for the average American citizen. Only those who own this company and who they can sell their goods to. The people of America want beauty, nature, and freedom. THOSE are what make America great, not carbon sequestering and business moguls. The best thing you can do to manage our land is leave it untouched and protected from greed and ambition. I highly oppose this project, and I am CERTAIN you will find I am far from alone. Please, in the name of the American people, protect this land
Public	As an energy executive, father, patriot, and outdoorsman I fully support this Dry Piney Helium Project. Domestic helium production is important to our country and its citizens due to its many beneficial uses. The Blue Spruce Team has done an outstanding job identifying, managing, and mitigating environmental impacts. Balanced, well planned projects on Federal Lands like this is exactly what our Country needs.
Wyoming Oil and Gas Conservation Commission	The Wyoming Oil and Gas Conservation Commission (WOGCC) has reviewed the Dry Piney Helium and CO2 Sequestration Project proposed by Blue Spruce Operating, LLC and supports approval of the project. There are several minor issues that should be addressed in the information submitted regarding the project. First is that the WOGCC should be listed in the Hydrogen Sulfide Public Protection Plan Appendix G, Section 2.10.3 Notifications Table 2. Agencies for Emergency Notifications. Table A-6 in Attachment A of Appendix G notes that Chapter 3, Section 43 of the WOGCC Rules as the Carbon Sequestration Utilization Process. Chapter 3, Section 43 of the WOGCC Rules is the Carbon Sequestration Unitization Process. This should be corrected so the process undertaken in that section of the WOGCC's rules is understood. In addition, since this section of the WOGCC rules has no relation to H2S, it is not clear why this table is included in Appendix G. Table A-6 also references Wyoming Statutes § 30-5-314 to 317 as UIC Class II Wells & Class VI Wells. These Wyoming Statutes actually relate to Carbon Sequestration Unitization, similar to the rules referenced in Ch. 3 Section 43. These referenced statutes are not related to Class II UIC wells and do not reference H2S requirements at the Class II wells sites or at acid gas disposal wells. It also appears a reference to Class II wells converting to Class VI wells is oversimplified at best and likely incorrect. A reference of Class II conversion to Class VI is much more detailed then the statement included in Table A-6. It is also not clear why a reference of Class II to Class VI UIC well conversion would be included in Appendix G since it has no relation to H2S. This reference should be deleted in its entirety, but if not deleted, then should be moved to a more appropriate section of the document. The WOGCC wishes to participate as a cooperating agency in any future BLM actions related to this project. You may contact me at tom.kropatsch@wyo.gov or Joe Scott at joe.scott@wyo.gov for any future action or with any questions.
Wyoming Dept. of Environmental Quality	Dear Mr. Cogswell, On behalf of the Wyoming Department of Environmental Quality (WDEQ), we appreciate the opportunity to comment on the Dry Piney Helium and Carbon Sequestration Project. WDEQ is charged with conserving and enhancing the quality of Wyoming's environment for the benefit of current and future generations. We envision a future where vibrant economic development and prosperity are achieved while providing sound and sensible environmental protection that protects human health and the environment. It is important to note as a foundation for our comments that WDEQ has been delegated primacy over multiple programs by the federal government - water, air, solid and hazardous waste, abandoned mine land reclamation, coal mining, and underground injection control (UIC) wells, including class VI, for the geologic sequestration of carbon dioxide. In addition, WDEQ permits and regulates all minerals mined in the state such as gravel and bentonite. WDEQ has also received an agreement state status with the Nuclear Regulatory Commission for uranium mining and processing in the State of Wyoming. Wyoming

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	received primacy delegations and agreement status as a result of federal agencies agreeing that Wyoming and WDEQ have the environmental, permitting and regulatory structure in place to ensure that any activity within WDEQ's authority is handled in a manner that protects human health and environment. WDEQ offers the following comments: Air Quality The proposed project is located in the Upper Green River Basin (UGRB) Ozone Nonattainment Designation Area. Therefore, the proposed facility may require Lowest Achievable Emission Rate (LAER) and emission offsets, depending on the source's size and emissions. Water Quality In accordance with Title 35, Chapter 11 of the Wyoming Statutes and Wyoming's Water Quality Rules, the Wyoming Department of Environmental Quality-Water Quality Division (WDEQ-WQD) is responsible for the protection and restoration of the quality of waters of the state. The WDEQ-}'\TQD also implements portions of the federal Clean Water Act, including development of surface water quality standards, identification of impaired waters, and development of total maximum daily loads for impaired waters under Section 303; inventorying water quality under Section 305; discharge permitting under Section 402; water quality certifications under Section 40 and addressing nonpoint sources of pollution under Section 319. As such, WDEQ is providing the folldwing comments to help facilitate the review of potential impacts to water quality and ensure the project analysis adequately reflects and adheres to Wyoming's Water Quality Rules. These comments are not intended to be comprehensive; rather, they are intended to help inform the Environmental Assessment (EA) for the Project and help identify all water resources potentially impacted by the Project, the type(s) of potential impacts, the steps to avoid or minimize impacts, proposed mitigation measures, and applicable local, state, and federal permits that may be necessary for the Project. It is incumbent upon the project proponent to conduct additional research to ensure the EA accurately identifies water resources and WQD requirements. The WDEQ recommends the EA identify the following surface and ground waters in proximity to the Project area, the potential impacts to the quality of those waters from the Project, and the steps to minimize those impacts. Surface Waters. WDEQ identified Beaver Dam Creek, Black Canyon Creek, Dry Piney Creek, Hogarty Creek, and multiple unnamed drainages in proximity to the Project area. Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards) classifies Black Canyon Creek, Dry Piney Creek, and Hogarty Creek as Class 2AB waters, for which the water quality is protected to support drinking water, cold-water game fish, nongame fish, aquatic life other than fish, recreation, agriculture, industry, wildlife, and scenic value designated uses. Moreover, Chapter 1 (Wyoming's Surface Water Quality Standards) classifies Beaver Dam Creek and multiple unnamed drainages as Class 38 waters, for which the water quality is protected to support aquatic life other than fish, recreation, wildlife, industry, agriculture, and scenic value designated uses. The water quality criteria and antidegradation provisions established for the protection of these designated uses are further described in Wyoming's Surface Water Quality Standards found at https: //deq.wyoming.gov /water-quality/watershed-protection/surfacewater-quality-standards/. WDEQ Monitoring Locations. WDEQ-WQD has conducted chemical, biological, and physical monitoring on Dry Piney Creek in proximity to the Project area. WDEQ-WQD can provide this data upon request. Assessed Waters. WDEQ's Water Quality Assessment Program evaluates whether surface waters of the state meet the applicable Wyoming Surface Water Quality Standards found in Wyoming Water Quality Rules, Chapter 1. As directed by Sections 305(b) and 303(d) of the federal Clean Water Act, the findings from water quality assessments are compiled into Wyoming's Integrated 305(b) and 303(d) Report and submitted to the United States Environmental Protection Agency biennially. Assessed waters that are not attaining surface water quality standards are included in the 303(d) List of impaired waters and prioritized for restoration planning. According to Wyoming's 2020 Integrated 305(b) and 303(d) Report, no surface water in proximity to the Project area has been listed for not attaining surface water quality standards. Additional information can be found at https: // wdeq.maps.arcgis.com/ apps /we bappviewer/ index.html? id=S2 Sb 2 f daff4 94f bea06 2 Sc49c2 02 6 3f 1. Public Water Supply. WDEQ-WQD's records indicate the Project is in proximity to public water supply (PWS) intake(s). Please contact the WDEQ-WQD to obtain further information about the identified PWS. We recommend the project proponent coordinate directly with the PWS regarding potential impacts. The EA should identify the PWS, evaluate potential impacts to the PWS, and describe actions that will be implemented to protect the PWS. Sensitive Aquifer. WDEQ's evaluation indicates a shallow sensitive aquifer is located within the project area. Sensitive aquifers are vulnerable to contamination due to their proximity to the surface and the absence of an overlying aquitard. Groundwater in these aquifers tends to flow rapidly through unconsolidated alluvial deposits, which can lead to the rapid spread of any contamination. As such, the WDEQ recommends the project proponent identify and minimize potential impacts to groundwater through measures such as implementation of best management practices (BMPs) to prevent surface spills in the area during construction and operation. Additional information is available at http://deq.wyoming.gov/water-quality/groundwater under the "Monitoring Data" section. In addition to the above recommendations and information, the WDEQ highlights the common water quality permits and requirements that may apply to the

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	project and should be noted in the EA, depending on the eventual scope of the project. This is not a comprehensive list of all applicable local, state, and federal permits that may be needed for the project. The Bureau of Land Management must ensure that all applicable local, state, and federal permits are included in the EA. Wyoming Pollutant Discharge Elimination System (WYPDES) Permits If the project will result in the point source discharge of pollution into surface waters of the state, including those associated with wastewater or drinking water treatment facilities, industrial facilities, mines, stormwater, temporary discharges associated with construction activities, discharges to and mitigation for isolated wetlands, pesticide applications, or other long-term discharges, the Project will require coverage under one or more permits issued by the Wyoming Pollutant Discharge Elimination System (WYPDES) Program consistent with Wyoming Water Quality Rules, Chapter 2 (Permit Regulations for Discharges to Wyoming Surface Waters). Surface waters of the state include all perennial, intermittent, and ephemeral drainages, lakes, reservoirs, c1t1d wetlands which are not human-made retention ponds used for the treatment of municipal, agricultural, or industrial waste; and all other bodies of surface water, either public or private which are wholly or partially within the boundaries of the state. WYPDES permits contain effluent limits and conditions to ensure discharges of pollution comply with Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards). Additional information is available at https: //deq.wyoming.gov /water-quality/wypdes/. The following WYPDES permits may be applicable to the project: • Individual Discharge Permit. If the project will result in the discharge of pollution into a surface water of the state a WYPDES Individual Discharge - =>ermit will be required. Additional information is available at https: //deq.wyoming.gov /water-quality/wypdes/discharge-permitting/. • Construction Stormwater General Permits. For ;,roject construction activities that will clear, grade, or otherwise disturb a cumulative one or mare acres, coverage under a WYPDES Construction Stormwater General Permit is required. Disturbance includes construction of the project and associated access roads, construction of mitigation sites, borrow and stockpile areas, and equipment staging and maintenance areas. WYPDES offers two Construction Stormwater General Permits: Large Construction General Stormwater Permit (LCGP) and the Small Construction General Stormwater Permit (SCGP). Coverage under the LCGP is required for construction activities that cumulatively disturb five or more acres whereas the SCGP is reserved for construction activities that cumulatively disturb between one and five acres. For coverage under the LCGP, a Notice of Intent and a complete Stormwater Pollution Prevention Plan (SWPPP) must be submitted prior to beginning construction activities. Additionally, if the project boundary falls within a Greater Sage-Grouse Core Area or a Mule Deer and Antelope Migration Corridor, the owner or operator must coordinate with the Wyoming Game and Fish Department to ensure that the project is consistent with the Governor's Executive Orders 2019-3 and 2020-1, respectively. A map of sage-grouse core areas in Wyoming is available at https: //wgfd.wyo.gov /wyoming-wildlife /sage-grouse-management/sage-grouse-data. A map of mule deer and antelope migration corridors can be found at https: //wgfd.wyo.gov /wyoming wildlife /movement-matters /big-game-migration. Additional information is available at https: //deq.wyoming.gov /water-quality/wypdes/discharge-monitoringreports/ storm-water-permitting/. • Temporary Discharge Permits. If the-project involves the temporary discharge of pollution associated with, but not limited to, construction dewatering, disinfection of potable water lines, well pump testing, or pipeline hydrostatic testing into a surface water of the state, coverage under the WYPDES General Permit for Temporary Discharges Involving Construction Activities is required. Additional information is available at https: //deq.wyoming.gov /waterquality/ wypdes/discharge-permitting/. • General Permit for Wetland Mitigation. If the project is not permitted for mining activities through the Wyoming Department of Environmental Quality - Land Quality Division and will result in the loss or destruction of more than one cumulative acre of (1) naturally occurring isolated wetlands or (2) human made isolated wetlands used to mitigate the loss of naturally occurring wetlands, mitigation and a WYPDES permit for wetland mitigation is required. Isolated wetlands are those wetlands, as defined in Wyoming Statutes 35-11-103(c)(x), that do not meet the federal definition of Waters of the United States at 33 CFR Part 328 and 40 CFR Part 120 but do meet the state's definition of waters of the state, as defined in Wyoming Statutes 35-11-103(c)(vi). Additional information is available: http://deq.wyoming.gov/wqd/discharge-permitting/. • Colorado River Basin Salinity. WDEQ has identified that the project is located within the Colorado River Basin of Wyoming and is therefore subject to the Water Quality Standards for Salinity, Colorado River System. If the project will require a Wyoming Pollutant Discharge Elimination System (WYPDES) permit, the project will be subject to the Policy for Implementation of Colorado River Salinity Standards through the WYPDES Permitting Program. Additional Information is available at https: //www.coloradoriversalinity.org/. 401 Water Quality Certification. If the project will result in the discharge of a pollutant into a water of the United States that requires coverage under a federal license or permit, a Clean Water Act Section 401 Water Quality Certification from the WDEQ-WQD must be secured to ensure the discharge complies with Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards). In Wyoming, 401 Water Quality Certifications are required for

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	discharges that need coverage under a United States Army Corps of Engineer's Clean Water Act Section 404 dredge and fill permit, United States Army Corps of Engineer's Rivers and Harbors Act Section 10 permit, and a Federal Energy Regulatory Commission (FERC) hydropower license. All conditions of the 401 Water Quality Certification are included as enforceable conditions of the federal permit or license. Additional information is available at https: / /deq.wyoming.gov /water-quality/watershed-protection-2/cwa-section-401-turbiditywetland/ 401-water-quality-certification /. Temporary Turbidity Waiver. If construction of the project will result in an increase in turbidity for surface waters designated for protection as drinking water supplies or fisheries, a temporary turbidity waiver is recommended. In accordance with Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards), the WDEQ-WQD Administrator may authorize temporary increases in turbidity above the numeric criteria on a case-by-case basis for construction related activities and may impose whatever controls, monitoring, and best management practices necessary to maintain and protect all water uses. Additional information is available at https://deq.wyoming.gov /water-quality/watershed-protection-2 /cwa-section-401-turbidity-wetland/. Spills Reporting. Wyoming Water Quality Rules, Chapter 4 requires, unless specifically exempted, any person owning or having control over oil or a hazardous substance which, after release, enters, or threatens to enter waters of the state to immediately notify the WDEQ-WQD of the type, quantity, and location of the release. Spills can be reported to WDEQ by phone at 307-777-7501 or online at http:/ /wyospills.org/. Groundwater Permits and Requirements. Groundwater Classification. If a subsurface discharge or other activity has the potential to affect groundwater quality, such as through in situ mining operations, groundwaters of the State must be classified as outlined in Wyoming Water Quality Rules, Chapter 8, Quality Standards for Wyoming Groundwaters. Additional information is available at http: //deq.wyoming.gov/wqd/groundwater /. Nonpoint Source. For activities that do not require WDEQ-issued permits, the WDEQ encourages project proponents to minimize potential impacts to surface and ground water quality through the implementation of best management practices (BMPs). These include, but are not limited to, practices associated with stream and lakeshore restoration, road construction and maintenance, rangeland management, wildland fire, silviculture, urban development, recreation management, and vegetation and mineral management. The EA should identify the BMPs that will be used during construction and operation to minimize nonpoint sources of pollution. Additional information on non point source pollution and manuals of recommended BMPs are available at https: //deq.wyoming.gov /water-quality/watershed-protection/nonpoint-source/. If you have any questions or need additional information, please feel free to contact Keith Guille at 3071777-6105 or keith.guille@wyo.gov. Sincerely, Todd Parfitt Director Wyoming Department of Environmental Quality
Wyoming State Geological Survey	The Wyoming State Geological Survey received your request for comments. Members of our staff have reviewed the Dry Piney Helium and Carbon Sequestration Project materials received. We have no comments to submit.
State of Wyoming Game and Fish	Dear Travis Chewning, The staff of the Wyoming Game and Fish Department (Department) has reviewed the proposed Temporary Use and Right-of-Way Plan of Development (POD) for this project in Sublette County. The Department is statutorily charged with managing and protecting all Wyoming wildlife (W.S. 23-1-103). Pursuant to our mission, we offer the following comments for your consideration. The project is a helium and natural gas extraction and carbon sequestration effort. Infrastructure consists of wells and well pads, pipelines, access roads, an acid-gas injection plant, a gas-fired power plant, and a natural gas processing facility. The project footprint overlaps private, state, and Bureau of Land Management (BLM) lands. On BLM lands specifically, the project includes buried pipelines and access roads. No new access roads will be built but existing roads will be improved. Most of the remainder of the development will occur on private land. The total, permanent right-of-way footprint for pipelines and utility corridors across all landownership types is 103.5 acres, all of which will be reclaimed after construction. Primary wildlife concerns include overlap with mule deer crucial winter range, elk crucial winter and crucial winter-yearlong range, elk parturition area, impacts to Wyoming Species of Greatest Conservation Need (SGCN), and impacts to aquatic habitat. All of the proposed infrastructure is outside of sage-grouse core areas and greater than 2 miles from any non-core area occupied leks. There is also no overlap with identified or designated antelope or mule

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	deer migration corridors. As such, the project does not require compliance with the Sage-Grouse Executive Order 2019-3 or the Migration Corridor Executive Order 2020-1. As noted in the POD, Blue Spruce Operating (BSO) met with Department personnel and discussed the original layout. The current project footprint reflects those discussions and we appreciate BSO's commitment to alter the project layout and minimize project-related impacts to wildlife and wildlife habitat. The following are the Department's recommendations and considerations to further reduce unavoidable project-related impacts to terrestrial and aquatic wildlife. Terrestrial Recommendations: Protect Big Game – As noted, the project footprint overlaps important big game habitats including mule deer crucial winter range, elk crucial winter and winter-yearlong range, and an elk parturition area. Mule deer move seasonally through the project area, traveling between summer habitats in the Wyoming and Salt River mountain ranges and winter habitats delineated in part by the crucial winter range boundaries. Mule deer use of the project area is well documented and the crucial winter range in the vicinity of the project is among the most valuable wintering areas for the Wyoming Range mule deer herd. Mule deer use has been documented through collar data (Figure 1) and observations collected by Department personnel while in the field and recorded in our Wildlife Observation System database (Figure 2). The Department is able to provide the available data, subject to our data sharing policy, for the pending Environmental Assessment (EA) so that impacts to big game are thoroughly considered. The Department acknowledges and appreciates BSO's current commitments to avoid impacts to big game. We specifically support the following components of the POD relative to big game: • Minimize permanent development within big game crucial winter ranges. • Adhere to crucial winter range seasonal stipulations. • Backfill trenches quickly to avoid barriers to wildlife movement and injury. • Reclaim pipeline corridors immediately after construction is completed. • Ensure successful reclamation. • Co-locate with existing disturbance to the extent possible. To further reduce project-related impacts to big game, the Department recommends the following additional considerations: • Add clarifying language to better capture the exception approval process for project activities that may occur during the big game winter stipulation period. • If exceptions are pursued, the Department will request limiting construction activities to 8AM-6PM. • Clarify how it will be determined that wildlife are impeding successful vegetation establishment in reclaimed areas. • Avoid fence construction unless necessary for human health and safety or by law. Use wildlife friendly fencing where fencing is needed and use of wildlife friendly fencing specifications are suitable. Consider secondary impacts associated with increased traffic and human presence during operations in the EA. • Use remote monitoring equipment during operations to minimize the need for regular onsite staff. Protect Species of Greatest Conservation Need – The project footprint overlaps the distribution of 79 SGCN. The POD provides limited direction regarding minimization efforts for SGCN, with the exception of evaluating impacts to eagles and migratory birds and clearing vegetation outside of the breeding season. We offer the following recommendations for consideration as the project advances acknowledging some components may be a requirement of BLM approval. Nesting Raptor Surveys – The landscape around the project contains suitable raptor nesting habitat and known raptor nest sites. Raptors and their nests and young are protected under federal law, and many species are SGCN. Disturbances such as construction activity and human presence can affect nesting success and potentially impact local population numbers and viability. As such, the Department recommends: • Perform surveys for nesting raptors within 1 mile of project infrastructure prior to any vegetation clearing or ground-disturbing activities if activities will occur during the breading season, which is defined at the U.S. Fish and Wildlife (Service) link below. Special attention should be paid to probable nesting habitat such as riparian corridors, lone trees, cliffs, rocky outcrops, and prairie dog colonies. • If any raptor nests are detected, follow the Service's seasonal and spatial timing stipulations, available at: https://www.fws.gov/media/wyoming-ecological-services-fieldoffice-raptor-guidelines-2022

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	Burrowing Owl Clearance Survey Protocol – Burrowing owls may be present in the project area. To avoid losses of birds or active nests, clearance surveys should be conducted prior to project activities that include surface disturbance when those activities occur in suitable habitat during the nesting and post-fledging period: April 1 to September 15. A description of suitable habitat is available in the Wyoming Species Account: https://wgfd.wyo.gov/media/28763/download?inline. Surveys should be conducted by experienced and appropriately trained biologists. • Number and Location of Survey Points - Conduct point counts using walking or driving survey routes (where road networks allow). Survey points should be spaced approximately 500 meters apart, however, exact locations should be selected to provide a complete view of the surrounding area. A higher density of survey points may be necessary if terrain limits the viewshed. Survey points should be recorded using a GPS unit or application so the survey can be repeated at the exact locations. • Number of Surveys - Three surveys should be conducted at each survey point. Surveys should be separated by a minimum of one week. • Daily Timing - Burrowing owl activity peaks in the morning and evening. Surveys should be conducted during these peaks in activity - morning (30 minutes before sunrise to 0900 hours) or evening (1700 hours until 30 minutes after sunset). Surveys should not be conducted if it is raining or if the wind speed is >12 miles/hour or if the temperature exceeds 80 degrees F. • Conducting the Survey - At each survey point, conduct a 6-minute survey, consisting of a 3-minute passive survey period, followed by a 3-minute call-broadcast period. o At each survey point, the observer should listen and use binoculars to search for burrowing owls in a 360 degree circumference during a 6-minute survey period. Observers should exit the vehicle to conduct the survey. o During the latter three minutes of the count, use call-broadcasting to increase the likelihood of detecting owls. Play the male burrowing owl “coo-coo” song for 30 seconds, followed by a 30-second passive listening period, and then repeat this series. The observer should then play 30-seconds of the burrowing owl “quickquick-quick” alarm call, followed by a 30-second passive listening period. o Calls can be broadcast from a cell phone attached to an amplified speaker or digital game call such as a FoxPro. Calls should be broadcast loudly, but without distortion. Recordings of this survey sequence (mp3) are available for download at: https://cpw.state.co.us/conservation/Pages/CON-Energy-Land.aspx • Identify Nest Burrows - If detected at the project site, owls should be monitored to map the locations of occupied burrows. Occupied burrows can be identified by the presence of whitewash, feathers, prey remains, and/or pellets in and around the opening to the burrow. Burrowing owl individuals may fly to and enter these primary occupied burrows, but will also use other alternate burrows for predator avoidance when alarmed (e.g. by the presence of a human observer). Colorado Parks and Wildlife offers a helpful photo guide with nest burrow examples at: https://cpw.state.co.us/Documents/ConservationResources/Energy-Mining/BurrowingOwl-Nest-Burrow-Examples.pdf • The Department recommends waiting to initiate project activities within 0.25 miles of active nest burrows until after October 31 or until it can be confirmed that owls have left the nest burrow area. Mountain Plover Surveys – During the breeding season, mountain plover use shortgrass and mixed-grass prairie, shrub-steppe landscapes, prairie dog colonies, and agricultural lands and may be present in the project area. They typically nest on sites with sparse vegetation that is less than 4 inches (10 cm) tall, slope less than 5 degrees, and a significant bare ground component. The Department recommends: • Conduct surveys in suitable habitat during the breeding season between April 17 and May 15. Sites should be surveyed three times with a minimum of 5-7 days between visits. • Conduct surveys between local sunrise and 1000, and from 1730 to sunset (periods of horizontal light to facilitate spotting the white breast of adult plovers). Use vehicles or all-terrain vehicles to conduct surveys if at all possible. Mountain plover cannot be effectively surveyed by a walking observer. • Use call-back devices to increase detection rates. • If occupied breeding habitat is detected, time any ground-disturbing activity in or within 0.25 miles of occupied habitat after July 31 or after nesting is complete. Pygmy Rabbit Surveys – Pygmy rabbit are limited to areas of taller, denser sagebrush habitat and may be present in the project area. • Conduct surveys for presence in areas of suitable habitat. Presence can be confirmed though detection of individuals, as well as sign (e.g., scat, burrows, runways, etc.). Surveys are most effective when conducted following snow fall during the winter months.

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	• Minimize surface occupancy or habitat conversion of tall, dense stands of Wyoming big sagebrush (Artemisia tridentata). Maintain corridors between dense sagebrush stands when possible to allow for dispersal. • Off-set development of roads, pads, and infrastructure >0.25 miles from areas occupied by pygmy rabbits, and avoid activities that compact soils within occupied habitat, which may limit burrow development and maintenance. White-tailed Prairie Dog Surveys – White-tailed prairie dogs are Wyoming SGCN, and their colonies provide habitat for a number of other SGCN. White-tailed prairie dogs may by present throughout the site. The Department recommends: • Conduct surveys during summer months, preferably during the green-up period from May to July. To map colonies, circumnavigate the colony by walking from active burrow to active burrow along the outer periphery of each colony. • If active prairie dog colonies are detected, develop outside the mapped boundaries. Migratory Bird Clearance Surveys – Other SGCN migratory bird species may be present along the development corridor. We specifically recommend the following process to minimize impacts to nesting migratory birds: • Conduct nest searches within 72 hours of disturbance from April 10th to July 15th. A migratory bird nest clearance survey in late February as suggested in the provided documentation will not be effective at minimizing impacts to migratory birds. • If a migratory bird nest is found, cease operations until the birds have fledged and can leave the area. Development of an approved mitigation plan in coordination with the Service may allow for sooner initiation of operations. • Nest searches should be conducted by biologists with ample nest searching experience. Minimize Excessive Artificial Lighting –Artificial lighting can have negative impacts to wildlife, including changing behavior and habitat use, disorienting wildlife, and potential increases in riskof mortality. We recommend the proposed project commit to minimizing light pollution whenever feasible by using Best Management Practices and the best available technologies: • Use only fully shielded, dark-sky friendly fixtures, so lights shine down towards the ground. • Use warmer-colored lights (<2200 Kelvin) versus cooler-colored light on the white-blue end of the spectrum (≥2200 Kelvin; Longcore et al. 2018). • Use only the amount of light needed. • Install timers, motion sensors, or dimmer switches. Turn off lights when not in use. • Limit the use of artificial lighting during peak migration periods. Department personnel can provide those dates. Aquatic Recommendations: The proposed project is near Dry Piney Creek and a number of ephemeral streams plus wetland and riparian areas. Many of the commitments made in the POD will successfully minimize impacts to streams and wetlands in the project area. The Department requests the following considerations to improve the POD and reduce the potential for project-related impacts to the aquatic habitat systems. • Commit to following state statute regarding Aquatic Invasive Species (more information provided below). • Provide clarity on where the hydrostatic testing water will be taken and how it will be discharged. We support consultation with the Wyoming Department of Environmental Quality and the State Engineers Office, but additional information on test water discharge is needed. The Department is concerned with erosion and sediment loading the subsequent impacts to aquatic systems if done improperly. • We recommend increasing staging distance to a minimum of 150 feet from riparian areas, stream channels, and wetlands. • We recommend the segments of the pipeline that parallel Dry Piney Creek should be a minimum of 100 feet from the associated stream channel and riparian area to the extent possible while also co-locating with existing surface disturbance. • We support and appreciate boring segments of pipeline under streams with flowing water. Department personnel request an opportunity to review a final plan that outlines where boring and trenching will be used prior to initiation of construction. Prevent Spread and Establishment of AIS – Aquatic invasive species (AIS) are organisms that are not native to Wyoming and can cause significant harm to an ecosystem when introduced. Harmful impacts can occur to municipal water supplies, fishing and boating-related recreation, agriculture, aquaculture, and other commercial activities. The potential economic impacts to the State of Wyoming could be severe if these non-native species are introduced into our water systems. Once these

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	organisms become established in a waterbody, there is very little that can be done to remove them. Prevention is the best way to keep a water body safe from AIS. The most significant known threat to Wyoming is from zebra and quagga mussels based on their proximity and demonstrated impacts in neighboring states. Other AIS include New Zealand mudsnail, Asian carp, rusty crayfish, and several species of aquatic plants. The spread of AIS from one body of water to another is a violation of Wyoming state statute (WS § 23-1-102 & §§ 23-4-201 through 205) and Wyoming Game and Fish Commission Regulation. To prevent the spread of AIS, the following is required: • Equipment that was in contact with a water positive for zebra/quagga mussels (currently none in Wyoming) within the last 30 days is required to undergo inspection by an authorized inspector prior to contacting a Wyoming water. • From March through November, all water hauling equipment and watercraft entering the state by land must be inspected before contacting a water of the state. • Equipment used in any Wyoming water that contains AIS, must be Cleaned, Drained and Dried before use in another water. Wyoming waters with AIS can be found at: https://wgfd.maps.arcgis.com/apps/webappviewer/index.html?id=935acbec194f4d428 23af3db59272409. • When equipment that has been in contact with any Wyoming water is moved from one 4th level watershed (8-digit Hydrological Unit Code) to another within Wyoming, it must be Cleaned, Drained and Dried. Specific guidance is available at: https://wgfd.wyo.gov/watercraft-inspection-information. Thank you for the opportunity to comment. If you have any questions or concerns please contact Ross Crandall, Habitat Protection Biologist, at (307) 367-5615. Sincerely, Will Schultz Habitat Protection Supervisor
Public	I hope that this project goes well and proves out to be sustainable
The Wilderness Society and Wyoming Outdoor Council	Dear Mr. Chewning, On behalf of our undersigned organizations, we write regarding the proposed Dry Piney Helium and Carbon Sequestration Project. Our organizations represent thousands of members and supporters who are deeply invested in the long-term health of Wyoming's wildlife populations and the habitat they rely on. We hope the following comments help achieve positive outcomes for big game herds that frequent the proposed project site. To start, we would like to express appreciation for steps the proponent took to revise the project's original layout following consultation with staff at the Wyoming Game and Fish Department and BLM. This willingness to adapt placement of infrastructure to lessen negative impacts to wildlife is commendable. Especially in this part of the state, where industrial development potential overlaps heavily with world class wildlife resources, it is imperative that parties work closely together, and in good faith, early in the planning process. Having reviewed the proposed infrastructure maps, we would like to focus our comments on the environmental protection measures tabulated in Section 5 of the Plan of Development. Specifically, the section of Table 17 on page 34 devoted to general wildlife is of interest. First, given the project's overlap with crucial winter range for mule deer and elk, we appreciate measures aimed at avoiding surface disturbing activities when big game is overwintering in the area. The measure to coordinate with BLM and Wyoming Game and Fish in the event surface disturbance occurs during the avoidance window should also be retained and strengthened. Second, we would like to see equal consideration for mule deer that migrate through the project area as that given to overwintering big game. Namely, surface disturbing activities should be avoided during spring and fall migration periods and coordination with BLM and Wyoming Game and Fish should take place if disturbance occurs during migration. We encourage BLM to consider making the following changes, highlighted in red, to better guard against negative impacts to big game herds: Resource Applicant-Committed Measures Wildlife – General • Surface disturbing activities will be avoided in crucial big game winter ranges from November 15 through April 30 and across the project area during mule deer migration from April 5 through May 15 and October 15 through December 5.

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	• If surface-disturbing activities are necessary in these areas big game crucial winter range during this from November 15 through April 30 period, BSO will coordinate with the BLM and/or Wyoming Game and Fish Department as applicable to avoid and minimize any disturbance to big game. • If surface-disturbing activities are necessary in the project area from April 5 through May 15 or October 15 through December 5, BSO will coordinate with the BLM and Wyoming Game and Fish Department to avoid and minimize any disturbance to big game. We contend that strengthening language around agency coordination and adding closure dates in spring and fall to accommodate migrating mule deer are warranted for the following reasons: Big game crucial winter range overlap With portions of the project area overlapping crucial winter range for mule deer and elk, it is only appropriate that surface disturbing activities be avoided when animals are overwintering. Crucial winter range provides essential habitat at a time of year when ungulates are at their most nutritionally stressed. As such, disturbances on winter range can have a negative impact on herd health and population numbers. Mule deer migration overlap Animals from the northern portion of the Wyoming Range mule deer herd migrate through the project area each spring and fall based on route data published by the US Geological Survey1 (figure 1). Research suggests that mule deer herds with long distance migrants can support more individuals than herds that lack the ability to migrate in search of high quality forage2,3, underscoring the importance of maintaining functionality of migration corridors. Figure 1. Overlap of Wyoming Range North mule deer migration routes (orange) with proposed well pads (pink) and pipeline ROWs (green). 3 Fryxell, JM, J Greever, and ARE Sinclair. 1988. Why are migratory ungulates so abundant? American Naturalist. 131: 781-98. 2 Kaufmann, MJ, EO Aikens, S Esmaeili, P Kaczensky, A Middleton, KL Monteith, TA Morrison, T Mueller, H Sawyer, and JR Goheen. 2021. Causes, consequences, and conservation of ungulate migration. Annual Review of Ecology, Evolution, and Systematics. 54: 453-78. 1 Kauffman, M, H Copeland, J Berg, S Bergen, EK Cole, M Cuzzocreo, S Dewey, J Fattebert, J Gagnon, E Gelzer, C Geremia, TA Graves, K Hersey, M Hurley, R Kaiser, J Meacham, JA Merkle, A Middleton, T Nunez, B Oates, D Olson, L Olson, H Sawyer, C Schroeder, S Sprague, A Steingisser, M Thonhoff. 2020. Ungulate migrations of the western United States, Volume 1. Scientific Investigations Report. Research also shows that mule deer have strong fidelity to migration corridors across generations, overriding the potential for animals to strike out and learn new routes4. Mule deer, unlike other large herbivores, appear to have little or no adaptability as to whether or where they migrate. In Wyoming, Sawyer et al. found that resident deer remained residents, and migrant deer remained migrants, regardless of age, reproductive status or number of years monitored5. They also found that migratory individuals show strong fidelity (>80%) to their migration routes across seasons and years and that choice of migration route can influence an animal's probability of survival. Deer migrating outside their traditional routes had 30% lower survival than individuals migrating along their traditional routes. In addition to showing strong fidelity to established migration routes, mule deer alter the timing and duration of their movements in response to development. Wyckoff et al. 2018 found that mule deer in Wyoming increase their rate of movement, reduce time in stopovers, and shift stopovers in response to increasing development along migration routes, diminishing the benefits of migratory foraging6. Mule deer in south central Wyoming showed a decreased ability to track springtime green-up and attain high value forage when energy development occurred in the herd's migration corridor7. Importantly, use of migratory habitat by mule deer declines as surface disturbance from energy development increases, with sharp declines observed when development crosses a 3% threshold8. Researchers caution against applying a 3% disturbance threshold to stopover habitats, which are disproportionately important for tracking vegetation green-up and characterized by low human disturbance. Given the above research findings, we strongly recommend avoidance of surface disturbing activities when mule deer are known to migrate through the area. Based on expert opinion and analysis, April 5 through May 15 and October 15 - December 5 are periods when activities may disrupt migrating mule deer in the project area. Avoiding surface disturbance during these dates will help ensure mule deer can migrate between seasonal ranges without undue stress or displacement. In addition, we recommend the BLM analyze the current disturbance level for the project area and limit overall surface disturbance to 3%. 8 Sawyer, H, MS Lambert, and JA Merkle. 2020. Migratory disturbance thresholds with mule deer and energy development. Journal of Wildlife Management 7 Aikens, EO, TB Wyckoff, H Sawyer, and MJ Kauffman. 2022. Industrial energy development decouples ungulate migration from the green wave. Nature Ecology & Evolution, 1-9.

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	6 Wyckoff, TB, H Sawyer, SE Albeke, SL Garman, and MJ Kauffman. 2018. Evaluating the influence of energy and residential development on the migratory behavior of mule deer. Ecosphere 9(2): e02113. 5 Sawyer, H, CW LeBeau, TL McDonald, W Xu, and AD Middleton. 2019. All routes are not created equal: an ungulate's choice of migration route can influence its survival. Journal of Applied Ecology 56: 1860-1869. 4 Merkle, JA, H Sawyer, KL Monteith, SPH Dwinnell, GL Fralick, and MJ Kauffman. 2019. Spatial memory shapes migration and its benefits: evidence from a large herbivore. Ecology Letters 22: 1797-1805. Mule deer declines Across the Intermountain West, mule deer populations have declined precipitously over the past 30 years. Wyoming is no exception, with herds statewide less than half as plentiful as they were in the early 1990s, including the Wyoming Range mule deer herd. In fact, this herd is in an even more precarious position following catastrophic winter mortality of two years ago, having lost about two thirds of its deer to harsh winter conditions. The Wyoming Range mule deer population was historically one of the largest mule deer herds in the state and a premier destination for mule deer hunting in the country. From a population high of over 50,000 in the late 1980s to a sustained population around 30,000 during much of the last decade, the herd now hovers around 10,000 animals – well below population objectives. In the face of these declines, wildlife and land managers must be mindful not to exacerbate issues contributing to mule deer declines as they consider management actions and resource protection measures. Numerous studies point to the important role migration corridors and winter range play in supporting herd health for big game species, both in terms of avoiding the worst winter conditions and maximizing fat gain through access to superior forage 9,10,11,12. Relevant to the Dry Piney Helium and Carbon Sequestration project, research shows that mule deer spend 95% of their time during migration at stopover areas and disturbance here during migration is particularly detrimental13,14. Because mule deer rigidly adhere to established migratory pathways and exhibit very little plasticity in when or where they migrate, avoiding disturbance to these animals in stopover areas during migration is imperative15. As such, avoiding construction at the project site during seasonally sensitive times of year is advisable and could pay dividends for this depleted mule deer population. 15 Sawyer H, JA Merkle, AD Middleton, SPH Dwinnell, and KL Monteith. 2019. Migratory plasticity is not ubiquitous among large herbivores. Journal of Animal Ecology, 88: 450-60. 14 Jachowski DS, MJ Kauffman, BR Jesmer, H Sawyer, and JJ Millspaugh. 2018. Integrating physiological stress into the movement ecology of migratory ungulates: a spatial analysis with mule deer. Conservation Physiology, 6(1): coy054. 13 Sawyer H and MJ Kauffman. 2011. Stopover ecology of a migratory ungulate. Journal of Animal Ecology, 80: 1078-87. 12 Mautz WW. 1978. Sledding on a bushy hillside: the fat cycle in deer. Wildlife Society Bulletin, 6(2): 8-90. 11 Middleton AD, JA Merkle, DE McWhirter, JG Cook, RC Cook, PJ White, and MJ Kauffman. 2018. Green-wave surfing increases fat gain in a migratory ungulate. Oikos, 127: 1060-68. 10 Hebblewhite M, E Merrill, and G McDermid. 2008. A multi-scale test of the forage maturation hypothesis in a partially migratory ungulate population. Ecological Monographs, 78: 141-66. 9 Albon SD and R Langvatn. 1992. Plant phenology and the benefits of migration in a temperate ungulate. Oikos, 65: 502-13. Thank you for the opportunity to comment and for your commitment to responsibly manage big game habitat in the Pinedale Field Office. Please don't hesitate to reach out if you have questions or if you'd like to discuss our recommendations. Sincerely,
Coalition of Local Governments	Dear Mr. Chewning, The Coalition of Local Governments (Coalition) submits the following scoping comments on the Dry Piney Helium and Carbon Sequestration Project proposed on public, private, and state lands near LaBarge in Sublette County. This project will consist of wells, wells pads, acid-gas injection facility, pipelines, access roads, a gas-fired power plant, and a natural gas processing facility. Many of the facilities will be located on private and state lands, except for segments of the gas gathering and gas disposal pipelines and access roads crossing public lands. While the facilities and wells pads are located on private and state lands, the pipeline construction would result in the disturbance of about 76 acres of public land during construction and about 39 acres for

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	the life of the project. Therefore, it is important to address the impacts this may have on the resources in the area, including the soil, water, and vegetation throughout the life of the project. I. STATEMENT OF INTEREST The Coalition is a voluntary association of local governments organized under the laws of the State of Wyoming to educate, guide, and develop public land policy in the affected counties. Wyo. Stat. §§11-16-103, 11-16-122, 18-5-201. Coalition members include Sweetwater County, Uinta County, Lincoln County, Daggett County, Lincoln Conservation District, Sweetwater County Conservation District, Uinta County Conservation District, Sublette County Conservation District, Little Snake River Conservation District, and Star Valley Conservation District. The Coalition serves many purposes for its members, including the protection of vested rights of individuals and industries dependent on utilizing and conserving existing resources and public lands, the promotion and support of habitat improvement, the support and funding of scientific studies addressing federal land use plans and projects, and providing comments on behalf of members for the educational benefit of those proposing federal land use plans and land use projects. Both the Counties and the Districts have authority to protect the public health and welfare of their citizens while promoting and protecting public lands and water resources. Wyo. Stat. §§ 11-16-122, 18-5-208; Utah Code § 17-27a-102(1)(a). Districts have statutory authority to develop and implement comprehensive resource use and management plans for range improvement and stabilization, conservation of soil, water and vegetative resources, control and prevention of soil erosion, and for flood prevention. Wyo. Stat. § 11-16-122(xvi). Districts' jurisdiction includes matters pertaining to the acquisition, construction, operation or administration of any land utilization, soil conservation, erosion control, erosion prevention, flood prevention projects, conservation of water, water utilization, disposal of water in watershed areas, and other water projects. Wyo. Stat. § 11-16-122(xix). By statute, the Wyoming Counties are "deemed to have special expertise on all subject matters for which it has statutory responsibility, including but not limited to, all subject matters directly or indirectly related to the health, safety, welfare, custom, culture and socioeconomic viability of a county." Wyo. Stat. Ann. §18-5-208. As such, the Counties "may regulate and restrict . . . the use, condition of use or occupancy of lands for residence, recreation, agriculture, industry, commerce, public use and other purposes in the unincorporated area of the county." Wyo. Stat. § 18-5-201. Daggett County, Utah, also possesses the general land use authority to protect the tax base, foster the state's agricultural and other industries, facilitate growth, and provide for the health, safety, and welfare of its citizens. Utah Code § 17-27a-102(1)(a)(i)-(ii), (iv), (vi). II. IMPACTS TO WATER QUALITY The proposed gas pipelines and other utilities will cross water bodies throughout the project area, so any potential impact to water quality must be addressed in the environmental assessment. The Plan of Development also recognizes that the project proponent must obtain the appropriate permits from the U.S. Army Corps of Engineers prior to construction and the Coalition would also expect that this right-of-way application would be conditioned on receiving the applicable state and federal permits for any work that would impact the newly defined "waters of the United States. III. IMPACTS TO VEGETATION AND RANGE RESOURCES The Coalition appreciates that the Plan of Development already recognizes the potential impact that this project will have on vegetation and range resources during the construction phase. This discussion should be carried forward into the environmental assessment and documented as best management practices for the project proponent. For example, the Plan of Development describes communication and notice to landowners and owners of livestock prior to construction and before crossing any livestock fences. In addition, the project proponent acknowledges the need to repair any rangeland improvements, including fences, that are damaged during construction and the need to install soft plugs in areas where wildlife and livestock trails run into pipeline trenches to reduce impacts. The project proponent should also consider the use of temporary fences to deter wildlife and livestock, and to backfill and remediate trenches immediately as the pipeline is installed. IV. RECLAMATION Reclamation and revegetation of disturbed areas is very important in this area to ensure successful restoration of wildlife and livestock habitat. As part of the reclamation efforts, the BLM must ensure that soil stabilization occurs throughout the life of the project and especially in areas where the pipeline and utility rights-of-way will cross water bodies and existing roads. The project proponent must ensure that interim reclamation occurs as soon as possible, appropriate seed mixes are used during remediation, and that continued monitoring occurs to ensure that the revegetation of disturbed areas occurs. The Coalition appreciates the recognition of the importance of reclamation, soil stabilization, and noxious weed control as discussed in the Plan of Development's best management practices to minimize environmental concerns. The Coalition would also request that the project proponent cooperate with the Sublette County Conservation District and Sublette County when implementing any noxious weed control programs in the project area.

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	The Coalition appreciates the opportunity to comment. Sincerely. Eric South, Chairman Coalition of Local Governments
Wyoming State Engineers office	Dear Mr. Chewning, The Wyoming State Engineer's Office (SEO) appreciates the opportunity to participate in the Dry Piney Helium and Carbon Sequestration Project comment process on behalf of the State of Wyoming. The role of the SEO and the State Board of Control (BOC) is to provide for the general supervision of the waters of the State of Wyoming, and of its appropriation, distribution, and application to beneficial use. Any new impoundment or diversion of surface water or groundwater of the State will require proper permitting through the State Engineer's Office. Any changes to existing permitted uses of surface water or groundwater of the State may require action through either the State Engineer or the State Board of Control. The proponent is advised to contact the SEO with specific plans for any impoundment or diversion prior to commencing any work. Please feel free to contact Jed Rockweiler, Surface Water Administrator, with any questions at (307) 777-6202, or jed.rockweiler@wyo.gov. Sincerely, Jedadiah Rockweiler Surface Water Administrator
Wyoming Game and Fish Department	Dear Travis Chewning, The staff of the Wyoming Game and Fish Department (Department) has reviewed the proposed Temporary Use and Right-of-Way Plan of Development (POD) for this project in Sublette County. The Department is statutorily charged with managing and protecting all Wyoming wildlife (W.S. 23-1-103). Pursuant to our mission, we offer the following comments for your consideration. The project is a helium and natural gas extraction and carbon sequestration effort. Infrastructure consists of wells and well pads, pipelines, access roads, an acid-gas injection plant, a gas-fired power plant, and a natural gas processing facility. The project footprint overlaps private, state, and Bureau of Land Management (BLM) lands. On BLM lands specifically, the project includes buried pipelines and access roads. No new access roads will be built but existing roads will be improved. Most of the remainder of the development will occur on private land. The total, permanent right-of-way footprint for pipelines and utility corridors across all landownership types is 103.5 acres, all of which will be reclaimed after construction. Primary wildlife concerns include overlap with mule deer crucial winter range, elk crucial winter and crucial winter-yearlong range, elk parturition area, impacts to Wyoming Species of Greatest Conservation Need (SGCN), and impacts to aquatic habitat. All of the proposed infrastructure is outside of sage-grouse core areas and greater than 2 miles from any non-core area occupied leks. There is also no overlap with identified or designated antelope or mule deer migration corridors. As such, the project does not require compliance with the Sage-Grouse Executive Order 2019-3 or the Migration Corridor Executive Order 2020-1. As noted in the POD, Blue Spruce Operating (BSO) met with Department personnel and discussed the original layout. The current project footprint reflects those discussions and we appreciate BSO's commitment to alter the project layout and minimize project-related impacts to wildlife and wildlife habitat. The following are the Department's recommendations and considerations to further reduce unavoidable project-related impacts to terrestrial and aquatic wildlife. Terrestrial Recommendations: Protect Big Game – As noted, the project footprint overlaps important big game habitats including mule deer crucial winter range, elk crucial winter and winter-yearlong range, and an elk parturition area. Mule deer move seasonally through the project area, traveling between summer habitats in the Wyoming and Salt River mountain ranges and winter habitats delineated in part by the crucial winter range boundaries. Mule deer use of the project area is well documented and the crucial winter range in the vicinity of the project is among the most valuable wintering areas for the Wyoming Range mule deer herd. Mule deer use has been documented through collar data (Figure 1) and observations collected by Department personnel while in the field and recorded in our Wildlife Observation System database (Figure 2). The Department is able to provide the available data, subject to our data sharing policy, for the pending Environmental Assessment (EA) so that impacts to big game are thoroughly considered.

Organization	Comments
	The Department acknowledges and appreciates BSO's current commitments to avoid impacts to big game. We specifically support the following components of the POD relative to big game: • Minimize permanent development within big game crucial winter ranges. • Adhere to crucial winter range seasonal stipulations. • Backfill trenches quickly to avoid barriers to wildlife movement and injury. • Reclaim pipeline corridors immediately after construction is completed. • Ensure successful reclamation. • Co-locate with existing disturbance to the extent possible. To further reduce project-related impacts to big game, the Department recommends the following additional considerations: • Add clarifying language to better capture the exception approval process for project activities that may occur during the big game winter stipulation period. • If exceptions are pursued, the Department will request limiting construction activities to 8AM-6PM. • Clarify how it will be determined that wildlife are impeding successful vegetation establishment in reclaimed areas. • Avoid fence construction unless necessary for human health and safety or by law. Use wildlife friendly fencing where fencing is needed and use of wildlife friendly fencing specifications are suitable. • Consider secondary impacts associated with increased traffic and human presence during operations in the EA. • Use remote monitoring equipment during operations to minimize the need for regular onsite staff. Protect Species of Greatest Conservation Need – The project footprint overlaps the distribution of 79 SGCN. The POD provides limited direction regarding minimization efforts for SGCN, with the exception of evaluating impacts to eagles and migratory birds and clearing vegetation outside of the breeding season. We offer the following recommendations for consideration as the project advances acknowledging some components may be a requirement of BLM approval. Nesting Raptor Surveys – The landscape around the project contains suitable raptor nesting habitat and known raptor nest sites. Raptors and their nests and young are protected under federal law, and many species are SGCN. Disturbances such as construction activity and human presence can affect nesting success and potentially impact local population numbers and viability. As such, the Department recommends: • Perform surveys for nesting raptors within 1 mile of project infrastructure prior to any vegetation clearing or ground-disturbing activities if activities will occur during the breading season, which is defined at the U.S. Fish and Wildlife (Service) link below. Special attention should be paid to probable nesting habitat such as riparian corridors, lone trees, cliffs, rocky outcrops, and prairie dog colonies. • If any raptor nests are detected, follow the Service's seasonal and spatial timing stipulations, available at: https://www.fws.gov/media/wyoming-ecological-services-field-office-raptor-guidelines-2022 Burrowing Owl Clearance Survey Protocol – Burrowing owls may be present in the project area. To avoid losses of birds or active nests, clearance surveys should be conducted prior to project activities that include surface disturbance when those activities occur in suitable habitat during the nesting and post-fledging period: April 1 to September 15. A description of suitable habitat is available in the Wyoming Species Account: https://wgfd.wyo.gov/media/28763/download?inline. Surveys should be conducted by experienced and appropriately trained biologists. • Number and Location of Survey Points - Conduct point counts using walking or driving survey routes (where road networks allow). Survey points should be spaced approximately 500 meters apart, however, exact locations should be selected to provide a complete view of the surrounding area. A higher density of survey points may be necessary if terrain limits the viewshed. Survey points should be recorded using a GPS unit or application so the survey can be repeated at the exact locations. • Number of Surveys - Three surveys should be conducted at each survey point. Surveys should be separated by a minimum of one week. • Daily Timing - Burrowing owl activity peaks in the morning and evening. Surveys should be conducted during these peaks in activity - morning (30 minutes before sunrise to 0900 hours) or evening (1700 hours until 30 minutes after sunset). Surveys should not be conducted if it is raining or if the wind speed is >12 miles/hour or if the temperature exceeds 80 degrees F.

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	• Conducting the Survey - At each survey point, conduct a 6-minute survey, consisting of a 3-minute passive survey period, followed by a 3-minute call-broadcast period.
	  ○ At each survey point, the observer should listen and use binoculars to search for burrowing owls in a 360 degree circumference during a 6-minute survey period. Observers should exit the vehicle to conduct the survey.
	  ○ During the latter three minutes of the count, use call-broadcasting to increase the likelihood of detecting owls. Play the male burrowing owl "coo-coo" song for 30 seconds, followed by a 30-second passive listening period, and then repeat this series. The observer should then play 30-seconds of the burrowing owl "quick-quick-quick" alarm call, followed by a 30-second passive listening period.
	  ○ Calls can be broadcast from a cell phone attached to an amplified speaker or digital game call such as a FoxPro. Calls should be broadcast loudly, but without distortion. Recordings of this survey sequence (mp3) are available for download at: https://cpw.state.co.us/conservation/Pages/CON-Energy-Land.aspx
	• Identify Nest Burrows - If detected at the project site, owls should be monitored to map the locations of occupied burrows. Occupied burrows can be identified by the presence of whitewash, feathers, prey remains, and/or pellets in and around the opening to the burrow. Burrowing owl individuals may fly to and enter these primary occupied burrows, but will also use other alternate burrows for predator avoidance when alarmed (e.g. by the presence of a human observer). Colorado Parks and Wildlife offers a helpful photo guide with nest burrow examples at: https://cpw.state.co.us/Documents/Conservation-Resources/Energy-Mining/BurrowingOwl-Nest-Burrow-Examples.pdf
	• The Department recommends waiting to initiate project activities within 0.25 miles of active nest burrows until after October 31 or until it can be confirmed that owls have left the nest burrow area.
	Mountain Plover Surveys – During the breeding season, mountain plover use shortgrass and mixed-grass prairie, shrub-steppe landscapes, prairie dog colonies, and agricultural lands and may be present in the project area. They typically nest on sites with sparse vegetation that is less than 4 inches (10 cm) tall, slope less than 5 degrees, and a significant bare ground component. The Department recommends:
	• Conduct surveys in suitable habitat during the breeding season between April 17 and May 15. Sites should be surveyed three times with a minimum of 5-7 days between visits.
	• Conduct surveys between local sunrise and 1000, and from 1730 to sunset (periods of horizontal light to facilitate spotting the white breast of adult plovers).
	• Use vehicles or all-terrain vehicles to conduct surveys if at all possible. Mountain plover cannot be effectively surveyed by a walking observer.
	• Use call-back devices to increase detection rates.
	• If occupied breeding habitat is detected, time any ground-disturbing activity in or within 0.25 miles of occupied habitat after July 31 or after nesting is complete.
	Pygmy Rabbit Surveys – Pygmy rabbit are limited to areas of taller, denser sagebrush habitat and may be present in the project area.
	• Conduct surveys for presence in areas of suitable habitat. Presence can be confirmed though detection of individuals, as well as sign (e.g., scat, burrows, runways, etc.). Surveys are most effective when conducted following snow fall during the winter months.
	• Minimize surface occupancy or habitat conversion of tall, dense stands of Wyoming big sagebrush (Artemisia tridentata). Maintain corridors between dense sagebrush stands when possible to allow for dispersal.
	• Off-set development of roads, pads, and infrastructure >0.25 miles from areas occupied by pygmy rabbits, and avoid activities that compact soils within occupied habitat, which may limit burrow development and maintenance.
	White-tailed Prairie Dog Surveys – White-tailed prairie dogs are Wyoming SGCN, and their colonies provide habitat for a number of other SGCN. White-tailed prairie dogs may by present throughout the site. The Department recommends:
	• Conduct surveys during summer months, preferably during the green-up period from May to July. To map colonies, circumnavigate the colony by walking from active burrow to active burrow along the outer periphery of each colony.
	• If active prairie dog colonies are detected, develop outside the mapped boundaries.
	Migratory Bird Clearance Surveys – Other SGCN migratory bird species may be present along the development corridor. We specifically recommend the following process to minimize impacts to nesting migratory birds:

Organization	Comments
	• Conduct nest searches within 72 hours of disturbance from April 10th to July 15th. A migratory bird nest clearance survey in late February as suggested in the provided documentation will not be effective at minimizing impacts to migratory birds. • If a migratory bird nest is found, cease operations until the birds have fledged and can leave the area. Development of an approved mitigation plan in coordination with the Service may allow for sooner initiation of operations. • Nest searches should be conducted by biologists with ample nest searching experience. Minimize Excessive Artificial Lighting –Artificial lighting can have negative impacts to wildlife, including changing behavior and habitat use, disorienting wildlife, and potential increases in risk of mortality. We recommend the proposed project commit to minimizing light pollution whenever feasible by using Best Management Practices and the best available technologies: • Use only fully shielded, dark-sky friendly fixtures, so lights shine down towards the ground. • Use warmer-colored lights (<2200 Kelvin) versus cooler-colored light on the white-blue end of the spectrum (≥2200 Kelvin; Longcore et al. 2018). • Use only the amount of light needed. • Install timers, motion sensors, or dimmer switches. Turn off lights when not in use. • Limit the use of artificial lighting during peak migration periods. Department personnel can provide those dates. Aquatic Recommendations: The proposed project is near Dry Piney Creek and a number of ephemeral streams plus wetland and riparian areas. Many of the commitments made in the POD will successfully minimize impacts to streams and wetlands in the project area. The Department requests the following considerations to improve the POD and reduce the potential for project-related impacts to the aquatic habitat systems. • Commit to following state statute regarding Aquatic Invasive Species (more information provided below). • Provide clarity on where the hydrostatic testing water will be taken and how it will be discharged. We support consultation with the Wyoming Department of Environmental Quality and the State Engineers Office, but additional information on test water discharge is needed. The Department is concerned with erosion and sediment loading the subsequent impacts to aquatic systems if done improperly. • We recommend increasing staging distance to a minimum of 150 feet from riparian areas, stream channels, and wetlands. • We recommend the segments of the pipeline that parallel Dry Piney Creek should be a minimum of 100 feet from the associated stream channel and riparian area to the extent possible while also co-locating with existing surface disturbance. • We support and appreciate boring segments of pipeline under streams with flowing water. Department personnel request an opportunity to review a final plan that outlines where boring and trenching will be used prior to initiation of construction. Prevent Spread and Establishment of AIS – Aquatic invasive species (AIS) are organisms that are not native to Wyoming and can cause significant harm to an ecosystem when introduced. Harmful impacts can occur to municipal water supplies, fishing and boating-related recreation, agriculture, aquaculture, and other commercial activities. The potential economic impacts to the State of Wyoming could be severe if these non-native species are introduced into our water systems. Once these organisms become established in a waterbody, there is very little that can be done to remove them. Prevention is the best way to keep a water body safe from AIS. The most significant known threat to Wyoming is from zebra and quagga mussels based on their proximity and demonstrated impacts in neighboring states. Other AIS include New Zealand mudsnail, Asian carp, rusty crayfish, and several species of aquatic plants. The spread of AIS from one body of water to another is a violation of Wyoming state statute (WS § 23-1-102 & §§ 23-4-201 through 205) and Wyoming Game and Fish Commission Regulation. To prevent the spread of AIS, the following is required: • Equipment that was in contact with a water positive for zebra/quagga mussels (currently none in Wyoming) within the last 30 days is required to undergo inspection by an authorized inspector prior to contacting a Wyoming water. • From March through November, all water hauling equipment and watercraft entering the state by land must be inspected before contacting a water of the state. • Equipment used in any Wyoming water that contains AIS, must be Cleaned, Drained and Dried before use in another water. Wyoming waters with AIS can be found at: https://wgfd.maps.arcgis.com/apps/webappviewer/index.html?id=935acbec194f4d42823af3db59272409.

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	• When equipment that has been in contact with any Wyoming water is moved from one 4th level watershed (8-digit Hydrological Unit Code) to another within Wyoming, it must be Cleaned, Drained and Dried. Specific guidance is available at: https://wgfd.wyo.gov/watercraft-inspection-information. Thank you for the opportunity to comment. If you have any questions or concerns please contact Ross Crandall, Habitat Protection Biologist, at (307) 367-5615. Sincerely, Will Schultz Habitat Protection Supervisor
Wyoming Department of Environmental Quality	Dear Mr. Cogswell, On behalf of the Wyoming Department of Environmental Quality (WDEQ), we appreciate the opportunity to comment on the Dry Piney Helium and Carbon Sequestration Project. WDEQ is charged with conserving and enhancing the quality of Wyoming's environment for the benefit of current and future generations. We envision a future where vibrant economic development and prosperity are achieved while providing sound and sensible environmental protection that protects human health and the environment. It is important to note as a foundation for our comments that WDEQ has been delegated primacy over multiple programs by the federal government - water, air, solid and hazardous waste, abandoned mine land reclamation, coal mining, and underground injection control (UIC) wells, including class VI, for the geologic sequestration of carbon dioxide. In addition, WDEQ permits and regulates all minerals mined in the state such as gravel and bentonite. WDEQ has also received an agreement state status with the Nuclear Regulatory Commission for uranium mining and processing in the State of Wyoming. Wyoming received primacy delegations and agreement status as a result of federal agencies agreeing that Wyoming and WDEQ have the environmental, permitting and regulatory structure in place to ensure that any activity within WDEQ's authority is handled in a manner that protects human health and environment. WDEQ offers the following comments: Air Quality The proposed project is located in the Upper Green River Basin (UGRB) Ozone Nonattainment Designation Area. Therefore, the proposed facility may require Lowest Achievable Emission Rate (LAER) and emission offsets, depending on the source's size and emissions. Water Quality In accordance with Title 35, Chapter 11 of the Wyoming Statutes and Wyoming's Water Quality Rules, the Wyoming Department of Environmental Quality-Water Quality Division (WDEQ-WQD) is responsible for the protection and restoration of the quality of waters of the state. The WDEQ-}'\TQD also implements portions of the federal Clean Water Act, including development of surface water quality standards, identification of impaired waters, and development of total maximum daily loads for impaired waters under Section 303; inventorying water quality under Section 305; discharge permitting under Section 402; water quality certifications under Section 401; and addressing nonpoint sources of pollution under Section 319. As such, WDEQ is providing the following comments to help facilitate the review of potential impacts to water quality and ensure the project analysis adequately reflects and adheres to Wyoming's Water Quality Rules. These comments are not intended to be comprehensive; rather, they are intended to help inform the Environmental Assessment (EA) for the Project and help identify all water resources potentially impacted by the Project, the type(s) of potential impacts, the steps to avoid or minimize impacts, proposed mitigation measures, and applicable local, state, and federal permits that may be necessary for the Project. It is incumbent upon the project proponent to conduct additional research to ensure the EA accurately identifies water resources and WQD requirements. The WDEQ recommends the EA identify the following surface and ground waters in proximity to the Project area, the potential impacts to the quality of those waters from the Project, and the steps to minimize those impacts. Surface Waters. WDEQ identified Beaver Dam Creek, Black Canyon Creek, Dry Piney Creek, Hogarty Creek, and multiple unnamed drainages in proximity to the Project area. Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards) classifies Black Canyon Creek, Dry Piney Creek, and Hogarty Creek as Class 2AB waters, for which the water quality is protected to support drinking water, cold-water game fish, nongame fish, aquatic life other than fish, recreation, agriculture, industry, wildlife, and scenic value designated uses. Moreover, Chapter 1 (Wyoming's Surface Water Quality Standards) classifies Beaver Dam Creek and multiple unnamed drainages as Class 3B waters, for which the water quality is protected to support aquatic life other than fish, recreation, wildlife, industry, agriculture, and scenic value designated uses. The water quality criteria and antidegradation provisions

Organization	Comments
	established for the protection of these designated uses are further described in Wyoming's Surface Water Quality Standards found at https: //deq.wyoming.gov /water-quality/watershed-protection/surfacewater-quality-standards/. WDEQ Monitoring Locations. WDEQ-WQD has conducted chemical, biological, and physical monitoring on Dry Piney Creek in proximity to the Project area. WDEQ-WQD can provide this data upon request. Assessed Waters. WDEQ's Water Quality Assessment Program evaluates whether surface waters of the state meet the applicable Wyoming Surface Water Quality Standards found in Wyoming Water Quality Rules, Chapter 1. As directed by Sections 305(b) and 303(d) of the federal Clean Water Act, the findings from water quality assessments are compiled into Wyoming's Integrated 305(b) and 303(d) Report and submitted to the United States Environmental Protection Agency biennially. Assessed waters that are not attaining surface water quality standards are included in the 303(d) List of impaired waters and prioritized for restoration planning. According to Wyoming's 2020 Integrated 305(b) and 303(d) Report, no surface water in proximity to the Project area has been listed for not attaining surface water quality standards. Additional information can be found at https://wdeq.maps.arcgis.com/apps/webappviewer/index.html?id=S2Sb2fdaff494fbea062Sc49c20263f1. Public Water Supply. WDEQ-WQD's records indicate the Project is in proximity to public water supply (PWS) intake(s). Please contact the WDEQ-WQD to obtain further information about the identified PWS. We recommend the project proponent coordinate directly with the PWS regarding potential impacts. The EA should identify the PWS, evaluate potential impacts to the PWS, and describe actions that will be implemented to protect the PWS. Sensitive Aquifer. WDEQ's evaluation indicates a shallow sensitive aquifer is located within the project area. Sensitive aquifers are vulnerable to contamination due to their proximity to the surface and the absence of an overlying aquitard. Groundwater in these aquifers tends to flow rapidly through unconsolidated alluvial deposits, which can lead to the rapid spread of any contamination. As such, the WDEQ recommends the project proponent identify and minimize potential impacts to groundwater through measures such as implementation of best management practices (BMPs) to prevent surface spills in the area during construction and operation. Additional information is available at http://deq.wyoming.gov/water-quality/groundwater under the "Monitoring Data" section. In addition to the above recommendations and information, the WDEQ highlights the common water quality permits and requirements that may apply to the project and should be noted in the EA, depending on the eventual scope of the project. This is not a comprehensive list of all applicable local, state, and federal permits that may be needed for the project. The Bureau of Land Management must ensure that all applicable local, state, and federal permits are included in the EA. Wyoming Pollutant Discharge Elimination System (WYPDES) Permits If the project will result in the point source discharge of pollution into surface waters of the state, including those associated with wastewater or drinking water treatment facilities, industrial facilities, mines, stormwater, temporary discharges associated with construction activities, discharges to and mitigation for isolated wetlands, pesticide applications, or other long-term discharges, the Project will require coverage under one or more permits issued by the Wyoming Pollutant Discharge Elimination System (WYPDES) Program consistent with Wyoming Water Quality Rules, Chapter 2 (Permit Regulations for Discharges to Wyoming Surface Waters). Surface waters of the state include all perennial, intermittent, and ephemeral drainages, lakes, reservoirs, c1t1d wetlands which are not human-made retention ponds used for the treatment of municipal, agricultural, or industrial waste; and all other bodies of surface water, either public or private which are wholly or partially within the boundaries of the state. WYPDES permits contain effluent limits and conditions to ensure discharges of pollution comply with Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards). Additional information is available at https: //deq.wyoming.gov /water-quality/wypdes/. The following WYPDES permits may be applicable to the project: • Individual Discharge Permit. If the project will result in the discharge of pollution into a surface water of the state a WYPDES Individual Discharge Permit will be required. Additional information is available at https://deq.wyoming.gov /water-quality/wypdes/discharge-permitting/. • Construction Stormwater General Permits. For project construction activities that will clear, grade, or otherwise disturb a cumulative one or more acres, coverage under a WYPDES Construction Stormwater General Permit is required. Disturbance includes construction of the project and associated access roads, construction of mitigation sites, borrow and stockpile areas, and equipment staging and maintenance areas. WYPDES offers two Construction Stormwater General Permits: Large Construction General Stormwater Permit (LCGP) and the Small Construction General Stormwater Permit (SCGP). Coverage under the LCGP is required for construction activities that cumulatively disturb five or more acres whereas the SCGP is reserved for construction activities that cumulatively disturb between one and five acres. For coverage under the LCGP, a Notice of Intent and a complete Stormwater Pollution Prevention Plan (SWPPP) must be submitted prior to beginning construction activities. Additionally, if the project boundary falls within a Greater Sage-Grouse Core Area or a Mule Deer and Antelope Migration Corridor, the owner or operator must coordinate with the Wyoming Game and Fish Department to ensure that the project is consistent with the Governor's Executive Orders 2019-3 and 2020-1, respectively. A map of sage-grouse core areas in Wyoming is available at https://wgfd.wyo.gov /wyoming-wildlife/sage-grouse-management/sage-grouse-data. A map of mule deer and antelope migration corridors can

Organization	Comments
	be found at https://wgfd.wyo.gov /wyoming wildlife /movement-matters /big-game-migration. Additional information is available at https://deq.wyoming.gov/water-quality/wypdes/discharge-monitoringreports/ storm-water-permitting/. • Temporary Discharge Permits. If the-project involves the temporary discharge of pollution associated with, but not limited to, construction dewatering, disinfection of potable water lines, well pump testing, or pipeline hydrostatic testing into a surface water of the state, coverage under the WYPDES General Permit for Temporary Discharges Involving Construction Activities is required. Additional information is available at https://deq.wyoming.gov/waterquality/wypdes/discharge-permitting/. • General Permit for Wetland Mitigation. If the project is not permitted for mining activities through the Wyoming Department of Environmental Quality - Land Quality Division and will result in the loss or destruction of more than one cumulative acre of (1) naturally occurring isolated wetlands or (2) human made isolated wetlands used to mitigate the loss of naturally occurring wetlands, mitigation and a WYPDES permit for wetland mitigation is required. Isolated wetlands are those wetlands, as defined in Wyoming Statutes 35-11-103(c)(x), that do not meet the federal definition of Waters of the United States at 33 CFR Part 328 and 40 CFR Part 120 but do meet the state's definition of waters of the state, as defined in Wyoming Statutes 35-11-103(c)(vi). Additional information is available: http://deq.wyoming.gov/wqd/discharge-permitting/. • Colorado River Basin Salinity. WDEQ has identified that the project is located within the Colorado River Basin of Wyoming and is therefore subject to the Water Quality Standards for Salinity, Colorado River System. If the project will require a Wyoming Pollutant Discharge Elimination System (WYPDES) permit, the project will be subject to the Policy for Implementation of Colorado River Salinity Standards through the WYPDES Permitting Program. Additional Information is available at https: //www.coloradoriversalinity.org/. 401 Water Quality Certification. If the project will result in the discharge of a pollutant into a water of the United States that requires coverage under a federal license or permit, a Clean Water Act Section 401 Water Quality Certification from the WDEQ-WQD must be secured to ensure the discharge complies with Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards). In Wyoming, 401 Water Quality Certifications are required for discharges that need coverage under a United States Army Corps of Engineer's Clean Water Act Section 404 dredge and fill permit, United States Army Corps of Engineer's Rivers and Harbors Act Section 10 permit, and a Federal Energy Regulatory Commission (FERC) hydropower license. All conditions of the 401 Water Quality Certification are included as enforceable conditions of the federal permit or license. Additional information is available at https://deq.wyoming.gov /water-quality/watershed-protection-2/cwa-section-401-turbiditywetland/ 401-water-quality-certification/. Temporary Turbidity Waiver. If construction of the project will result in an increase in turbidity for surface waters designated for protection as drinking water supplies or fisheries, a temporary turbidity waiver is recommended. In accordance with Wyoming Water Quality Rules, Chapter 1 (Wyoming Surface Water Quality Standards), the WDEQ-WQD Administrator may authorize temporary increases in turbidity above the numeric criteria on a case-by-case basis for construction related activities and may impose whatever controls, monitoring, and best management practices necessary to maintain and protect all water uses. Additional information is available at https://deq.wyoming.gov /water-quality/watershed-protection-2 /cwa-section-401-turbidity-wetland/. Spills Reporting. Wyoming Water Quality Rules, Chapter 4 requires, unless specifically exempted, any person owning or having control over oil or a hazardous substance which, after release, enters, or threatens to enter waters of the state to immediately notify the WDEQ-WQD of the type, quantity, and location of the release. Spills can be reported to WDEQ by phone at 307-777-7501 or online at http//wyospills.org/. Groundwater Permits and Requirements. Groundwater Classification. If a subsurface discharge or other activity has the potential to affect groundwater quality, such as through in situ mining operations, groundwaters of the State must be classified as outlined in Wyoming Water Quality Rules, Chapter 8, Quality Standards for Wyoming Groundwaters. Additional information is available at http: //deq.wyoming.gov/wqd/groundwater/. Nonpoint Source. For activities that do not require WDEQ-issued permits, the WDEQ encourages project proponents to minimize potential impacts to surface and ground water quality through the implementation of best management practices (BMPs). These include, but are not limited to, practices associated with stream and lakeshore restoration, road construction and maintenance, rangeland management, wildland fire, silviculture, urban development, recreation management, and vegetation and mineral management. The EA should identify the BMPs that will be used during construction and operation to minimize nonpoint sources of pollution. Additional information on non point source pollution and manuals of recommended BMPs are available at https: //deq.wyoming.gov /water-quality/watershed-protection/nonpoint-source/.

Organization	Comments
	If you have any questions or need additional information, please feel free to contact Keith Guille at 3071777-6105 or keith.guille@wyo.gov. Sincerely, Todd Parfitt Director Wyoming Department of Environmental Quality Cc: Jennifer Zygmunt - Administrator, Water Quality Division Nancy Vehr - Administrator, Air Quality Division Keith Guille - Outreach Program Manager 200
Wyoming Wildlife Federation	Dear Mr. Chewning, The Wyoming Wildlife Federation appreciates the opportunity to comment on the Dry Piney Helium and Carbon Sequestration project. The WWF represents thousands of hunters across the state who have a vested interest in strong ungulate populations, which they rely upon for their pursuits. We are specifically concerned about the potential impacts to wintering big game that utilize some of the proposed project area annually. Crucial winter range habitat is of the utmost importance during a time when animals are the most vulnerable. Wyoming Range mule deer Portions of the proposed project area are used by the famed Wyoming Range mule deer herd, which has seen precipitous declines in recent years. This population is one of the most sought after for Wyoming hunters, and nonresidents alike. It is difficult to overstate the importance of this mule deer herd to hunters, wildlife enthusiasts and the culture of western hunting. While resident hunters can hunt annually on a general license, nonresident hunters may wait ten years to draw a hunting license for the opportunity to look for some of the largest bucks produced in the West. Similarly, many people flock to the winter ranges to observe mule deer and look for trophy class animals. Historically, this herd has reached a population of around 50,000 animals in the early 1990's. In recent years, the population has hovered around 30,000 until recently when the herd was cut by roughly two thirds after the winter of '22/23. It is imperative that these losses not be exacerbated during this period while the herd is rebuilding. Coordination of surface disturbing activities on crucial winter range We appreciate that the project applicant has recognized the importance of crucial winter range and has committed to avoiding surface disturbing activities from November 15-April 30. The project applicant should make every effort to adhere to these dates, but if surface disturbing activities are truly unavoidable during this time frame, we ask that the proponent coordinate with the Bureau of Land Management and the Wyoming Game and Fish Department (WGFD) to minimize disturbance as much as possible. We request that the General Wildlife section in Table 17, Applicant-Committed Environmental Protection Measures, be amended to include this language. Given the vulnerable nature of wintering wildlife, it is imperative that the project proponent coordinate with both the land management agency (BLM) and the wildlife management agency (WGFD) when contemplating surface disturbing activities on crucial winter range. Thus far, the applicant has already shown good faith by redesigning the project layout after considering the input of both of these agencies, which we hope will continue throughout this project's timeline. The WWF appreciates the BLM being proactive in considering development in seasonally sensitive wildlife habitat in the Pinedale Field Office. Please do not hesitate to contact us with any questions. Regards, Nat Paterson Policy Director Wyoming Wildlife Federation

Organization	Comments
Sublette County Conservation District	Travis, Sublette County Conservation District wants to be a CA on this project. Please involve us moving forward. Thanks Michael Henn District Manager Sublette County Conservation District P.O. Box 647 217 Country Club Ln. Pinedale, WY 82941 307-367-2364
Public	I support the approval and execution of the project.
Public	I am in total favor of this project going forward, oil + gas production is already prevalent so there won't be much disruption. I feel like this wil also be a benefit to our community. I am a Big Piney Resident
Public	This Project is an excellent idea. It is refreshing to attend a presentation from BLM that does not center around violating the Taylor Grazing Act or taking public uses away from the people. This area of Wyoming my home and where the project is planned is desperately in need of jobs. Our state of Wyoming as a whole has been repressed for at least the last 4 years, prevented from developing the land's rich mineral resources. This project is an excellent way to herald a new era of "Freeing Our Fuel!" I am strongly in favor of this project.
Public	I am in full favor of this project to move forward, the area is already prevalent with O&G development and there will be minimal additional disturbance above and below the surface. I am a Big Piney, WY resident.
Public	am writing to support Blue Spruce's application to build and operate the subject project. Helium is a critical commodity for which the domestic demand is increasing, and the domestic supply is decreasing. Additionally, the carbon sequestration project will be an excellent way to offset the emissions from the project as well as emissions captured from other sources. This project has been designed to minimize surface disturbance and minimize visual impacts. Finally, the project is located in an area where oil and gas production has taken place for many decades and has become a staple of the local economy and tax base. I urge BLM to approve this unique and thoughtful project at the earliest opportunity
Sublette County Weed and Pest	Dear BLM Pinedale Field Office, The proposed project by Blue Spruce Operating is in an area of historical disturbance causing heavy noxious weed infestations. Sublette County Weed and Pest has worked with the local BLM, energy producers and their contractors to manage musk thistle and black henbane in this area. This area has been a struggle in past years with multiple companies to ensure that these noxious weeds are managed with proper tools and at proper times to ensure control. The disturbance of this new project will cause a resurgence of these noxious weeds. We ask that if approved the company works with the BLM and the Sublette County Weed and Pest to develop a 5 year weed management plan. This area has also had routine monitoring and treatment for cheatgrass, an annual invasive grass that thrives in disturbance, along roads and pipelines. We ask that disturbance be limited when practical, certified weed free mulch and gravel be used and certified cheatgrass free seed be purchased for reclamation. Please contact Sublette County Weed and Pest for further information

APPENDIX B

Interdisciplinary Team Checklist

National Environmental Policy Act (NEPA)
Interdisciplinary Team Scoping Worksheet

Project Title: BSO Dry Piney Helium and Carbon Sequestration Project

Project Lead: Travis Chewning, U.S. Bureau of Land Management, Project Manager

DETERMINATION OF STAFF: ***(Choose one of the following abbreviated options for the left column)***
NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for relevant impact that need to be analyzed in detail in the EA.
The NEPA Handbook states that issues need to be analyzed in detail if: 1) Analysis of the issue is necessary to make a reasoned choice between alternatives or 2) The issue is significant...or where analysis is necessary to determine the significance of impacts.

RESOURCES AND ISSUES CONSIDERED:

Determination	Resource	Rationale for Determination	Assigned Staff	Date
PI	Air Quality & Greenhouse Gas Emissions	The proposed and connected actions have the potential to impact air quality by emitting criteria air pollutants, hazardous air pollutants, and greenhouse gases. Direct and indirect impact analysis will include a quantitative analysis of the air emissions generated by the construction and operation of the pipelines and improvements to access roads on BLM-managed lands as well as the construction and operation of the two well pads in Section 35 and 11. SWCA will prepare a comprehensive air emissions inventory for all sources associated with the construction and operation of the proposed and connected actions. Results of this air emissions inventory will be compared with appropriate permitting thresholds to ensure that any impacts will not cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS). SWCA will utilize the most recent EPA guidance on air emission calculation methodologies including the use of EPA MOVES3 for tailpipe emissions from on and off-road vehicles, WRAP Fugitive Dust Handbook for air emissions from land clearing and surface disturbance, and AP-42 emission factors for air emissions from paved and unpaved roadways. Blue Spruce will obtain the required permits from the WDEQ Air Quality Division for private components of this project. These permits include appropriate level of analysis and show that air quality standards will be met; therefore, by complying with these permits impacts to air quality would be avoided and minimized. The analysis will incorporate the state air permits analyses for the private components of the project.	R. Jacoby	7/31/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
PI	Air Quality – Ozone General Conformity	See EA section 3.2. A copy of the 2025 memorandum documenting compliance with the emissions and ozone requirements for the non-attainment area is included in the administrative record.	R. Jacoby/ T.J. Zebulske	7/31/25
NP	Areas of Critical Environmental Concern	There are no Areas of Critical Environmental Concern (ACECs) within the proposed action or connected action footprints. And there is no potential for impacts to ACECs. The closest ACEC is the Rock Creek ACEC, which is approximately 2 miles to the southwest of the proposed action and connected action areas. This resource will not be further analyzed.	Thea Koci	7/16/2025
NI	Cultural Resources	The re-route managed to successfully avoid previously known Eligible sites 48SU867, 48SU1318, and 48SU1653; as well as newly discovered Eligible site 48SU7955. A Class III Cultural Resource Inventory was conducted by SWCA for the original APE as well as the re-route in Spring/Summer 2025, with specific attention paid to Eligible sites that fall within or adjacent to the APE. The inventory included intensive pedestrian survey, and thorough subsurface testing to evaluate sites for significance under Criterion D for the NRHP, contributing areas, and ultimately to assess for project effects. Because they will be excavating in an area near several Eligible cultural sites, an Archaeological Monitor will be assigned for all ground disturbing activity along the pipeline route. The determination of effect for the re-routed project is No Historic Properties Affected. See Section 3.4 for further discussion.	Shannon Groves	8/19/2025
NP	Farmlands (Prime or Unique)	There are areas classified as farmland by the Natural Resource Conservation Service within the proposed action and connected action areas; however, these are classified as “Not Prime Farmland.” There are no areas classified as “Prime or Unique Farmland” within the proposed action or connected action footprints, and there is no potential for impacts to prime or unique farmlands.	Travis Chewning	8/19/25
NI	Fish Habitat	Fish habitat is present in the vicinity of the project. Surface disturbing activity within the watershed especially within floodplains and riparian areas has potential to impact fish habitat. Design features within the POD address and substantially reduce potential threats to fish habitat resulting from ground disturbance. attempted analysis of potential impacts would not be meaningful. Additionally, changes to water use can alter fish habitat both locally and downstream of the project. Determination of potential impacts from changes in water use and water development are addressed in the T&E section.	Alex Gardiner	2/20/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
NP	Fuels/Fire Management	There are no current or proposed prescribed fire or fuels management projects within the project vicinity. The design features of the Proposed Action reduce the possibility of unplanned ignitions (wildland fire) to a degree that does not require analysis. Any unplanned ignitions as a result of activities associated with the Proposed Action will be the project proponent's responsibility for reporting and any associated costs for suppression and rehabilitation. This resource will not be further analyzed.	Ross Dary	2/12/2025
NI	Geology/Mineral Resources/Energy Production	Geology: Mineral development would take place in the Madison and Bighorn formations. Fracking is not proposed. There are no known geologic hazards or evidence of infrastructure damaged in the LaBarge Field, from seismic activity/Mineral resources and energy production: The proposed action supports fluid mineral development and energy production and would not conflict with any such activities.	Brian Roberts	2/5/2025
NI	Invasive Species/ Noxious Weeds (EO 13112)	The presence of existing state-listed and Sublette County–designated noxious weeds within the proposed action is anticipated. The project is proposed for placement in an existing oil and gas production field and is primarily planned to be co-located within existing pipeline corridors that have previously been disturbed. BSO will implement a noxious weed control program in cooperation with the BLM and Sublette County to minimize the spread of noxious weeds as described in the Weed Management Plan (Appendix B of the Plan of Development).	T.J. Zebulske	2/5/2025
NI	Lands/Access	The proposed and connected action facilities will be located within an area of checkerboard land ownership that is used primarily for livestock grazing and mineral development. The Pinedale RMP designates most of this area as “Intensively Developed Fields;” however, portions of the pipeline ROWs and access roads will extend outside of these designated areas and into “Traditional Leasing Areas.” Approximately 35% of the land required for development of the ROWs will occur on BLM-managed lands; however, activities are not anticipated to impact other uses of the land, including ranching activities and future development.	Anna Welsh	7/28/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
NI	Livestock Grazing	The proposed and connected action footprints will be located within an area used for livestock grazing. Facilities will be located within the North LaBarge and Dry Piney grazing allotments. No changes or reductions to federally permit animal unit months are anticipated to occur. Additionally, the proposed and connected actions will not interfere with livestock movement, and coordination will occur with livestock operators to ensure construction activities are conducted at a safe distance from active grazing. No effects to Wyoming Standards for Healthy Rangelands are anticipated.	Erik Bailly	7/17/2025
NI	Migratory Birds	The proposed action and connected action footprints include breeding and foraging habitat for migratory birds protected under the Migratory Bird Treaty Act of 1918. Clearing of vegetation will occur outside the typical May 1 through July 31 nesting period for migratory birds. Additionally, limits to ground disturbance will be in place from November 15 through April 30 in big game crucial winter range, which will limit disturbance to any species that have breeding seasons that begin earlier than May 1, such as raptors. Although impacts on foraging habitat outside of the restricted time periods could impact individuals, the limited amount of permanent habitat loss, reclamation of any disturbed areas, and widespread availability of foraging habitat for migratory birds in the project vicinity will limit impacts to migratory birds. For these reasons, migratory birds will not be affected to a degree that detailed analysis is required. The proposed action and connected action footprints contain foraging habitat for bald and golden eagles; , suitable nesting habitat is present for Golden Eagles. There are no known nest locations within 1 mile of the proposed action. Although impacts on foraging habitat outside of the restricted time could impact individuals foraging in the area during the time of disturbance, the limited amount of permanent habitat loss, reclamation of any disturbed areas, and widespread availability of foraging habitat for bald and golden eagles in the project vicinity will limit impacts to bald and golden eagles. For these reasons, bald and golden eagles will not be affected to a degree that detailed analysis is required.	Mark Thonhoff	09/25/25
9/25/25NP	National Historic Trails	There are no National Historic Trails (NHTs) within the proposed action or connected action footprints. There is no potential for impacts to NHTs. The closest NHT is the Lander Cutoff (48SU387), over 9 miles north of the proposed and connected action. Due to the distance and intervening topography and existing development, no visual impacts or indicated impacts will occur.	Shannon Groves	8/20/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
NP	Native American Religious Concerns	This resource will not be further analyzed. Tribal consultation with the eight Nations interested in the Pinedale Field Office began in March 2025. The Northern Arapaho Tribe requested a site visit and a Tribal Monitor due to the project going through several Eligible sites. The project was updated in August 2025 to avoid all Eligible sites. Tribal consultation continued and Nations were informed of the determination of effect changing from 'Adverse Effect' to 'No Historic Properties Affected'. Despite multiple efforts to contact the Northern Arapaho to see if they still wanted a Tribal representative present, contact was not able to be made. According to BLM Wyoming State Office leadership, the Pinedale Field Office has fulfilled its responsibility for Tribal Consultation, having made a good faith effort to identify, notify, involve, and respond to all potentially affected Tribes. As such, the consultation process is considered complete.	Shannon Groves	11/18/25
NI	Paleontology	This undertaking takes place partially within the Paleocene to Eocene-aged La Barge and Chappo Members of the Wasatch Formation (mapped in combination) and the Eocene-aged unnamed diamictite and sandstone member of the Wasatch Formation, which have a very high potential to contain scientifically important paleontological resources (PFYC 5). An inventory was conducted with found a single fossil locality was discovered consisting of an impression of a piece of wood. It was determined not to be scientifically important. Due to shallow deposits any excavation efforts in the area are likely to impact Wasatch Formation materials. A monitor is recommended for any work that may impact the Wasatch Formation. The applicant has committed environmental protection measures (Unanticipated Discovery Plan; construction monitoring of geologic units with PFYC of 3, 5, and U) and compliance with federal and state regulations to minimize (or avoid) potential physical damage and/or destruction of scientifically important fossils.	Stephen Dadio	9/16/2025
PI	Public Health and Safety	The introduction of hydrogen sulfide (H_2S) facilities, including pipelines and disposal wells, into an area previously without such infrastructure, poses new risks to public health and worker safety that warrant heightened scrutiny. This new risk profile, coupled with the potential for H_2S releases, necessitates a comprehensive hazard analysis to ensure the safety of both the public and project personnel. Therefore, issues concerning H_2S and its potential impacts on public health and safety will be carried forward for detailed analysis and public review. See Section 3.8 for further discussion.	Travis Chewning	7/10/25

Determination	Resource	Rationale for Determination	Assigned Staff	Date
NI	Recreation, including access (SO 3373) and shooting sports (SO 3356)	The proposed and connected action will be located within an area of checkerboard land ownership, which includes privately owned and BLM-managed lands. Activities on BLM-managed lands are managed as dispersed recreation. There are no Special Recreation Management Areas or developed recreation areas within or near the footprints of the proposed action or connected action. Development of the proposed and connected actions will not interfere with the direction of SO 3356 and 3373 (i.e., recreational activities will not be disrupted by the proposed and connected actions). For these reasons, recreational activities will not be affected to a degree that detailed analysis will be required.	Thea Koci	7/16/2025
NI	Greater Sage-Grouse Habitat	The proposed and connected action footprints will not be located within designated Sage-Grouse Core Area, and no known leks are within 2.0 miles of the proposed action; however, the proposed action and connected action footprints are in BLM sage-grouse general habitat management area (GHMA). Sagebrush steppe habitat, consisting of a mosaic of big sagebrush and native grassland communities, is present in the proposed and connected action footprints and may potentially provide suitable habitat for greater sage-grouse. Ground clearance and surface-disturbing activities will impact this habitat type. However, BSO will implement a project-wide reclamation plan that is compliant with State EO 2019-3, which includes required design features for GHMA, as well as reseeding practices and a seed mixture design that considers wildlife habitat reestablishment, including sagebrush steppe habitat. Seed mixtures will be site-specific, composed of native species, and based on existing ecological sites and site conditions. On BLM-managed lands, seed mixtures will be approved by the BLM. Limited amount of permanent habitat loss, reclamation of any temporary surface disturbances, and widespread availability of this habitat type in the project vicinity will limit impacts to greater sage-grouse.	Mark Thonhoff	9/05/25
PI	Socioeconomics	The Project is expected to generate significant socioeconomic benefits. The construction of pipelines will require a workforce of 50–75 personnel over approximately 6 months, while well pad and access road construction will involve 10–12 personnel over 3 months. This substantial need for labor, along with the consistent demand for heavy construction equipment, is anticipated to stimulate the local economy through increased demand for goods and services. Furthermore, the project's long-term operation and maintenance activities will provide sustained economic activity and potential employment opportunities in Sublette County, Wyoming. See Section 3.7 for further discussion.	Travis Chewning	7/102025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
NI	Quality of Life	The Proposed Action is not expected to alter socioeconomic values such as access to public services, recreation, or community cohesion in a way that would affect the quality of life of the American people. As described in EA §3.7, the project would result in a short-term, minor population increase during construction, with no long-term workforce or permanent housing demand. Public services and infrastructure in the region have adequate capacity, and the project does not restrict access to public lands or affect cultural or recreational values. Because the project is consistent with existing land uses and does not introduce new stressors to community well-being, this resource was appropriately eliminated from detailed analysis.	Travis Chewning	9/25/25
NI	Soils and Vegetation Excluding Special-Status Species	The proposed and connected actions will cause impacts to soil resources and vegetation during construction operations. ROW segments occurring on BLM-managed lands are primarily planned to be co-located within existing pipeline corridors that have previously been disturbed. Of the 14.2 miles of total ROW construction, only 5.4 miles are anticipated to occur on BLM-managed lands. Additionally, the proposed project will use existing roads across BLM-managed lands. No new roads will be constructed on BLM-managed lands. Applicant-committed environmental protection measures (i.e., topsoil salvage practices from the Temporary Use and Right-of-Way Plan of Development; implementation of a project reclamation plan; implementation of a project stormwater pollution prevention plan) and compliance with federal and state regulations will minimize impacts to soil and vegetation resources. Impacts to soil and vegetation resources are mitigable with the proper planning and implementation of BMPs.	Erik Bailly	7/17/2025
NI	Threatened, Endangered, Candidate or Special-Status Plant Species	The proposed and connected actions will have no impact on federally listed threatened or endangered plant species, because none have the potential to occur in the proposed action due to the absence of suitable habitat. The proposed and connected actions overlap the known possible range for whitebark pine (Pinus albicaulis), which is listed as federally threatened. Whitebark pine is found in high-elevation forests and timberlines amongst other high mountain conifers. The project does not provide suitable habitat to support Whitebark Pine and therefore will not impact the species. Initial review of available public resources indicates that the project overlaps the known ranges of four BLM sensitive plant species: Trelease's milkvetch (Astragalus racemosus var. treleasei), cedar rim thistle (Cirsium aridum), beaver rim phlox (Phlox pungens), and tufted twinpod (Physaria condensata). However, no occurrences of these species have been recorded within the proposed action. Documented occurrences of cedar rim thistle, beaver rim phlox, and tufted	Brian Roberts	819/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
		twinpod have been recorded east of the project and east of the Green River. Small populations of Trelease's milkvetch were documented in the vicinity of the project (approximately 0.5 mile from the project or farther) in 2002. The project is proposed for placement in an existing oil and gas production field and is primarily planned to be co-located within existing pipeline corridors that have previously been disturbed; therefore, it is unlikely that suitable habitat or established populations of Trelease's Milkvetch occur within the proposed action. The proposed and connected actions are unlikely to impact BLM special-status plant species to a degree that will require detailed analysis.		
NI	Threatened, Endangered, Candidate or Special-Status Animal Species	The proposed and connected actions will have no impact on federally listed threatened, proposed threatened, or endangered terrestrial wildlife species, because suitable habitat is not present for these species. The proposed action lacks the high-elevation habitat required by Canada lynx (Lynx canadensis;[Bridger-Teton Lynx Analysis Unit]) and wolverine (Gulo gulo luscus), the roadless undisturbed areas for grizzly bear (Ursus arctos horribilis), and the broadleaf riparian habitat that yellow-billed cuckoo (Coccyzus americanus) requires. All of the areas that will be permanently disturbed are currently grazed. This limits the amount of understory present that typically supports nectar-producing flowers, which monarch butterflies use for foraging, or milkweed species, which are essential for monarch butterfly reproduction. Therefore, federally listed terrestrial species will not be affected by the project. Critical habitat for these threatened and endangered fish species—bonytail (Gila elegans), Colorado pikeminnow (Ptychocheilus lucius), razorback sucker (Xyrauchen texanus), and humpback chub (Gila cypha)—is downstream of the proposed action on the Green River below Flaming Gorge. There are no recent records of any of the species being present above Flaming Gorge, which is over 50 miles downstream of the proposed action. No additional depletions are planned under the project, thus de minimis water depletions are not applicable. BLM special-status species that use sagebrush steppe habitat have the potential to be present in the proposed and connected action footprints. Ground disturbance and vegetation removal will occur outside of restricted time periods (November 15–April 30 in big game crucial winter range and May 1–July 31 everywhere else). This will limit disturbance during the typical nesting and breeding season for many BLM sensitive species. Although impacts to habitat outside of the restricted time periods could impact individuals in the area during the time of disturbance, the limited amount of permanent habitat loss, reclamation of any disturbed areas, and widespread availability of similar habitat in the project vicinity will limit impacts to	Mark Thonhoff	09/05/25

Determination	Resource	Rationale for Determination	Assigned Staff	Date
		BLM sensitive status species. A survey for pygmy rabbit (Brachylagus idahoensis) will be conducted within the proposed action area following the January 2011 BLM Pinedale Field Office Wildlife Survey Protocols to document the presence/absence of this species. For these reasons, BLM sensitive status species will not be affected to a degree that detailed analysis is required.		
PI	Travel/ Transportation	The Dry Piney Project is expected to significantly increase traffic, especially during peak construction, raising concerns about potential vehicle collisions, limited sight distances, and hazards from heavy equipment sharing roads with regular traffic. This surge in activity could also degrade road surfaces and generate dust, impacting both public safety and visibility. Furthermore, increased traffic raises significant concerns about wildlife, potentially leading to more wildlife-vehicle collisions, habitat fragmentation from noise, and disruptions to migration patterns. Therefore, it's crucial to analyze how the project's transportation impacts affect both public safety and local wildlife. See section 3.5 for further discussion.	Thea Koci	7/24/2025
NI	Visual Resources	The proposed and connected actions will occur on BLM-managed lands within areas designated as Visual Resource Management (VRM) Class III (approximately 1.6 miles of the ROW) and VRM Class IV (approximately 5.8 miles of the ROW). The objective for VRM Class III is to partially retain the existing character of the landscape, with moderate change being acceptable provide they do not dominate the view of the casual observer. The objectives for VRM Class IV allow for major modification to the existing character of the landscape. Because the area to be disturbed will consist of the ROW containing a buried pipeline, impacts to visual resources will be temporary. For these reasons, visual resources will not be affected to a degree that detailed analysis will be required.	Brian Roberts	8/192025
NI	Wastes (hazardous or solid)	Operator will follow NTL-3A, and all applicable state spill/release reporting regulations	Alex Artz	2/27/25
NI	Water Resources/ Quality (drinking/ surface/ground)	The project area is located within the Greater Green River Basin and overlies the Wasatch Formation as well as the La Barge and Chappo aquifers. Reported depths of the Wasatch Formation vary significantly across the region, ranging from approximately 300 feet to 2,500 feet. The applicant will implement best management practices and comply with all applicable state and federal regulations governing oil and gas exploration. Implementation of BMPs and adherence to these regulatory requirements will further minimize potential impacts to water resources and ensure the protection of groundwater and surface water quality.	Brian Roberts	8/19/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
		Water for project use will be sourced from a nearby municipal water source and trucked to site. Applicant will comply with all applicable water permitting requirements. The project area is located in the Green River Basin, Birch Creek-Green River Watershed hydrologic unit code 10-digit 1404010111. South Fork Dry Piney Creek are found within the area along with several intermittent or ephemeral channels as mapped by the National Hydrography Dataset. Additionally several springs are mapped within the area including one named spring; Gentle Annies Spring. With design features in place, detailed analysis is not required.		
NI	Wetlands/ Riparian Zones & Floodplains	The proposed and connected actions have the potential to cause impacts, as well as temporary and permanent impacts, to wetlands, riparian zones, and floodplains through the construction and the operation of the project. However, project avoidance (e.g., boring) and minimization measures will allow development of the project, with minimal or no impacts to wetlands, riparian zones, or floodplains.	Brian Roberts	8/19/2025
NP	Wild and Scenic Rivers	There are no WSR segments within the proposed action or connected action footprints, and there is no potential for impacts to WSR segments. The closest WSR segment is the Green River Unit, which is over 40 miles to the north of the proposed action and connected action areas. This resource will not be further analyzed.	Thea Koci	7/16/2025
NP	Wilderness/WSA	There are no WSAs within the proposed action or connected action footprints, and there is no potential for impacts to WSAs. The closest WSA is the Lake Mountain WSA, which is approximately 1.5 miles to the southwest of the proposed action and connected action areas. This resource will not be further analyzed.	Thea Koci	7/16/2025
NP	Lands with Wilderness Characteristics	A Lands with Wilderness Characteristics inventory was completed for the entire project area. The project is within one Lands with Wilderness Characteristics inventory unit, WYD01-6300-300. This unit does not contain the qualities necessary to qualify as lands with wilderness characteristics. This resource will not be further analyzed.	Thea Koci	7/16/2025

Determination	Resource	Rationale for Determination	Assigned Staff	Date
NP	Wild Horses and Burros	No wild horse and burro herd management areas (HMAs) are within the proposed action or connected action footprints. There is no potential for impacts to wild horse and burro HMAs. The closest HMA is the Little Colorado HMA, which is approximately 10 miles to the southeast. The proposed action and connected action footprints will be located within the LaBarge Herd Area; which by definition, is not actively managed for the maintenance of wild horse or burros as defined in 43 CFR 4700. This resource will not be analyzed further.	Benjamin D. Smith	8/21/25
NI (general wildlife) PI (big game)	Wildlife Excluding Special-Status Species	Habitat for general wildlife is present within the proposed action and connected action footprints. Ground disturbance and vegetation removal will occur outside of restricted time periods (November 15–April 30 in big game crucial winter range and May 1–July 31 everywhere else). This will limit disturbance during the typical nesting and breeding season for many wildlife species. Impacts on habitat outside of the restricted time periods could impact individuals in the area during the time of disturbance. The project area supports crucial winter range and migratory routes for big game species, including mule deer, elk, and moose. Previous studies on impacts to big game species in oil and gas fields indicate potential impacts, including avoidance of the area, during construction and after construction is complete. See Section 3.6 for further discussion.	Mark Thonhoff	09/05/25
NP	Woodland/Forestry	No forest or woodlands present within the project area. This resource will not be analyzed further.	Abigail Stemmler	01/30/2025

APPENDIX C

Application for Permit to Drill (APD) and Right-of-Way Terms and Conditions

Application for Permit to Drill (APD) And Right-of-Way Terms and Conditions

APD General Surface Conditions of Approval:

Operator: Blue Spruce Operating
Lease #: Multiple
Location: Multiple, 6th Principal Meridian, Sublette County, Wyoming.
NEPA: DOI-BLM-WY-D010-2025-0046-EA

Per 43 CFR 3171.14: For APDs approved after June 22, 2024, an APD approval is valid for 3 years from the date that it is approved, or until lease expiration, whichever occurs first.

Operators are required to comply with all of decisions and applicable terms, conditions, and requirements in the as well as the Conditions of Approval (COAs) attached as part of this Revised Surface Use Plan. Failure to comply with these decisions, requirements and COAs will be considered Incidents of Noncompliance (INCs) subject to the requirements in 43 CFR 3163. Additionally, failure to comply with all of the decisions and requirements of the ROD for the 2008 FSEIS ROD could result in other actions being imposed as deemed necessary by Authorized Officer, up to and including, withholding development authorizations until compliance is achieved.

1. The operator shall be responsible for the prevention and suppression of fires on public lands caused by its employees, contractors, or its subcontractors. During conditions of extreme fire danger, surface use operations may be either limited or suspended in specific areas, or additional measures may be required by the Authorized Officer.

2. Notice of any death, fire, spill, or leakage, as defined in BLM Notice to Lessees (NTL)-3A, will be immediately reported by the operator to the BLM and other such federal and state officials (e.g., WDEQ) as required by law. Verbal notice will be given as soon as possible, but within 24 hours, and verbal notices will be confirmed in writing within 72 hours of any such occurrence. Spills will be immediately contained and cleaned up in accordance with BLM requirements.

   Report undesirable events to:
   Alex Artz, Environmental Protection Specialist
   Cell Phone: (307) 367 – 5314

3. All facilities on location that have the potential to leak/spill oil, glycol, methanol, produced water, condensate, or other fluids which may constitute a hazard to the environment, public health or safety (including, but not limited to, drain sumps, sludge holdings, and chemical containers), shall be within secondary containment, impervious to those fluids, exclusive of wildlife and livestock, with animal/bird escape capability, and able to contain a minimum of 110% of the volume of the largest storage vessel, respective to content, or 100% with at least one foot of freeboard, whichever is greater, so that any spill or leakage would not drain, infiltrate, or otherwise escape to ground water, surface water, or navigable waters before cleanup can be completed (within 72 hours).

4. If not approved in the APD, the operator must have an approved sundry notice with a topographic overview of the well pad at a 1"-50' scale which shows the proposed production facility layout before installation occurs.

5. All wells, above-ground structures, production equipment, tanks, transformers, and insulators not subject to coloring requirements for safety would be painted the BLM approved non-contrasting

color. This includes any new facilities installed during the life of the well and as well as any associated facilities on the pad permitted through a right-of-way action.

6. All open-vent exhaust stacks on production equipment must be constructed, modified and/or otherwise equipped and maintained to prevent birds and bats from entering, and to discourage perching, roosting, and nesting.

7. No construction, reclamation, or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts more than 6 inches deep, the soil shall be deemed too wet to adequately support construction equipment.

8. Construction, reclamation, and maintenance will not be performed with frozen ground, except in cases where the activity and/or construction method is approved by the Authorized Officer.

9. Any mulch and mineral material (sand and gravel) used must be certified weed free. Any topsoil brought into the location must be approved by the Authorized Officer.

10. The operator will monitor and control noxious and invasive weeds according to an approved weed management plan, on project-disturbed areas and native areas infested as a direct result of the project. The control methods shall comply with the applicable requirements established by the EPA, BLM, state, and local authorities. Prior to the use of pesticides, the permit holder will submit a Pesticide Use Proposal (PUP) to obtain written approval from the Authorized Officer. Pesticide Application Records shall be submitted to the BLM Weeds Specialist not later than 1 month after spraying has been completed for the season.

11. The operator will also use fall as their primary window for seeding reclamation. If the operator cannot seed during this window, they must notify the BLM for an alternative seeding time or defer to the next fall.

12. Interim reclamation (i.e., site stabilization/soil retention seeding) shall be conducted on disturbed areas that are needed for future planned operations but will not be occupied for one or more growing seasons.

13. Seed mixes shall be submitted with a Sundry Notice, Notice of Intent (Form 3160-5) to the BLM for approval before reclamation begins. The seed mix shall include native species that approximates the surrounding natural vegetation and be certified weed-free (including cheatgrass).

14. The Operator must provide a Sundry Notice - Subsequent Report (Form 3160-5) to the Authorized Officer upon completion of each seeding attempt. Sundry Notices must provide the date(s) seeding was completed and copies of seed tags of seed used at specific locations.

Pits:

1. A Sundry Notice, Notice of Intent (Form 3160-5) must be submitted and approved before any pit closures or reclamation work.

2. If any of the following scenarios occur during the life of the cuttings pit, the cuttings pit will be tested for Diesel Range Organics (DRO), Gasoline Range Organics (GRO), Sodium Absorption Ratio (SAR), and Total Petroleum Hydrocarbons (TPH), and results submitted via sundry notice for authorization before pit closure.
    a. Oil used down hole for relief of differential sticking during drilling operation is released into the pit.

b. Locations remaining open 30 days past the rig release date of the first well drilled on a location.

c. Cuttings pits are located within 500 feet of a water well or Sand Draw.

3. If the above scenarios are not applicable, pit closure may occur without prior approval, provided test results indicate the materials are below expected levels. **Samples of each pit must be taken, and results provided to the Pinedale Field Office within 30 days of closure.**

4. Any pits containing harmful fluids shall be maintained to prevent wildlife and livestock injury and mortality.

5. Any hydrocarbon material released into any pits shall be removed within seven (7) days of the discharge event.

6. An approved Sundry Notice, Notice of Intent (Form 3160-5) is required before any transport of drilling fluids or cuttings off location can occur.

Other:

1. The Operator proposes to use an existing water supply well. The water well and any tanks, pumps, hoses, pipes, or other associated connections shall include check valves, backflow preventers or other devices that secure the water well against discharge of fluids into the water well.

2. All freshwater used for the drilling of the surface casing must comply with all requirements concerning water quality as set forth by the Wyoming Oil and Gas Conservation Commission Regulations.

3. A Safety Data Sheet for every chemical or hazardous material brought on-site will be kept on file at the operator's field office in accordance with 29 CFR §1910.1200.

Cultural:

A permitted Archaeologist shall monitor all new surface disturbing activities.

Site 48SU7957 will be temporarily fenced off during construction. The position of the fence will be determined by a permitted Archaeologist. The installation of the fence will be monitored by a permitted Archaeologist.

Stipulations from 43 CFR Part 3171.1(c)(1) through (5) apply. The Operator shall suspend all operations within 100 feet of the immediate area of such discovery. If the discovery is suspected to include human remains, then all operations within 300 feet of the discovery shall be suspended. In either case, work within the vicinity of the discovery may not proceed until written authorization to proceed is issued by the Authorized Officer. The management of any cultural resources discovered during construction shall follow the Wyoming State Protocol, Appendix K (Standard Discovery Plan).

Paleontology:

1. Collecting: The project proponent/Operator is responsible for informing all persons associated with this project including employees, contractors, and subcontractors under their direction that they shall be subject to prosecution for damaging, altering, excavating, or removing any vertebrate fossils or other scientifically significant paleontological resources from the project area. Collection of vertebrate fossils (bones, teeth, turtle shells) or other scientifically significant paleontological

resources is prohibited without a permit. Federal law enforcement personnel will prosecute unlawful removal, damage, or vandalism of paleontological resources.

2. Discovery: If vertebrate or other scientifically significant paleontological resources (fossils) are discovered on BLM-administered land during operations, the Operator shall suspend operations that could disturb the materials, stabilize, and protect the site, and immediately contact the BLM Pinedale Field Office Manager (Authorized Officer). The Authorized Officer would arrange for evaluation of the find within an agreed timeframe and determine the need for any mitigation actions that may be necessary. Any mitigation would be developed in consultation with the Operator, who may be responsible for the cost of site evaluation and mitigation of project effects to the site. If the operator can avoid disturbing a discovered site, there is no need to suspend operations; however, the discovery shall be immediately brought to the attention of the Authorized Officer.

3. Avoidance: All vertebrate or scientifically significant paleontological resources found as a result of the project/action will be avoided during operations. Avoidance in this case means "No action or disturbance within a distance of at least 100 feet of the outer edge of the paleontological locality."

Wildlife:

Big Game

- Activities or surface use are not allowed from November 15 through April 30 for the protection of big game crucial winter habitat.

Greater Sage-Grouse

- Will the project occur within designated GHMA sage-grouse management area? ☒ Yes ☐ No
- Will the project occur within designated PHMA sage-grouse management area? ☐ Yes ☒ No
- Will the project occur within designated SFA sage-grouse management area? ☐ Yes ☒ No

Raptors

- All surface disturbing activities are seasonally restricted from February 1 through July 31 within a 1 mile radius of ferruginous hawk nesting habitat and within 0.5 miles of all other raptor nesting habitat.

Other wildlife

- If surface disturbing activity is requested to take place in mountain plover habitat between April 10 and July 10, presence / absence surveys are required. Survey results will determine when activities will be permitted.
- Surface disturbing and disruptive activity will be prohibited within 1/2 mile of burrowing owl nesting habitat from April 1 through August 14.

Exceptions to conditions of approval/mitigation would be processed according to procedures discussed in RMP Appendix 8 (BLM 2008b, page 8-4). Details regarding requesting an exception can be obtained from the BLM Pinedale Field Office. Additional mitigation measures may be applied if exceptions are granted.

ROW Terms and Conditions

1. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. Emergency use of pesticides shall be approved in writing by the authorized officer prior to such use.

2. The holder shall be responsible for weed control on disturbed areas within the limits of the right-of-way. The holder is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods (within limits imposed in the grant stipulations).

3. The holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) In excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

4. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the plan of development which was approved and made part of the grant on September 30, 2025. Any relocation, additional construction, or use that is not in accord with the approved plan of development, shall not be initiated without the prior written approval of the authorized officer. **A copy of the complete right-of-way grant, including all stipulations and approved plan of development, shall be on the right-of-way area during construction, operation, and termination.** Noncompliance with the above will be grounds for immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

5. Surface disturbance will be restricted in any of the following areas or conditions. Modification to this limitation may be approved in writing by the Authorized Officer.
    - Construction with frozen ground material or during periods when the soil material is saturated, frozen, or when water shed damage is likely to occur.

6. Holder shall remove only the minimum amount of vegetation necessary for the construction of structures and facilities. Topsoil shall be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation.

7. Sixty (60) days prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surface material, recontouring, topsoiling, or seeding. The authorized officer must approve the plan in writing prior to the holder's commencement of any termination activities.

8. Additional Stipulations

The holder may request an exception in writing to the following stipulations at any time. Any exceptions to the following stipulations must be approved in writing by the authorized officer prior to conducting any surface disturbing activities or activities disruptive to wildlife. The exception request must explain the reason(s) for the exception and explain why the proposed activities will not impact the species or their habitat. Data supporting the exception must accompany the written request.

Paleontology

- Retention of a BLM-permitted paleontologist to create, implement, and oversee a Paleontological Resources Mitigation Monitoring Program, including an Unanticipated Discoveries Plan, that details the proper procedures to document, identify, collect, prepare, and curate scientifically important fossils discovered during ground disturbance activities, as determined in consultation with the BLM.
- Full-time paleontological monitoring by a BLM-permitted paleontologist during grounddisturbing construction activities that have the potential to impact sediments of the Wasatch Formation (PFYC 5). Additionally, full-time paleontological monitoring is recommended for all excavation activities that take place within T28N R113W, Sections 31 and 32, including in areas mapped as Quaternary alluvium and colluvium (PFYC 2). Although these sediments are considered to be of low potential to contain paleontological resources, these deposits appear particularly shallow within these Sections, and thus any excavation efforts in the area are likely to impact Wasatch Formation materials.
- A final report should be prepared to describe the results of the paleontological mitigation program implemented for the Project during ground disturbance activities, and to document the presence of any unearthed fossil materials, any collection and preparation activities related to them, and their curation at an approved repository (if collected).
- If vertebrate or other scientifically significant paleontological resources (fossils) are discovered on BLM-administered land during operations, the Operator shall suspend operations that could disturb the materials, stabilize and protect the site, and immediately contact the BLM Pinedale Field Office Manager (Authorized Officer). The Authorized Officer would arrange for evaluation of the find within an agreed timeframe and determine the need for any mitigation actions that may be necessary. Any mitigation would be developed in consultation with the Operator, who may be responsible for the cost of site evaluation and mitigation of project effects to the site. If the operator can avoid disturbing the discovered site, there is no need to suspend operations; however, the discovery shall be immediately brought to the attention of the Authorized Officer.
- All vertebrate or scientifically significant paleontological resources found as a result of the project/action will be avoided during operations. Avoidance in this case means “No action or disturbance within a distance of at least 100 feet of the outer edge of the paleontological locality.”

Wildlife

- Activities or surface use are not allowed from November 15 through April 30 for the protection of big game crucial winter habitat.
- All surface disturbing activities are seasonally restricted from February 1 through July 31 within a 1 mile radius of ferruginous hawk nesting habitat and within 0.5 miles of all other raptor nesting habitat.

- If surface disturbing activity is requested to take place in mountain plover habitat between April 10 and July 10, presence / absence surveys are required. Survey results will determine when activities will be permitted.
- Surface disturbing and disruptive activity will be prohibited within 1/2 mile of burrowing owl nesting habitat from April 1 through August 14.

Cultural

- A permitted Archaeologist shall monitor all new surface disturbing activities.
- Site 48SU7957 will be temporarily fenced off during construction. The position of the fence will be determined by a permitted Archaeologist. The installation of the fence will be monitored by a permitted Archaeologist.
- Stipulations from 43 CFR Part 3171.1(c)(1) through (5) apply. The Operator shall suspend all operations within 100 feet of the immediate area of such discovery. If the discovery is suspected to include human remains, then all operations within 300 feet of the discovery shall be suspended. In either case, work within the vicinity of the discovery may not proceed until written authorization to proceed is issued by the Authorized Officer. The management of any cultural resources discovered during construction shall follow the Wyoming State Protocol, Appendix K (Standard Discovery Plan).