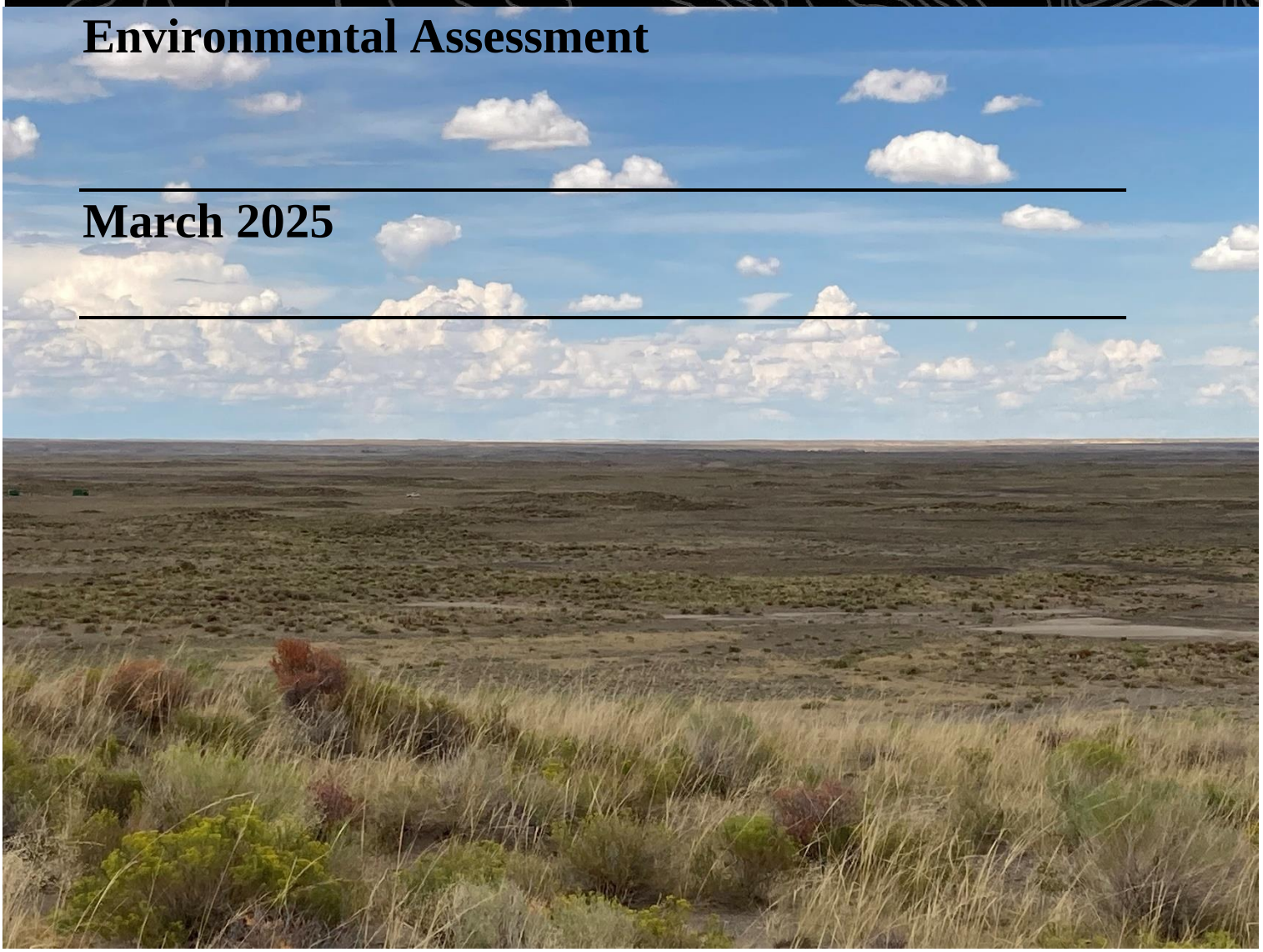
U.S. Department of the Interior
Bureau of Land Management

Southwest Wyoming CO_2 Sequestration

DOI-BLM-WY-D090-2023-0010-EA
Location: Wyoming – High Desert District – Kemmerer and Rock Springs Field Offices

Environmental Assessment

March 2025



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1.0 Background

Moxa Carbon Storage, LLC has submitted an application for right-of-way (ROW) for the use of BLM-administered pore space for injection and permanent geologic sequestration of carbon dioxide in Lincoln, Uinta, and Sweetwater counties in southwest Wyoming. The current application does not include any surface infrastructure or well development. Total federally managed BLM lands requested for the ROW is 605,091 acres. The legal land description of the project is shown in Appendix 3, and a map of the area is shown as Map 1 on page 8. If Class VI Underground Injection Control (UIC) wells are approved by the Wyoming Department of Environmental Quality (WDEQ), then the applicant would need to submit additional ROW application(s) for specific infrastructure across BLM-administered land.

Geologic Sequestration of Carbon Dioxide
Carbon Capture, Utilization & Storage (CCUS) refers to the process in which carbon is captured from industrial processes or the atmosphere and either utilized by turning the carbon into a new product or stored by injecting the carbon into a storage site, usually underground in a geologic formation.

The US Environmental Protection Agency (EPA) is authorized by the Safe Drinking Water Act (SDWA) to develop requirements and provisions for the UIC Program. This program regulates the injection of fluids (such as water, wastewater, brines from oil and gas production, and CO_2) into the subsurface for the purposes of storage or disposal. The main goal of the UIC Program is the protection of Underground Sources of Drinking Water such as aquifers or parts of aquifers that supply a public water system or contain a sufficient quantity of groundwater to supply a public water system now or in the future. Primary enforcement authority, often called primacy, refers to state, territory or tribal responsibilities associated with implementing US EPA approved UIC programs. Primacy programs are established under Section 1422 and 1425 of the SDWA. Wyoming received primacy over Class I through V in 1983. The Wyoming Department of Environmental Quality received primacy over Class VI wells on September 3. 2020. Wyoming is one of four states to have received primacy for implementing the Class VI program; the others are North Dakota, Louisiana, and West Virginia.

The WY Department of Environmental Quality Underground Injection Control Program regulates the subsurface injection of nonhazardous waste fluids, subsurface storage of liquid and gaseous fluids, and mineral solution mining to protect current and future uses of Underground Sources of Drinking Water. An underground source of drinking water site is defined as an aquifer which currently, or could, supply a public water system with drinking water.

The US EPA regulations group injection wells into six classes. Class VI CCUS refers to the process in which carbon is captured from industrial processes and either utilized by turning the carbon into a new product or stored by injecting the carbon into a storage site, usually underground in a geologic formation.

Prior to constructing or operating a Class VI well, a party must first obtain a well-specific permit from the WDEQ. Information about the WDEQ Class VI well permit application process can be found at https://deq.wyoming.gov/water-quality/groundwater/uic/class-vi/. Class VI wells are used to inject carbon dioxide (CO_2) into deep rock formations. This long-term underground storage is called geologic sequestration. Geologic sequestration, as part of CCUS, is a technology

that can be used to reduce CO_2 concentrations in the atmosphere and mitigate climate change. Possible sources of CO_2 for geologic sequestration include CO_2 captured from point source emissions, such as from an industrial facility or energy production, as well as CO_2 captured directly from the atmosphere.

The Class VI well requirements are designed to protect public health and underground sources of drinking water from the unique nature of CO_2 injection for geologic sequestration, including the:

- Relative buoyancy of CO_2
- Subsurface mobility
- Corrosivity in the presence of water
- Large injection volumes

Requirements include:

- Site characterization requirements to ensure the geology in the project area can receive and contain the CO_2 within the zone where it will be injected, including that the area is free of faults and fractures and that induced seismicity is not a concern.
- Requirements to predict the extent of the injected CO_2 plume and associated pressure front for the project using computational modeling, and to identify and address any deficiencies of existing wells within the Area of Review through corrective action. The Area of Review includes the area where the injected plume and its associated pressure front may impact pore fluids.
- Well construction requirements to ensure the Class VI injection well is constructed in a manner that will prevent any CO_2 from leaking outside of the injection zone. Class VI injection wells and in-zone monitoring wells are designed for the life of the project. Owners or operators must demonstrate that the well materials, including casing and cement, are corrosion resistant and compatible with the conditions and fluids to which they may be exposed.
- Testing and monitoring requirements to monitor the integrity of the injection well, groundwater quality, and the movement of the CO_2 plume and pressure front throughout the life of the project, including after CO_2 injection has ended, until the permitting authority determines no additional monitoring is needed to ensure that the project does not pose an endangerment to USDWs.
- Operating requirements to ensure the injection activity is appropriate to the well's construction and geologic characteristics so that it will not endanger USDWs or human health.
- Requirements to plug the injection well in a manner that will not allow fluid movement that endangers USDWs.
- Requirements for the operator to establish and maintain financial instruments sufficient to cover the cost of corrective action, plugging the injection well, post-injection site care, and emergency and remedial response for the project (i.e., financial responsibility).
- Requirements to develop and maintain a site-specific emergency and remedial response plan.
- Requirements for the Class VI well owner or operator to report all testing and monitoring results to the permitting authority to ensure the project is operating in compliance with all permit and regulatory requirements.

The issuance of a Class VI permit authorizes an applicant to construct a Class VI injection well. The WDEQ has the opportunity to review the results of the well construction (including an

inspection of the well) before authorizing an applicant to inject CO_2 in the subsurface pore space. Likewise, the public and the BLM will have the opportunity to review the permits for each Class VI well through the WDEQ comment process. This robust administrative process ensures a careful review of the proposed CO_2 sequestration project by the WDEQ and a thorough vetting by the stakeholders and the public.

1.1 Purpose and Need

The purpose for the federal action is for the BLM to respond to an application for a ROW by Moxa Carbon to dispose of carbon dioxide in the federal pore space under BLM administered surface, while minimizing disturbance and utilizing existing ROW, where applicable.

The need for the federal action is established by the BLM's responsibility under Title V of the Federal Land Policy and Management Act of October 21, 1976, 43 CFR 2800- Rights-of-Way under the Federal Land Policy And Management Act, the Kemmerer Resource Management Plan and Record of Decision, May 24, 2010, (as amended), and the Rock Springs Field Office Resource Management Plan and Record of Decision, December 20, 2024 (as amended).

Decision to be Made
The BLM's authorized officer will decide whether or not to grant the ROW to Moxa Carbon and if so, under what terms and conditions. Stipulations, other restrictions and required mitigation would be administered once the ROW grant approval has been determined.

1.2 Scoping, Public Involvement and Issues

Scoping and Public Involvement
The BLM formulated potential issues (see Appendix 1) for analysis during internal scoping and public scoping which began on April 26, 2023, for a total of 30 days. The project was posted to the BLM's National NEPA Register at https://eplanning.blm.gov/eplanning-ui/project/2023000/510. Press releases were sent to statewide media, posted online and on BLM social media. The BLM sent informational letters about the project to 53 various state and local governments, interested parties and native American Tribes requesting input. There were 12 comments received. The scoping comments can be reviewed in Appendix 5. Additionally, the Environmental Assessment was posted to the NEPA Register page on July 1, 2024, for a 60-day public review. The substantive comments and BLM's responses to those comments can be found in Appendix 6.

Identification of Issues
For each resource identified in Appendix 1, the rationale for determination to analyze the resource is described. Resources which may be affected by the Proposed Action or other alternatives, which are carried forward throughout this analysis are briefly explained as follows:

- **Sage-Grouse**
  - **Issue 1:** How would Greater Sage-grouse general habitat management areas be impacted by the proposal? Section 3.1
  - **Issue 2:** How would Greater Sage-grouse priority habitat management areas be impacted by the proposal? Section 3.2

- **Big Game**
  - **Issue 3:** How would crucial winter range habitat be impacted for deer, moose, pronghorn, and elk by the proposal? Section 3.3
  - **Issue 4:** How would elk parturition habitat be impacted by the proposal? Section 3.4

- **Raptor Nesting**
  - **Issue 5:** How would raptor nesting be impacted by the proposal? Section 3.5

- **BLM Sensitive Species - Wildlife**
  - **Issue 6:** How would pygmy rabbit be impacted by the proposal? Section 3.6
  - **Issue 7:** How would white-tailed prairie dogs be impacted by the proposal? Section 3.7
  - **Issue 8:** How would Idaho pocket gopher be impacted by the proposal? Section 3.8
  - **Issue 9:** How would BLM sensitive bats be impacts by the proposal? Section 3.9
  - **Issue 10:** How would migratory birds be impacted by the proposal? Section 3.10
  - **Issue 11:** How would mountain plover be impacted by the proposal? Section 3.11
  - **Issue 12:** How would BLM sensitive amphibians be impacted by the proposal? Section 3.12

- **Endangered Species**
  - **Issue 13:** How would Canada lynx be impacted by the proposal? Section 3.13
  - **Issue 14:** How would yellow-billed cuckoo be impacted by the proposal? Section 3.14
  - **Issue 15:** How would Ute Ladies-tresses be impacted by the proposal? Section 3.15

- **Riparian Areas and Wetlands**
  - **Issue 16:** How would riparian areas and wetlands be impacted by the proposal? Section 3.16

- **Paleontological**
  - **Issue 17:** How would paleontological resources be impacted by the proposal? Section 3.17

- **Soils**
  - **Issue 18:** How would soils be impacted by the proposal? Section 3.18

- **BLM Special Status Plants**
  - **Issue 19:** How would BLM special status plant ACEC be impacted by the proposal? Section 3.19
  - **Issue 20:** How would BLM special status plants outside of the special status plant ACEC be impacted by the proposal? Section 3.20

- **Cultural/Historic Trails**
  - **Issue 21:** Issue Statement: How would the granting of the ROW impact Blacks Fork Cutoff, Slate Creek Cutoff, Sublette Cutoff, and the Oregon Trail National Historic Trails (NHTs)? Section 3.21
  - **Issue 22:** Issue Statement: How would the proposed project impact cultural and historic resources? Section 3.22

- **Visual Resources**

- **Issue 23:** How would visual resources be impacted by the proposal? Section 3.23

- **Oregon Trail SRMA**
  - **Issue 24:** How would the Oregon Trail Special Recreation Management Area be impacted by the proposal? Section 3.24

- **Lands/Realty**
  - **Issues 25:** How would granting the ROW for underground pore space impact other existing or proposed ROWs near or adjacent to the proposed project area? Section 3.25

2.0 Proposed Action and Alternatives

No Action
Under the No Action alternative, the BLM would reject the proposal as submitted by Moxa Carbon therefore denying Moxa Carbon's proposal to use BLM-administered federal pore space for permanent geologic sequestration. Moxa Carbon would be unable to capture, transport, and permanently sequester carbon dioxide in the BLM-administered federal pore space, though Moxa Carbon could potentially use the non-federal pore space in the project area or resubmit the ROW application to the BLM.

Proposed Action
The proposed ROW would be authorized in Lincoln, Uinta and Sweetwater counties in southwest Wyoming for permanent geologic sequestration of carbon dioxide.[1] The BLM's ROW authorization would only provide for use of the subsurface BLM-administered federal pore space within the project area and not State of Wyoming or private lands. The BLM's pore space ROW grant would not authorize surface-disturbing activities or surface occupancy of BLM-administered public lands.

Additional ROWs may be submitted to the BLM in the future, should Moxa Carbon eventually seek BLM authorization to construct and use surface infrastructure on BLM-administered public lands. As Moxa Carbon explained in a letter submitting their application to the BLM, the pore space ROW is the "first step in a larger project that will consist of CO_2 capture infrastructure at planned ammonia production facilities and other potential CO_2 source points, CO_2 compression and pumps, a CO_2 pipeline, and sequestration surface facilities. Once the details of the larger sequestration project are finalized, [Moxa Carbon] will request the use of specific federal surface lands through a separate ROW application."

Accordingly, the Proposed Action does not include any use of BLM-administered public lands for related surface infrastructure (such as access roads, well pads, pipelines, etc.). These types of surface infrastructure are not currently proposed. In the future, related surface infrastructure may be proposed entirely on non-federal lands, on BLM-administered public lands, or on both federal and non-federal lands. The BLM does not authorize or regulate use of non-federal lands, and the

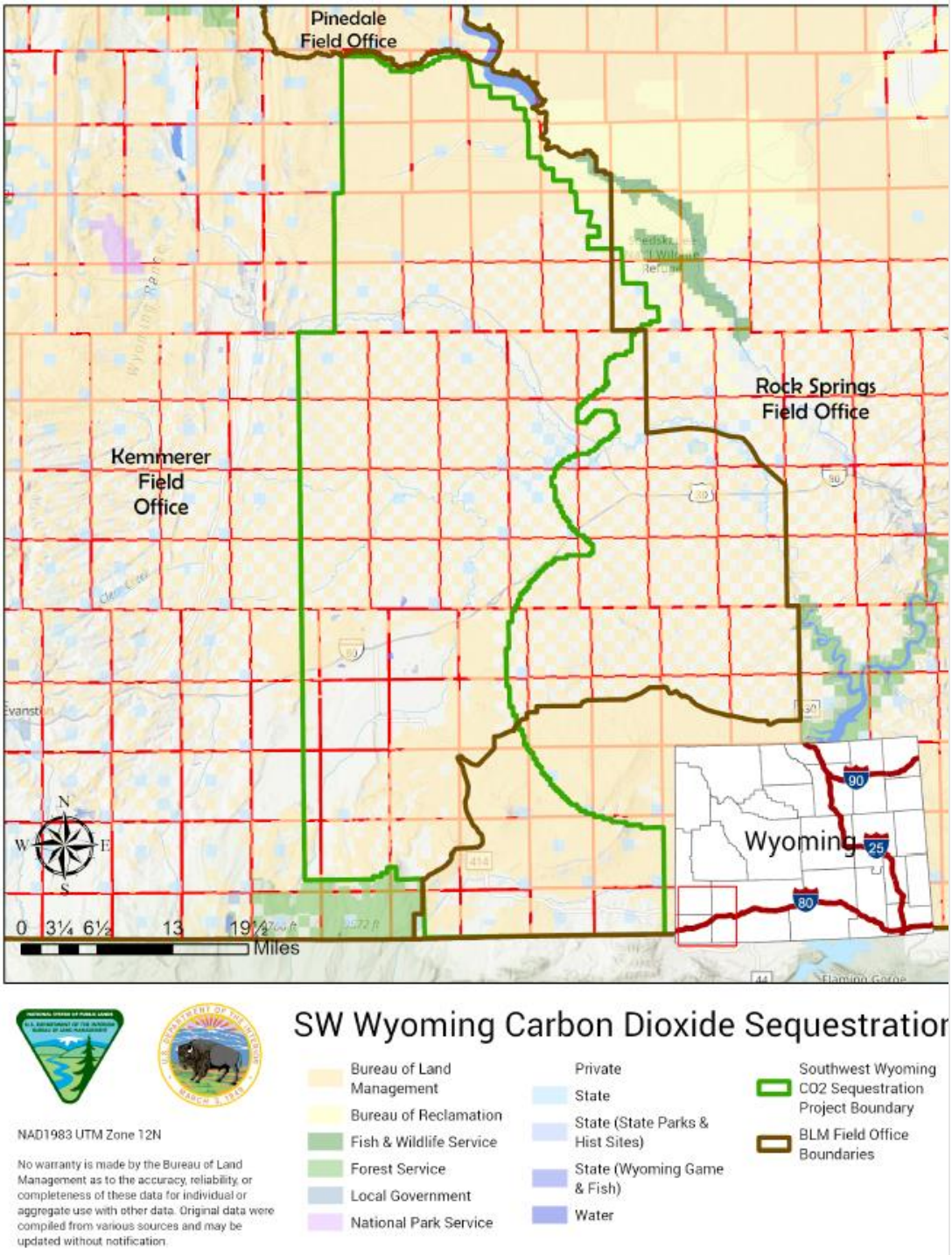
[1] The BLM has issued policy on the use of ROWs for carbon capture, utilization, and storage projects located on BLM-administered public lands (see BLM Instruction Memorandum 2022-041, "National Policy for the Right-of-Way Authorizations Necessary for Site Characterization, Capture, Transportation, Injection, and Permanent Geologic Sequestration of Carbon Dioxide in Connection with Carbon Sequestration Projects," June 8, 2022). Available at: https://www.blm.gov/policy/im-2022-041

BLM's ROW grant would not authorize or restrict use of the non-federal lands in the project area by the non-federal landowners (or anyone granted the lawful right by the landowner to use their lands).

In addition to a ROW granting the use of BLM-administered federal pore space for permanent geologic sequestration, Moxa Carbon would be required to seek approval from the State of Wyoming Department of Environmental Quality[2] for the construction and eventual operation of one or more Class VI UIC wells utilizing the BLM-administered federal pore space. The Proposed Action incorporates the terms and conditions identified in Appendix 4, including a stipulation that would require the ROW grant holder to seek and obtain authorization from the BLM under a Notice to Proceed (NTP) before using the BLM-administered federal pore space (e.g., before beginning injection operations that would result in the CO_2 plume encroaching upon public lands). The BLM will not issue an NTP until the ROW grant holder obtains an authorization to inject from the Wyoming Department of Environmental Quality's Water Quality Division (WDEQ-WQD) under W.S. § 35-11-313 and a unitization order from the Wyoming Oil and Gas Conservation Commission (WOGCC) under W.S. § 35-11-314 to -317.

Details regarding the construction and operation of the Class VI injection wells (and appurtenant infrastructure) are unknown at this time. The BLM cannot predict with reasonable certainty how many Class VI wells will be constructed, where exactly they will be constructed, or the timing and duration of associated operations. To the extent additional BLM authorizations are necessary to allow for use of the BLM-administered federal pore space, the BLM will ensure NEPA compliance by screening the actions in accordance with the applicable regulations, BLM policies, and providing for future public participation.

[2] On October 9, 2020, the State of Wyoming was granted primacy by the Environmental Protection Agency to administer the Class VI Underground Injection Control program in Wyoming, other than within Indian lands (see 85 FR 64053-64056, October 9, 2020).



Map 1 – Proposed Action Area

Alternatives Considered but not Analyzed in Detail
Moxa Carbon conducted a geologic study encompassing the Rock Springs Uplift, Hanna Basin and sequestration sites near Wamsutter. The study indicated that neither of these sites could hold the CO_2 volumes they anticipated sequestering for their project.

2.1 Conformance

The proposal would be required to comply with all applicable federal, state, and local laws, plans, and permits required for this type of activity. This proposal is subject to the following land use plans[3]:

- The Rock Springs Field Office Resource Management Plan and Record of Decision (RSFORMP; 2024), as amended, and 43 CFR 1610.5.
    - The Proposed Action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s): Page 2-49 of the RSFORMP/ROD: *"Manage public lands to meet transportation and ROW needs consistent with Goals and objectives of other resources while supporting the national energy plans and policies."*
- The Final Environmental Impact Statements (FEIS) for the KFO Planning Area (August 2008; BLM 2008a) and the Kemmerer Resource Management Plan/Record of Decision (KRMP/ROD) approved on May 24, 2010 (BLM 2010a).
    - The Proposed Action is in conformance with the RMP as amended and the land use direction pertaining to Land Resources (LR); Goal LR: 3; Manage public lands to meet access and (or) right-of-way needs.
    - The site-specific analysis in this EA tiers to and incorporates by reference the information and analysis contained in these documents.
- Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region including the Greater Sage-Grouse Sub-Regions of: Lewiston, North Dakota, Northwest Colorado and Wyoming and the Approved Resource Management Plans for Billings, Buffalo, Cody, HiLine, Miles City, Pompeys Pillar National Monument, South Dakota and Worland (Approved: September 21, 2015) (ARMPA) (2015a)
    - In November 2021, the BLM published an NOI in the Federal Register to amend land use plans regarding Greater Sage-grouse conservation in a number of Western states, including Wyoming. Since this RMP amendment is ongoing, conformance is assessed against the existing 2015 ARMPA. Management decisions in the pending 2021 Greater Sage-grouse Land Use Plan Amendments EIS and ROD could affect development within the project area in the future, but proposed allocations and management direction would not conflict with this proposal or prejudice the outcome of the RMP revision.

Due to the project being located in multiple field offices, RMP decisions will apply to the portions of the project within its planning area.

Relationship to Statutes, Regulations, and other Applicable Plans

- American Indian Religious Freedom Act – 42 USC § 1996
- Archaeological Resources Protection Act - 16 USC § 470aa et seq.

[3] 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 the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 *et seq.* Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The [bureau] 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.

- Clean Air Act – 42 U.S.C. § 7401, et seq.
- Clean Water Act - 33 U.S.C. § 1251 et seq.
- Endangered Species Act (ESA) - 16 U.S.C. § 1531 et seq.
- Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761)
- Migratory Bird Treaty Act (16 U.S.C. § 703-7120) (MBTA).
- National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. § 4321 et seq.
- National Historic Preservation Act (NHPA, Section 106) Title 54 U.S.C. § 306108
- Native American Graves Protection and Repatriation Act - 25 USC § 3001

3.0 Affected Environment/Environmental Effects

This chapter describes the existing environment that would be affected by the No Action Alternative or the Proposed Action and discloses the potential impacts of these alternatives. Resources which are not present or are not affected by the Proposed Action or alternatives are documented on the IDT checklist (Appendix 1) and resource issues carried forward are identified in Section 1.2.

The Environmental Consequences (direct/indirect effects analysis) sections of this chapter disclose the impacts that the Proposed Action and No Action Alternatives are likely to have when considered in the context of impacts associated with past, present, and reasonably foreseeable future actions that have occurred, or are likely to occur, in the project area.

Reasonably foreseeable future actions (RFFAs) include those actions for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends. The only actions for the project area, which are highly probable, are continued livestock grazing, range improvement projects and recreation. There are no proposals for new infrastructure at this time.

The BLM cannot reasonably determine at the pore space ROW stage: whether actual injection operations to use the pore space will eventually be proposed and authorized, or the exact location and nature of such operations. As a result, this EA discloses the general effects and potential mitigation that could be applied by the BLM, acknowledging that actual injection operations (if proposed and authorized) would result in potential effects to the resources described below. Disclosing the anticipated impacts of issuing a pore space ROW grant (even the uncertain future effects associated with potential injection operations), serves NEPA's twin aims to ensure that agencies consider the environmental consequences of proposed actions and inform the public about agency decision making. Additional NEPA compliance documentation will be completed by the BLM (including public participation) once additional, related proposals for use of public lands are submitted to the BLM. See Background section of this EA for more information about the geologic sequestration of carbon process.

3.1 Greater Sage-Grouse General Habitat

Issue Statement: How would Greater Sage-grouse general habitat management areas be impacted by the proposal?

Affected Environment

Greater Sage-grouse are considered a sensitive species by the BLM. One of the primary management strategies for conservation of Greater Sage-grouse is the designation and protection of habitat considered important to the long-term success of sage-grouse management (BLM 2015a).

The proposal occurs within mapped Wyoming Greater Sage-grouse General Habitat Management Area (GHMA; Map 3.1). GHMA is defined as lands likely to be occupied outside of Priority Habitat Management Area (PHMA) where some special management would apply to sustain greater sage-grouse populations (BLM 2015a). There is a total of 704,057 acres of GHMA habitat in the project area (including Federal, Private and State of Wyoming Lands).

Additionally, Greater Sage-grouse congregate for courtship and breeding annually in specific areas known as leks. A total of 51 occupied leks (21 in GHMA) are located within the project area and a total of 171,413 acres of the project area is located within a two-mile seasonal nesting buffer in GHMA (Map 3.1).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project related disturbance would occur. Greater Sage-grouse general habitat management areas would not be impacted.

Proposed Action

Impacts to Greater Sage-grouse are generally caused by removal and fragmentation of sagebrush habitats associated with roads and infrastructure. If surface disturbance or disruptive activities were to occur, project activities would directly impact designated Greater Sage-grouse GHMA within the project area. There is a total of 171,413 acres of GHMA designated nesting habitat within the project area. Research indicates that Greater Sage-grouse hens also avoid nesting in developed areas. Any development associated with the project would adversely impact nesting habitat, both through direct loss and avoidance of the area by Greater Sage-grouse.

Cumulative Impacts

The cumulative impact analysis area (CIAA) for Greater Sage-grouse GHMA include all GHMA within a 4-mile buffer of the project area (954,491 acres). There is a total of 63 leks within the CIAA. Cumulative impacts to Greater-Sage grouse would be similar to those described under the Proposed Action. There are currently 143,972 acres of disturbance in GHMA within the project area. Existing uses include grazing, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, it would result in additional cumulative impacts to Greater Sage-grouse GHMA.

Mitigation Measures/Conditions of Approval

- Surface occupancy and surface disturbing activities would be prohibited or restricted within a 0.25-mile radius of the perimeter of occupied Greater Sage-grouse leks within GHMA.

- Avoid human activity between 8 p.m. and 8 a.m. from March 1 to May 15 within 0.25 miles of the perimeter of occupied Greater Sage-grouse leks.

- Surface disturbing and/or disruptive activities would be prohibited from March 15 to June 30 to protect sage-grouse nesting and early brood rearing habitats within 2 miles of the perimeter of any occupied lek within GHMA.

3.2 Greater Sage-Grouse Priority Habitat

Issue Statement: How would Greater Sage-grouse priority habitat management areas be impacted by the proposal?

Affected Environment

Greater Sage-grouse are considered a sensitive species by the BLM. One of the primary management strategies for conservation of Greater Sage-grouse is the designation and protection of habitat considered important to the long-term success of sage-grouse management.

The proposal occurs within mapped Wyoming Greater Sage-grouse priority habitat management area (PHMA; Map 3.2). PHMA is defined as having the highest value to maintaining sustainable Greater Sage-grouse populations. These areas include breeding, late brood-rearing, winter concentration areas, and migration or connectivity corridors (BLM 2015a). A total of 340,790 acres of PHMA occurs within the project area (including Federal, Private and State of Wyoming Lands).

Additionally, Greater Sage-grouse congregate for courtship and breeding annually in specific areas known as leks. A total of 51 occupied leks (30 leks PHMA) are located within the project area (Map 3.2).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted; therefore, no project related disturbance would occur on public lands. Greater Sage-grouse PHMA would not be impacted.

Proposed Action

Impacts to Greater Sage-grouse are generally caused by removal and fragmentation of sagebrush habitats associated with roads and infrastructure. If surface disturbance or disruptive activities were to occur, project activities would directly impact Greater Sage-grouse PHMA. There is a total of 340,790 acres of PHMA within the project area. Research indicates that Greater Sage-grouse hens also avoid nesting in developed areas. Any development associated with the project would adversely impact nesting habitat, both through direct loss and avoidance of the area by Greater Sage-grouse. Surface disturbance or disruptions within a PHMA would be subject to density and disturbance thresholds as outlined in the Approved Resource Management Plan Amendment (ARPMA; BLM 2015a).

Cumulative Impacts

The CIAA for Greater Sage-grouse PHMA includes all PHMA within an 11-mile buffer of the project area (711,207 acres) based on Connelly et al., 2000. There is a total of 68 leks within the CIAA. Cumulative impacts to Greater Sage-grouse would be similar to those described under the Proposed Action. There are currently 43,972 acres of disturbance within the project area. Existing uses include grazing, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to

occur within the CIAA, it could result in additional cumulative impacts to Greater Sage-grouse PHMA.

Mitigation Measures/Conditions of Approval

- Construction activity and surface disturbance would be prohibited during the periods of March 15 – June 30 for the protection of Greater Sage-grouse PHMA habitat. Any exceptions to this requirement must have prior written approval from the authorized officer.

- Surface disturbing and disruptive activities would be restricted to 1 disturbance per 640-acre average or less than 5% disturbance in PHMA.

- Surface occupancy and surface disturbing activities would be prohibited or restricted within a 0.6-mile radius of the perimeter of occupied Greater Sage-grouse leks within PHMA.

- Avoid human activity between 8 p.m. and 8 a.m. from March 1 - May 15 within 0.25 miles of the perimeter of occupied Greater Sage-grouse leks.

3.3 Big Game Crucial Winter Range Habitat

Issue Statement: How would crucial winter range habitat be impacted for deer, moose, pronghorn, and elk by the proposal?

Affected Environment

Big game species that occur in the project area include Rocky Mountain elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), and moose (*Alces alces*).

The proposed project occurs within designated crucial winter range (CWR) for all big game species (Map 3.3.1 Elk, Map 3.3.2 Mule Deer, Map 3.3.3 Moose, Map 3.3.4 Pronghorn). CWR are areas where a wildlife species is confined during periods of heavy snow cover or are portions of year-round range that provide crucial forage and/or cover during severe winter conditions.

Elk

There are two Wyoming Game and Fish Department (WGFD) designated elk herd units within the project area including the Uinta and West Green River herds. The Uinta herd has been below population management objectives for seven years and the West Green River herd is currently within the population management objectives (WGFD 2021b). There is a total of 121,587 acres of elk CWR within the project boundary.

Mule Deer

There are two WGFD designated mule herd units within the project area including the Wyoming Range and Uinta herds. The Wyoming Range herd has been below population management objectives for six years and the Uinta herd is also below the population management objectives (WGFD 2021b). There is a total of 144,031 acres of mule deer CWR within the project boundary.

Pronghorn

There are three WGFD designated pronghorn herd units within the project area including the Sublette, Carter Lease, and Uinta-Cedar Mountain pronghorn herd. The Sublette herd has been below population management objectives for 11 years, the Carter Lease is above population objective, and the Uinta-Cedar Mountain herd is above the population management objectives (WGFD 2021b). There is a total of 306,383 acres of pronghorn CWR within the project boundary.

Moose

There are two WGFD designated moose herd units within the project area including the Lincoln and Uinta moose herds. The Lincoln herd has been below population management objectives for six years and there is no population objective for the Uinta herd as it is considered a limited opportunity type objective (WGFD 2021b). There is a total of 29,037 acres of moose CWR within the project boundary.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Impacts to big game CWR from the project would not occur.

Proposed Action

If surface disturbance or disruptive activities were to occur, project activities would directly impact elk, mule deer, moose and pronghorn CWR as these habitats occupy portions of the project area. Big game species would be temporarily displaced by any construction activities that occur during sensitive time periods in CWR. Disruptive activities during winter months can reduce the chances of big game survival and potentially impact big game populations. Additionally, if construction of infrastructure occurred, there would be a direct loss of habitat within designated CWR. Areas of overlapping big game CWR are of greater importance because they provide crucial habitat for more than one species of big game. The impacts of habitat loss within overlapping CWRs would be greater than in non-overlapping areas. Timing restrictions that prohibit surface disturbing and disruptive activities during winter months can reduce these impacts. Impact thresholds identified for each species below are based on acreages of disturbance that correspond to "moderate," "high," and "extreme" impacts to big game habitat effectiveness as identified by the Wyoming Game and Fish Department (WGFD 2010b).

Elk

Existing disturbance in elk CWR averages 27 acres of disturbance per square mile within the project boundary and would be classified as a high level of impact (WGFD 2010b). High impacts are defined as more difficult or at times impossible to effectively mitigate within the project area. The impact can be reduced, but probably not eliminated through seasonal use restrictions and more intensive management (WGFD 2010b). If surface disturbance or disruptive activities were to occur, project activities would directly impact elk CWR and add additional impacts to an area of high disturbance.

Mule Deer

Impacts to mule deer CWR would be similar to all big game species as described above. Existing disturbance in mule deer CWR averages 15 acres of disturbance per square mile within the project boundary and would be classified as a moderate level of impact (WGFD 2010b).

Moderate impacts are defined as an impairment of habitat function becomes discernable – however the impact can be significantly reduced or eliminated through seasonal use restrictions (WGFD 2010b). If surface disturbance or disruptive activities were to occur, project activities would directly impact mule deer CWR and add additional impacts to an area of moderate disturbance.

Pronghorn

Impacts to pronghorn CWR would be similar to all big game species as described above. Existing disturbance in pronghorn CWR averages 60 acres of disturbance per square mile within the project boundary and would be classified as a high level of impact (WGFD 2010b). High impacts are defined as more difficult or at times impossible to effectively mitigate within the project area. The impact can be reduced, but probably not eliminated through seasonal use restrictions and more intensive management (WGFD 2010b). If surface disturbance or disruptive activities were to occur, project activities would directly impact pronghorn CWR and add additional impacts to an area of high disturbance.

Moose

Impacts to moose CWR would be similar to all big game species as described above. Existing disturbance in moose CWR averages 27 acres of disturbance per square mile within the project boundary and would be classified as a high level of impact (WGFD 2010b). High impacts are defined as more difficult or at times impossible to effectively mitigate within the project area. The impact can be reduced, but probably not eliminated through seasonal use restrictions and more intensive management (WGFD 2010b). If surface disturbance or disruptive activities were to occur, project activities would directly impact moose CWR and add additional impacts to an area of high disturbance.

Cumulative Impacts

Elk

The CIAA for elk is the two designated elk crucial winter range polygons that intersect the project area (266,407 acres). Crucial winter range is a habitat component that is the determining factor in a population's ability to maintain itself at a certain level. These two polygons within the CIAA provide a crucial habitat component for four elk herd units. Existing land use activities in the CIAA include grazing, oil and gas production, and recreation activities. There are currently 21,370 acres of disturbance within the CIAA. Cumulative impacts to elk would be similar to those described under the Proposed Action. Elk crucial winter range within the CIAA boundary is considered to be at a high level. High impacts are defined as more difficult or at times impossible to effectively mitigate. The impact can be reduced, but probably not eliminated through seasonal use restrictions and more intensive management (WGFD 2010b). If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, it could result in additional cumulative impacts to elk. To minimize impacts to elk CWR a seasonal timing restriction would be placed on surface disturbing and disruptive activities within designated CWR.

Mule Deer

The CIAA for mule deer is the two designated mule deer crucial winter range polygons that intersect the project area (291,284 acres). Crucial winter range is a habitat component that is the determining factor in a population's ability to maintain itself at a certain level. These two polygons within the CIAA provide a crucial habitat component for five deer herd units. Existing

land use activities within the CIAA include grazing, oil and gas production, and recreation activities. There are currently 32,651 acres of disturbance within the CIAA. Cumulative impacts to mule deer would be similar to those described under the Proposed Action. Mule Deer CWR within the CIAA boundary is classified as moderately impacted. Moderate impacts are defined as an impairment of habitat function becomes discernable – however the impact can be significantly reduced or eliminated through seasonal use restrictions (WGFD 2010b). If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the wildlife analysis area, it could result in additional cumulative impacts to mule deer. To minimize impacts to mule deer crucial winter range, a seasonal timing restriction would be placed on surface disturbing and disruptive activities within designated CWR.

Pronghorn

The CIAA for pronghorn is all delineated pronghorn CWR polygons within the project area and all CWR for the three pronghorn herd units outside the project boundary, east to the Green River (726,537 acres). Crucial winter range is a habitat component that is the determining factor in a population's ability to maintain itself at a certain level. Existing land use activities include grazing, oil and gas production, mining and recreation activities. There are currently 57,785 acres of disturbance and existing uses within the CIAA. Cumulative impacts to pronghorn would be similar to those described under the Proposed Action. Pronghorn CWR within the CIAA boundary is classified as moderately impacted. Moderate impacts are defined as an impairment of habitat function becomes discernable – however the impact can be significantly reduced or eliminated through seasonal use restrictions (WGFD 2010b). If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the wildlife analysis area, it could result in additional cumulative impacts to pronghorn. To minimize impacts to pronghorn crucial winter range, a seasonal timing restriction would be placed on surface disturbing and disruptive activities within designated CWR.

Moose

The CIAA for moose is all of the designated moose crucial winter range polygons that intersect the project area (85,681 acres). Crucial winter range is a habitat component that is the determining factor in a population's ability to maintain itself at a certain level. Existing land use activities include grazing, oil and gas production, and recreation activities. There are currently 42,282 acres of disturbance within the CIAA. Cumulative impacts to moose would be similar to those described under the Proposed Action. Moose crucial winter range within the CIAA boundary is considered to be at a high level. High impacts are defined as more difficult or at times impossible to effectively mitigate. The impact can be reduced, but probably not eliminated through seasonal use restrictions and more intensive management (WGFD 2010b). If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the wildlife analysis area, it could result in additional cumulative impacts to moose. To minimize impacts to moose crucial winter range, a seasonal timing restriction would be placed on surface disturbing and disruptive activities within designated CWR.

Mitigation Measures/Conditions of Approval

No disruptive activities will be allowed in big game crucial winter range between November 15 and April 30.

3.4 Elk Parturition Habitat

Issue Statement: How would elk parturition habitat be impacted by the proposal?

Affected Environment

The proposed project area occurs within multiple seasonal habitats utilized by Rocky Mountain elk (*Cervus canadensis*). The southern portion of the proposed project area contains 15,867 acres of designated parturition habitat (Map 3.4). Parturition habitats are documented birthing areas which includes calving areas, fawning areas, and lambing grounds. Parturition areas may be used as nurseries by multiple big game species (The Wyoming Chapter of the Wildlife Society 2007).

There are two WGFD designated elk herd units within the project area including the Uinta and West Green River herds. The Uinta herd has been below population management objectives for seven years and the West Green River herd is currently within the population management objectives (WGFD 2021b). Designated parturition habitat within the project area is completely within the Uinta elk herd management unit.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Designated elk parturition habitat would not be impacted.

Proposed Action

If surface disturbance or disruptive activities were to occur, project activities would directly impact designated elk parturition areas as they occupy portions of the project area. Noise and human disturbance during construction activities are likely to disturb and displace elk within designated parturition areas in and adjacent to the proposed project area. Additionally, any construction of infrastructure would result in direct loss of habitat within designated parturition areas. To protect big game birthing habitat, surface disturbing and disruptive activities will be prohibited from May 1 to June 30 within designated/mapped parturition range (Map 3.4; BLM 2008, BLM 2024).

Cumulative Impacts

The CIAA is the entire designated parturition habitat within the Uinta elk herd management area (76,819 acres). The designated elk parturition is the only designated parturition area for elk herds that occur within the project area. Existing uses within the project area includes grazing, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the wildlife analysis area, it could result in additional cumulative impacts to designated elk parturition.

Mitigation Measures/Conditions of Approval

No disruptive activities will be allowed in elk parturition habitat between May 1 and June 30.

3.5 Raptor Nesting

Issue Statement: How would raptor nesting be impacted by the proposal?

Affected Environment

Raptors include eagles, hawks, owls, falcons, and vultures. Nesting sites for these species include cliffs, trees and shrubs, cavities, rock outcrops, ground substrate, and man-made structures. Most

species build substantial stick nests and many re-use the same or alternate nests within their territory. There are 437 nest locations consisting of 10 species of raptors within the project area (Table 1 and Map 3.5). BLM Wyoming sensitive species (burrowing owl, Ferruginous hawk, and golden eagle) are discussed in more detail below.

Burrowing Owl

Burrowing owls (*Athene cunicularia*) are listed as a BLM Wyoming sensitive species. This species occurs throughout Wyoming and requires short-grass habitats, open areas within grasslands, desert, and shrub-steppes (BLM 2010e). Nesting sites are correlated heavily with prairie dog colonies (WGFD 2006b, McDonald et al. 2004f). Burrowing owls prey on insects and small mammals primarily during daylight hours. Due to the widespread eradication of prairie dogs and land-use changes, this species is declining throughout the western United States.

Ferruginous Hawk

The ferruginous hawk (*Buteo regalis*) occurs in arid and open grassland, shrub steppe, and desert habitats in western North America. Wintering occurs in grasslands in the southwestern U.S. and northern Mexico. This raptor is a prairie dog specialist that also preys on other small mammals, birds, reptiles, and large invertebrates (Travsky and Beauvais 2023e). Ferruginous hawks are listed as a BLM Wyoming sensitive species because population status and trends are unknown, they are experiencing ongoing loss of habitat and are sensitive to human disturbance. Suitable habitat and nesting substrate required by ferruginous hawks is ubiquitous in the area.

Golden Eagle

Golden eagles (*Aquila chrysaetos*) are listed as a BLM Wyoming sensitive species and are year-round residents in Wyoming (BLM 2010e). The average territory size is approximately 20 to 55 square miles with a breeding season that typically begins in early spring (Palmer 1988b). The species primarily preys on small mammals, but may eat a variety of other prey, including carrion. Golden eagles are sensitive to extensive human activity around nest sites and are threatened by loss of nesting habitat to industrial development, powerline mortalities, and other factors (Nicholoff 2003d). Suitable habitat and nesting substrate required by golden eagles is present throughout the project area.

Table 1 - Raptor nests by species within project area.

Raptor Nests		
Common Name	**Scientific Name**	**Number of Nests**
American Kestrel	*Falco sparverius*	3
Burrowing Owl *	*Athene cunicularia*	24
Ferruginous Hawk*	*Buteo regalis*	63
Golden Eagle*	*Aquila chrysaetos*	72
Great Horned Owl	*Bubo virginianus*	3
Northern Harrier	*Circus hudsonius*	2
Osprey	*Pandion haliaetus*	3
Prairie Falcon	*Falco mexicanus*	9
Red-tailed Hawk	*Buteo jamaicensis*	15
Swainson's Hawk	*Buteo swainsoni*	4
Unknown	N/A	239

* BLM Wyoming sensitive species

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Raptor nesting and associated habitats would not be impacted.

Proposed Action

If surface disturbance or disruptive activities were to occur, project activities would directly impact raptor nesting habitat areas that occupy portions of the project area. Habitat loss, degradation, and fragmentation are widely accepted causes contributing to raptor population declines (Newton 2010c). Availability of nests and food supply are considered limiting factors for raptor populations (Temple 1986 and Watson and Langslow 1989). Raptors compensate for the loss of foraging and nesting habitat by abandoning established territories and/or attempting to utilize less productive or already occupied territories (Nelson 1979, Newton 2010c). Human activities near active raptor nests may interfere with nest productivity. If disruptive activities occur during nesting, they could be sufficient to cause adult birds to remain away from the nest and their chicks for the duration of the activities. This absence can lead to overheating or chilling of eggs or chicks and can result in egg or chick mortality.

To reduce impacts described above, a management buffer would be placed on existing raptor nests, as outlined in the Rock Springs Field Office and Kemmerer Resource Management Plans (BLM 2024 and 2008a). This restriction is a timing limitation during the breeding season around active raptor nests to reduce the risk of decreased productivity or nest failure. Seasonal restrictions are species-specific and range from 0.25 to 2.5 miles (Table 2).

Cumulative Impacts

The CIAA for raptors is a one-mile buffer of the project area (1,164,807 acres). A one-mile buffer was selected as the CIAA to correspond to the largest protective nesting buffer and include all nests outside the project area that may be impacted. There is a total of 439 raptor nests within the CIAA. Cumulative impacts to raptors would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the wildlife analysis area, it could result in additional cumulative impacts to nesting raptors. To minimize impacts to raptors, a species-specific seasonal timing restriction would be placed on all nests that occur in the project area (Table 2) for any BLM-authorized surface disturbing or disruptive activities.

Mitigation Measures/Conditions of Approval

No surface occupancy or disturbing activities within the seasonal timing restrictions and corresponding spatial buffer listed below (Table 2) for the protection of nesting raptors unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policy to raptor nests.

Table 2 - Species specific raptor buffers

Common Name	Scientific Name	Seasonal Timing Restriction (Miles)	Seasonal Timing Restriction (Dates)
American Kestrel	*Falco sparverius*	0.75	February 1– August 15
Burrowing Owl *	*Athene cunicularia*	0.75	April 1– September 15
Ferruginous Hawk*	*Buteo regalis*	1	February 1– July 31
Golden Eagle*	*Aquila chrysaetos*	0.75	February 1– July 31
Great Horned Owl	*Bubo virginianus*	0.75	February 1– August 15
Northern Harrier	*Circus hudsonius*	0.75	February 1– August 15
Osprey	*Pandion haliaetus*	0.75	February 1– August 15
Prairie Falcon	*Falco mexicanus*	0.75	February 1– August 15
Red-tailed Hawk	*Buteo jamaicensis*	0.75	February 1– August 15
Swainson's Hawk	*Buteo swainsoni*	0.75	February 1– August 15
Other Raptors	n/a	0.75	February 1— August 15

3.6 Pygmy Rabbit

Issue Statement: How would pygmy rabbit be impacted by the proposal?

Affected Environment

Pygmy rabbit (*Sylvilagus idahoensis*) is a BLM sensitive species that is distributed throughout the sagebrush steppe of southwestern Wyoming (BLM 2010e, WGFD 2017a). This species is found in areas with tall, dense stands of sagebrush (*Artemisia* spp.) and require deep, loose soils to develop burrows for shelter and breeding (WGFD 2018). Observations occur throughout the entire project area with mapped burrows concentrated in the northern portion of the project area. Mapping efforts were a result of surveys associated with previous projects, while observation data came from both past project surveys and Wyoming Natural Diversity Database WYNDD data. A total of 1,137 acres of pygmy rabbit burrows have been mapped and WYNDD distribution models place approximately 918,465 acres of pygmy rabbit habitat within the project boundary (Map 3.6).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Pygmy rabbits and associated habitats would not be impacted.

Proposed Action
Impacts to pygmy rabbit typically occur from conversion of shrub-steppe to other uses (i.e., energy development) causing habitat fragmentation (Keinath and McGee 2004). If surface disturbance or disruptive activities were to occur, project activities would directly impact pygmy rabbit habitat areas as they occupy portions of the project area. Noise and human disturbance during construction activities are likely to disturb and displace pygmy rabbit that occur within and adjacent to the proposed project area. Additionally, any construction of infrastructure would result in direct loss of habitat or burrows. To protect pygmy rabbit populations and habitat, avoid surface disturbing activities in occupied pygmy rabbit habitats. Pre-construction surveys would be conducted to determine presence/ absence of pygmy rabbit outside of known occupied areas (See Map; BLM ARMPA 2015a, BLM 2024). To minimize impacts described above, pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied pygmy rabbit habitat.

Cumulative Impacts
The CIAA for pygmy rabbit is a 1-mile buffer of the project boundary (1,164,807 acres). This species is a non-migratory animal, the CIAA was selected to ensure that impacts to home ranges on the edge of the project boundary would be analyzed. Cumulative impacts to pygmy rabbits would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the wildlife analysis area, it could result in additional cumulative impacts to pygmy rabbit habitat.

Mitigation Measures/Conditions of Approval
Pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied pygmy rabbit habitat.

3.7 White-tailed Prairie Dogs
Issue Statement: How would white-tailed prairie dogs be impacted by the proposal?

Affected Environment
White-tailed prairie dog (*Cynomys leucurus*) is a BLM sensitive species that is distributed in the western and the central parts of Wyoming, mostly in areas dominated by sagebrush (BLM 2010e, WGFD 2005e). White-tailed prairie dog colonies are found in areas with open plant communities and requires deep and well-drained soils in which to develop burrow systems. Mapped colonies are concentrated in the northern portion of the project area because of survey efforts associated with previous energy development projects. However, white-tailed prairie dogs occur through the entire project area. A total of 139,140 acres prairie dog colonies has been mapped within the project area (Map 3.7).

Environmental Consequences (direct/indirect effects)
No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. White-tailed prairie dogs and associated habitats would not be impacted.

Proposed Action
If surface disturbance or disruptive activities were to occur, project activities would directly impact white-tailed prairie dog colonies as they occur throughout the project area. If surface disturbance or disruptive activities were to occur, project activities would directly impact white-tailed prairie dog habitat. There is a total of 139,140 acres of mapped prairie dog colonies and any construction of infrastructure would result in direct loss of habitat or burrows.
Pre-construction surveys would be conducted to determine presence/ absence of white-tailed prairie dogs outside of known occupied areas (See Map; BLM ARMPA 2015a, BLM 2024). To reduce impacts described above, surface disturbance and disruptive activities in occupied white-tailed prairie dog colonies or complexes of 200 acres or greater would be prohibited.

Cumulative Impacts
The CIAA for white-tailed prairie dogs is a 1-mile buffer of the project area (1,164,807 acres). This species is a non-migratory animal, and the CIAA was selected was selected to ensure that impacts to home ranges on the edge of the project boundary would be analyzed. There is a total of 234,382 acres of mapped prairie dog colonies within the CIAA. Cumulative impacts to white-tailed prairie dogs would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the project area. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, it could result in additional cumulative impacts to white-tailed prairie dog. To minimize impacts to white-tailed prairie dogs, surface disturbance would be prohibited in colonies or complexes of 200 acres or greater.

Mitigation Measures/Conditions of Approval
To minimize impacts described above, pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied white-tailed prairie dog habitat. Surface disturbance and disruptive activities in occupied white-tailed prairie dog colonies or complexes of 200 acres or greater would be prohibited.

3.8 Idaho Pocket Gopher
Issue Statement: How would Idaho pocket gopher be impacted by the proposal?

Affected Environment
Idaho pocket gopher (*Thomomys idahoensis*) is a BLM sensitive species that is distributed throughout southwestern Wyoming (BLM 2010e). This species preferentially inhabits mountain foothill and sagebrush shrublands but can occur in a variety of habitats, including ponderosa pine (*Pinus ponderosa*), grasslands, shrub-steppe, subalpine meadows, and areas with shallow, rocky soils (Abernethy et al 2016a, WGFD 2017a). One WYNDD observation of Idaho pocket gopher is in the southernmost portion of the project area, but a total of 357,758 acres of Idaho pocket gopher WYNDD modeled habitat is within the project area (Map 3.8).

Environmental Consequences (direct/indirect effects)
No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Idaho pocket gophers and associated habitats would not be impacted.

Proposed Action
Impacts to Idaho pocket gophers are generally from soil disturbance and compaction associated with energy development activities including increased road development (Beauvais and Dark-Smiley 2005a). If surface disturbance or disruptive activities were to occur, project activities would directly impact Idaho pocket gopher habitat as they occupy portions of the project area. Noise and human disturbance during construction activities are likely to disturb and displace Idaho pocket gopher that occur within and adjacent to the proposed project area. Additionally, any construction of infrastructure would result in direct loss of habitat. To protect Idaho pocket gopher populations and habitat, avoid surface disturbing activities in occupied Idaho pocket gopher habitats. Pre-construction surveys would be conducted to determine presence/ absence of Idaho pocket gopher outside of known occupied areas (Map 3.8; BLM ARMPA 2015a, BLM 2024).

Cumulative Impacts
The CIAA for Idaho pocket gopher is a 1-mile buffer off modeled distribution (710,294 acres). This species is a non-migratory animal, the CIAA was selected was selected to ensure that impacts to home ranges on the edge of the project boundary would be analyzed There is a total of 357,758 acres of modeled distribution within the CIAA. Cumulative impacts to Idaho pocket gopher would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, it could result in additional cumulative impacts to Idaho pocket gopher habitat.

Mitigation Measures/Conditions of Approval
To minimize impacts described above, pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied Idaho pocket gopher habitat.

3.9 BLM Sensitive Bats
Issue Statement: How would BLM sensitive bats be impacts by the proposal?

Affected Environment
There are three BLM sensitive species of bats that occur within the project area including Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum),* and long-eared myotis (*Myotis evotis*). In general, population abundance and trend are not well documented in Wyoming. There are no known hibernacula in the project area and bat use is primarily foraging, roosting, and migrating.

Townsend's Big-eared Bat
Townsend's big-eared bat is distributed throughout most of Wyoming but is concentrated in the southeastern and north central portions of the state (Hester and Grenier 2005d). Townsend's big eared bat requires undisturbed roosting structures such as caves or abandoned mines during all

seasons and stages of its life cycle. WYNND models indicate 14,724 acres of habitat on the eastern edge of the project area (Map 3.9.1).

Spotted Bat
Spotted bat distribution in Wyoming is not well documented, although according to Clark and Stromberg (Hester and Grenier 2005d) it may be expected to occur throughout the western part of the state. This species occurs in a wide variety of habitats and roosts in cracks and crevices in cliffs and canyons (Hester and Grenier 2005d). Roost sites must be in proximity of foraging and water sources (Luce, 2004b). WYNND models indicate 94,897 acres of habitat on the eastern edge of the project area (Map 3.9.2).

Long-eared Myotis
Long-eared myotis occurs throughout most of Wyoming at elevations between 5,000 and 9,800 ft. This species inhabits primarily coniferous forest and woodland (Hester and Grenier 2005d). Long-eared Myotis uses a wide variety of roosts, including buildings, rock crevices, and hollow trees. Roosts are more likely to be found in proximity of foraging sites and water. WYNND models indicate occurrence of the species throughout the entire project area (605,091 acres; Map 3.9.3).

Environmental Consequences (direct/indirect effects)

No Action
Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Bats and associated habitats would not be impacted.

Proposed Action
If surface disturbance or disruptive activities were to occur, project activities would directly impact bat habitat as they occupy portions of the project area. If construction activities occur, it would impact foraging areas and habitat. Any infrastructure associated with the project could lead to direct and indirect mortalities.

Townsend's Big-eared Bat
A total of 14,724 acres of Townsend's big-eared bat habitat occurs on the eastern edge of the project area, which accounts for approximately 1.4 % of the project area. Although all available habitat in the project area could be impacted by implementation. Pre-construction surveys and avoidance of habitat where possible would help reduce impacts to bat species.

Spotted Bat
A total of 94,897 acres of spotted bat habitat occurs within the project area, which accounts for approximately 9.4 % of the project area. Although all available habitat in the project area could be impacted by implementation. Pre-construction surveys and avoidance of habitat where possible, would help minimize impacts to bat species.

Long-eared Myotis
Long eared myotis habitat occurs throughout the entire project area (1,005,797 acres). Although all available habitat in the project area could be impacted by implementation. Pre-construction surveys and avoidance of habitat where possible, would help minimize impacts to bat species.

Cumulative Impacts

The CIAA for BLM sensitive bats is a 1-mile buffer of the project area (1,164,807 acres). There are no known hibernacula or resident populations of bats within the project area. A one- mile buffer is typically recommended for ground-based disturbances. The CIAA was selected to analyze activities that would occur on the edge of the project boundary. The CIAA Cumulative impacts to BLM sensitive bats would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, it could result in additional cumulative impacts to BLM sensitive bats. All available habitat in the project area could be impacted by implementation.

Mitigation Measures/Conditions of Approval
Pre-construction surveys and avoidance of habitat where possible would help reduce impacts to bat species.

3.10 Migratory Birds

Issue Statement: How would migratory birds be impacted by the proposal?

Affected Environment

Many migratory bird species may be found throughout the project area (USFWS 2023f). Both generalist species that inhabit multiple habitat types and specialist species that are only found in salt desert scrub and sagebrush shrublands occur within the project area. The analysis of impacts to migratory birds is focused on USFWS Bird Species of Conservation Concern (BCC) for region 12 (USFWS 2021a), Wyoming Partners in Flight (PIF) Priority Species (Ceroviski, et al 2001a), and Wyoming Species of Greatest Conservation Need (SGCN) (WYGFD 2017a). Table 3 summarizes non-raptor migratory bird species that could occur in the project area based on their range and habitat requirements described by WYNDD 2023 and Cornell Lab of Ornithology (Cornell 2022a). Four of these migratory birds are BLM sensitive species (Brewer's sparrow, sagebrush sparrow, loggerhead shrike, sage thrasher. Species listed in Table 3 typically occur in the area during the breeding season (January 15 to September 30); most migrating out of the area for the winter.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Migratory birds would not be impacted.

Proposed Action

Avian migration is a natural phenomenon that occurs as bird species migrate between breeding and wintering grounds and typically occur in Wyoming during late summer through fall and late winter through spring. Direct impacts to migratory birds would occur throughout the entire project area if surface disturbing activities were to occur via removal of habitat and noise disturbance from development activities.

If surface disturbance occurs, mitigation measures or habitat improvement/ development/ reclamation plans would be developed by the proponent in consultation with and to the satisfaction of BLM, the USFWS, and the appropriate state agencies. Mitigation measures may include, but not limited to, seasonal operations in buffer zones around "occupied" nests and other

important habitat areas, protection of "active" nests, off or on-site habitat improvement or development, special reclamation measures, or other appropriate measures for long-term nest or habitat protection (BLM 2024).

Table 3 - Summary of Migratory Birds of Conservation Concern and Eagles

Species	Status	Seasonal Use	Density/KM^2 within Project Area (2022)	Suitable Habitat in Wildlife Analysis Area
BLM Sensitive Species				
Brewers Sparrow (*Spizella breweri*)	PIF Priority; SGCN; BLM Sensitive	Breeding	59.83	Scrub/shrublands
Loggerhead Shrike (*Lanius ludovicianus*)	PIF Priority; SGCN; BLM Sensitive	Breeding	0.86	Open woodlands, grasslands, desert scrublands
Sagebrush Sparrow (*Artemisiospiza nevadensis*)	PIF Priority; SGCN; BLM Sensitive	Breeding	20.03	Scrub/shrublands
Sage Thrasher (*Oreoscoptes montanus*)	PIF Priority; SGCN; BLM Sensitive	Breeding	7.39	Scrub/shrublands
Species of Greatest Conservation Concern / Birds of Conservation Concern				
Black Rosy-finch (*Leucosticte atrata*)	BCC	Breeding	Unknown	Cliffs and tundra
California Gull (Larus californicus)	BCC	Breeding	Unknown	Lakes, ponds, and rivers
Cassin's Finch (*Carpodacus cassinii*)	BCC	Breeding	Unknown	Coniferous, mixed forests, and aspen
Clark's Nutcracker (*Nucifraga columbiana*)	BCC	Breeding	0.3	Coniferous and mixed forests
Common nighthawk *(Chordeiles minor)*	SGCN	Breeding	0.64	Scrub/shrublands
Evening Grosbeak (*Coccothraustes vespertinus*)	BCC	Breeding	Unknown	Coniferous and mixed forests
Franklin's Gull (*Leucophaeus pipixcan*)	BCC	Breeding	Unknown	Lakes and ponds
Lesser Yellowlegs (*Tringa flavipes*)	BCC	Breeding	Unknown	Marshes, mudflats, shores, ponds; open boreal woods

Lewis's Woodpecker (*Melanerpes lewis*)	BCC	Breeding	Unknown	Mixed forest, Cottonwoods, open woodlands
Olive-sided Flycatcher (*Contopus cooperi*)	BCC	Breeding	Unknown	Mixed forest edges; open woodlands
Pinyon Jay (*Gymnorhinus cyanocephalus*)	BCC	Breeding	0.06	Juniper woodlands, scrub/shrublands, open woodlands
Rufous Hummingbird (*Selasphorus rufus*)	BCC	Breeding	Unknown	Scrub/shrublands, open woodlands
Vesper sparrow *(Pooecetes gramineus)*	PIF Priority	Breeding	9.97	Scrub/shrublands
Virginia's Warbler (*Vermivora virginiae*)	BCC	Breeding	Unknown	Juniper woodlands, open woodlands
Western Grebe (*Aechmophorus occidentalis*)	BCC	Breeding	Unknown	Lakes and ponds
Willet (*Tringa semipalmata*)	BCC	Breeding	Unknown	Marshes, wet meadows, mudflats, shorelines

Non-sensitive Migratory Birds				
American crow *(Corvus brahcyrhynchos)*	Least Concern	Year-round	0.06	Scrub/shrublands
American kestrel *(Falco sparverius)*	Least Concern	Breeding	0.18	Nesting habitat on mesa. Foraging habitat in scrub/shrublands.
American robin *(Turdus mirgratorius)*	Least Concern	Breeding	2.2	Scrub/shrublands
Black-billed magpie (*Pica hudsonia)*	Least Concern	Year-round	0.29	Scrub/shrublands/ forest edges/ riparian areas
Blue-gray gnatcatcher (*Polioptila caerulea)*	Least Concern	Breeding	0.74	Scrub/shrublands
Brewer's blackbird (*Euphagus cyanocephalus)*	Least Concern	Breeding	3.81	Scrub/shrublands/ riparian woodlands
Brown-headed cowbird *(Molothrus ater)*	Least Concern	Breeding	0.67	Scrub/shrublands
Common raven *(Corvus corax)*	Least Concern	Year-round	0.11	Scrub/shrublands
Eastern kingbird (*Tyrannus tyrannus*)	Least Concern	Breeding	0.82	Forest edges/ riparian areas
Gray flycatcher (*Empidonax wrightii*)	Least Concern	Breeding	2.43	Scrub/shrublands/ juniper
Green-tailed towhee *(Pipilo cholorurus)*	Least Concern	Breeding	6.54	Scrub/shrublands

Horned lark *(Eremophila alpestris)*	Least Concern	Breeding	66.93	Scrub/shrublands
Lark sparrow *(Chondestes grammacus)*	Least Concern	Breeding	1.15	Scrub/shrublands
Long-billed curlew *(Numenius americanus)*	Least Concern	Breeding	0.04	Scrub/shrublands/ pastures
Mountain bluebird *(Sialia currucoides)*	Least Concern	Breeding	3.29	Scrub/shrublands
Mourning dove *(Zenaida macroura)*	Least Concern	Breeding	1.16	Scrub/shrublands/ clearings
Northern flicker *(Colaptes auratus)*	Least Concern	Breeding	0.19	Forest edges
Red crossbill *(Lozia curvirostra)*	Least Concern	Breeding	0.31	Montane coniferous forests
Red-winged blackbird *(Agelaius phoeniceus)*	Least Concern	Breeding	0.38	Riparian areas/ pastures
Rock wren *(Salpinctes obsoletus)*	Least Concern	Breeding	3.34	Rock slopes
Say's pheobe *(Sayornis saya)*	Least Concern	Breeding	0.34	Scrub/shrublands
Western meadowlark *(Sturnella neglecta)*	Least Concern	Breeding	1.21	Scrub/shrublands
Western tanager *(Piranga ludoviciana)*	Least Concern	Breeding	0.22	Coniferous forests
White-crowned sparrow *(Zonotrichia leucophrys)*	Least Concern	Breeding	0.92	Forest edges

[1] Data references for density estimates within SW Wyoming CO_2 Sequestration Project: Pavlacky et al. 2017c and Reese et al. 2022c. Density estimates were calculated using the Integrated Monitoring in Bird Conservation Regions (IMBCR) program in coordination with the Birds Conservancy of the Rockies.

[2] BGEPA = protected by Bald and Golden Eagle Protection Act; BCC = Bird of Conservation Concern; MBTA = protected by the Migratory Bird Treaty Act; BCR = Bird Conservation Regions

[3] Species with an unknown density rating were not detected during 2022 Integrated Monitoring in Bird Conservation Regions (IMBCR) surveys. This is likely due to the monitoring protocol used which best targets terrestrial dwelling birds (i.e., songbirds, tree-dwelling birds, and perching birds). It is uncommon for raptors, waterfowl, and nocturnal species to be detected during these surveys. For these species, targeted surveys are necessary to estimate population sizes. Rare species or species that occur in low densities may also not be detected on IMBCR surveys unless a large sampling effort occurs.

Cumulative Impacts

The CIAA for migratory birds is a 1-mile buffer of the project area (1,164,807 acres). A one-mile buffer is typically recommended for ground-based disturbances. The CIAA was selected to analyze activities that would occur on the edge of the project boundary. Cumulative impacts to migratory birds would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, it could

result in additional cumulative impacts to migratory birds. All available habitat in the project area could be impacted by implementation.

Mitigation Measures/Conditions of Approval
Pre-construction surveys and avoidance of habitat where possible would help reduce impacts to migratory bird species.

3.11 Mountain Plover

Issue Statement: How would mountain plover be impacted by the proposal?

Affected Environment

Mountain plover (*Charadrius montanus*) is a BLM sensitive species that occurs throughout Wyoming between mid-March to late October migrating outside Wyoming during winter (BLM 2010e). This species occurs in sparsely vegetated desert and prairie habitats utilizing areas grazed by herbivores, such as prairie dogs (*Cynomys* spp.), pronghorn (*Antilocapra americana*), and domestic livestock. In the western periphery of its range, it uses xeric shrubland communities dominated by bare ground with saltbush (*Atriplex* spp.) and sagebrush (*Artemisia* spp.) (Wickens, et al 2015b, WGFD 2017a).

Many observations of mountain plover from past project surveys and WYNDD data occur in the northernmost portion of the project area, but a total of 476,865 acres of mountain plover WYNDD distribution modeled habitat is within the project area (Map 3.11).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Mountain plover and associated habitats would not be impacted.

Proposed Action

Impacts to mountain plover include loss of native habitats, loss of prairie dogs, and habitat fragmentation (Dinsmore 2003c). If surface disturbance or disruptive activities were to occur, project activities would directly impact mountain plover habitat as it occupies portions of the project area. Noise and human disturbance during construction activities are likely to displace mountain plover that occur within and adjacent to the proposed project area resulting in habitat loss. To protect mountain plover breeding and nesting habitats, no surface occupancy or surface disturbing activities should occur within any identified mountain plover habitat between April 10 to July 10 (KFO RMP Decision 4010). Pre-construction surveys are recommended to determine presence/ absence of mountain plover outside of known occupied areas (See Map; BLM ARMPA 2015a, BLM 2024).

Cumulative Impacts

The CIAA for mountain plover is a 1-mile buffer off modeled distribution (936,908 acres). A one- mile buffer is typically recommended for ground-based disturbances. The CIAA was selected to analyze activities that would occur on the edge of the project boundary. Cumulative impacts to mountain plover would be similar to those described under the Proposed Action. There are currently 143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance

or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the project area, it could result in additional cumulative impacts to mountain plover. Although all available habitat in the project area could be impacted by implementation.

Mitigation Measures/Conditions of Approval
No surface disturbing or disruptive activities in area of mountain plover nesting habitat until a survey is conducted by a qualified biologist and a plan following best available science is submitted to the AO that will protect the area during nesting season (April 10-July 10).

3.12 BLM Sensitive Species - Amphibians

Issue Statement: How would BLM sensitive amphibians be impacted by the proposal?

Affected Environment

Amphibian distribution data is limited throughout Wyoming. Based on available data, two special status amphibian species occur in the project area, the Great Basin spadefoot toad (*Spea intermontana*) and the northern leopard frog (*Lithobates pipiens*); both are BLM sensitive species. The Great Basin spadefoot toad is a habitat generalist in a landscape and habitat models indicate they occur throughout the project area Map 3.12.1. Great Basin Spadefoot toads require ephemeral or permanent stands of water for breeding. Species ranges and modeled habitat from WYNND indicate this species occurs within approximately 848,190 acres within the project area.

The northern leopard frog occurs in or near permanent water sources in a wide range of habitat types. Northern leopard frogs require small fishless ponds for reproduction and upland habitats for summertime foraging (Smith and Keinath 2004c). In the project area habitat for the northern leopard frog is associated with major perineal streams Map 3.12.2. Species ranges and modeled habitat from WYNND indicate this species occurs within approximately 92,660 acres of habitat within the project area.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. BLM sensitive amphibians and associated habitats would not be impacted.

Proposed Action

If surface disturbance or disruptive activities were to occur, project activities would directly impact sensitive amphibian habitat as it occupies portions of the project area. Amphibians could be directly impacted by the removal of habitat associated with construction. Linear features that cross stream channels can also result in increased sedimentation and reduce the quality of amphibian habitat. Impacts would be reduced by prohibiting surface disturbance within 500 feet of surface water and/or riparian areas.

Cumulative Impacts

The CIAA for amphibians is a 1-mile buffer of the project area (1,164,807 acres). These species are non-migratory animals. The CIAA was selected to ensure that impacts to home ranges on the edge of the project boundary would be analyzed. Cumulative impacts to BLM sensitive amphibians would be similar to those described under the Proposed Action. There are currently

143,388 acres of disturbance within the CIAA. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the project area, it could result in additional cumulative impacts to BLM sensitive amphibians. Although all available habitat in the project area could be impacted by implementation.

Mitigation Measures/Conditions of Approval
Impacts would be reduced by prohibiting surface disturbance within 500 feet of surface water and/or riparian areas.

3.13 Endangered Species – Canada Lynx

Issue Statement: How would Canada lynx be impacted by the proposal?

Affected Environment

Canada lynx (*Lynx canadensis*) is an Endangered Species Act (ESA) threatened species that occurs throughout Alaska eastward to the Atlantic coast of Canada with southern extensions into the contiguous United States along the Rocky Mountains and Cascade Mountains. This species occurs in boreal spruce-fir forest ecosystems and subalpine forests at about 4,900-11,500 feet elevation and are likely to persist in areas that are characterized by deep snow and dense horizontal forest cover that support adequate densities of snowshoe hare (Beauvais et al 2016b). There have been sparce observations of Canada lynx within the project area, the most recent occurring in 1995. Six designated critical habitat areas known as Lynx Analysis Units (LAUs) occur along the southern border of the project area (BLM 31-1, BLM 31-2, BLM 31-3, BLM 31-4, BLM 32, and BLM 33-2) (BLM 2005b; Map 3.13).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Canada lynx and associated habitats would not be impacted.

Proposed Action

Potential impacts to Canada lynx include loss of habitat or displacement from construction activities. If surface disturbance or disruptive activities were to occur, an informal/formal endangered species act consultation may be required for any surface disturbing activities within identified habitat for listed species. During the consultation process ways to mitigate and/or reduce impacts would be identified including following best management practices outlined in the programmatic biological evaluation and the Canada Lynx Conservation Assessment and Strategy (BLM 2005b, LCAS 2013).

Cumulative Impacts

The cumulative Impact Analysis Area (CIAA) for Canada Lynx is a 1-mile buffer around designated Lynx Analysis Units (LAUs; 29,094 acres). A one- mile buffer is typically recommended for ground-based disturbances. The CIAA was selected to analyze activities that would occur on the edge of the LAU's. Cumulative impacts to Canada lynx would be similar to those described under the Proposed Action. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW

Wyoming CO_2 Sequestration Project were to occur within the CIAA, an informal/formal endangered species act consultation may be required.

3.14 Endangered Species – Yellow-billed Cuckoo

Issue Statement: How would yellow-billed cuckoo be impacted by the proposal?

Affected Environment

Observations of yellow-billed cuckoo (*Cuccyzus americanus)* have not been documented within the project area. Yellow-billed cuckoos use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland and dense thickets along streams and marshes. The entire project area is within an area of influence (AOI), designated by the United States Fish and Wildlife Service. Areas of influence identify areas where any project located within should consider potential effects to the Threatened, Endangered, Proposed, and Candidate species and designated and proposed critical habitat (ESA 1973). AOI's typically encompass larger areas than where the species is known to exist because of direct and indirect effects to the species and their habitat.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. The yellow-billed cuckoo and associated habitats would not be impacted.

Proposed Action

Potential impacts to yellow-billed cuckoo include loss of habitat or displacement from construction activities. If surface disturbance or disruptive activities were to occur, an informal/formal endangered species act consultation may be required for any surface disturbing activities within identified habitat for listed species. During the consultation process ways to mitigate and/or reduce impacts would be identified including following best management practices outlined in the programmatic biological evaluation (BLM 2003b).

Cumulative Impacts

The CIAA for a yellow-billed cuckoo is a 1-mile buffer of the major rivers in the project area (193,736 acres). A one- mile buffer is typically recommended for ground-based disturbances. The CIAA was selected to analyze activities that would occur on the edge of the project boundary. Cumulative impacts to yellow-billed cuckoo would be similar to those described under the Proposed Action. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, an informal/formal endangered species act consultation may be required.

3.15 Endangered Species – Ute Ladies'-tresses

Issue Statement: How would Ute Ladies-tresses be impacted by the proposal?

Affected Environment

Observations of Ute ladies'-tresses (*Spiranthes diluvialis*) have not been documented within the project area. However, the Fish and Wildlife Service (FWS) has identified 327,544 acres of

habitat defined as the Area of Influence (AOI) for Ute ladies'-tresses. The AOI identifies areas where any project located should consider potential effects to the Threatened, Endangered, Proposed, and Candidate species and designated critical habitat. An AOI typically encompass larger areas than where the species is known to exist because of direct and indirect effects to the species and their habitat (Map 3.15). Habitat for Ute lady's tresses varies but is usually associated with moist environments including alkaline wetlands, moist meadows, floodplains, flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, lakeshores, irrigation canals, berms, levees, or irrigated meadows.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Ute ladies' tresses and associated habitats would not be impacted.

Proposed Action

Potential impacts to Ute ladies'-tresses include loss of habitat or displacement from construction activities. If surface disturbance or disruptive activities were to occur, an informal/formal endangered species act consultation may be required for any surface disturbing activities within identified habitat for listed species. For federally listed species, protective measures are developed and implemented in coordination with the USFWS. During the consultation process ways to mitigate and/or reduce impacts would be identified including following best management practices outlined in the programmatic biological evaluation (UTE BLM 2005b).

Cumulative Impacts

The CIAA for Ute ladies'-tresses is the CIAA for riparian and wetland areas and is delineated by a 500-foot avoidance buffer around the USFWS National Wetland Inventory (NWI) wetland and riparian polygons (approximately 24,077 acres). The 500-foot buffer is the standard avoidance area and would include all riparian habitat within the project area. Cumulative impacts to Ute ladies'-tresses would be similar to those described under the Proposed Action. Existing land uses include grazing, mining, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from SW Wyoming CO_2 Sequestration Project were to occur within the CIAA, an informal/formal endangered species act consultation may be required.

3.16 Riparian Areas and Wetlands

Issue Statement: How would riparian areas and wetlands be impacted by the proposal?

Affected Environment

Riparian areas are defined as the transitional area between water features and uplands and are often delineated by the presence of vegetative species that are dependent on sustained levels of high soil moisture. Wetlands are often found adjacent to streams and ponds but may also be associated with groundwater seeps and meadows that do not contain open water. The project area is dominated by a High Desert Sagebrush Steppe environment with limited amounts of riparian areas and wetlands. These areas tend to be more diverse, more productive, and hold water and green vegetation much longer than the surrounding uplands making them important areas for wildlife. Additionally, riparian and wetland vegetation have well developed root systems that provide many key watershed functions such as bank stabilization, water infiltration, and flood control.

Map 3.16 shows riparian areas and wetlands in the project area.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action alternative, the BLM-administered federal pore space would not be leased and the potential for future surface and subsurface disturbance related to carbon sequestration would remain at their present levels.

Proposed Action

Under the Proposed Action, the applicant would be granted the right to occupy the federal pore space associated with the requested subsurface Federal ROW, and the potential for surface and subsurface disturbance related to CO_2 sequestration would increase in relation to the level of future activity. Surface and subsurface disturbances can affect the flow of surface and groundwater upon which riparian areas are dependent. The guidelines provided in the KFRMP and RSFORMP would direct surface disturbance and reclamation practices. These guidelines reduce and minimize, but do not fully eliminate, direct and indirect impacts to riparian areas and wetlands, including bank destabilization, changes in water infiltration and flood control, and overall watershed impairment.

Cumulative Impacts

The CIAA for riparian and wetland areas are the portions within the project area delineated by a 500-foot avoidance buffer around USFWS National Wetland Inventory (NWI) wetland and riparian polygons (approximately 24,077 acres). The NWI is the best available database that delineates both riparian and wetland habitat within the project area and it is conservative in the way that it is more likely an overestimate of riparian and wetland occurrences than an underestimate. Cumulative impacts to riparian areas and wetlands would be similar to those described under the Proposed Action, combined with existing land uses that include grazing, mining, oil and gas production, and recreation activities. Surface and subsurface disturbance and these historic land uses would have a cumulative impact upon the health and distribution of riparian communities within the USFWS National Wetland Inventory.

3.17 Paleontological Resources

Issue Statement: How would paleontological resources be impacted by the proposal?

Affected Environment

The BLM adopted the Potential Fossil Yield Classification (PFYC) system to identify and classify fossil resources on federal lands. These paleontological resources are closely tied to the geologic units (i.e., formations, members, or beds) that contain them. The probability for finding fossil resources can be broadly predicted from the geological units present at or near the surface. Therefore, geologic mapping can be used for assessing the potential for the occurrence of fossil resources.

The requested ROW is located within the KFO and RSFO jurisdictions and is located within large areas of PFYC 3 to PFYC 5, which have a high to very high probability for finding important paleontological resources (Love and Christiansen 1985). These include the Tipton and Luman Tongues of the Green River Formation, various members of the Bridger Formation as

well as the Niland Tongue of the Wasatch Formation. The total acreage for PFYC 3 is 840 acres; PFYC 4 covers 13 acres and PFYC 5 covers 739,464 acres.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the Proposed Action would not be authorized and there would be no impact to fossil localities on public lands.

Proposed Action

The proposed ROW does not authorize any surface disturbance, thus there is no possibility of affecting paleontological resources at this time. However, the potential for impacts to paleontological resources from future disturbance is determined to be high in areas that are classified as PFYC 5, which is the vast majority of the project area. In addition to direct impacts due to construction of future proposed facilities, construction may increase erosion within, downstream and adjacent to the project area, which can lead to the exposure of buried paleontological resources and may result in increased visitation for avocational collectors of vertebrate fossils artifacts. If surface disturbance is proposed in PFYC 5 areas, further evaluation would be needed and may include the requirements for a pre-construction survey and/or a paleontological monitor during ground disturbance activities.

Cumulative Impacts

The Cumulative Effects Analysis Area for paleontological resources include the total acreage of PFYC 3, 4 and 5 within the project area. Approval of the project ROWat this stage will have no cumulative impact to paleontological resources. However, if specific ground-breaking activities, which would be granted via separate ROWs, are constructed for the carbon sequestration projects, paleontological resources may face increased impact from exposure to erosion due to construction activities. Avocational fossil collectors or persons looking to sell fossils may use project access roads to sensitive fossil areas.

Pre-approval requirements in PFYC Class III, IV & V areas

A pre-surface disturbance paleontological field study must be conducted by a BLM permitted paleontologist. A written report of the findings by the paleontologist must be submitted to the BLM Authorized Officer with recommendations for mitigation or avoidance. Authorization for an activity to proceed cannot be given by a consulting paleontologist. Performance of the survey, either by a consulting paleontologist or qualified BLM staff, or submission of the report does not constitute approval for the activity to proceed. The BLM must review the report, including adequacy of the field methods and findings. The Authorized Officer must approve the findings and determine the need for monitoring or other mitigation prior to approval to proceed. See IM-2009-011 and attachments for more information.

Mitigation Measures/Conditions of Approval

A variety of stipulations would be applied to future authorizations that involve surface/subsurface disturbance and construction:

(Construction Monitor)

A certified paleontologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior will be on site at all times during construction. Any paleontological materials located during construction will be reported to the authorized officer. Procedures for

determining significance and/or effect will be established at that time. Cost of any further paleontological work will be borne by the holder.

(Open Trench Inspection)
A certified paleontologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior will inspect the open pipeline trench after construction and before the pipeline is placed into the trench. Any paleontological materials located during construction will be reported to the authorized officer. Procedures for determining significance and/or effect will be established at that time. Cost of any further paleontological work will be borne by the holder.

(Spot Check)
A certified paleontologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior will be on site at all times during construction and shall inspect any bedrock exposed during surface disturbing activities (such as the construction of the reserve pit, well pad, access road, etc.). Any paleontological materials located during construction will be reported to the authorized officer. Procedures for determining significance and/or effect will be established at that time. Cost of any further paleontological work will be borne by the holder.

3.18 Soils

Issue Statement: How would soils be impacted by the proposal?

Affected Environment

Soils within the project area are broken up into 3 distinct groups: Green River Basin Uplands, Relict Alluvial Fans and Floodplains. The largest soil group by geographic area represented within the project boundary is the Green River Basin Uplands, this group contains the sedimentary uplands of the Green River basin. Low relief bedrock-controlled ridges, erosional side slopes and alluvial fans dominate the landscape with badlands and small sand dunes. Soils in this group are formed from shales producing clayey textures with poor surface water infiltration and high runoff potential. Soils are found to contain high carbonate levels and are largely saline which create a high erosion factor. Low organic matter content within these soils makes silt and sand particles highly susceptible to erosion due to lack of binding.

The second group, the Relict Alluvial Fans is in the extreme southern part of the project area near the base of the Uinta Mountain range. These landforms were created due to alluvial material flushing out of the canyons of the nearby mountains. Glacial till occurs in the southern part of Uinta County and is found on high level outwash terraces. Soil in this area is generally deep, with rock and cobbles throughout the profile.

The third group, the floodplains is found along major drainages, and makes up the smallest percentage of the project area. These soils can be divided into three groups due to surrounding soil types and they are not uniform in character. The group that is found within the project area is mainly influenced by the Hams fork River within the Opal area. The soils tend to have more rock and vary more in texture but are usually less saline than the groups.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the Proposed Action would not take place and there would not be a potential impact to soils on public lands.

Proposed Action
The proposed ROW is for 605,091 acres of pore space underneath federal managed lands in Lincoln, Uinta, and Sweetwater counties in southwest Wyoming for storage of carbon dioxide. The permitting of the ROW does not have any surface disturbance or proposed surface facilities currently. However, there is potential for surface disturbance to occur at a future date.

Surface disturbing activities have a potential to increase soil erosion factors, mix soil horizons and break up soil crusts. These erosion factors are increased if surface disturbance is conducted on areas where slopes are 20% or greater. Generally, surface disturbing activities result in the removal of vegetation. The absence of vegetation reduces the presence of organic materials and soil binding capabilities, this increases potential for erosion. Further erosion of soil makes it a less productive community and decreases potential productivity and recovery of plant communities. Mixing of soil horizons and breaking up of soil crusts due to construction practices influences soil organic matter and productivity also leading to less vegetation and soil binding factors increasing chances of erosion.

Cumulative Impacts
The CIAA is the whole 605,091 acres of the proposed right-of-way. Cumulative impacts to soils would be similar to those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. If surface disturbance or disruptive activities from the SW Wyoming CO_2 Sequestration Project were to occur within the CIAA it could increase the already existing impacts to soils.

3.19 BLM Special Status Plant Species ACEC
Issue Statement: How would the Special Status Plant Species ACEC be impacted by the proposal?

Affected Environment
The Special Status Plant Species Area of Critical Environmental Concern (ACEC) consists of individual polygons around known plant populations designated to protect BLM species that occur within the southern portion of the project area (i.e., Uinta green-thread, precocious milkvetch, and Cedar Mountain easter daisy). Information on each of the species are described in section 3.20. This Special Status Plant Species ACEC was designated in 1997 and then expanded in the 2024 Rock Springs Field Office RMP (Map 3.20). Special status plants are those listed, proposed for listing, or candidates for listing as threatened and endangered under the ESA, identified by the state in a category implying potential endangerment or extinction, or species designated by the BLM State Director as sensitive. Management priority and emphasis for the ACEC was given to maintain or enhance these species and their habitats, and the ACEC is a ROW exclusion area. The special status plant ACEC consists of numerous individually mapped sensitive plant populations. The total area in the southern portion of the Special Status Plant Species ACEC is 873 acres. Approximately 783 acres occur within the project area.

Environmental Consequences (direct/indirect effects)
No Action
Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. The Special Status Plant Species Area of Critical Environmental Concern would not be impacted.

Proposed Action
If surface disturbance or disruptive activities were to occur, project activities would directly impact the Special Status Plant Species ACEC as it occupies 783 acres of the project area. Potential impacts include loss of habitat or a reduction in habitat quality from construction activities. Although the Special Status Plant Species ACEC in the project area could be impacted by implementation, the ACEC itself is a ROW exclusion area, meaning that its designated boundaries would be protected by closing them to surface disturbing activities, thereby minimizing any impacts from the project.

Cumulative Impacts
The CIAA is the designated southern portions of the Special Status Plant Species ACEC (873 acres). Current uses within the CIAA include grazing and recreation activities. Cumulative impacts would be similar to those described under the Proposed Action in combination with the other land uses in the CIAA. A total of 90% of the ACEC southern portions occur within the project area boundary. Currently, less than 0.1% of the CIAA is disturbed. If surface disturbance or disruptive activities from the carbon sequestration project were to occur, indirect impacts and reduction of plant vigor could occur.

Mitigation Measures/Conditions of Approval
Surface occupancy and use would be prohibited within the Special Status Plant Species ACEC.

3.20 BLM Special Status Plants
Issue Statement: How would BLM special status plants outside the special status plant ACEC be impacted by the proposal?

Affected Environment
Beaver Rim Phlox
Beaver rim phlox (*Phlox pungens*) is a BLM sensitive species endemic to the Wind River and Green River basins and southeastern foothills of the Wind River Range in Fremont, Lincoln, and Sublette counties of Wyoming (BLM 2010e). This species is typically found in concave washes along summit rims, mid-slopes, and ridgetops of gray to reddish brown clay-shale soils with a surface layer of white limey-sandstone in cushion plant/ bunchgrass vegetation or openings in *Artemisia nova*/ *A. tridentata* grasslands at 6,000 to 7,400 feet (NatureServe 2023b, USFS 2002b). The species range reaches approximately 17,352 acres within project area and modeled habitat from WYNND indicate this species occurs within approximates 6,720 acres of the northern portion of the project area (Map 3.20.1).

Precocious Milkvetch
Precocious milkvetch (*Astragalus proimanthes*) is a BLM sensitive species endemic to Wyoming (BLM 2010e). This species is found in grassland and talus/ scree habitats with course calcareous clay soils on summits and upper slopes of low, windy ridges at about 7000 ft (NatureServe 2023a, Jouseau 2016c). Observations and modeled habitat from WYNDD and BLM Rock Springs Field Office surveys indicate this species occurs within approximately 15,688 acres of the southeastern portion of the project area (Map 3.20.2).

Treleases Milkvetch

Trelease's milkvetch (*Astragalus racemosus var. treleasei*) is a BLM sensitive species that is endemic to northeast Utah and southwest Wyoming (BLM 2010e). In Wyoming, this species is found in the Green River Basin and the foothills of the Wyoming Range in sparsely- vegetated, shale-derived substrates in outwash flats and slopes along river valleys at 6,500-7,500 ft. This species frequently occurs with thickspike wheatgrass (*Elymus lanceolatus),* rubber rabbitbrush (*Ericameria nauseosa* var. *oreophila*), green rabbitbrush (*Chrysothamnus viscidiflorus*) and shadscale (*Atriplex confertifolia*) (Heidel 2003a, NatureServe 2023d). There is approximately 3,793 acres of mapped habitat that occur throughout the project area (Map 3.20.3).

Tufted Twinpod

Tufted twinpod (*Physaria condensata*) is a BLM sensitive species endemic to the southern Overthrust Belt and lower Green River Basin in Lincoln, Uinta, and Sublette counties in Wyoming (BLM 2010e). Populations are typically found in cushion plant and bunchgrass communities in semi-barren, wind-blasted upper slopes and rims of calcareous shale or sandstone desert mesas at elevations of 6,000-7,760 feet (NatureServe 2023c, Fertig 2002a). There are five mapped tufted twinpod populations within the project area and approximately 116,203 acres of modeled habitat along the northwest portion of the project area (Map 3.20.4).

Stemless Beardtongue

Stemless beardtongue (*Penstemon acaulis* var.*acaulis*) is a narrow endemic of the southern Green River Basin and northern foothills of the Uinta Range in Sweetwater County, Wyoming and Daggett County, Utah (Jouseau, M.R.G. 2012). Approximately 1,467 acres of mapped populations and habitat for stemless beardtongue occur in the southeast portion of the proposed project area (Map 3.20.5).

Large-fruited Bladderpod

Large-fruited bladderpod (*Lesquerella macrocarpa*) occurs in the western United States and is endemic to southwestern Wyoming. Habitat occurs along the western rim of the Great Divide Basin in Fremont and Sweetwater counties, the Green River Basin near Opal, Wyoming in Lincoln County, and Ross Butte in Sublette County (Heidel, B. 2009). Approximately 44 acres of mapped populations and habitat occurs within the proposed project area (Map 3.20.6).

Entire-leaved Peppergrass

Entire-leaved peppergrass (*Lepidium integrifolium* var. *integrifolium*) is a regional endemic of northeastern Utah and southwestern Wyoming. Its habitat is restricted to alkaline wet meadows associated with low-elevation riparian habitat of foothills and valley bottoms. Wyoming populations occur in sparsely vegetated, seasonally saturated flats of silts and silt loams derived from Quaternary alluvium, sometimes with a claypan. One known population occurs on approximately one acre within the proposed project area (Heidel, B. 2004a; Map 3.20.7).

Uinta Green-thread

Uinta green-thread (T*helesperma pubescens*) is a BLM sensitive species endemic to Utah and southwest Wyoming. This species is found on mesa-like mountains in sparsely vegetated cushion plant communities and sagebrush grasslands at 8,040-8,960 ft (Fertig 2001b). In the project area, it occurs on BLM-managed public land off the north side of the Uinta Mountains and on Cedar, Sage Creek and Hickey Mountains. These mountains are isolated plateaus capped with cobbly, coarse soils formed from Bishop conglomerate. The Uinta green-thread grows along the rims of these mountaintops. Species ranges and modeled habitat from WYNND indicate this

species habitat occurs within approximately 3,111 acres in the southern portion of the project area (Map 3.20.8). A total of 2,554 acres of Uinta green-thread habitat occurs outside of the Special Status Plant Species Area of Critical Environmental Concern and of the ACEC.

Cedar Mountain Easter Daisy

Cedar Mountain easter daisy (*Townsendia microcephala*) is a BLM sensitive species endemic to southwestern Wyoming and known only from the northern foothills of the Uinta Range (Sweetwater and Uinta counties). This species occurs on exposed, west-facing upper slopes and ridges at 8,200- 8,500 feet (Markow and Fertig 2001c). The total population was estimated at 2,280- 4,550 plants (Fertig 1995 in Markow and Fertig 2001c). Species ranges and modeled habitat from WYNND indicate this species habitat occurs within approximates 1,816 acres in the southern portion of the project area (Map 3.20.9). A total of 1,755acres of Uinta green-thread habitat occurs outside of the Special Status Plant Species Area of Critical Environmental Concern and of the ACEC.

Limber Pine

Limber pine (*Pinus flexilis*), a BLM Sensitive Species ranges in elevation from 5,720-9,670 feet (2019 Jones). Due to drought tolerance, it is commonly found associated with juniper woodlands in the High Desert District. However, it can also be present in the mixed conifer forests that extend from US Forest Service lands adjacent to the Utah border. Within the project area limber pine is likely to occur over the 15,859 acres of mixed conifer forest and juniper woodland cover present in the southernmost portion of the project area (Map 3.20.10).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the project would not be permitted therefore no project-related disturbance would occur on public lands. Sensitive plant populations and associated habitats would not be impacted.

Proposed Action

The proposed project covers 1,005,797 acres (including private and State of Wyoming) within the KFO and RSFO offices which overlaps with nine BLM sensitive plant species habitats. If surface disturbance activities were to occur, surface disturbance and loss of habitat from project activities would directly impact special status plant habitats. Possible indirect negative impacts which may result if surface disturbing activities were to occur include fugitive dust from construction activities and vehicle traffic on unpaved roads. Fugitive dust could occur from construction activities, thus negatively impacting habitat quality and plant vigor.

Beaver Rim Phlox

A total of 6,720 acres of beaver rim phlox habitat occurs within the project area, which accounts for approximately 0.67% of the project area and 0.58% of the known habitat. Impacts to Beaver Rim phlox would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Although all habitat in the project area could be impacted by implementation, known

locations of the plants would be protected by these areas to surface disturbing activities, which would minimize any impacts to the species from the project.

Precocious Milkvetch

A total of 15,688 acres of precocious milkvetch habitat occurs within the project area, which accounts for approximately 1.6% of the project area and 20.1% of the known habitat. Impacts to precocious milkvetch would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Although all habitat in the project area could be impacted by implementation, known locations of the plants would be protected by these areas to surface disturbing activities, which would minimize any impacts to the species from the project.

Treleases Milkvetch

A total of 3,793 acres of treleases milkvetch habitat that occurs within the project area, which accounts for approximately 0.3% of the project area and 2.5% of the known habitat. Impacts to treleases milkvetch would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Although all habitat in the project area could be impacted by implementation, known locations of the plants would be protected by these areas to surface disturbing activities, which would minimize any impacts to the species from the project.

Tufted Twinpod

A total of 116,203 acres of tufted twinpod habitat occurs within the project area, which accounts for approximately 1.8% of the project area and 16% of the known habitat. Impacts to tufted twinpod would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Although all habitat in the project area could be impacted by implementation, known locations of the plants would be protected by these areas to surface disturbing activities, which would minimize any impacts to the species from the project.

Stemless Beardtongue

A total of 1,467acres of Stemless Beardstongue habitat occur within the project area, which accounts for approximately 0.5% of the project area and 43% of the known habitat. Although all habitat in the project area could be impacted by implementation, known location of the plants would be protected by closing them to surface disturbing activities, which would minimize any impacts to the species from the project.

Large-fruited Bladderpod

A total of 44 acres of large-fruited bladderpod habitat occur within the project area, which accounts for approximately 0.004% of the project area and 0.4% of the known habitat. Impacts to large-fruited bladderpod would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Although all habitat in the project area could be impacted by implementation,

known location of the plants would be protected by closing them to surface disturbing activities, which would minimize any impacts to the species from the project.

Entire-leaved Peppergrass

Less than 1 acre of entire-leaved peppergrass habitat occur within the project area, which accounts for approximately less than 0.001% of the project area and less than 0.001% of the known habitat. Although all habitat in the project area could be impacted by implementation, known location of the plants would be protected by closing them to surface disturbing activities, which would minimize any impacts to the species from the project.

Uinta Green-thread

A total of 3,111 acres of Uinta green-thread habitat occurs within the project area, which accounts for approximately 0.3% of the project area and 80% of the known habitat. Impacts to Uinta green-thread would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Approximately 80% of the existing habitat could be impacted if surface disturbing activities are permitted. The other 20% of Uinta green-thread habitat, would be protected under ACEC designation.

Cedar Mountain Easter Daisy

A total of 1,816 acres of Cedar Mountain easter daisy habitat occurs within the project area, which accounts for approximately 0.2% of the project area and 100% of the known habitat. Impacts to Uinta Cedar Mountain easter daisy would be the same as those described above. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it would result in direct loss of habitat. Approximately 97% of the existing habitat could be impacted if surface disturbing activities are permitted. The other 3% of Cedar Mountain easter daisy habitat, would be protected under ACEC designation.

Limber Pine

Within the project area limber pine is likely to occur over the 15,859 acres of mixed conifer forest and juniper woodland cover present in the southernmost portion of the project area. There are no designated ACECs for limber pine. There is a potential for temporary or permanent loss of limber pine cover with future surface disturbing activities.

Cumulative Impacts

Beaver Rim Phlox

The CIAA for the Beaver Rim phlox is the entire modeled population of the plant species with a 1-mile buffer (19,693 acres). Cumulative impacts to beaver rim phlox would be similar to those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 9% of the habitat for Beaver Rim phlox in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Precocious Milkvetch

The CIAA for the precocious milkvetch is the entire modeled population of the plant species with a 1-mile buffer (37,101 acres). Cumulative impacts to precocious milkvetch would be similar to those described under the Proposed Action. Existing land uses include grazing, oil and

gas production, and recreation activities. Currently 2% of the habitat for precocious milkvetch in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Treleases Milkvetch

The CIAA for the trelease's milkvetch is the entire modeled population of the plant species with a 1-mile buffer (38,470 acres). Cumulative impacts to Trelease's milkvetch would be similar to those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 4.2% of the habitat for Trelease's milkvetch in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Tufted Twinpod

The CIAA for the tufted twinpod is the entire modeled population of the plant species with a 1mile buffer (46,439 acres). Cumulative impacts to tufted twinpod would be similar to those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 28% of the habitat for tufted twinpod in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Stemless Beardtongue

The CIAA for the stemless beardtongue is the entire modeled population of the plant species with a 1-mile buffer (20,995 acres). Cumulative impacts to stemless beardtongue would be the same as those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 5.3% of the habitat for stemless beardtongue in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Large-fruited Bladderpod

The CIAA for the large-fruited bladderpod is the entire modeled population of the plant species with a 1-mile buffer (40,677 acres). Cumulative impacts to large-fruited bladderpod would be the same as those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 0.13% of the habitat for large-fruited bladderpod in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Entire-leaved Peppergrass

The cumulative impact analysis area (CIAA) for the entire-leaved peppergrass is the entire modeled population of the plant species with a 1-mile buffer (2,009 acres). Cumulative impacts to entire-leaved peppergrass would be the same as those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 6.2 % of the habitat for entire-leafed peppergrass in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could

result in additional loss of habitat and impacts to 80% of the modeled plant habitat within the CIAA.

Uinta Green-thread

The cumulative impact analysis area (CIAA) for the Uinta green-thread is the entire modeled population of the plant species with a 1-mile buffer (3,897 acres). Cumulative impacts to Uinta green-thread would be similar to those described under the Proposed Action. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 0.3 % of the habitat for Uinta green-thread in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to 97% of the modeled plant habitat within the CIAA.

Cedar Mountain Easter Daisy

The cumulative impact analysis area (CIAA) for the Cedar Mountain easter daisy is the entire modeled population of the plant species with a 1-mile buffer (1, 816 acres). Cumulative impacts to Cedar Mountain easter daisy would be the same as those described under the Proposed Action because the entire known population occurs within the project area. Existing land uses include grazing, oil and gas production, and recreation activities. Currently 0.8 % of the habitat for Cedar Mountain easter daisy in the CIAA is disturbed. If surface disturbance or disruptive activities from the CO_2 sequestration project were to occur, it could result in additional loss of habitat and impacts to the entire plant population within the CIAA.

Limber Pine

The CIAA is an estimated 15,859 acres of forest and woodland cover within the project area. Current disturbances and existing uses within the project area includes grazing, oil and gas production, and recreation. Disturbances impact limber pine health and resilience by damaging or preventing regeneration. These activities also introduce invasive plants, insects, and diseases which compete for resources, cause mortality, and reduce vigor. Direct removal of limber pine reduces sources of regeneration and genetic diversity.

Mitigation Measures/Conditions of Approval

Pre-construction surveys would be required in areas of sensitive plant species habitat. Surface disturbing activities will be restricted unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policies for Special Status plant species.

3.21 National Historic Trails

Issue Statement: How would the granting of the ROW impact Blacks Fork Cutoff, Slate Creek Cutoff, Sublette Cutoff, and the Oregon Trail National Historic Trails (NHTs)?

Affected Environment

The requested ROW is situated within the Green River Basin Subregion (GBS), a physiographic-based, cultural resource study area as defined in the BLM KFO's Proposed Resource Management Plan/Final Environmental Impact Statement (BLM 2008a:3-96 and Map 27). The requested ROW is in an area with National Register of Historic Places (NRHP)-eligible historic transportation routes. NHT I-, NHT II-, and NHT III-contributing segments of the following NHTs are situated within the area encompassed by the subsurface Federal ROW: Slate Creek

Cutoff, Sublette Cutoff, Blacks Fork Cutoff, and Dempsey-Hockaday Cutoff of the Oregon-California NHT, and the Emigrant NHT (BLM 2004d:163).

Within the RSFO, per the RSFORMP (2024), surface disturbing activities will be prohibited if the project causes more than a weak contrast (VRM) to the setting of the National Historic and Scenic trails. Within the KFO, per the BLM KFO RMP and ROD, the viewshed of NHT segments are protected by the following guidelines:

- Class 1 segments: a 3-mile buffer north and east of U.S. Highway 30 and 1 mile within other areas outside the checkerboard;
- Class 2 segments: a 1-mile buffer in blocked federal lands south of U.S. Highway 30;
- The viewshed of Class 1 and 2 NHT segments located within the checkerboard are managed to protect the character of setting within the federal sections in which they occur;
- Class 3 segments: manage the viewshed according to the appropriate VRM class for the area.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action alternative, the pore space associated with the requested subsurface Federal ROW would not be granted, and the potential for future surface and subsurface disturbance related to carbon sequestration would remain at their present levels. There would be no impacts to NHTs under the No Action alternative.

Proposed Action

Under the Proposed Action, the applicant would be granted the right to occupy the federal pore space associated with the requested subsurface Federal ROW. Pursuant to Section V.B.ii.a and Appendix B.2 of the State Protocol, the proposed subsurface ROW request for geologic sequestration of CO_2 has no potential to affect historic properties because the issuance of leases, easements, and ROWs does not authorize or promote surface disturbance.

However, all subsequent applications under the ROW will be analyzed under NHPA Section 106 and the BLM/SHPO protocol agreement as separate undertakings once a project specific application has been received. Should any new cultural resources be discovered, standard stipulations and mitigation measures will be implemented individually for site specific discoveries.

Cumulative Impacts

Although BLM issuance of the proposed ROW would not affect National Historic Trails, the cumulative effects from subsequent implementation, construction, and operations, associated with geologic sequestration of CO_2, has the potential to impact cultural resources. Current impacts to the trails in this area are associated with other authorized use activities such as oil and gas, grazing, and recreation. Cultural resources are a non-renewable resource, and the increase in infrastructure development has the potential to adversely impact the cultural landscape. The greatest potential for impacts to historic properties, in the ROW area, over the long-term, would come from construction associated with infrastructure development.

Mitigation Measures/Conditions of Approval

To minimize impacts, sections of the proposed project area located within the RSFO boundary are restricted to surface-disturbing activities within the National Trails Management Corridor if the project will cause an adverse effect or cause more than a weak contrast to the setting of the NHT.

3.22 Cultural Resources

Issue Statement: How would the proposed project impact cultural and historic resources?

Affected Environment

The project area contains sites that have been identified by regional Native American tribes, through agency consultation, as being culturally sensitive due to their sanctity and significance to traditional tribal values. The requested ROW is situated within the GBS, a physiographic-based, cultural resource study area as defined in the BLM KFO's Proposed Resource Management Plan/Final Environmental Impact Statement (BLM 2008a:3-96 and Map 27). The 2004 KFO's Cultural Resources Class I Regional Overview provides a summary of cultural resource site types recorded in the project vicinity as well as a narrative context for the region's prehistory, Native American tribes, and historical development (BLM 2004d). The GBS contains the greatest concentration of cultural resources in the BLM KFO. A total of 4,837 cultural resources, consisting of 4,335 prehistoric sites and 502 historic sites, have been documented within the GBS from 1975 to 2003 (BLM 2004d:149).

The BLM KFO RMP and ROD preserves the viewshed of the following historic properties, situated within the area encompassed by the subsurface Federal ROW, with a 3-mile buffer. In addition, these historic properties are protected from surface disturbing activities within the defined boundaries indicated below:

- Emigrant Spring/Slate Creek: 87-acres
- Gateway Petroglyphs: 518-acres
- Johnston Scout Rock: 2-acres

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action alternative, the pore space associated with the requested subsurface Federal ROW would not be granted, and the potential for future surface and subsurface disturbance related to carbon sequestration would remain at their present levels. There would be no impacts to cultural resources under the No Action alternative.

Proposed Action

Under the proposed action, the applicant would be granted the right to occupy the federal pore space associated with the requested subsurface Federal ROW. Pursuant to Section V.B.ii. and Appendix B.2 of the State Protocol, the proposed subsurface ROW request for geologic sequestration of CO_2 has no potential to affect historic properties because the issuance of leases, easements, and ROWs does not authorize or promote surface disturbance.

However, all subsequent applications under the ROW will be analyzed under NHPA Section 106 and the BLM/SHPO protocol agreement as separate undertakings once a project specific application has been received. Should any new cultural resources be discovered, standard

stipulations and mitigation measures will be implemented individually for site specific discoveries.

Cumulative Impacts

Current impacts to the cultural and historic resources in this area are associated with other authorized use activities such as oil and gas, grazing, and recreation. Although BLM issuance of the proposed ROW would not affect cultural and historic properties, the cumulative effects from subsequent implementation, construction, and operations associated with geologic sequestration of CO_2, has the potential to impact cultural resources. Cultural resources are a non-renewable resource, and the increase in infrastructure development has the potential to adversely impact the cultural landscape. The greatest potential for impacts to historic properties, in the ROW area, over the long-term, would come from construction associated with infrastructure development.

3.23 Visual Resources

Issue Statement: How would visual resources be impacted by the proposal?

Affected Environment

The project area encapsulates a variety of landscapes with varying degrees of development on the landscape. The Proposed Action falls within Visual Resource Management (VRM) Classes II, III, and IV, see Map 3.23. The landscape varies between open rolling desert, the foothills to the Wyoming Range, and urban backcountry interface surrounding the town of Mountain View, Wyoming. Project approval and or stipulations would depend on what the nature of the future surface disturbing activity and the landscape class in which it occurs. Objectives for class management are as follows:

Class II Objective: Retain the existing character of the landscape. Allow a low level of change that should not attract the attention of a casual observer.

Class III Objective: Partially retain the existing character of the landscape. Allow a moderate level of change that may attract attention but should not dominate the view of a casual observer.

Class IV Objective: Provide for management activities that require major modifications of the existing character of the landscape. The level of change may be high and may dominate the view and be the major focus of viewer attention.

Proposed development or modifications to the landscape in VRM class II and III areas will be evaluated using the contrast rating system described in BLM Manual H8431. Modifications to the landscape will be assessed based on impacts to the existing line, form, color, and texture of the landscape.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the proposed ROW would not be issued and there would be no impact to visual resources on public lands.

Proposed Action

If surface disturbing activities were to occur as a part of the SW Wyoming CO_2 Sequestration Project, the effect of additional impacts to the landscape could potentially fall outside of VRM class objectives in VRM Class II and III. New development on a lightly developed viewshed could cause the viewshed as a whole to be more heavily impacted. These existing impacts would be considered along with the new surface disturbing project design when making a determination. Mitigations would be necessary to keep developments within the acceptable levels of contrast for the associated VRM class.

Cumulative Impacts

The CIAA for visual impacts is the project area. The CIAA for visual resources includes three VRM classes. While impacts to the visual landscape exist across the project area, landscapes in VRM IV have moderate to heavily impacts, while those in VRM II and III are respectively less impacted and more pristine.

3.24 Oregon Trail Special Recreation Management Area

Issue Statement: How would the Oregon Trail Special Recreation Management Area be impacted by the proposal?

Affected Environment

The Oregon Trail Special Recreation Management Area (SRMA) surrounds a segment of the Oregon – California National Historic Trail (see Map 3.24). As outlined in the KRMP, the SRMA management objective is to provide an opportunity to visit and learn about trail history and use while maintaining the setting character and present condition of trails and associated historic sites. The SRMA within the proposed project area includes multiple National Historic Trails (NHTs) variants, including the Sublette Cutoff, Slate Creek Cutoff, Hams Fork Cutoff, Oregon-Mormon-Pony Express, Overland Trail, and the Blacks Fork Cutoff. These various segments of the NHTs have been classified as ranging between Oregon-California Trails Association Condition Classes 1 and 4 (Class 1 being unaltered trail and Class 4 being location-verified but altered by activities such as road construction).

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, the proposed ROW would not be issued and there would be no impact to the Oregon Trail SRMA.

Proposed Action

The Proposed Action is unlikely to affect the characteristics because it is a sub-surface ROW. The average user would therefore not be aware of the project when visiting the trail. However, surface disturbing activity within the SRMA would have an impact on its setting, character, viewsheds and present condition of the trails and associated historic sites. Surface disturbing activities within the SRMA have the ability to degrade the user experience for recreators on the trail by changing the above characteristics, moving the experience farther from that of the original pioneers. The management objectives for the Oregon Trail SRMA state that the setting, character, and present condition of the trails and associated historic sites must be maintained. Any surface disturbing activities applied for under future ROWs within the SRMA would be subject to this management objective.

Cumulative Impacts

Current impacts to the trails in this area are associated with other authorized use activities such as oil and gas, grazing, and recreation. There are currently no other known proposals for actions that would have the ability to change the characteristics of the trail within this portion of the SRMA. The cumulative effects from subsequent implementation, construction, and operations associated with geologic sequestration of CO_2, has the potential to further impact the Oregon Trail SRMA when combined with the existing authorized uses in the proposed project area.

3.25 Lands/Realty

Issue statement: How would granting the ROW for underground pore space impact other existing or proposed ROWs near or adjacent to the proposed project area?

Affected Environment

The proposed project area is near hundreds of existing linear ROWs including access roads, buried pipelines, overhead transmission lines, monitoring wells, railroad lines, and buried fiber lines, as well as nonlinear ROWs that include cathodic protection sites and well pads. These linear and nonlinear ROWs transect the entirety of the 605,091-acre proposed project area and are especially concentrated in the North and East portions where these pockets of development support existing oil and gas infrastructure.

Environmental Consequences (direct/indirect effects)

No Action

Under the No Action Alternative, no ROW would be issued. Existing ROWs would not be impacted.

Proposed Action

Per 43 CFR 2800, a ROW grant authorizes a holder to use or occupy BLM-administered public lands for a specific use or purpose. The grant conveys the use of the described lands to construct, operate, maintain, and terminate systems and facilities within the ROW in compliance with any terms, conditions, and stipulations deemed to be in the public interest by the BLM. All existing ROW holders are granted a right in time, right in space. Grants are also issued subject to valid existing rights of others, including those holders with property interests granted by previous ROWs. This does not exclude the BLM from allowing common use of the ROW or from authorizing the ROW for compatible uses.

The proposed ROW for 605,091 acres of pore space underneath federally managed lands would be non-exclusive, meaning that it would convey rights to use and access the described pore space, but is still subject to the prior valid existing rights of others. In addition, the authorization would not include any surface disturbance. Therefore, there would be no impacts to the existing ROWs in the project area. The impacts to existing ROWs from any potential infrastructure proposed by Moxa Carbon would be analyzed separately if the proponent should submit any future applications to the BLM. In accordance with BLM Instruction Memorandum 2022-041 (National Policy for the Right-of-Way Authorizations necessary for Site Characterization, Capture, Transportation, Injection, and Permanent Geologic Sequestration of Carbon Dioxide in Connection with Carbon Sequestration Projects), the BLM would continue to authorize other

uses of the proposed project area as long as these other uses would not interfere with previously authorized CO_2 sequestration projects (BLM 2022d).

4.0 Tribes, Individuals, Organizations, or Agencies Consulted

There were 53 public scoping comment letters sent out to tribes, individuals, organizations, and other local, state and federal agencies in April 2023 for a 30-day comment period. A meeting between the BLM and Cooperating Agencies was held on October 30, 2023. Details about the public scoping and comment process can be found in Section 1.2 of this document.

Certain sites that are culturally sensitive to regional Native American tribes are known to be present in the project area. Should the proponent apply for additional ROW in the future, the BLM would initiate Tribal consultation as appropriate.

5.0 List of Preparers

Name	Title	Responsibility
Ryan McCammon	Physical Scientist (Air Quality)	Air Resources: Ozone – Non-attainment, Air Resources: other than ozone, Climate Change and Green House Gases
Abigail Stemmler	Forester	Woodland/Forestry
Kaisa McKenna Lisa Aleshire	Realty Specialist Realty Specialist	Land Resources/Access
Cheyenne Laeske Alisa Bartos Mariah Gaston Rebecca Chester Patrick Lionberger	Wildlife Biologist Wildlife Biologist Wildlife Biologist Wildlife Biologist Management & Program Analyst	Migratory Birds, Threatened, Endangered, Sensitive or Candidate Animal Species, Wildlife/Fisheries, Threatened, Endangered, Sensitive or Candidate Plant Species, Areas of Critical Environmental Concern – Plants
Jace Stott Connor Bailey Christina Handy Hope Wentzel	Rangeland Management Specialist Rangeland Management Specialist Rangeland Management Specialist Rangeland Management Specialist	Range/Livestock Management, Vegetation
Doug Tingwall Jason Dabling Scott Stadler Morgan Robins	Archeologist Archeologist Archeologist Archeologist	Cultural Resources/Native American Religious Concerns
Ben Molitor TJ Franklin	Project Manager Natural Resource Specialist	Soils, Weeds - Invasive, Non-native Species
Rich Fleming Jason Dabling Gene Smith	Geologist Archeologist Archeologist	Paleontology
Alex Gardiner Dennis Doncaster Janet Bellis	Fish Biologist Hydrologist Physical Scientist	Water Quality (drinking/ground), Wetlands/Riparian/ Floodplains
Steve Walker	Petroleum Engineer Technician	Wastes (hazardous or solid)

Name	Title	Responsibility
Ben Molitor TJ Franklin	Project Manager Natural Resource Specialist	
Hunter Harridge Lauren Hazzard Jerry Frimml	Outdoor Recreation Planner Outdoor Recreation Planner Outdoor Recreation Planner	Areas of Critical Environmental Concern, Lands with Wilderness Characteristics, Recreation, Special Designations, Travel Management, Wild and Scenic Rivers, Wilderness Study Areas, Visual Resources Management
Phil Lockwood	Fire Management Specialist	Fuels/Fire Management
Karsyn Lamb	Economist	Socioeconomics
Jay D'Ewart	Wild Horse & Burro Specialist	Wild Horse & Burro
Louis Niglio	Geologist	Fluid Mineral Resources/Energy Production/Reservoir Management
Holly Goggin	Geologist	Solid Minerals
Tracy Hoover Jacob Earnhart Maura Bradshaw	Project Coordinator Planning & Environmental Specialist Planning & Environmental Specialist	Project Leads

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Appendix 1 – Issues Considered but not Carried Forward for Detailed Analysis

IDT Resource Issue Determinations
NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected or effects cannot be meaningfully analyzed
PI = present with potential for impact analyzed in detail in the NEPA document, or identified in a DNA as requiring further analysis
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents

Determi-nation	Resource	Rationale for Determination	Initials	Date
NI	Air Resources: Ozone – Non-attainment	*This resource will not be further analyzed.* The Proposed Action conforms to all applicable local, state, and federal air quality laws, regulations, and statutes including 40 CFR 93.153 subpart B and Chapter 8, Section 3 of the Wyoming Air Quality Standards and Regulations (WAQSR). It has been determined that the potential maximum total direct and indirect emissions are below the *de minimis* threshold of 100 tons per year of Nitrous Oxides (NOx) or Volatile Organic Compounds (VOCs). A copy of the general conformity evaluation (August 5, 2022) is stored in the administrative record.	RM	3/10/2023
NI	Air Resources: other than ozone	*This resource will not be further analyzed.* Best management practices, as applicable, will be required in the Conditions of Approval to minimize emissions and control fugitive dust during construction activities.	RM	3/10/2023
PI	Areas of Critical Environmental Concern (ACEC)	*This resource will not be further analyzed.* **RSFO:** The Special Status Pant ACEC is within the project area. {RSFORMP ROD 2024, pg. 2-74} See section 3.19.	HH LH	5/5/2023
NI	Climate Change and Green House Gases (GHGs)	*This resource will not be further analyzed.* In order to assess the potential for climate change, and the resultant effects of climate change, the standard approach is to measure and	RM	3/10/2023

Determi-nation	Resource	Rationale for Determination	Initials	Date
		predict emissions of greenhouse gases (GHGs) measured in terms of global warming potentials (GWPs) and as carbon dioxide equivalents (CO_2e), with some gases like methane demonstrating much higher GWPs (28-36X greater than CO_2). The GWP provides a method to quantify the cumulative effects of multiple GHGs released into atmosphere using a standard "currency" at local, regional, national, and global scales. The Proposed Action would not produce or contribute to the environment hydrocarbons or other potential "downstream" sources of GHGs.		
PI	Cultural Resources/Native American Religious Concerns	See section 3.21 and 3.22.	DT SS	5/3/2023 5/3/2023
NI	Fluid Mineral Resources/ Energy Production/ Reservoir Management	*This resource will not be further analyzed.* Based on pore space determination report from Reservoir Management Group (RMG), no economically producible hydrocarbons or helium were identified in the Madison and Nugget formations.	NL	
NI	Fuels/Fire Management	*This resource will not be further analyzed.* The project area overlaps with planned fuels treatments and fire management units. There will be no impacts from a sub-surface ROW. Once surface disturbance occurs or when surface infrastructure is in place fire management priorities will need to be updated and hazardous fuels reduction treatments may be reprioritized or relocated.	PL	4/19/2023
NI	Land Resources/Access	See Section 3.25	KM LA	2/9/2023 2/14/2023
NI	Lands with Wilderness Characteristics	*This resource will not be further analyzed.* **KFO** Lands with Wilderness Characteristics	HH LH	4/26/2023 5/2/2023

Determi-nation	Resource	Rationale for Determination	Initials	Date
		(LWC) will not be affected by a subsurface ROW. The project area is made up of units found not to have wilderness character and un-inventoried areas. Additional analysis will be required if the applicant applies for surface disturbing activity within un-inventoried areas in the future. **RSFO** LWC will not be affected by subsurface ROW as they do not exist within the project area. Areas inventoried for wilderness characteristics fail size requirements, either to location within the checkerboard or due to the density of existing motorized routes.		
NI	Range/Livestock Management	*This resource will not be further analyzed.* **KFO:** No surface impacts, however, more project details will be needed to determine if surface disturbance will impact forage availability which could reduce AUM's, and if disturbances could impact livestock movement. **RSFO:** The proposed action involves issuing a sub-surface ROW, with no surface disturbance proposed at this time. Because of this, there are no expected impacts to livestock operations from this action. Once specific actions are proposed that involve surface disturbing activities, the BLM will consider potential impacts to livestock grazing in future NEPA analyses.	JS CH HW	3/30/2023 3/30/2023 4/18/2023
PI	Migratory Birds (Migratory Bird Treaty Act, WO 13186)	See section 3.10.	CL PL	
PI	Paleontology	See section 3.17.	RF GS	
NI	Recreation	*This resource will not be further analyzed.* Recreation would not require further analysis to issue a sub-surface right-of-way. Additional	HH LH	4/26/2023 5/2/2023

Determi-nation	Resource	Rationale for Determination	Initials	Date
		analysis will be required if the applicant applies for surface disturbing activity in the future. Portions of the project area fall within the Oregon Trail Special Recreation Management Area which has the management objective to provide visitors the opportunity to visit and learn about trail history and use while maintaining the setting, character, and present condition of trails and associated historical sites. The remainder of the project area falls within the KFO Extensive Recreation Management Area where Recreation is to be managed in a custodial manner for compatibility with other uses.		
NI	Socio-Economics	*This resource will not be further analyzed.* The Proposed Action would not contribute to any population growth or reduction except as applies to peak construction periods. It would, however, help support the economic health of the existing community. Disruptions to social life are expected to be minimal throughout the project, as the project has a discreet presence above ground. It is anticipated that the Project will result in an increase in jobs related to construction and clean energy operations, an additional revenue source for private landowners whose pore space will be a part of the overall project that will indirectly contribute to associated community economies, and an increase of tax revenue provided through direct and indirect expenditures related to the project's creation and operation. The project in total is also expected to improve health impacts associated with communities proximal to wells, associated flaring, and ensuing air quality impacts, however, these	KL	3/14/2023

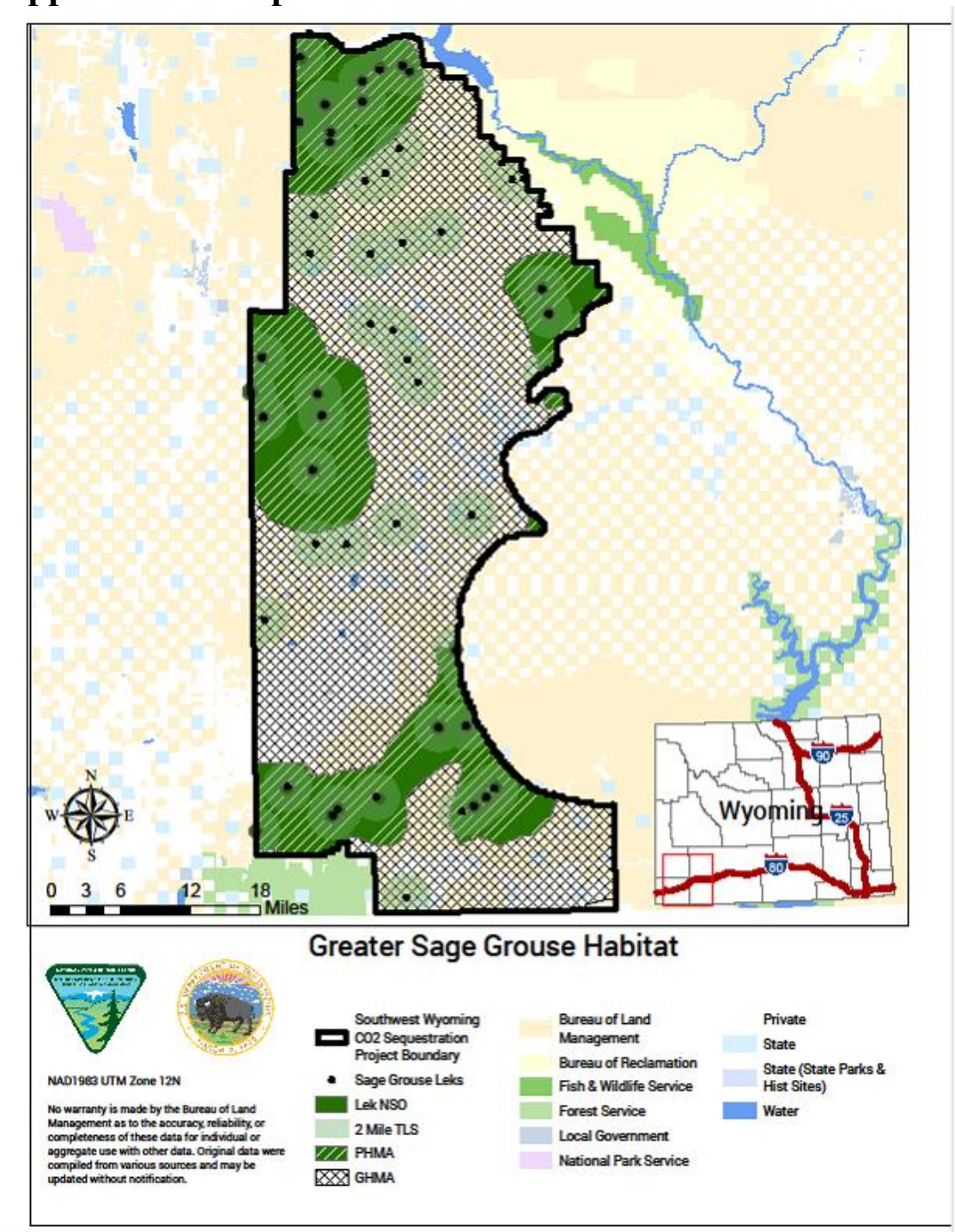
Determi-nation	Resource	Rationale for Determination	Initials	Date
		beneficial impacts would not be realized until project completion.		
NI	Soils	*This resource will not be further analyzed.* **KFO/RSFO**: Erodible soils are within project area. However, this ROW action will not impact soils.	BM TJF	5/2/2023 5/2/2023
NI	Solid Minerals/ Geologic Resources	*This resource will not be further analyzed.* **RSFO**: The proposed project area pore space edge meets the edge of the Known Sodium Leasing Area (KSLA) and/or Mechanically Mineable Trona Area (MMTA). While CO_2 laterally entering the KSLA or MMTA itself is not a foreseeable issue due to the proposed deep depth of the target formations, there still exists a concern that CO_2 may travel laterally or vertically into existing mine workings posing a safety risk to the underground miners. Consequently, a complete reservoir characterization, including but not limited to confining zone characteristics and faulting or fracturing are necessary to ensure the proposed CO_2 injection zone(s) are not breached. Should the applicant receive the Wyoming Class VI Wyoming Department of Environmental Quality permit (which is a prerequisite to use of the BLM-administered federal pore space), these concerns would be mitigated. Additional analysis may be required if the applicant applies for surface disturbing activity.	HG	5/11/2023
NI	Solid Minerals/ Geologic Resources	*This resource will not be further analyzed.* **RSFO:** The proposed project area overlaps with potential helium resources. The Bruff Unit 1 test well is the only well within the proposed area to test for helium, and it produced helium from the Madison and Nugget Formations (the proposed formations)	HG	8/8/2023

Determi-nation	Resource	Rationale for Determination	Initials	Date
		between 0.27% and 1.52% helium at less than 100 mcf where a typical economic well is closer to 10,000 mcf making the helium within the target formations uneconomic.		
PI	Special Designations and Management Areas	See section 3.24.		
	Threatened, Endangered, Candidate Wildlife Species	**KFO**: Multiple threatened and endangered and Candidate species are present within the proposed project area, including Greater Sage-grouse, Yellow-billed Cuckoo, Canada Lynx, and Monarch Butterfly. If surface disturbing activities were to occur, timing stipulations will apply, and species-specific surveys will be required where habitat is present. T&E Colorado River Fishes (Bonytail, Colorado Pikeminnow, Humpback Chub, and Razorback Sucker) may require consultation if water use exceeds 0.10 acre feet. **RSFO**: T&E and Candidate species include Yellow-billed Cuckoo, Monarch Butterfly, Bonytail, Colorado Pikeminnow, Humpback Chub, and Razorback Sucker.	CL PL TAG	4/13/2023
PI	Sensitive Wildlife Species	See sections 3.6 through 3.12.	CL PL TAG	4/13/2023
PI	Threatened, Endangered, Sensitive or Candidate Plant Species	See section 3.19 and 3.20.	CL PL	
NI	Vegetation	*This resource will not be further analyzed.* The proposed action involves issuing a sub-surface right-of-way, with no surface disturbance proposed at this time. Because of this, there are no expected impacts to vegetation from this action. Once specific actions are proposed that involve surface disturbing activities, the BLM will consider potential	JS HW TJF	4/18/2023

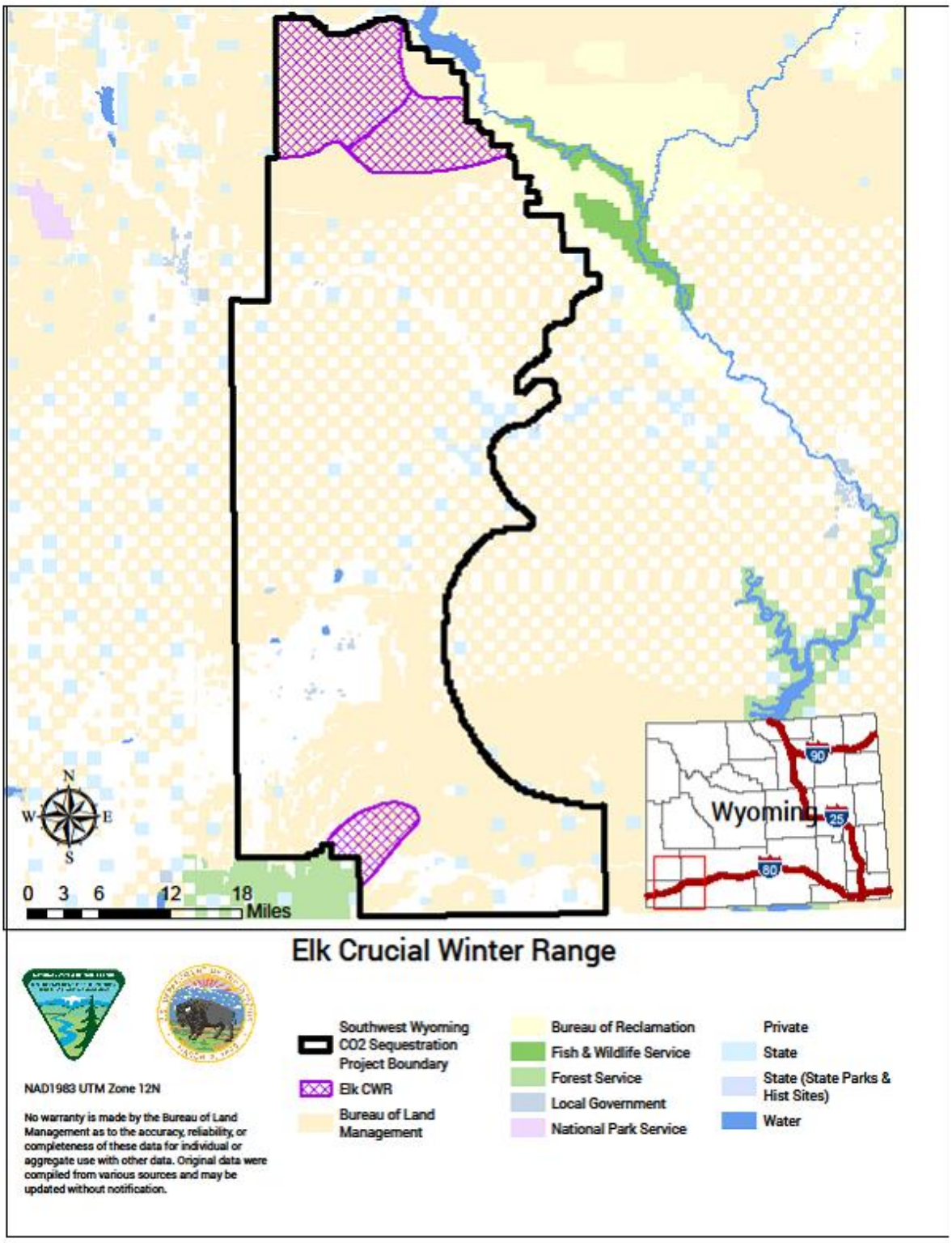
Determi-nation	Resource	Rationale for Determination	Initials	Date
		impacts to vegetation in future NEPA analyses.		
NI	Visual Resources Management	See section 3.23.	HH LH	4/26/2023 5/2/2023
NI	Wastes (hazardous or solid)	*This resource will not be further analyzed.* Without further context of a Plan of development it is impossible to meaningfully analyze or predict what hazardous wastes would be involved. In the event of further project development Hazardous or solid wastes will be managed and responded to per BLM Manual 1703-Hazard Management and Resource Restoration in accordance with procedures outlined in the National Contingency Plan (40 CFR 300). The operator is responsible for safe use, storage and containment of hazardous materials or waste, biological and/or solid waste. The release of any hazardous materials/ waste, in reportable quantities, must be immediately reported to NRC and BLM.	BM TJF	5/2/2023 5/2/2023
NI	Water Quality (drinking/ground)	*This resource will not be further analyzed.* The BLM will provide for compliance with applicable water quality standards by requiring the applicant obtain the necessary authorizations from the State of Wyoming, including permitting under the Wyoming Department of Environmental Quality's Class VI Underground Injection Control program. The State of Wyoming has been delegated primacy to regulate Class VI UIC wells in Wyoming by the Environmental Protection Agency (see 85 FR 64053-64056, October 9, 2020).	TAG JB JPB	4/13/2023 8/28/2023 1/11/2024
NI	Wetlands/Riparian/ Floodplains (EO 11990)	Riparian see section 3.16.	TAG JB JPB	4/13/2023 8/28/2023 1/11/2024
NP	Wild and Scenic Rivers (Wild and Scenic Rivers Act)	*This resource will not be further analyzed.* There are no wild and scenic	HH LH	4/26/2023 5/2/2023

Determi-nation	Resource	Rationale for Determination	Initials	Date
		rivers within or adjacent to the project area.		
NP	Wilderness/Wilderness Study Areas (WSA)	*This resource will not be further analyzed.* There are No WSA's or Wilderness Areas within or adjacent to the project area.	HH LH	4/26/2023 5/2/2023
NI	Weeds - Invasive, Non-native Species (Federal Noxious Weed Control Act, EO 13112)	*This resource will not be further analyzed.* While actual construction and development could lead to noxious weeds being established. It is impossible to predict at what scale or meaningfully analyze the impacts without a plan of development. The operator will need to implement a weed monitoring and control plan. Per BLM Handbook H-9011-1, submission of a Pesticide Use Permit (PUP) and annual Pesticide Application Report (PAR) will be required.	BM TJF	5/2/2023 5/2/2023
NP	Wild Horse and Burro	*This resource will not be further analyzed.* There are no herd management areas within the project area.	JD	2/2/2023
PI	Wildlife/Fisheries	See sections 3.1 through 3.12, 3.15 and 3.16.	CL/PL TAG	 4/13/2023
NI	Woodland/Forestry	*This resource will not be further analyzed.* The proposed action involves no surface disturbance at this time. Because of this, there are no expected impacts to forest or woodlands from this action. Once specific actions are proposed that involve surface disturbing activities, the BLM will consider potential impacts to forests and woodlands in future NEPA analyses.	AS	2/9/2023

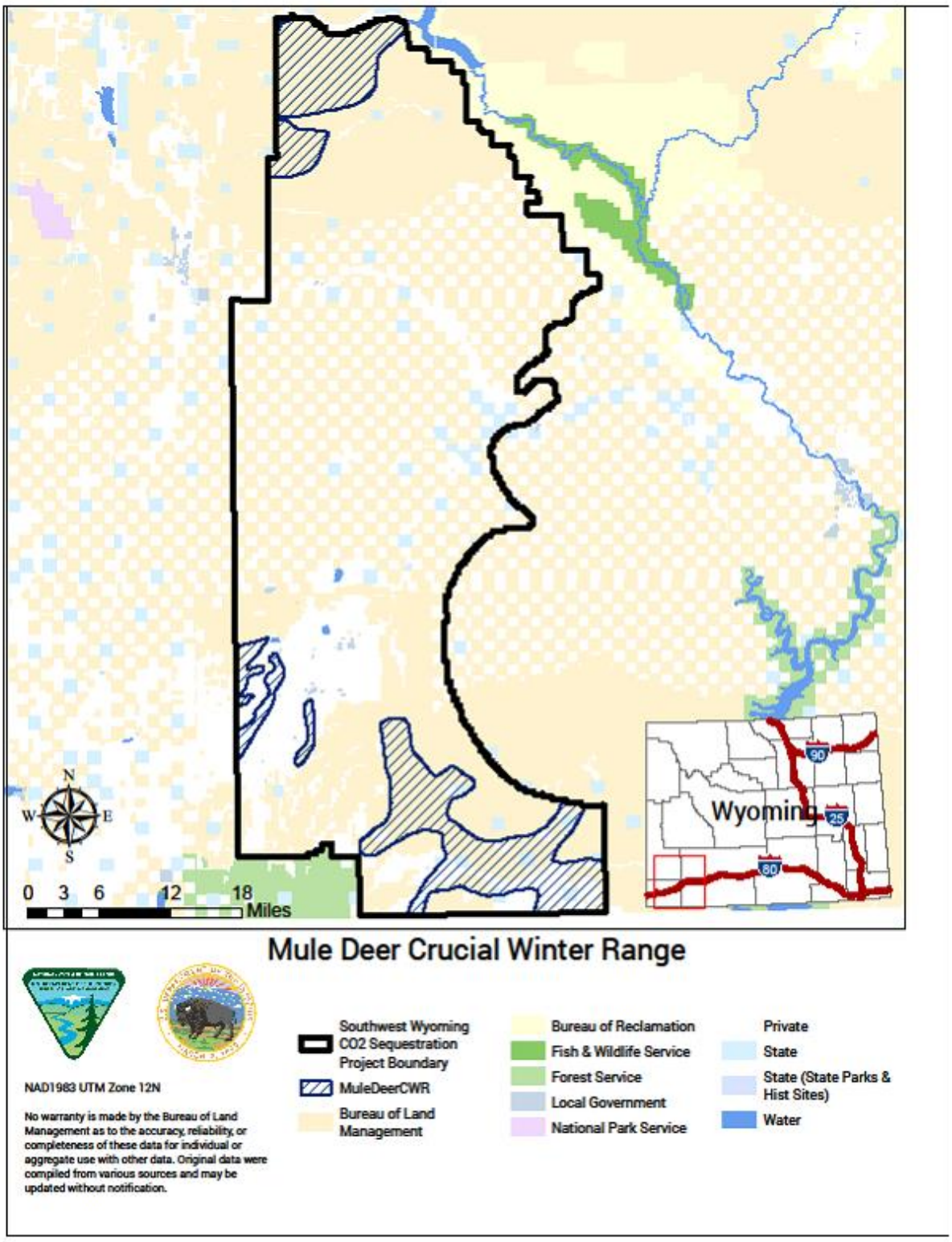
Appendix 2 – Maps



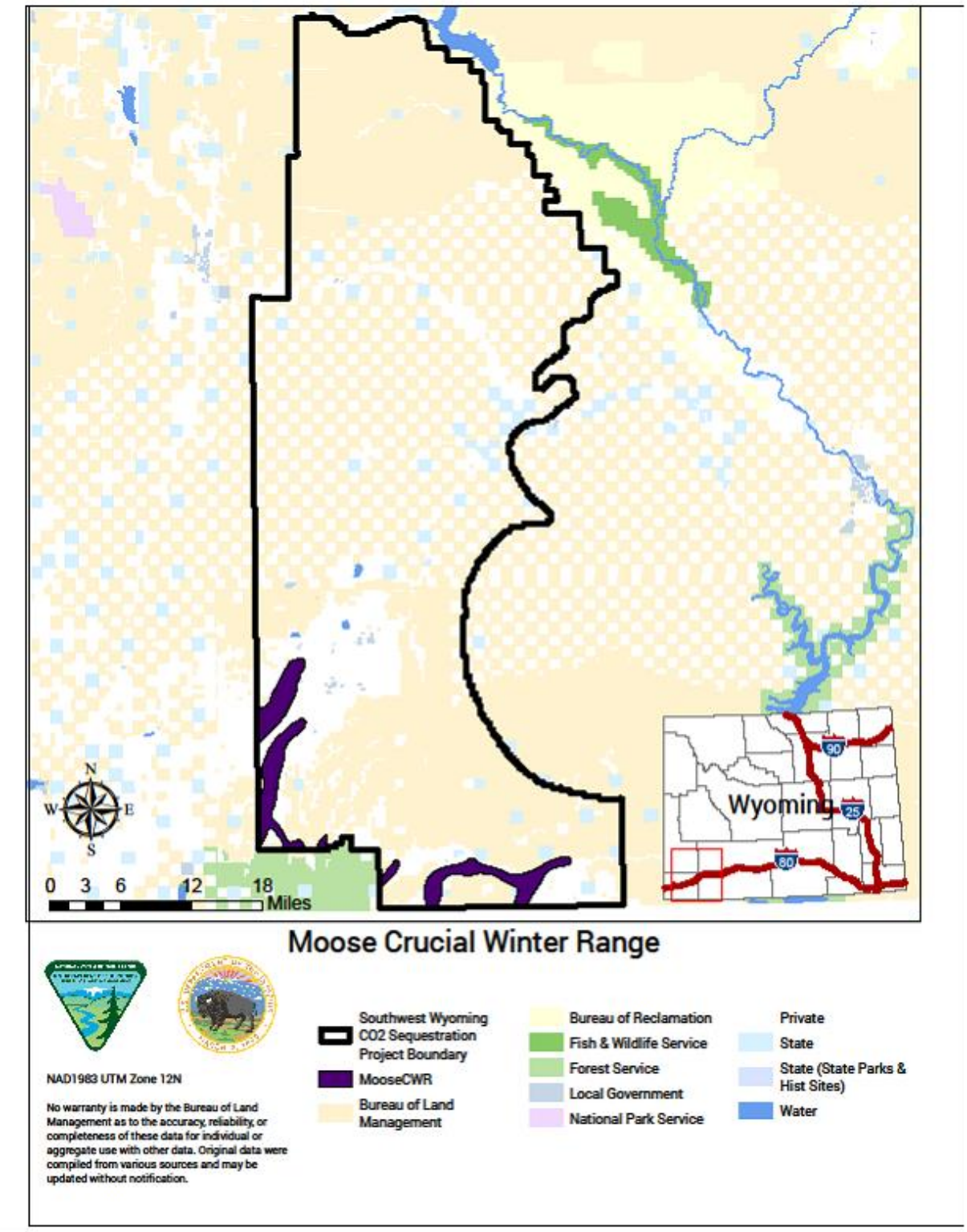
Map 3.1 and 3.2. Map showing General and Priority Habitat Management Areas for Greater Sage-Grouse.



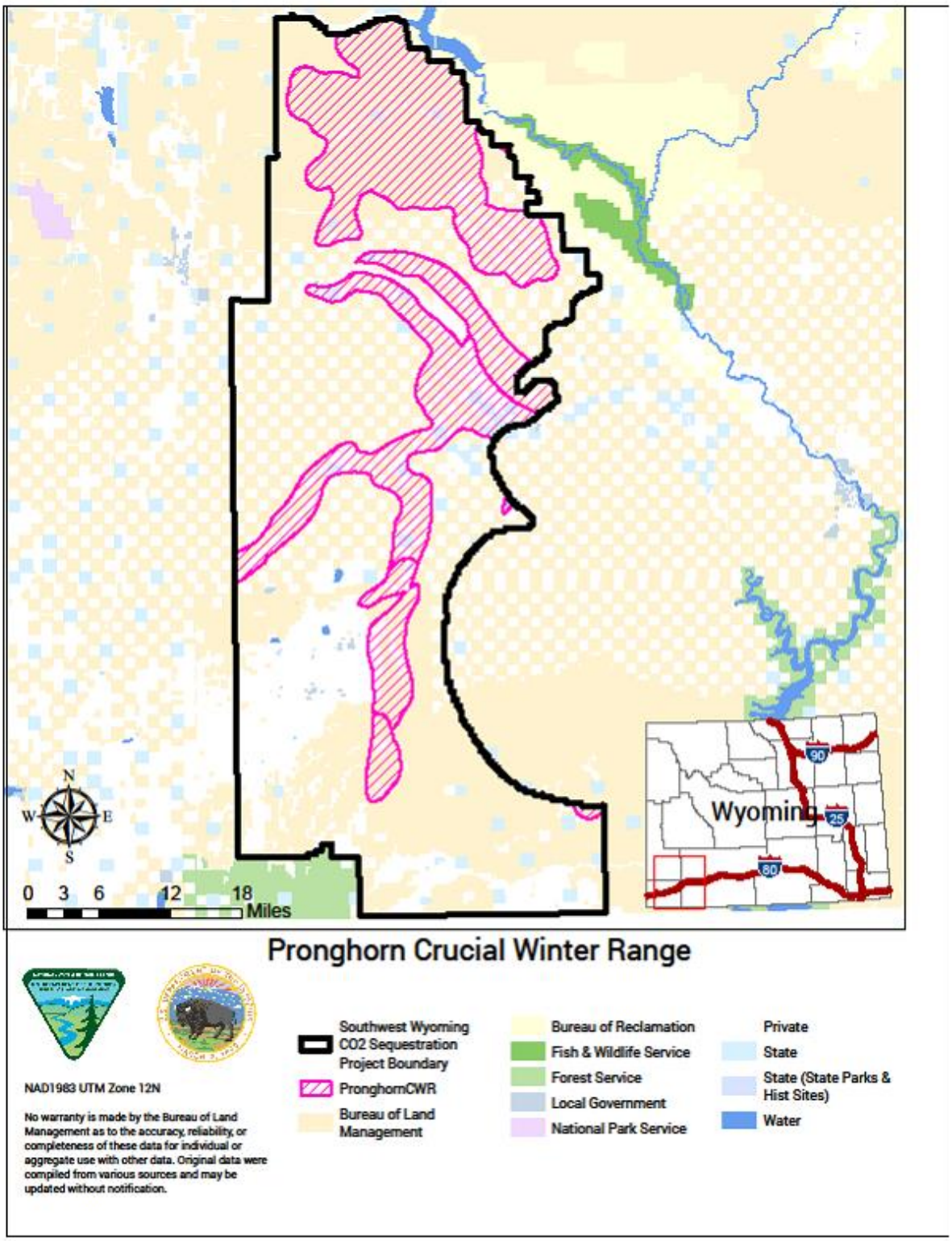
Map 3.3.1. Map showing Elk Crucial Winter Range.



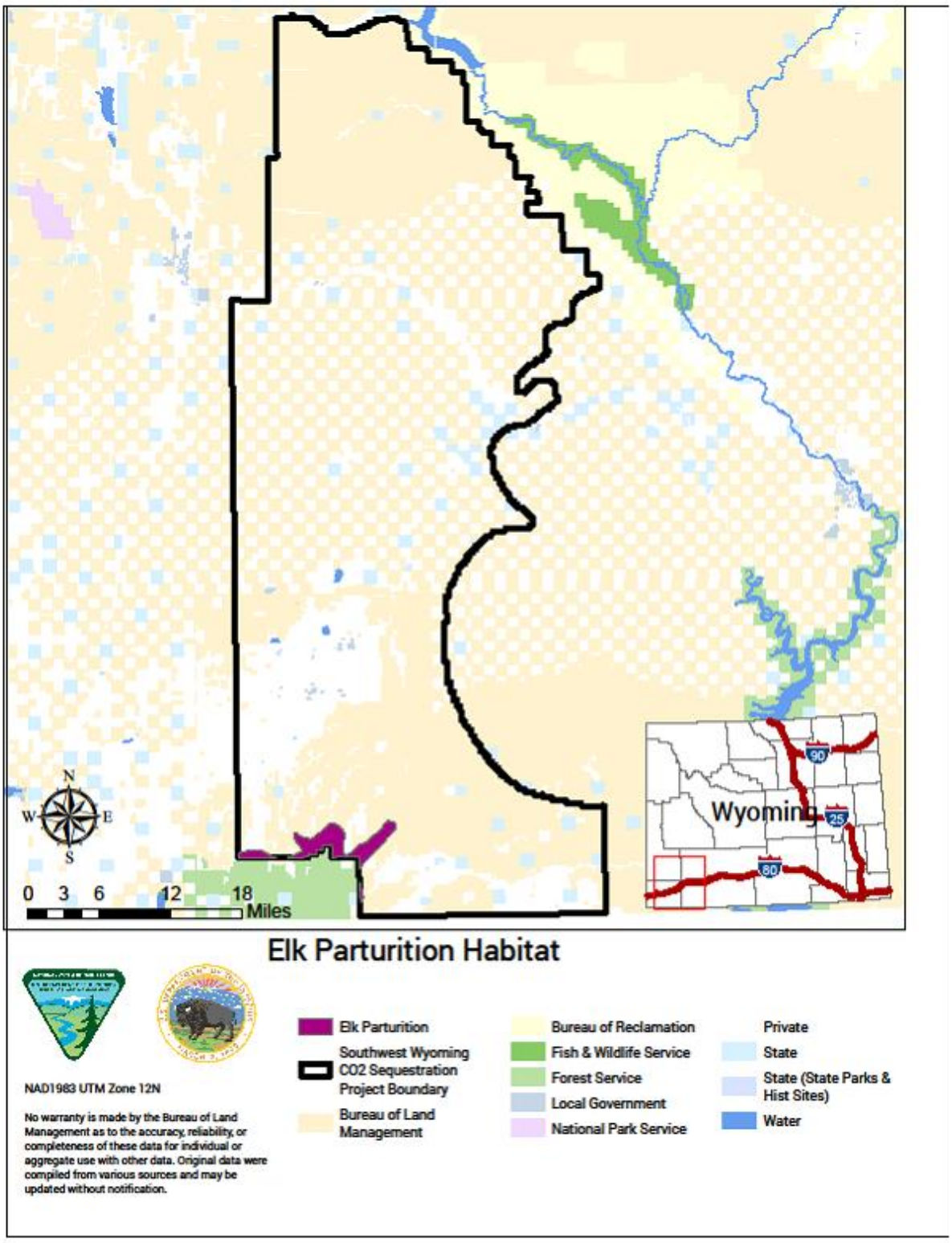
Map 3.3.2. Map showing Mule Deer Crucial Winter Range.



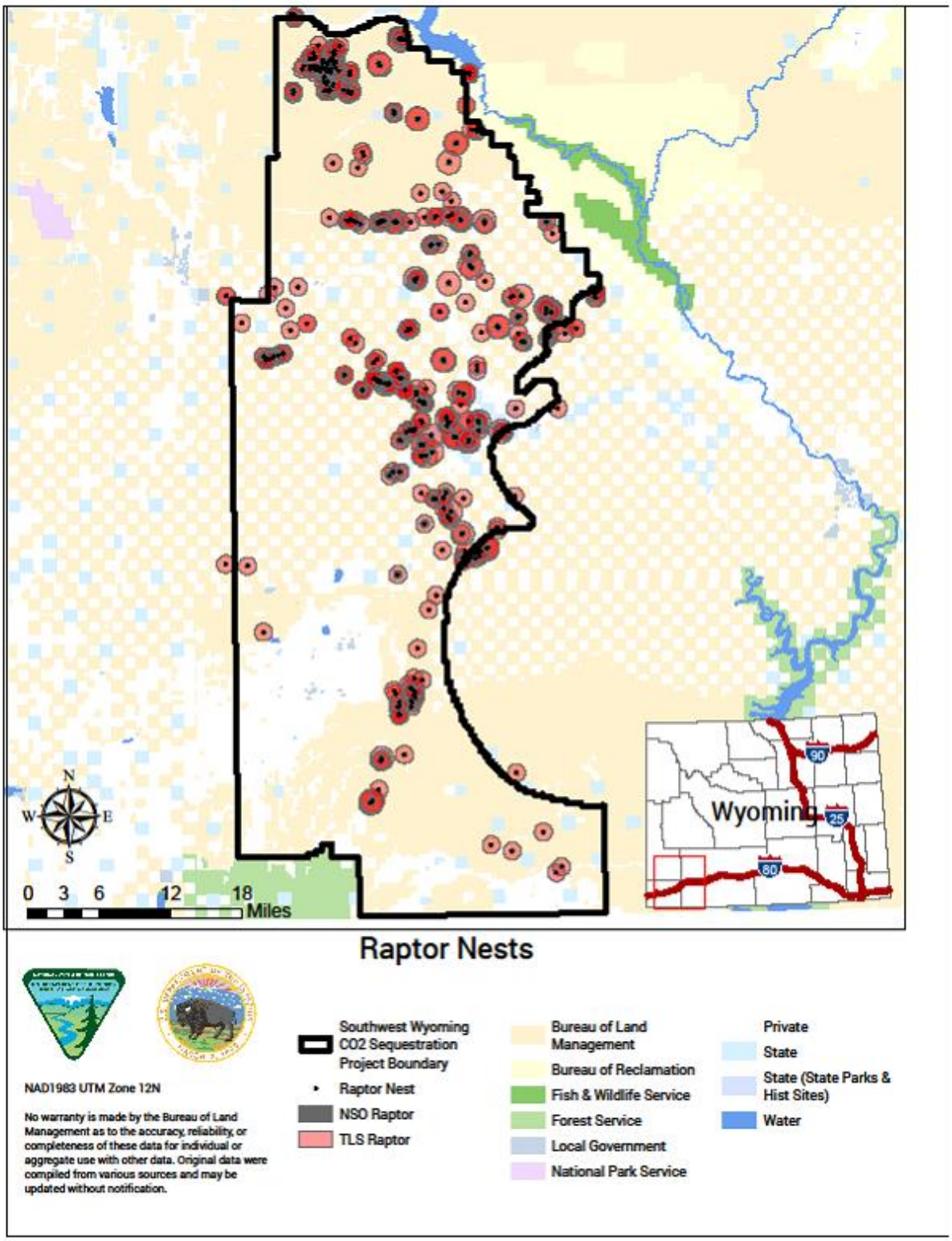
Map 3.3.3. Map showing Moose Crucial Winter Range.



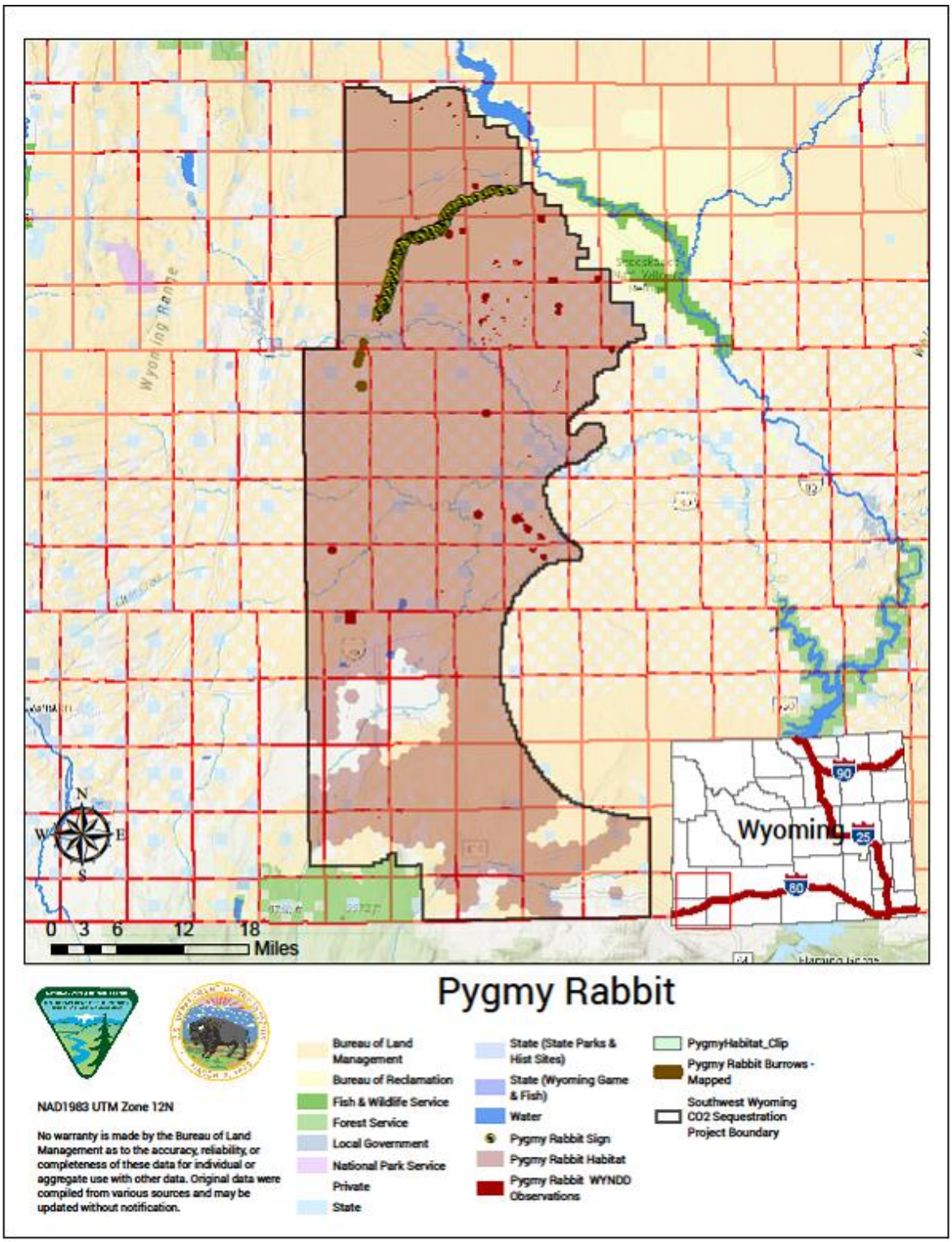
Map 3.3.4. Map showing Pronghorn Crucial Winter Range.



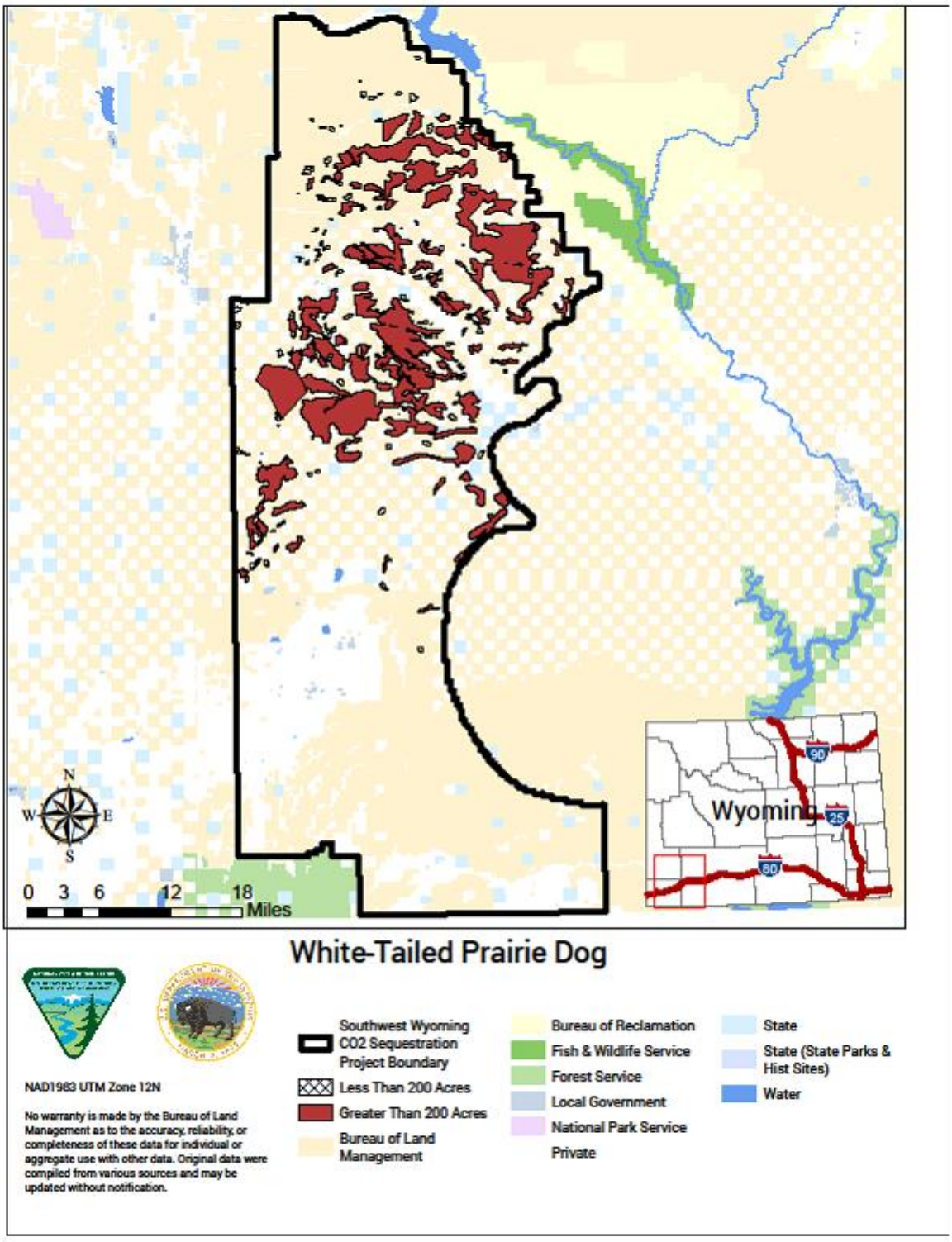
Map 3.4 Map showing Elk Parturition Habitat.



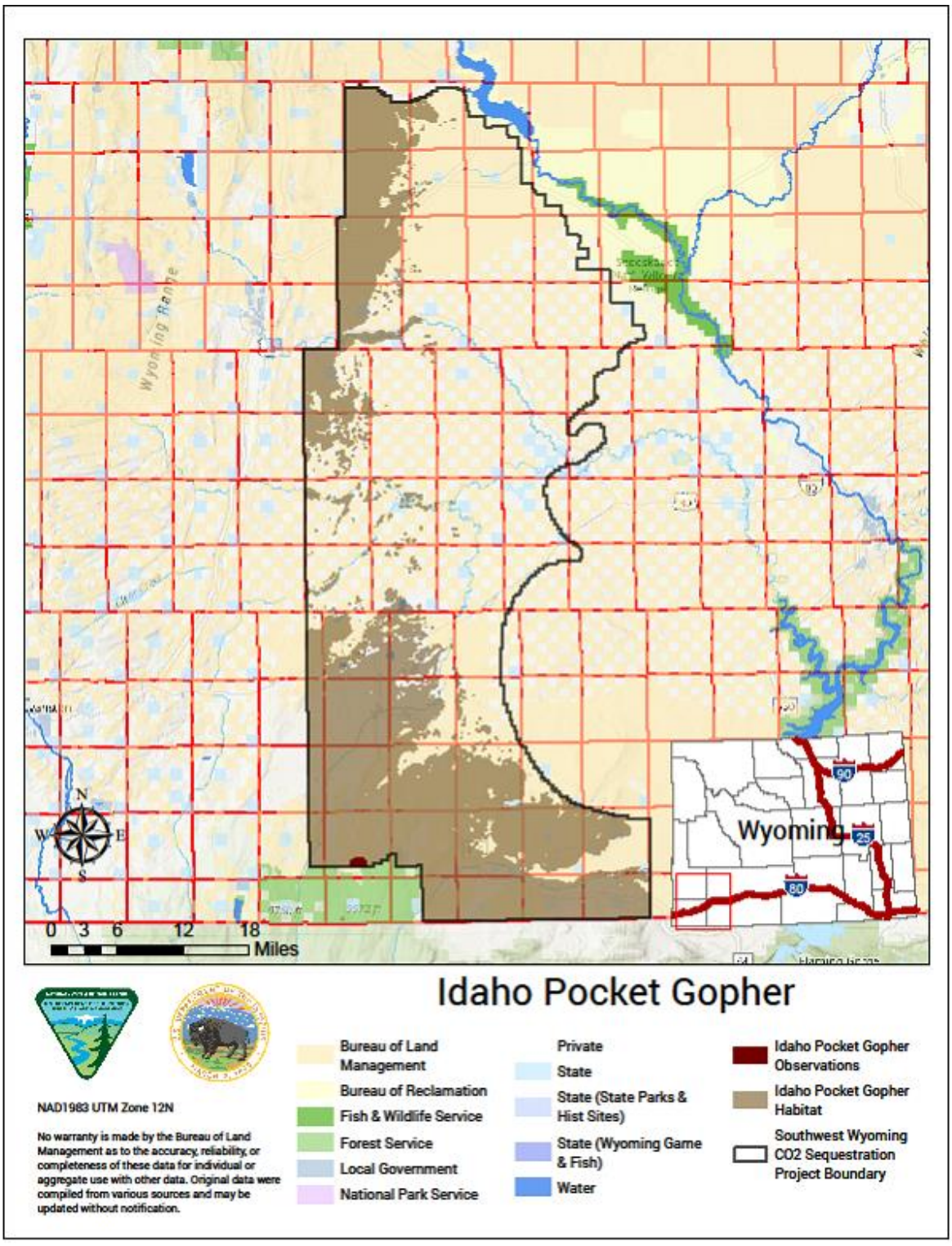
Map 3.5 Map showing Raptor Nests.



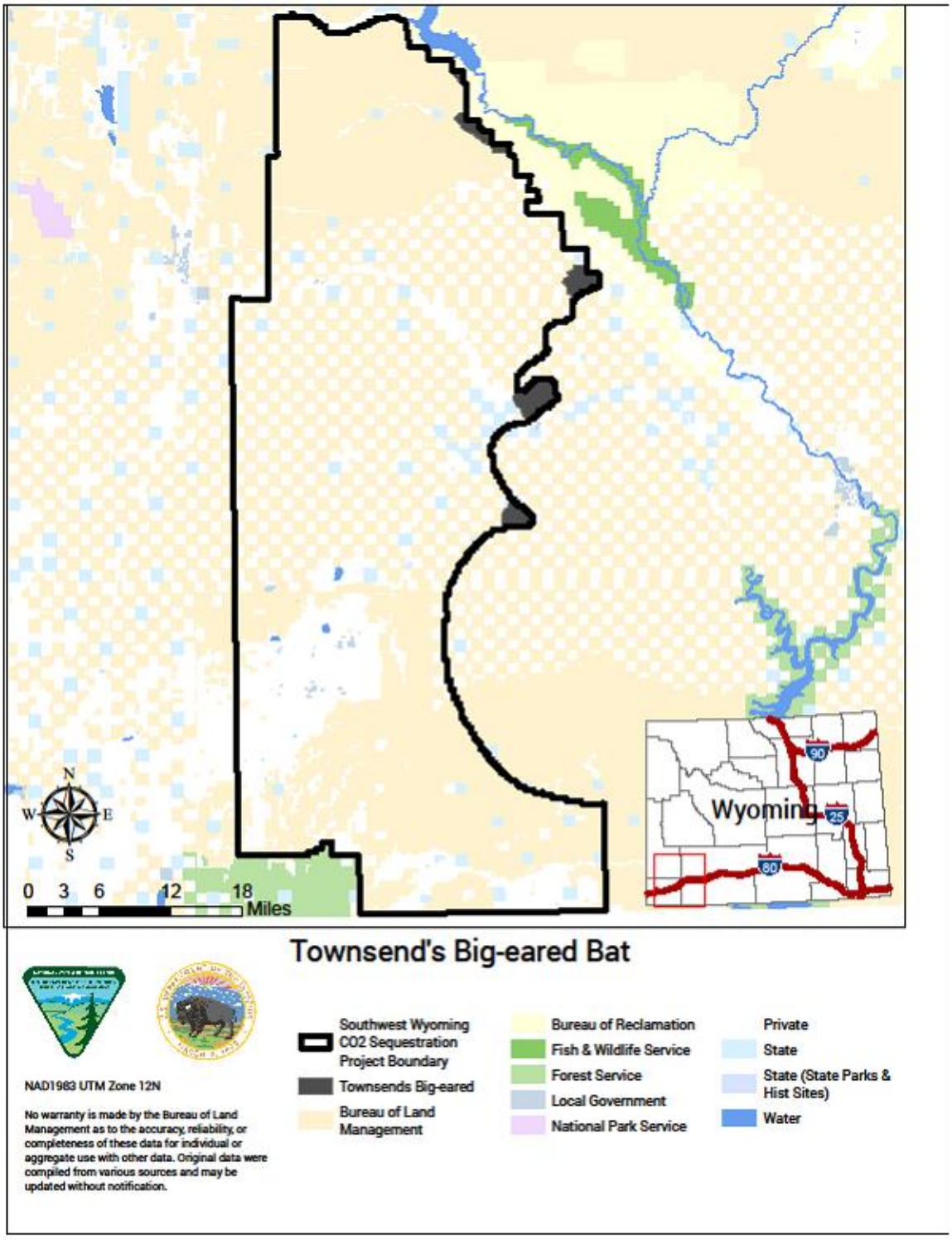
Map 3.6 Map showing Pygmy Rabbit.



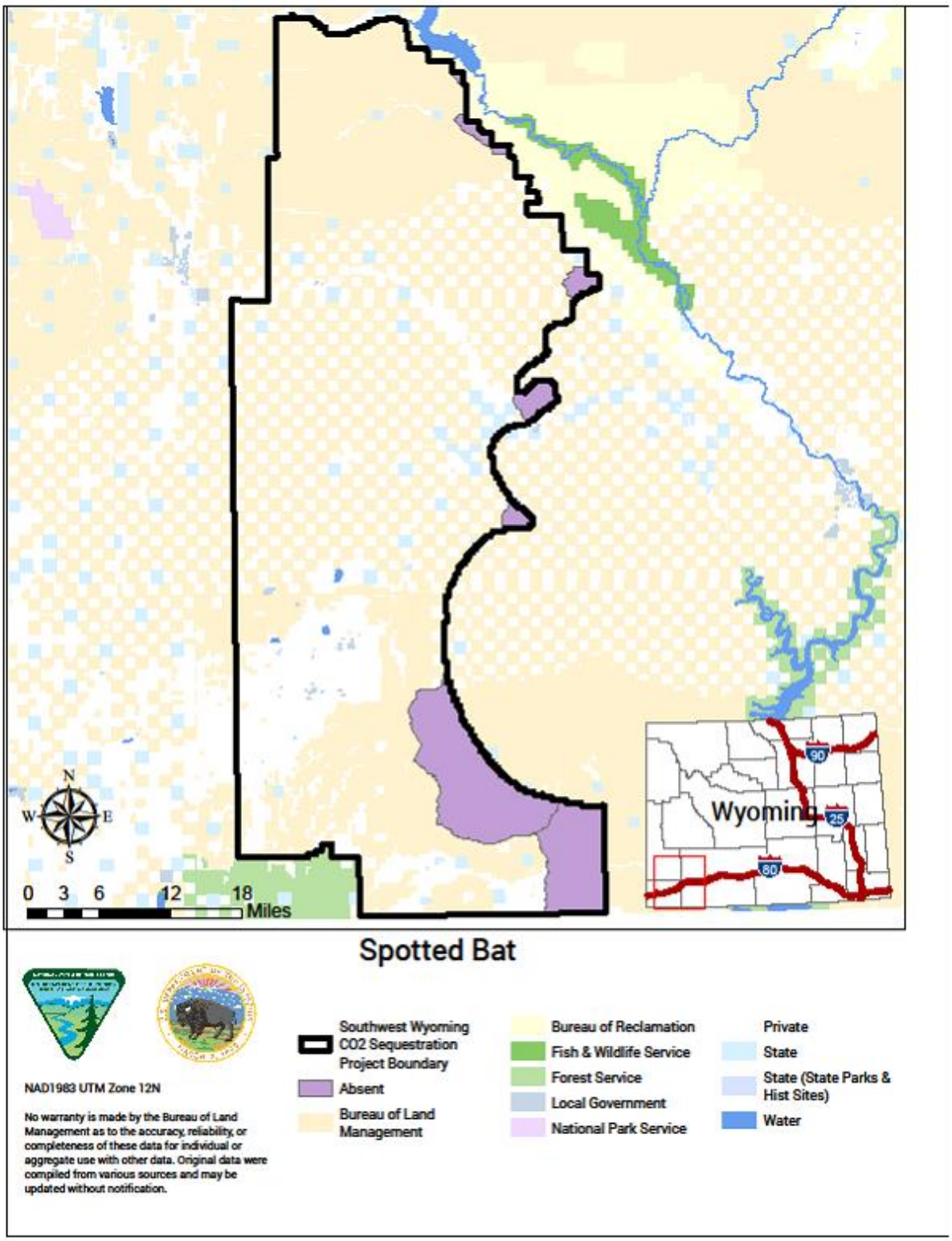
Map 3.7 Map showing White-tailed Prairie Dogs.



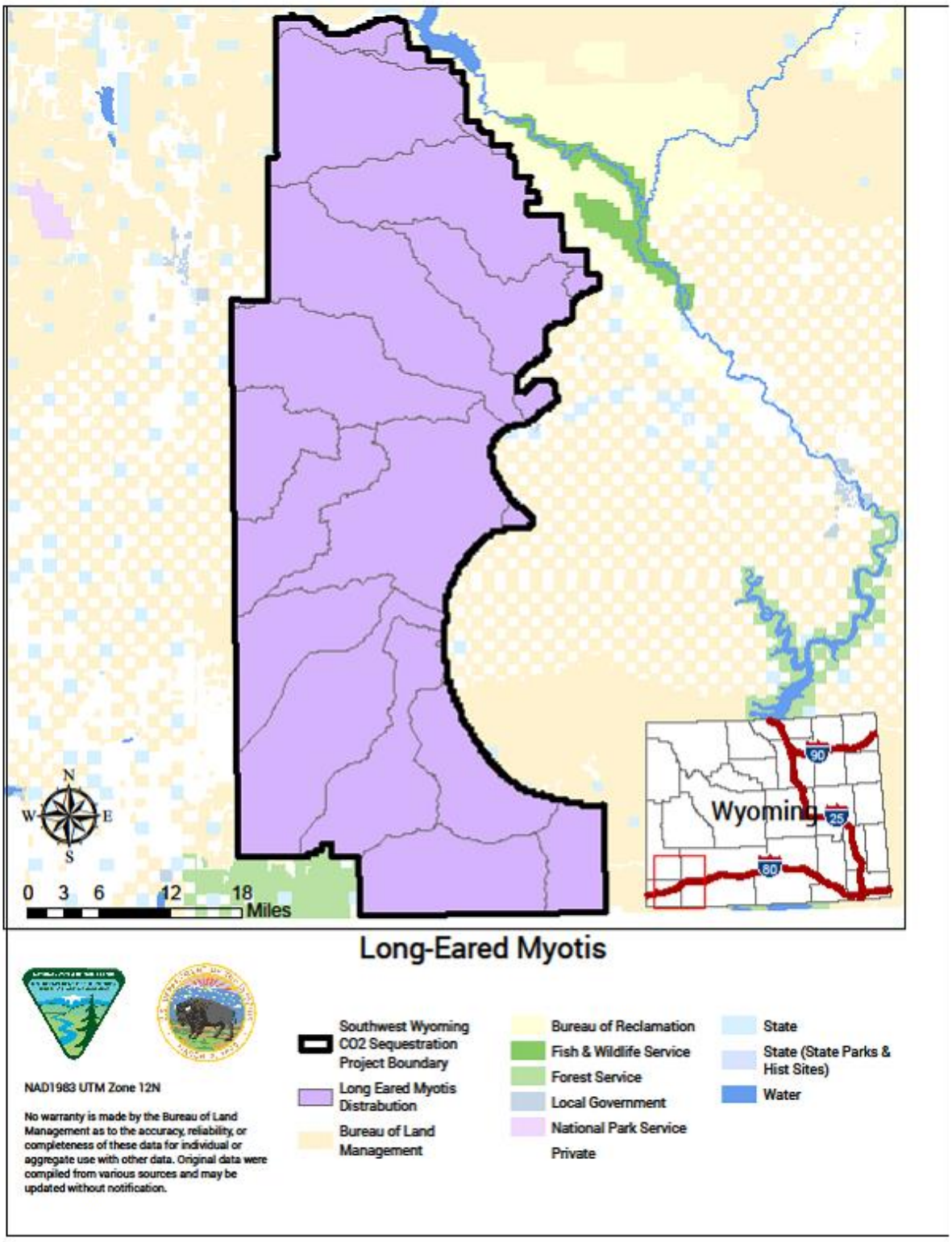
Map 3.8 Map showing Idaho Pocket Gopher.



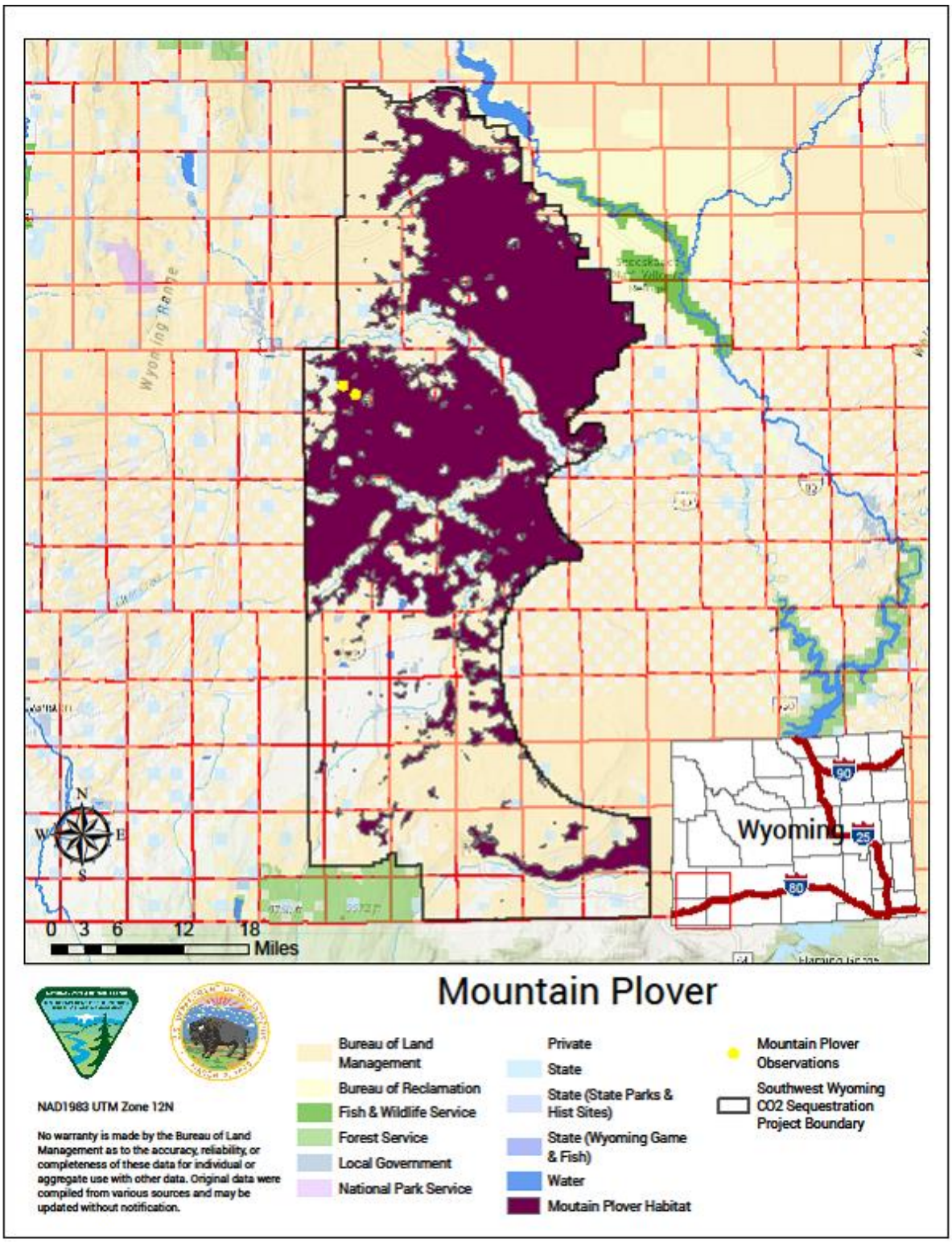
Map 3.9.1 Map showing BLM Sensitive Bats – Townsend Big-Eared Bat.



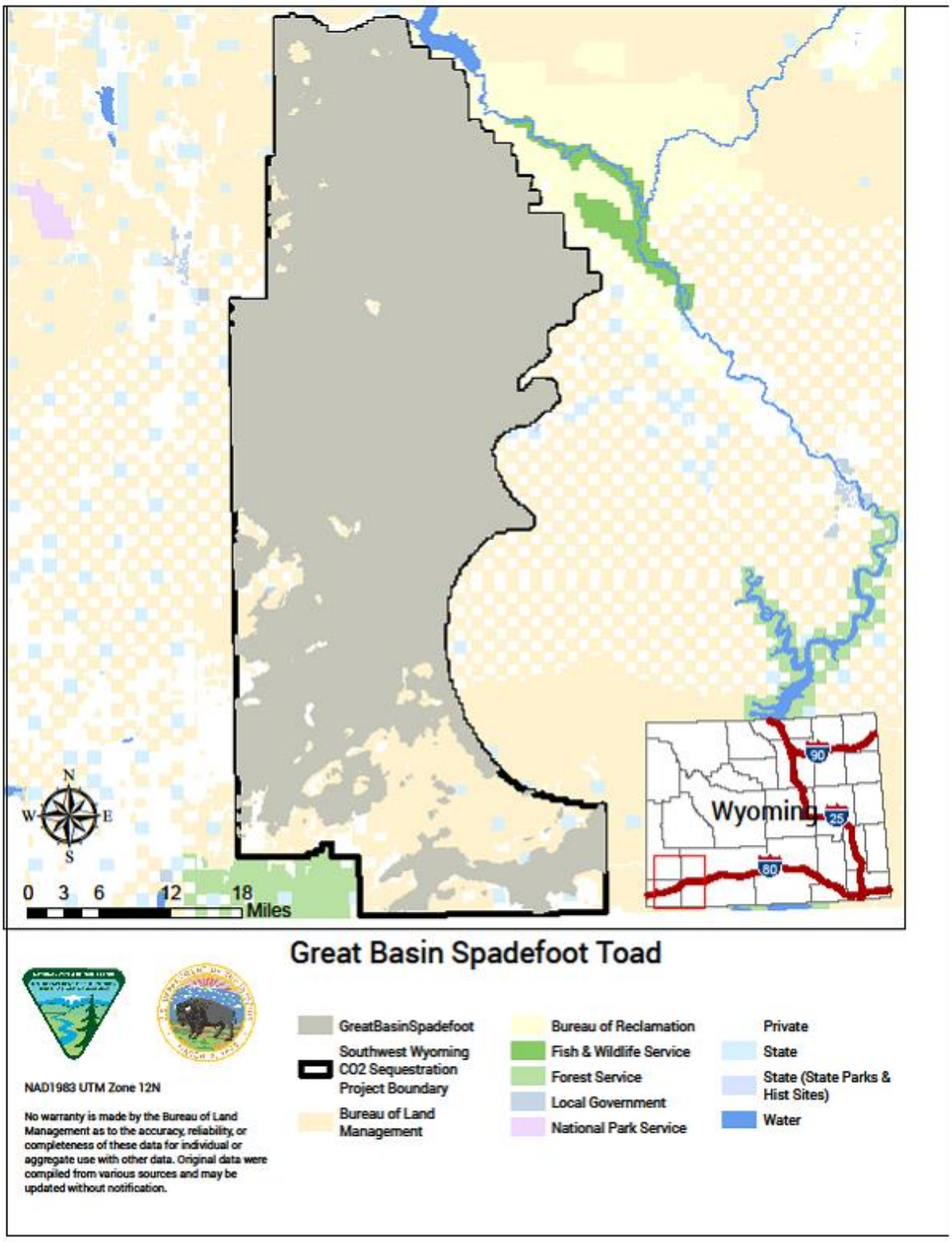
Map 3.9.2 Map showing BLM Sensitive Bats – Spotted Bat.



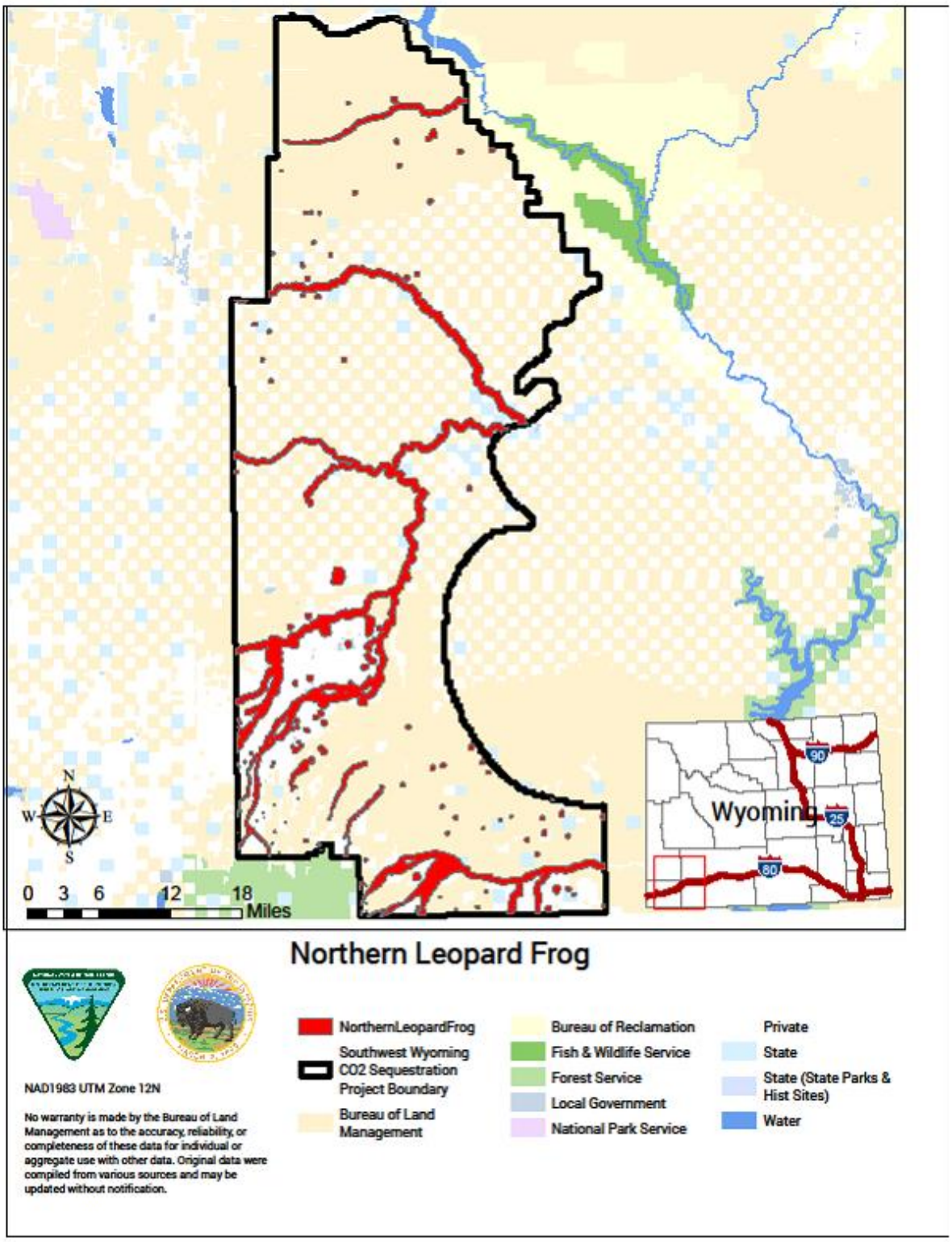
Map 3.9.3 Map showing BLM Sensitive Bats – Long-Eared Myotis.



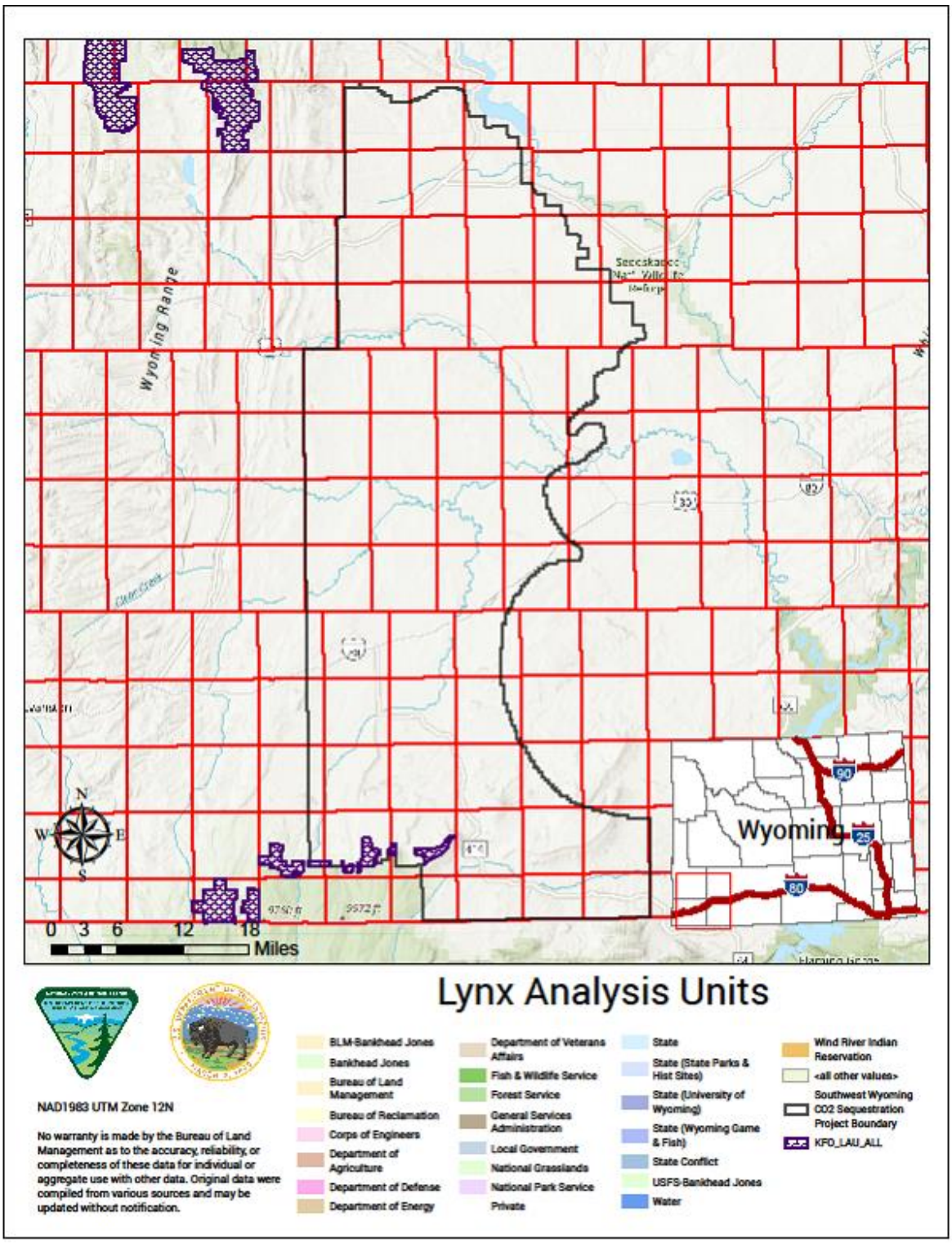
Map 3.11 Map showing Mountain Plover Habitat.



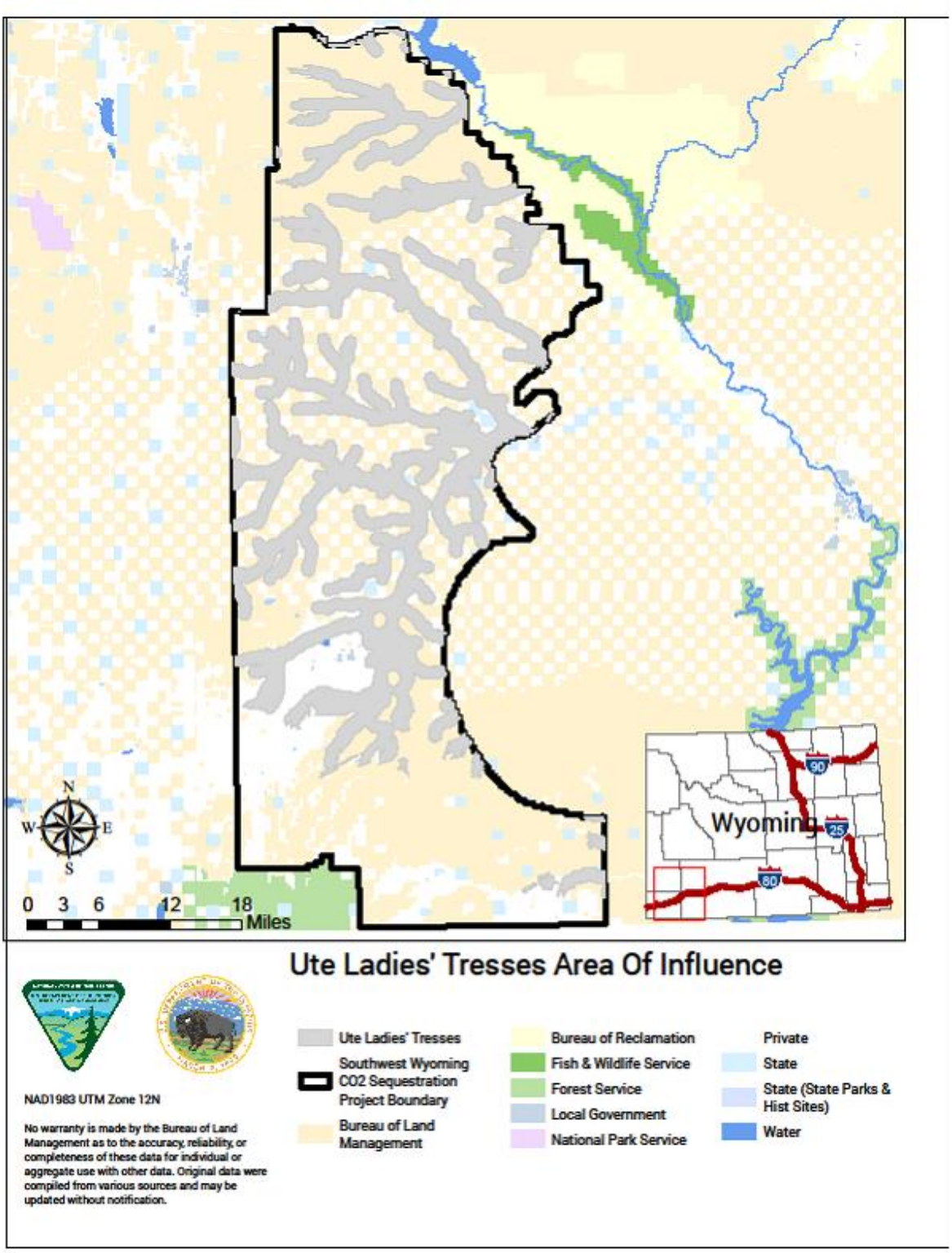
Map 3.12.1 Map showing Great Basin Spadefoot Toad Habitat.



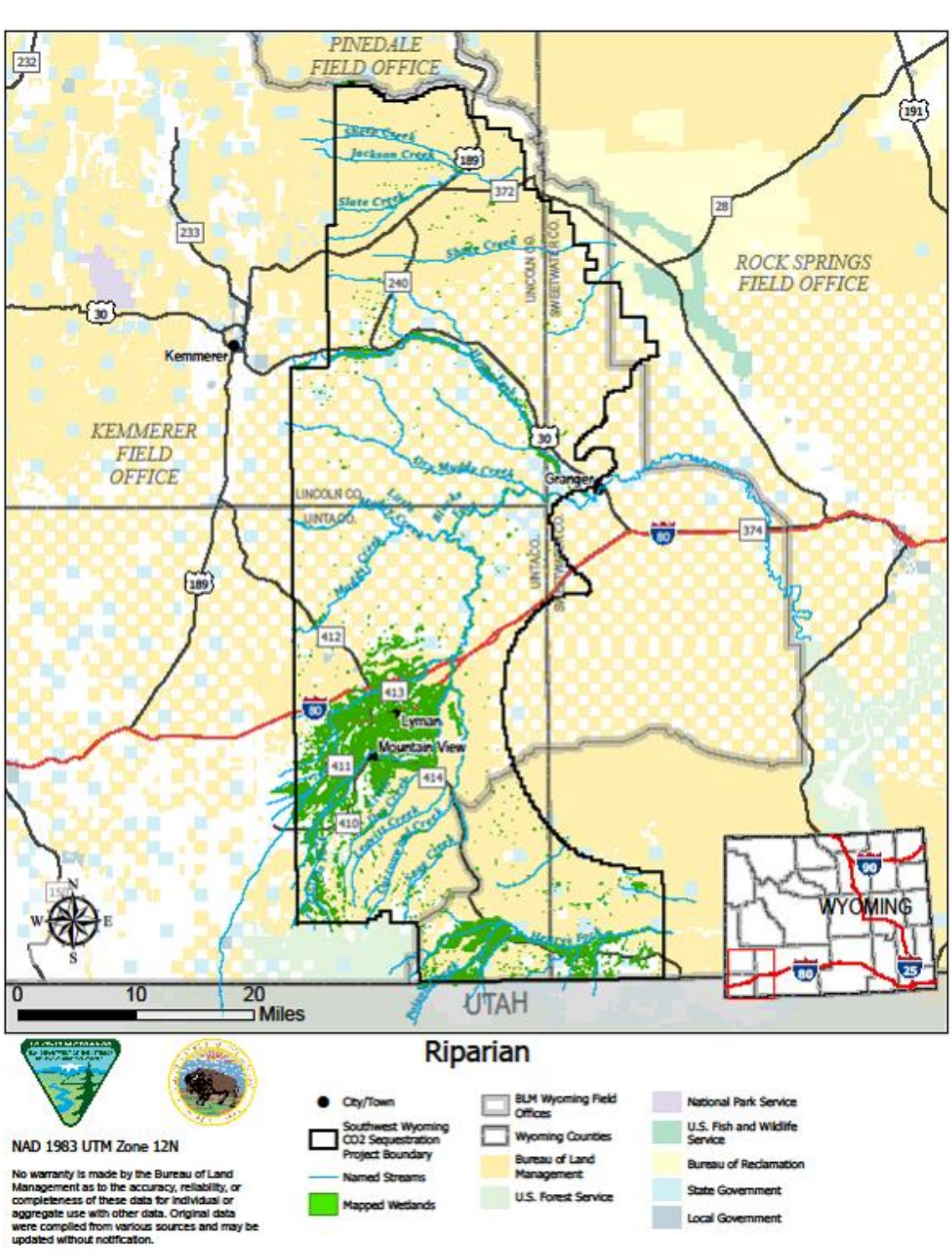
Map 3.12.1 Map showing Northern Leopard Frog Habitat.



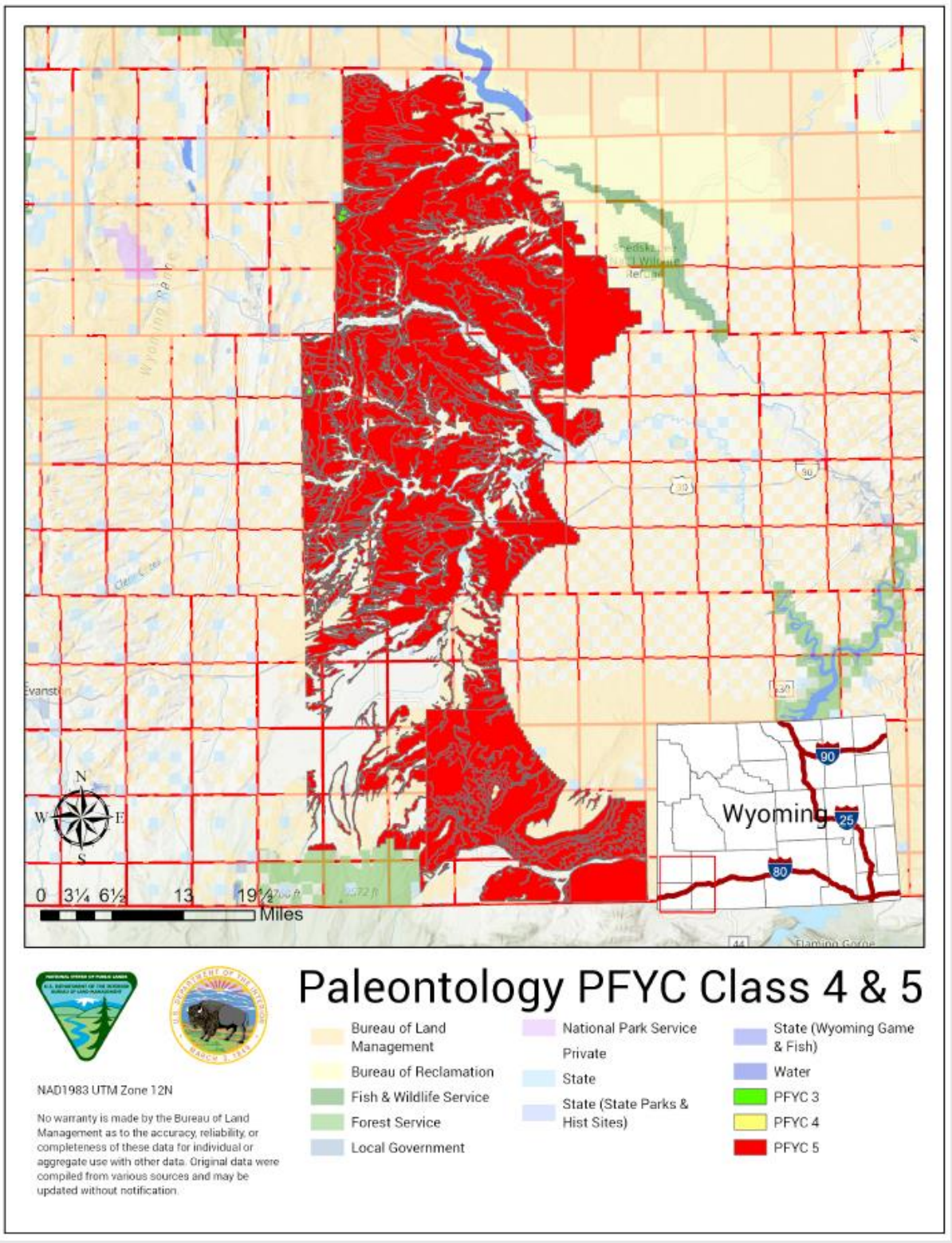
Map 3.13 Map showing Canada Lynx Habitat.



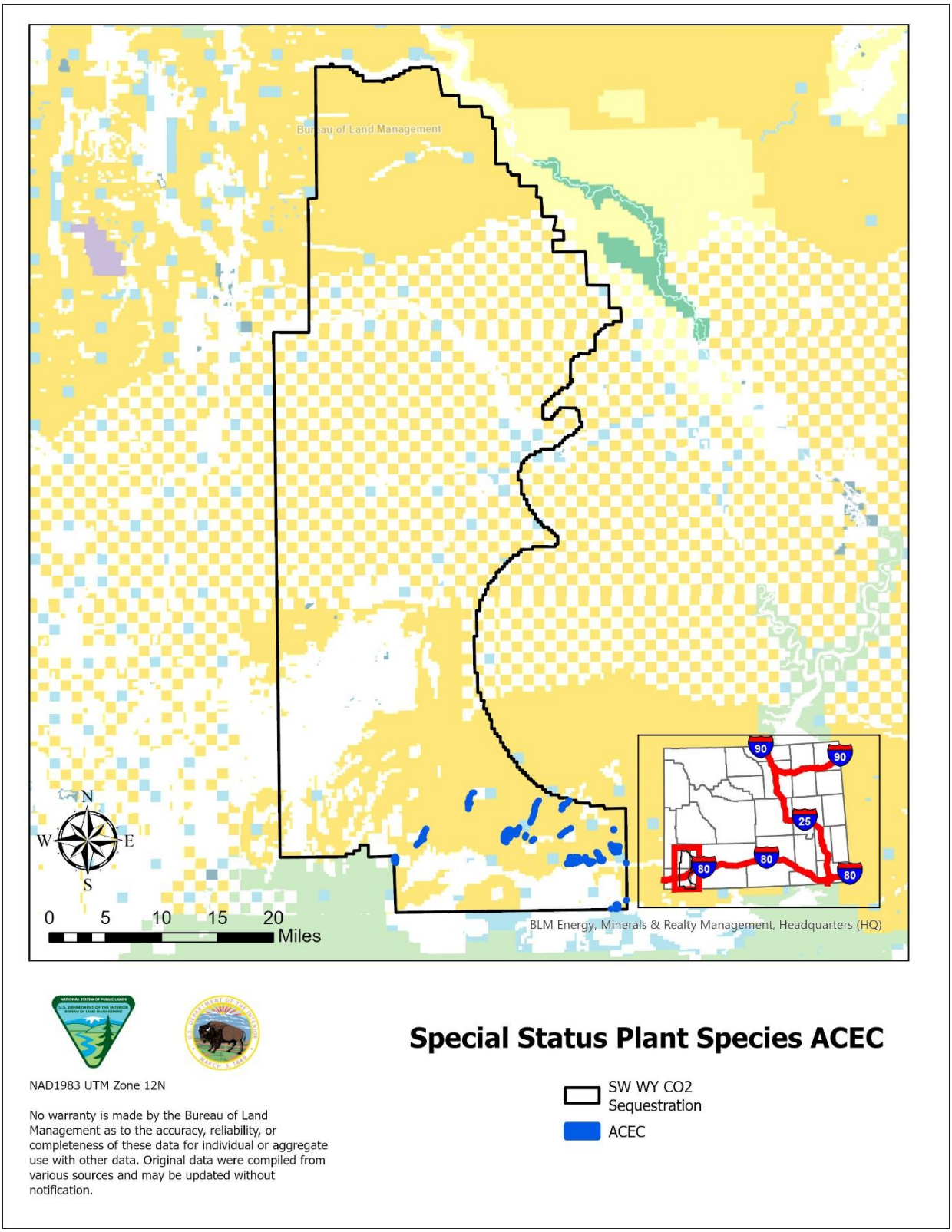
Map 3.15 Map showing Ute Ladies' Tresses Area of Influence Habitat.



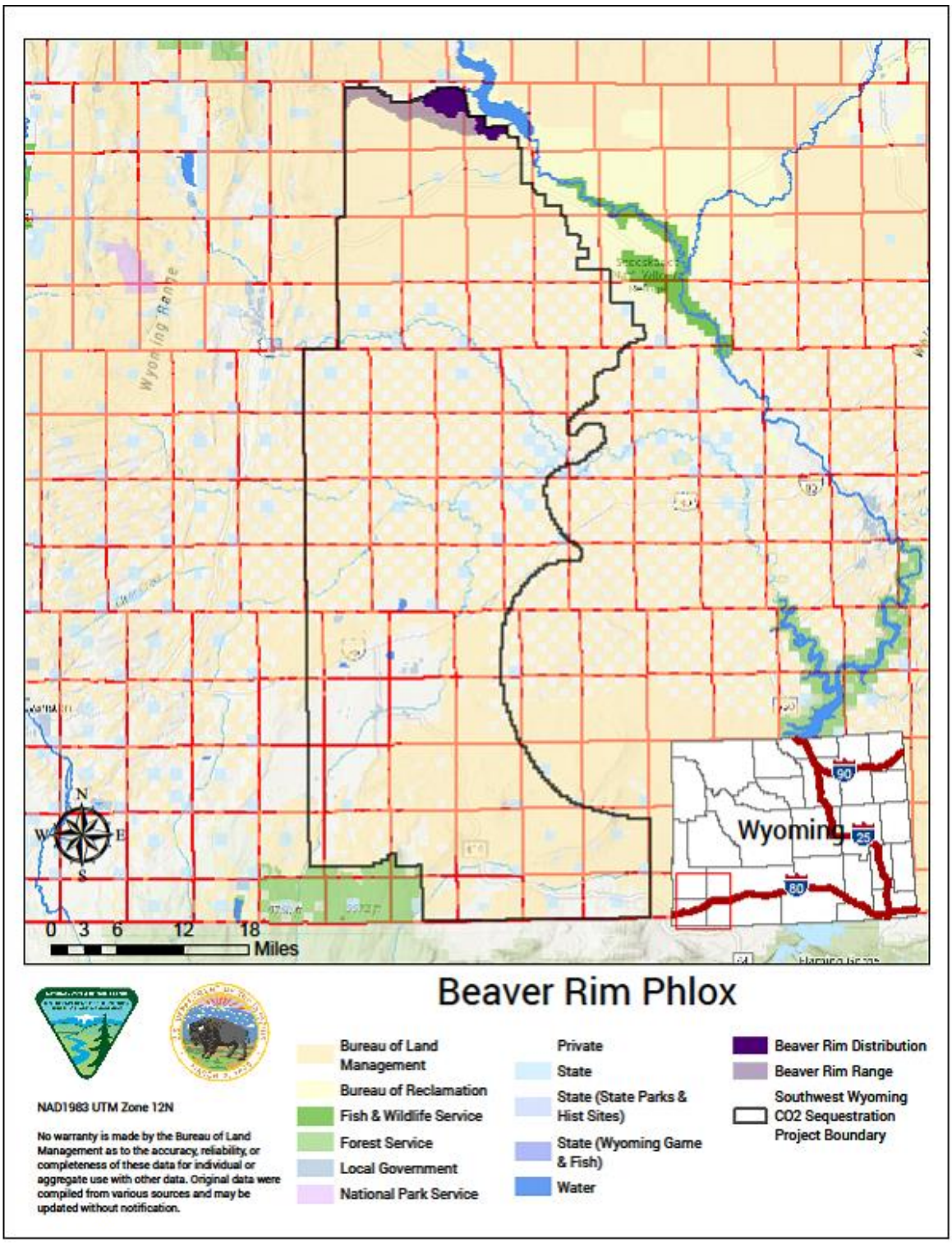
Map 3.16 Map showing Riparian areas.



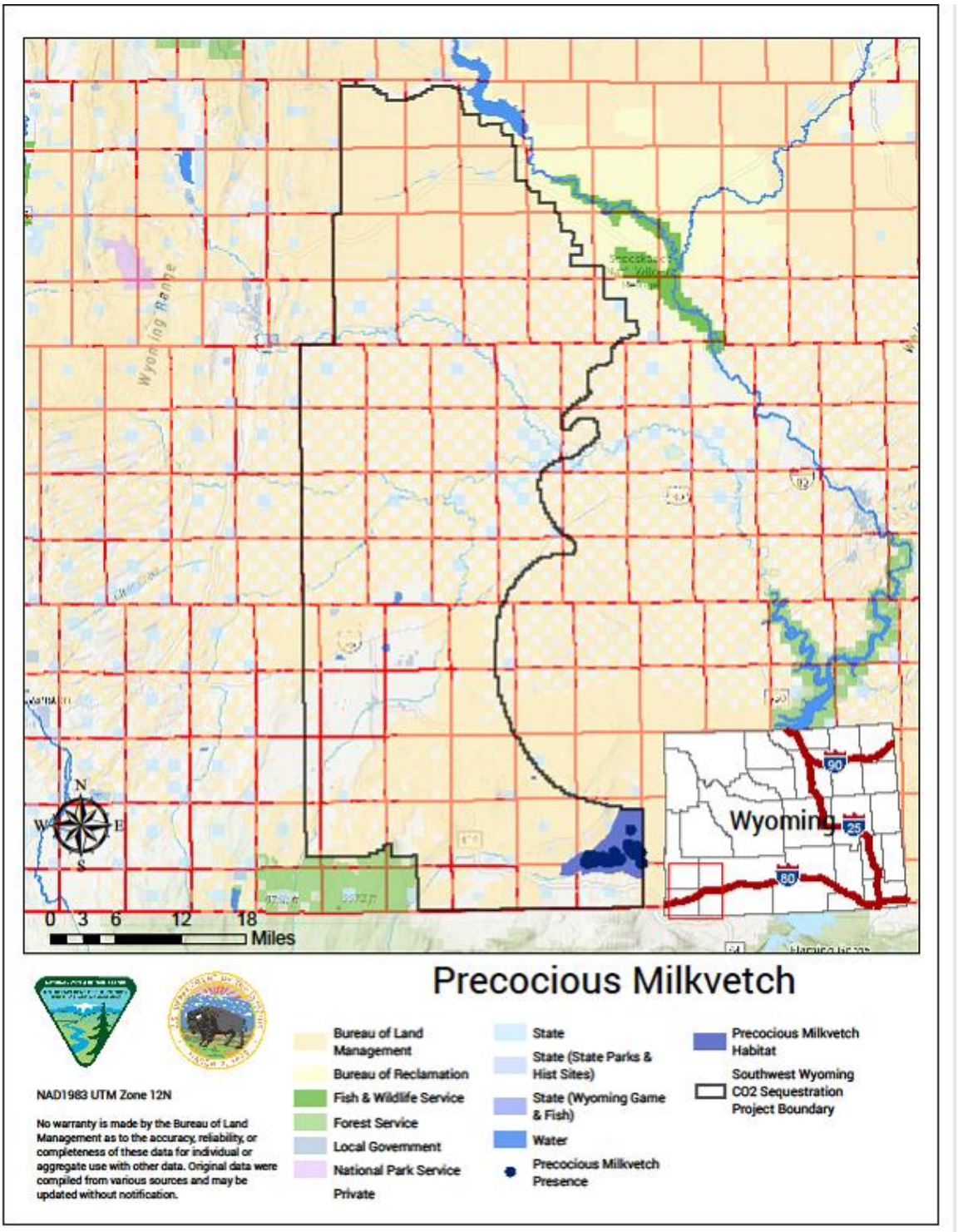
Map 3.17 Map showing PFYC Classes.



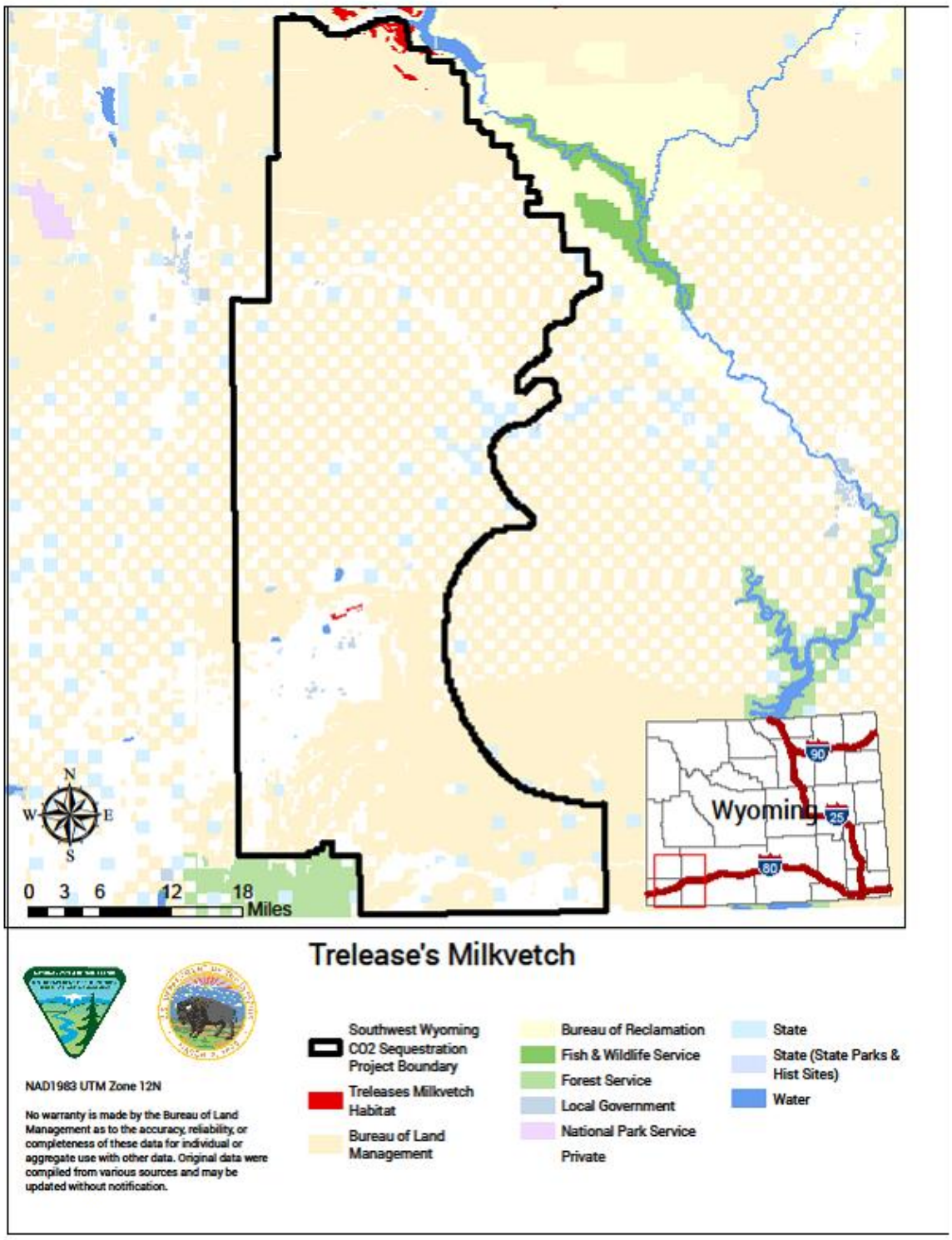
Map 3.19 Map showing Special Status Plant ACEC.



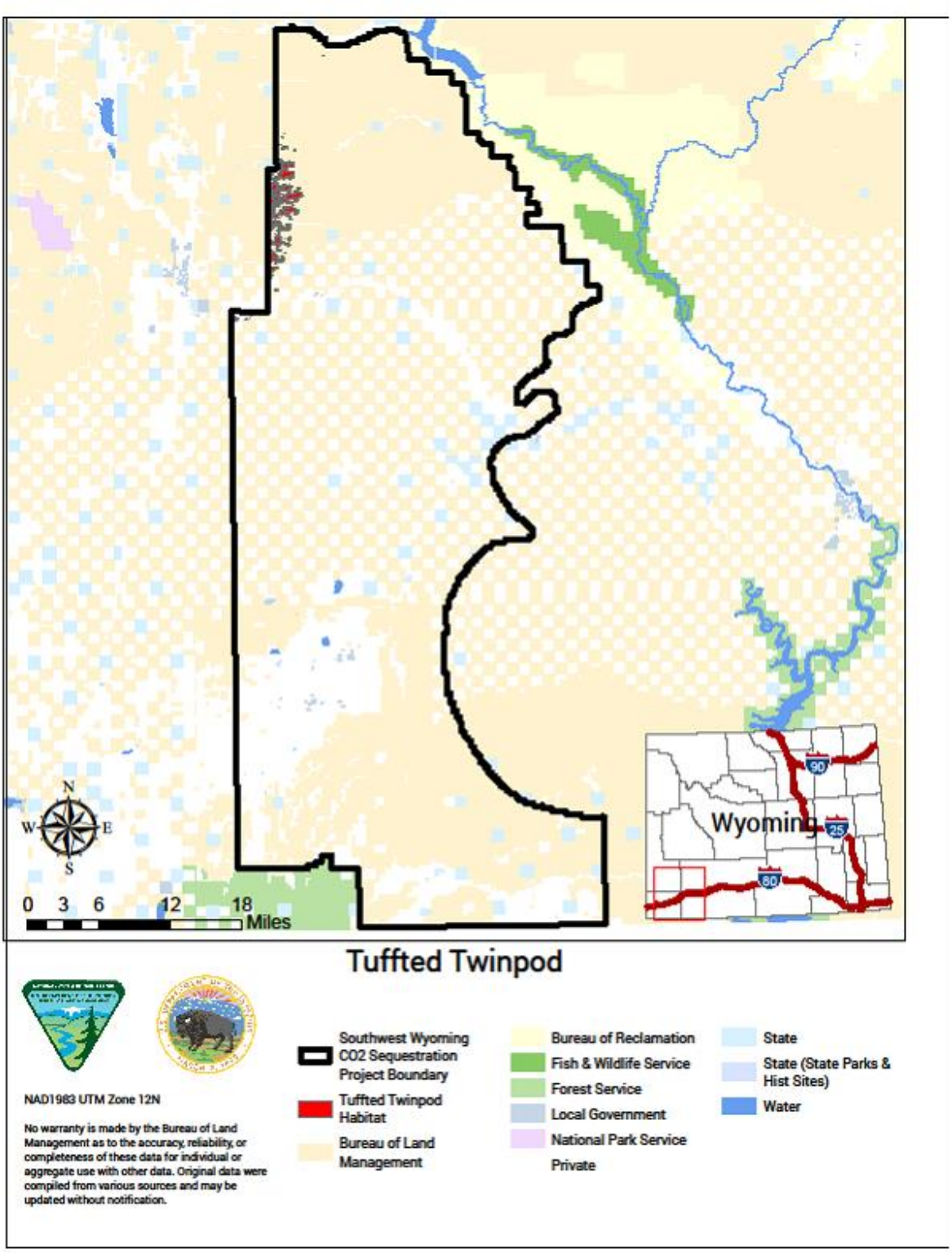
Map 3.20.1 Map showing Beaver Rim Phlox Habitat.



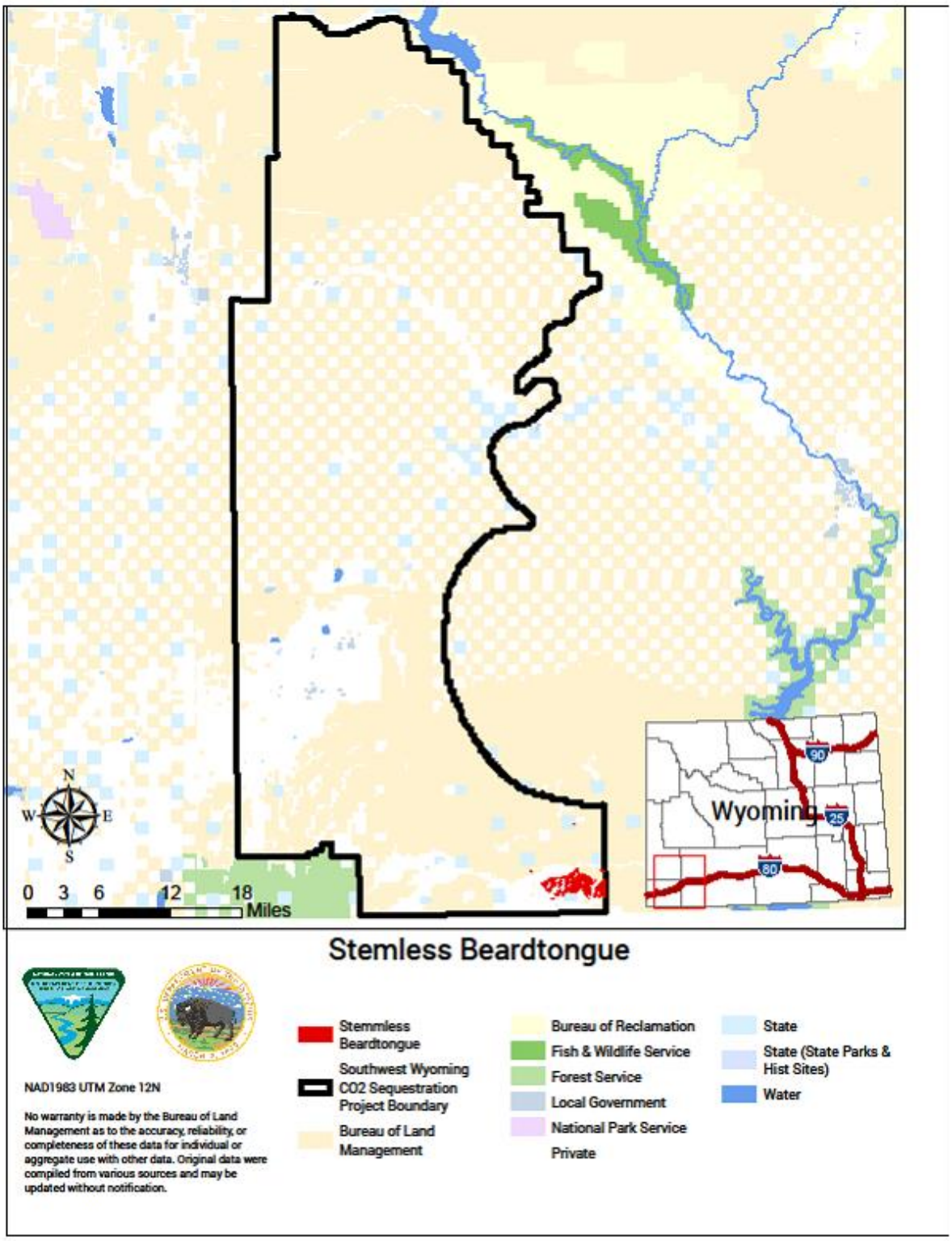
Map 3.20.2 Map showing Precocious Milkvetch Habitat.



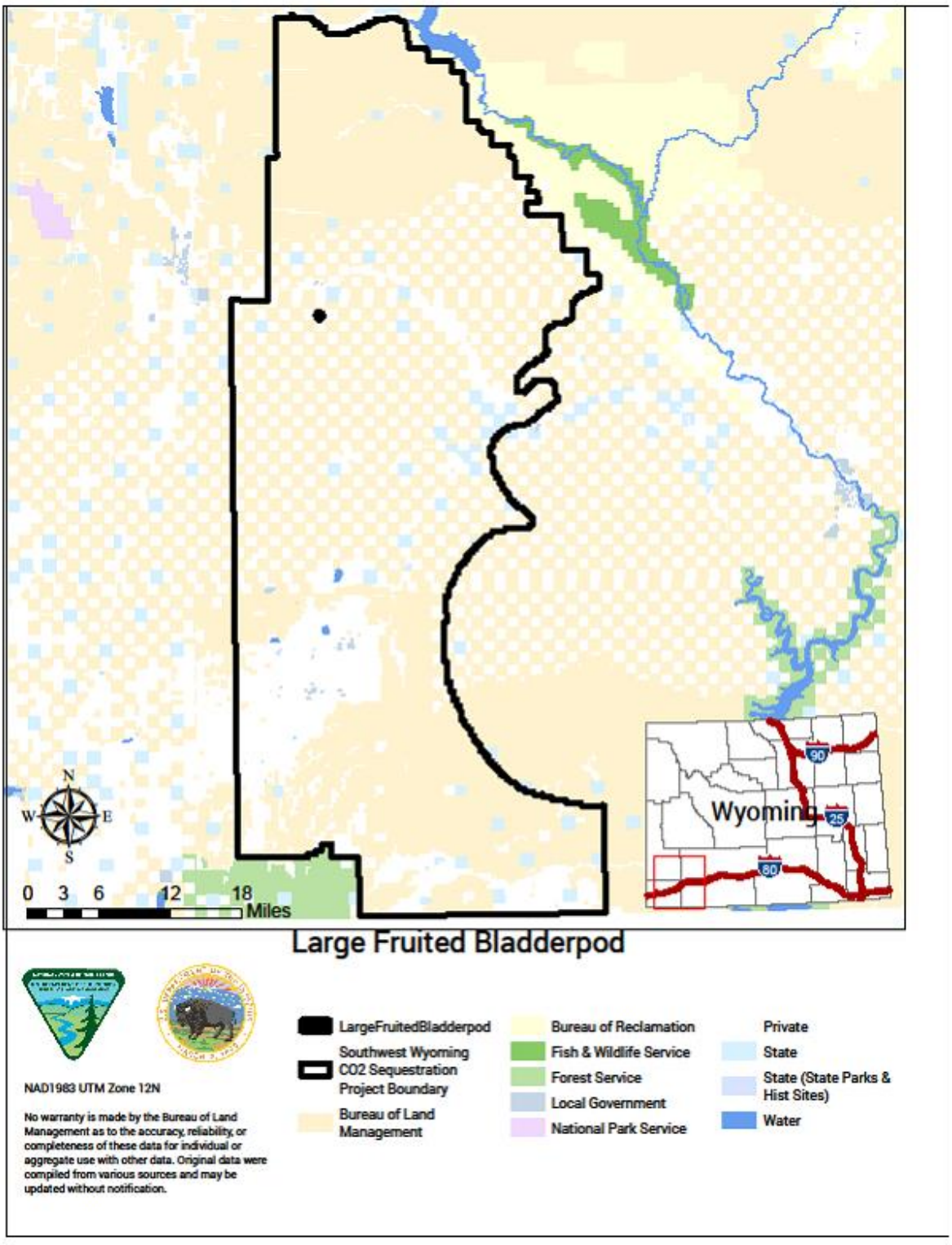
Map 3.20.3 Map showing Trelease's Milkvetch Habitat.



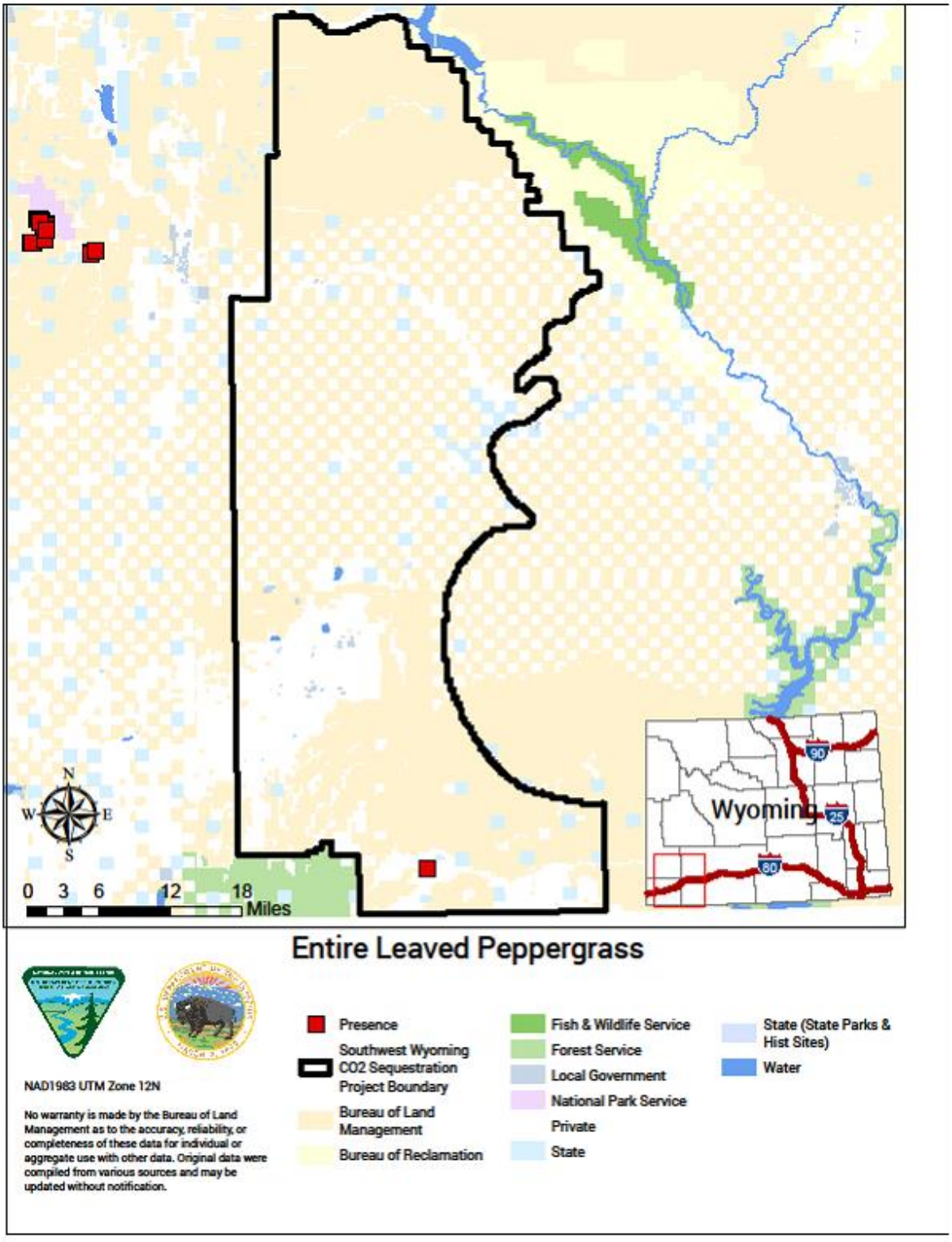
Map 3.20.4 Map showing Tufted Twinpod Habitat.



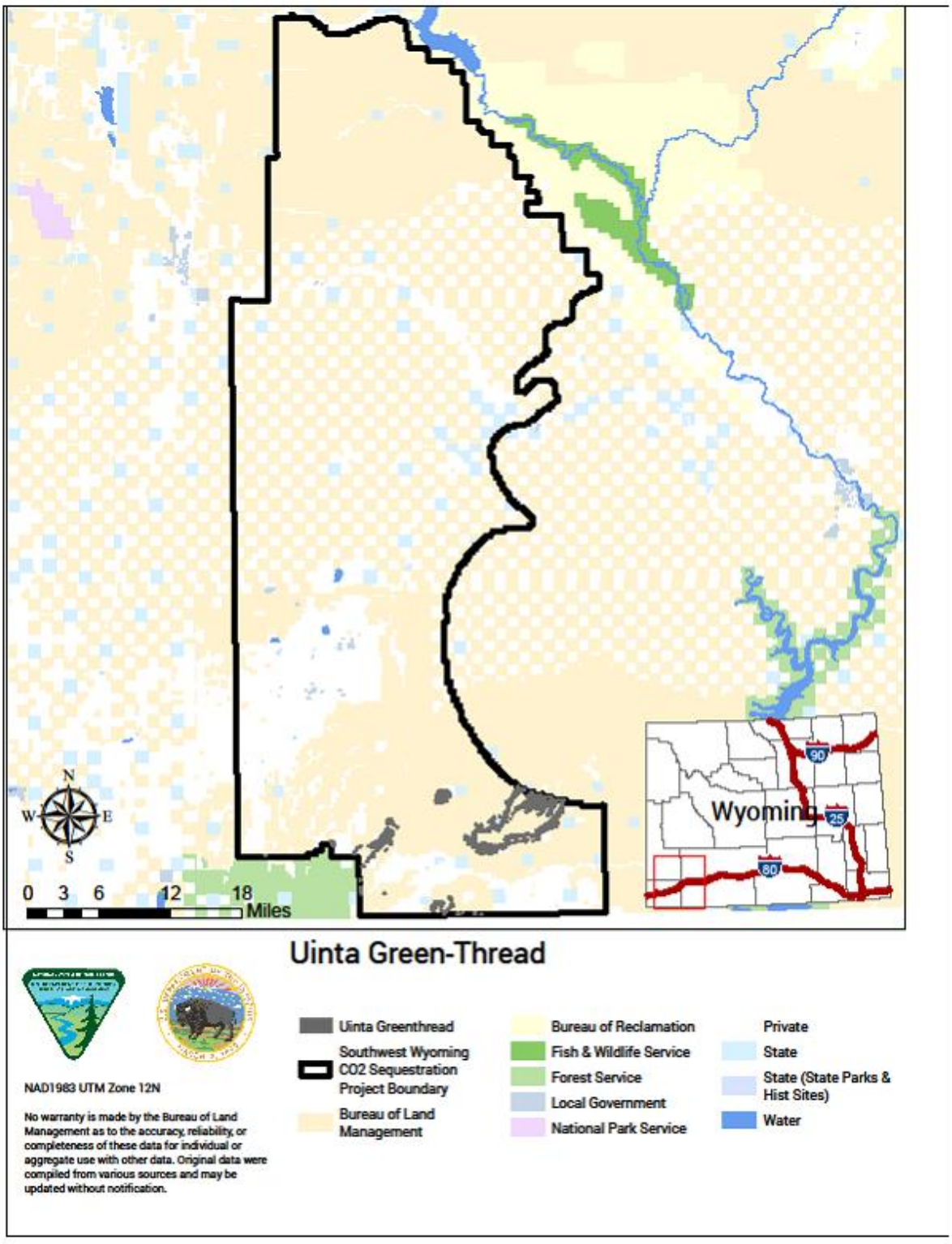
Map 3.20.5 Map showing Stemless Beard Tongue Habitat.



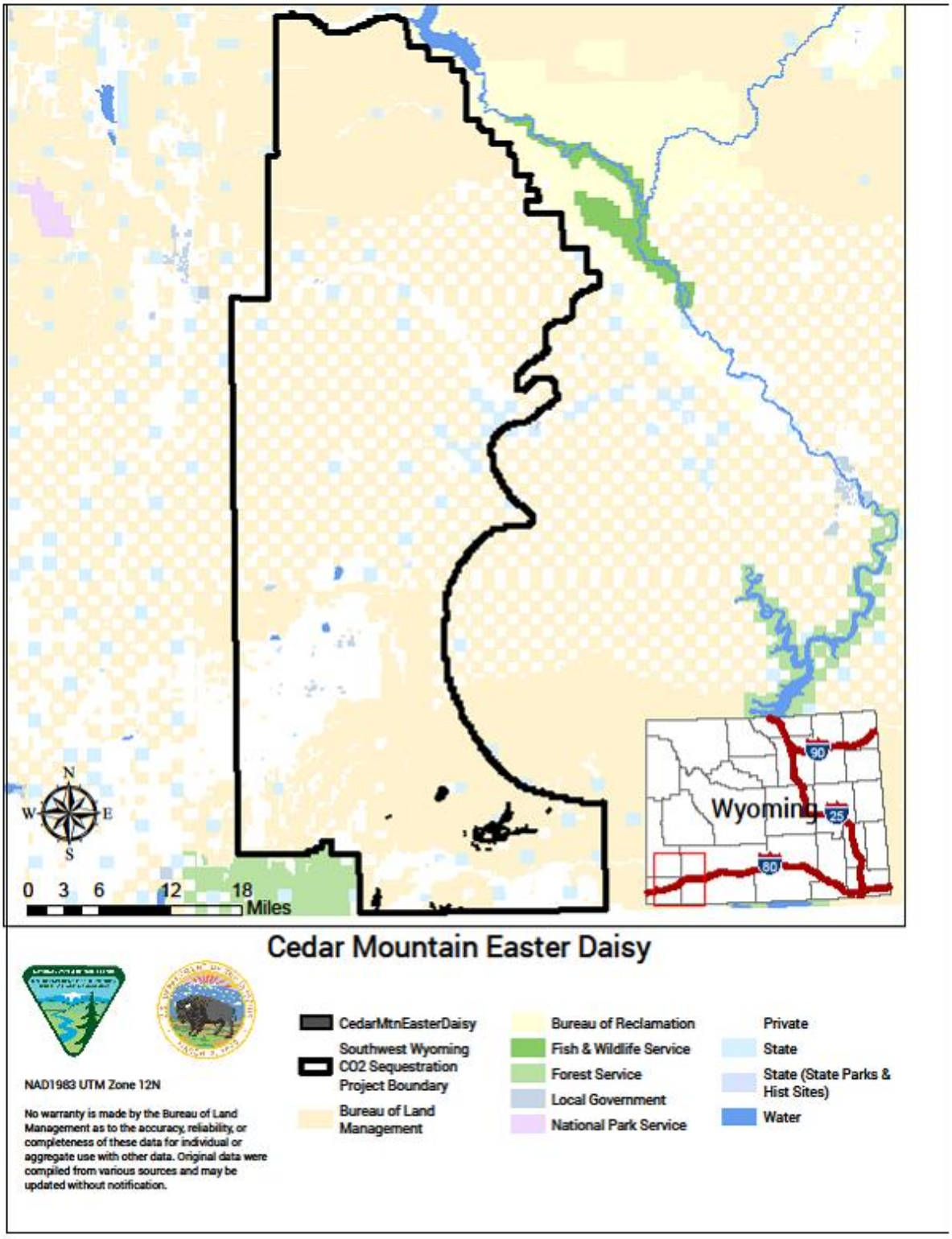
Map 3.20.6 Map showing Large-fruited Bladderpod Habitat.



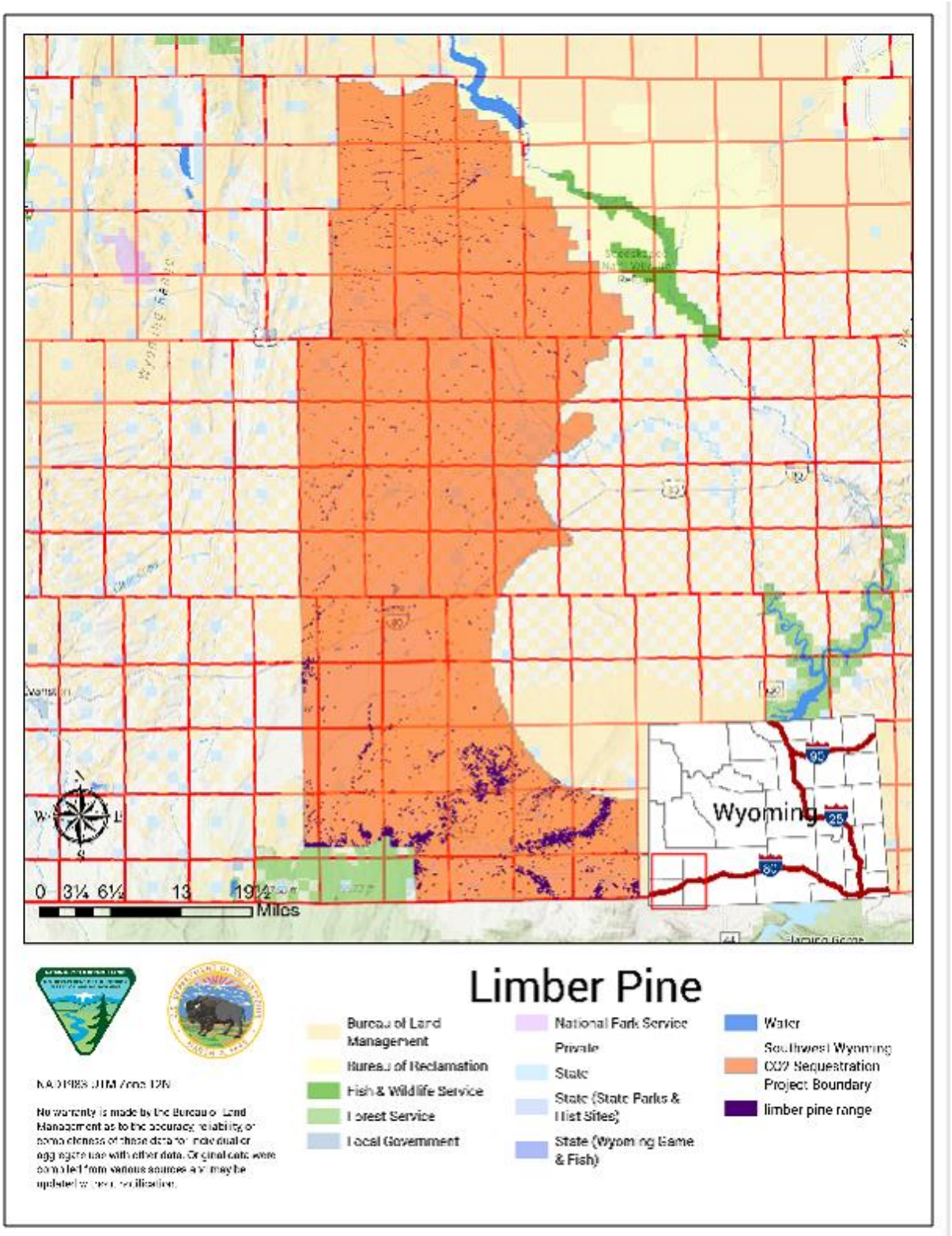
Map 3.20.7 Map showing Entire-leaved Peppergrass Habitat.



Map 3.20.8 Map showing Uinta Green-thread Habitat.

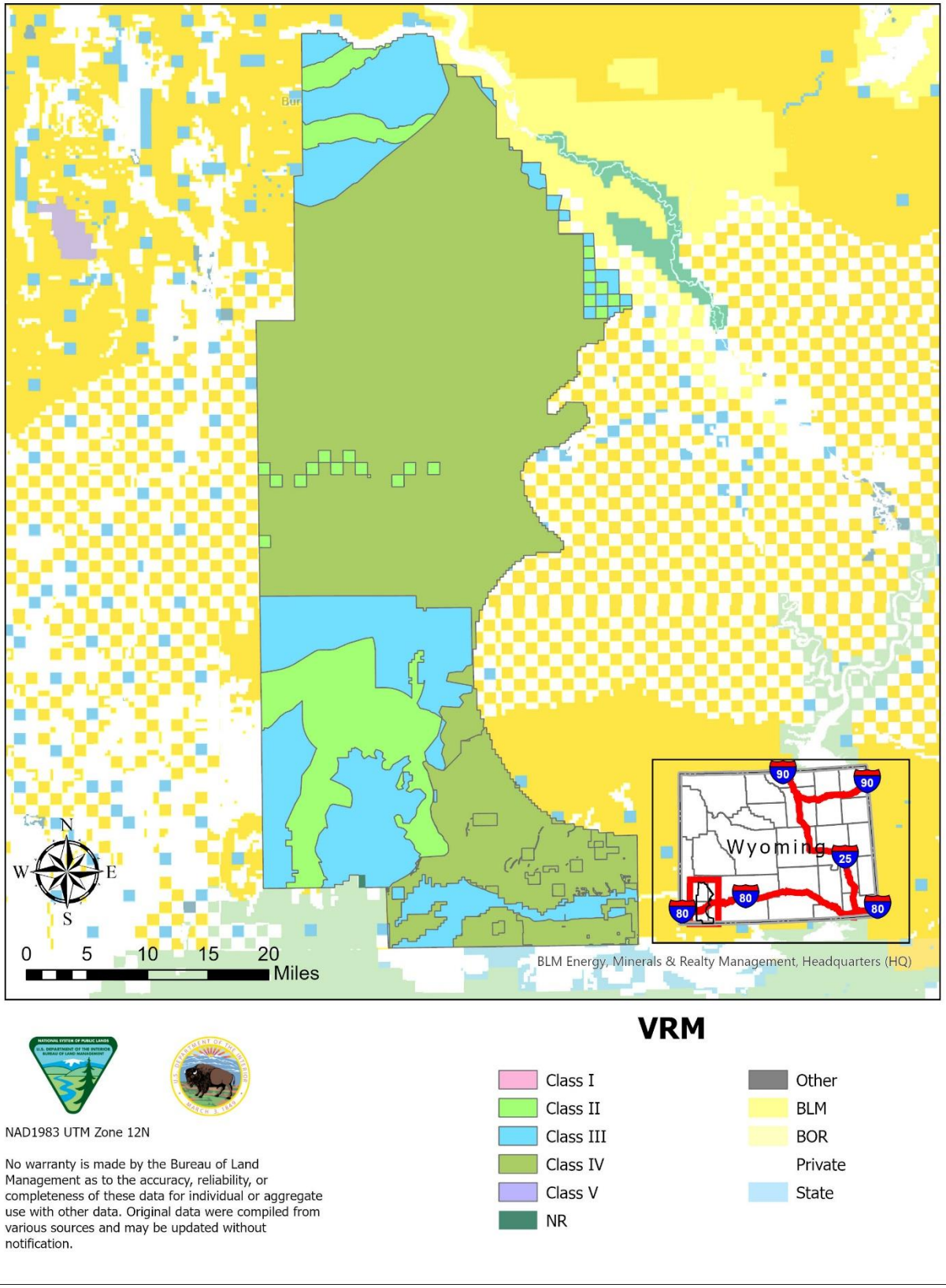


Map 3.20.9 Map showing Cedar Mountain Easter Daisy Habitat.

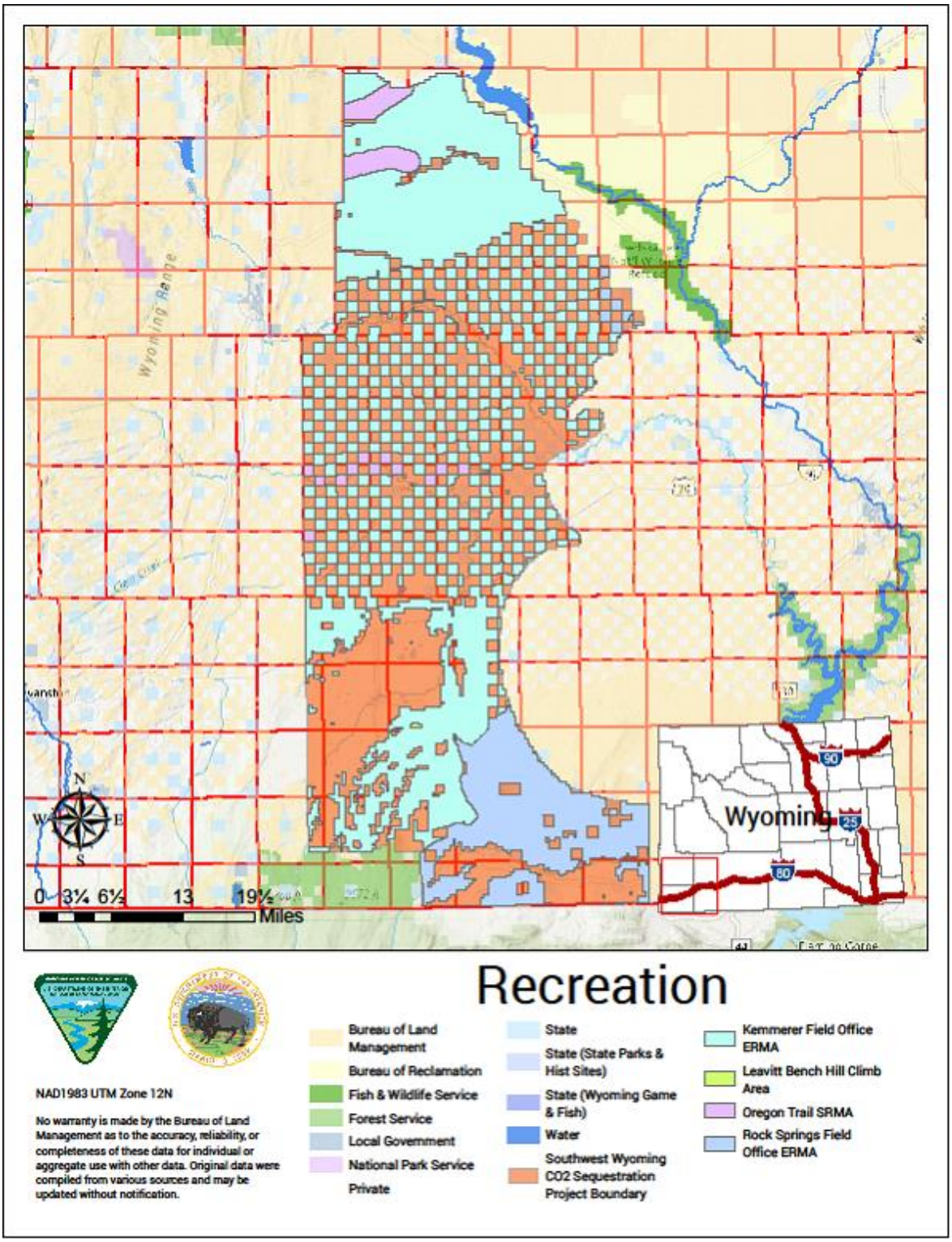


Map 3.20.10 Map showing “Potential” Limber Pine Forest.

Map 3.21 Map showing National Historic Trails.



Map 3.23 Map showing Visual Resources.



Map 3.24 Map showing Recreation.

Appendix 3 – Legal Land Description of the Proposed Project

Sixth Principal Meridian, Wyoming
T. 12 N., R. 110 W.,

sec. 6, lots 8, 10 and 11;
sec. 7, lots 5 thru 8;
sec. 18, lots 5 thru 8;
sec. 19, lots 7 and 8;
sec. 30, lot 4.

T. 13 N., R. 110 W.,
sec. 7, lots 5 thru 8;
sec. 18, lots 5 thru 8;
sec. 19, lots 5 thru 8;
sec. 30, lots 5 thru 8;
sec. 31, lots 5 thru 8.

T. 21 N., R. 110 W.,
sec. 6, all;
sec. 18, all;
sec. 20, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, N½NE¼, NW¼, and N½SW¼.

T. 12 N., R. 111 W.,
sec. 1, lot 8, SW¼NE¼, SE¼NW¼, NE¼SW¼, S½SW¼, and SE¼;
sec. 2, lots 5, 7, 8, 9, and 10, and S½;
sec. 3, lots 7, 8, 11, and 12, S½SW¼, and SE¼;
sec. 6, lots 8, 11, 12, and 13, W½NE¼, and E½NW¼;
sec. 10, lots 1, 2, 3, 6, and 9, NW¼NE¼, E½NW¼, and E½SW¼;
sec. 12, N½ and SE¼;
sec. 13, E½;
sec. 15, lot 1;
sec. 18, lot 11;
sec. 20, lot 9;
sec. 23, lot 6;
sec. 24, E½NE¼ and S½;
sec. 25, lots 1 thru 4;
sec. 26, lots 1 and 2;
sec. 27, lots 1 thru 4;
sec. 28, lot 4.

T. 13 N., R. 111 W.,
sec. 2, SW¼SW¼;
sec. 3, S½SE¼;
sec. 4, W½SW¼;
sec. 5, SW¼NE¼, S½NW¼, and S½;
sec. 6, all;
sec. 7, all;
sec. 8, all;
sec. 9, lots 1 and 2, W½NW¼, and N½SE¼;
sec. 10, lots 1, 3 and 4, NE¼, NW¼SW¼, and N½SE¼;

sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, lots 1, 6, 7, 8, and 9, W½SW¼, SE¼SW¼, and S½SE¼;
sec. 15, lots 3 and 4, and E½SE¼;
sec. 16, lots 1 thru 4, W½;
sec. 17, all;
sec. 18, all;
sec. 19, lots 5 thru 8, and E½NE¼, E½SW¼;
sec. 20, E½;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, all;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, N½, SW¼, N½SE¼, and SW¼SE¼;
sec. 33, all;
sec. 34, N½, SW¼, N½SE¼, and SW¼SE¼;
sec. 35, lots 1, 2 and 3, NE¼, NW¼, NE¼SW¼, and N½SE¼.

T. 14 N., R. 111 W.,
sec. 31, lot 8.

T. 17 N., R. 111 W.,
sec. 6, lots 2 thru 7, S½NE¼, SE¼NW¼, E½SW¼, and SE¼;
sec. 8, W½NW¼.

T. 19 N., R. 111W.,
sec. 6, lots 1 thru 6, S½NE¼, SE¼NW¼, and E½SW¼;
sec. 8, NE¼, SE¼NW¼, and S½;
sec. 10, W½NW¼, SE¼NW¼, and SW¼;
sec. 16, all;
sec. 18, all;
sec. 20, N½;
sec. 30, lot 1, N½NE¼ and NE¼NW¼.

T. 20 N., R. 111 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 14, NW¼;
sec. 16, all;

sec. 18, all;
sec. 20, all;
sec. 28, W½NE¼, W½, and SE¼;
sec. 30, all;
sec. 32, lots 1 thru 3, N½, N½SW¼, and N½SE¼.

T. 21 N., R. 111 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 22 N., R. 111 W.,
sec. 4, lots 6 thru 8, SW¼NE¼, S½NW¼, and S½;
sec. 5, all;
sec. 6, all;
sec. 7, lots 5 thru 7, NE¼, E½NW¼, NE¼SW¼, and N½SE¼;
sec. 16, all;
sec. 18, lots 5 thru 7, NE¼, E½NW¼, NE¼SW¼, and N½SE¼;
sec. 20, all;
sec. 22, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all.

T. 23 N., R. 111 W.,
sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, W½.

T. 12 N., R. 112 W.,
sec. 1, lots 5 thru 7, N½NE¼, SW¼NE¼, NW¼, N½SW¼, and SW¼SW¼;
sec. 2, all;
sec. 3, all;

sec. 4, lots 8 and 9, N½, and N½SE¼;
sec. 5, lots 5 thru 12, NE¼, and E½NW¼;
sec. 6, lots 8 thru 11;
sec. 7, all;
sec. 8, lots 2 thru 4, SW¼NE¼, W½NW¼, SE¼NW¼, SW¼, and SE¼;
sec. 9, lots 4 and 5;
sec. 10, lots 1 thru 5, and NE¼NE¼;
sec. 11, lots 1 thru 7, and N½NW¼;
sec. 12, lots 1 and 2;
sec. 13, lot 4;
sec. 16, lots 3 thru 7, W½NW¼, SE¼NW¼, and SW¼;
sec. 17, all;
sec. 19, all;
sec. 20, all;
sec. 21, W½;
sec. 27, lot 4;
sec. 28, lots 1 thru 4;
sec. 29, lots 1 thru 4;
sec. 30, lots 1 and 2.

T. 13 N., R. 112 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, all;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, all;
sec. 15, E½;
sec. 16, W½;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, N½, W½SW¼, and SE¼SE¼;
sec. 24, N½, SW¼SW¼, and SE¼;
sec. 25, all;
sec. 26, all;
sec. 27, N½NW¼;
sec. 28, W½NE¼, W½, and SE¼;
sec. 29, all;

sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all.

T. 14 N., R. 112 W.,
sec. 6, lots 9 thru 11, and 13, SE¼NE¼, and E½SE¼;
sec. 7, all;
sec. 8, W½NW¼, SE¼NW¼, SW¼, and W½SE¼;
sec. 17, W½NE¼, SE¼NE¼, W½, and SE¼;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, SW¼NE¼, W½, and SE¼;
sec. 22, SW¼SW¼;
sec. 26, SW¼SW¼;
sec. 27, S½NE¼, W½, and SE¼;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, W½NE¼, SE¼NE¼, W½, and SE¼.

T. 17 N., R. 112 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, N½;
sec. 16, N½ and SW¼SW¼;
sec. 18, all;
sec. 20, N½, SW¼, N½SE¼, and SW¼SE¼;
sec. 30, all.

T. 18 N., R. 112 W.,
sec. 4, lots 1 thru 4 and S½NE¼, S½NW¼;
sec. 6, lots 1 thru 5, SE¼NW¼ and S½NE¼;
sec. 10, W½NE¼, W½, and SE¼;
sec. 14, SW¼SW¼;
sec. 18, NW¼SE¼;
sec. 20, all;
sec. 22, all;
sec. 26, W½NE¼, SE¼NE¼, W½, and SE¼;
sec. 28, all;

sec. 30, all;
sec. 32, all;
sec. 34, all.

T. 19 N., R. 112 W.,
sec. 2, all;
sec. 6, all;
sec. 8, all;
sec. 10, N½NE¼ and SE¼NE¼;
sec. 12, all;
sec. 18, all;
sec. 20, all;
sec. 28, all;
sec. 30, all;
sec. 32, all.

T. 20 N., R. 112 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 20, SE¼NE¼, SW¼SW¼, and NE¼SE¼;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, E½NE¼, NW¼NE¼, NE¼NW¼, and E½SE¼;
sec. 30, all;
sec. 32, W½NE¼, W½, and W½SE¼;
sec. 34, all;
sec. 36, all.

T. 21 N., R. 112 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;

sec. 30, all;
sec. 32, N½, NE¼SW¼, and SE¼;
sec. 34, all;
sec. 36, all.

T. 22 N., R. 112 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, all;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, N½NE¼ and N½NW¼;
sec. 15, N½, N½SW¼, SW¼SW¼, and N½SE¼;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, N½NE¼, N½NW¼, SW¼NW¼, and NW¼SW¼;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 29, NW¼NW¼;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 23 N., R. 112 W.,
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, all;
sec. 7, lots 6 thru 10, 12, 15, 16, NE¼, and SW¼SE¼;
sec. 8, N½, N½SW¼, SE¼SW¼, and SE¼;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 14, all;
sec. 15, all;
sec. 17, SW¼NW¼ and S½;

sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, all;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 36, all.

T. 24 N., R. 112 W.,
sec. 18, lots 1 thru 4, E½NW¼, and E½SW¼;
sec. 19, all;
sec. 20, NW¼ and S½;
sec. 27, S½NE¼, S½NW¼ and S½;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all.

T. 12 N., R. 113 W.,
sec. 1, SE¼SW¼ and S½SE¼;
sec. 5, SW¼NE¼, S½NW¼, and W½SW¼;
sec. 6, SE¼NE¼ and SE¼;
sec. 7, lots 2 thru 11, W½NE¼, E½NW¼, NE¼SW¼, and N½SE¼;
sec. 8, lots 1, 2, 7, and 8, N½SW¼, and NW¼SE¼;
sec. 10, lots 1 and 8, E½SW¼, and SE¼;
sec. 11, S½NE¼ and S½;
sec. 12, all;
sec. 13, W½;
sec. 14, all;
sec. 15, all;
sec. 17, NW¼NW¼;
sec. 18, lots 1 and 2, NE¼, and E½NW¼;
sec. 21, lots 2, 3 and 4, NE¼, SE¼NW¼, NE¼SW¼, and N½SE¼;
sec. 22, all;

sec. 23, all;
sec. 24, all.

T. 13 N., R. 113 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, all
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, N½, N½SW¼, SE¼SW¼, and SE¼;
sec. 27, lots 4 and 5, NE¼, E½NW¼, and NE¼SE¼;
sec. 28, N½, N½SW¼, and NW¼SE¼;
sec. 29, N½, N½SW¼, SE¼SW¼, N½SE¼, and SW¼SE¼;
sec. 30, lots 1 thru 3, NE¼, NE¼NW¼, N½SE¼, and SW¼SE¼;
sec. 35, NE¼NE¼.

T. 14 N., R. 113 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, all;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;

sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, lots 1 thru 4, W½NE¼, E½NW¼, E½SW¼, and W½SE¼;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, all;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all.

T. 15 N., 113 W.,
sec. 2, lot 4, SW¼NW¼ and SW¼;
sec. 3, lots 1 thru 4;
sec. 4, all;
sec. 5, all;
sec. 7, lots 1 thru 4 and E½NE¼ and E½SE¼;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 14, SW¼NE¼, W½ and W½SE¼;
sec. 15, lots 1 thru 4;
sec. 16; all
sec. 17, all;
sec. 18, lots 1 thru 4, E½NE¼, E½NW¼, E½SW¼, and E½SE¼;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, E½SE¼;
sec. 24, SW¼SW¼;
sec. 25, W½NW¼, SE¼NW¼, SW¼, and SW¼SE¼;
sec. 26, all;
sec. 27, lots 1 thru 4 and E½SE½;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, all;

sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 36, W½NE¼, W½, SE¼.

T. 16 N., R. 113 W.,
sec. 2, lots 1 thru 4, SW¼NE¼, S½NW¼, SW¼, and W½SE¼;
sec. 4, all;
sec. 5, lots 1 thru 4;
sec. 6, lots 1 thru 5, 8, 11, 12, 13, 14, SE¼NE¼, and NE¼SE¼;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 14, W½;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 26, W½NW¼ and W½SW¼;
sec. 28, all;
sec. 29, all;
sec. 30, lots 3 and 4, NE¼, E½NW¼, E½SW¼, and SE¼;
sec. 31, lots 1 and 2, NE¼, E½NW¼, NE¼SW¼, N½SE¼, and SE¼SE¼;
sec. 32, all;
sec. 33, all;
sec. 34, all.

T. 17 N., R. 113 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, NE¼ and S½;
sec. 12, all;
sec. 14, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, W½;
sec. 30, all;
sec. 32, all;
sec. 34, all
sec. 36, all.

T. 18 N., R. 113 W.,
sec. 2, lots 1 thru 4, S½NE¼. S½NW¼, S½SW¼ and S½SE¼;
sec. 4, all;
sec. 6, all;
sec. 8, N½NE¼, SW¼NE¼, NW¼, SW¼, and NW¼SE¼;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, N½, SW¼, and W½SE¼;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all.

T. 19 N., R. 113 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all.

T. 20 N., R. 113 W.,
sec. 2, lot 1 and NE¼SE¼;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 14, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;

sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 21 N., R. 113 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, lots 1 thru 7;
sec. 18, all;
sec. 20, lots 1 thru 4 and 6 thru 10;
sec. 22, lots 1, 2, and 5, NE¼, and N½NW¼;
sec. 24, all;
sec. 26, lots 3 thru 6, W½SW¼, and SE¼SW¼;
sec. 28, all;
sec. 30, lots 1 thru 4, and 6 thru 9, E½NE¼, and N½SE¼;
sec. 32, all;
sec. 34, all;
sec. 36, lots 5 thru 7.

T. 22 N., R. 113 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, all;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;

sec. 25, lots 1 thru 3, E½NE¼, NW¼, N½SW¼, and N½SE¼;
sec. 26, all;
sec. 27, all;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, lots 1 thru 4, NE¼, W½NW¼, NE¼SW¼, and N½SE¼;
sec. 32, all;
sec. 33, N½NE¼ and N½NW¼;
sec. 34, all;
sec. 35, N½NE¼ and N½NW¼;
sec. 36, all.

T. 23 N., R. 113 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, lots 1 thru 4, NW¼, and S½;
sec. 12, lots 1 thru 10, and 12, and W½NE¼;
sec. 13, all;
sec. 14, lots 1, 2, 4, E½NE¼, NE¼NW¼, SE¼SW¼, and SE¼;
sec. 15, lots 2 thru 7 and 9;
sec. 16, lots 1 thru 4, N½, N½SW¼ and N½SE¼;
sec. 17, all;
sec. 20, lots 1 thru 9, and 11 and 12, NW¼NE¼, NE¼NW¼, and SE¼SE¼;
sec. 21, lots 3, 4, and 9 thru 12, SE¼NE¼, and S½
sec. 22, lots 2 thru 4, and 6, S½NE¼, S½NW¼, and S½;
sec. 23, lot 1, NE¼, NE¼NW¼, S½NW¼, and S½;
sec. 24, all;
sec. 25, all;
sec. 26, al
sec. 27, all;
sec. 28, all;
sec. 29, lots 2 thru 4, NE¼, E½NW¼, E½SW¼, and SE¼;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 36, all.

T. 24 N., R. 113 W.,
sec. 1, lots 2 thru 5 and S½SW¼;
sec. 2, lots 3 and 4, and S½;
sec. 3, S½SW¼ and SE¼;
sec. 8, lots 4 and 7, E½SW¼, and SE¼;

sec. 9, lot 1, NE¼NE¼, S½NE¼, S½NW¼, S½;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, all;
sec. 28, all;
sec. 29, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 36, all.

T. 12 N., R. 114 W.,
sec. 2, lot 4;
sec. 3, all;
sec. 4, lot 1, SE¼NE¼ and E½SE¼;
sec. 9, lots 4 and 5, E½NE¼, and NE¼SE¼;
sec. 10, lots 1, 2, 7, and 8, NE¼, NW¼, N½SW¼, and NW¼SE¼;
sec. 11, lots 1 thru 8, S½NE¼, and N½SE¼;
sec. 12, lots 1 thru 8, S½NE¼, S½NW¼, N½SW¼ and N½SE¼;
sec. 13, all;
sec. 14, all;
sec. 15, NE¼NE¼, S½NE¼, W½, and SE¼;
sec. 22, N½, N½SW¼, SW¼SW¼, and NW¼SE¼;
sec. 23, NE¼ and N½NW¼;
sec. 24, N½NW¼ and SW¼NW¼;
sec. 28, lot 1.

T. 13 N., R. 114 W.,
sec. 1, all;
sec. 2, all;
sec. 3, lots 1 thru 4, S½NE¼, S½NW¼, and SE¼;
sec. 4, lots 1 thru 4, S½NE¼, S½NW¼, SW¼, and W½SE¼;
sec. 5, all;
sec. 6, lots 3 thru 7, SE¼NW¼, and E½SE¼;
sec. 7, lots 1 thru 3, N½NE¼, SE¼NE¼, E½NW¼, NE¼SE¼, and S½SE¼;
sec. 8, N½, SW¼, N½SE¼, and SW¼SE¼;

sec. 9, NW¼NE¼, N½NW¼, SW¼NW¼, and NW¼SW¼;
sec. 10, E½ and NE¼NW¼;
sec. 11, all;
sec. 12, all;
sec. 13, N½, N½SW¼, SE¼SW¼, and SE¼;
sec. 14, all;
sec. 15, E½;
sec. 16, SE¼NW¼ and E½SW¼;
sec. 17, W½NE¼, W½, and W½SE¼;
sec. 18, lot 1, SE¼SW¼, and S½SE¼;
sec. 19, lots 1 thru 4, E½NW¼ and E½SW¼;
sec. 21, S½NE¼, E½NW¼, E½SW¼, and SE¼;
sec. 22, NE¼, S½NW¼, SW¼, and SE¼;
sec. 23, S½SW¼ and S½SE¼;
sec. 24, NE¼, E½NW¼, NE¼SW¼, S½SW¼, and SE¼;
sec. 25, W½NE¼ and W½;
sec. 26, all;
sec. 27, all;
sec. 33, E½NE¼ and E½SE¼;
sec. 34, W½NW¼ and W½SW¼;
sec. 35, NE¼, E½NW¼ and E½SW¼.

T. 14 N., R. 114 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, lots 2, 5 thru 7, SE¼NE¼, E½SW¼, and SE¼;
sec. 7, all;
sec. 8, all;
sec. 9, NE¼, NW¼, N½SW¼, SW¼SW¼, and NW¼SE¼;
sec. 10, all;
sec. 11, N½NE¼, N½NW¼, SW¼NW¼, and W½SW¼;
sec. 12, E½, E½NW¼ and E½SW¼;
sec. 13, all;
sec. 14, S½NE¼, W½NW¼, SE¼NW¼, and S½;
sec. 15, all;
sec. 16, NE¼, SE¼NW¼, and S½;
sec. 17, N½NE¼, SW¼NE¼, W½, and SE¼;
sec. 18, all;
sec. 19, lots 1, 3 and 4, E½NE¼, SW¼NE¼, E½SW¼, and SE¼;
sec. 20, N½, SW¼ and NE¼SE¼;
sec. 21, N½NE¼, NW¼, SE¼SW¼, and SE¼;
sec. 22, NE¼, N½NW¼, and S½;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, all;

sec. 28, NE¼, NE¼NW¼, S½NW¼, and S½;
sec. 29, SE¼NE¼, N½NW¼, SW¼NW¼, W½SW¼, and SE¼SW¼;
sec. 30, all;
sec. 31, lots 1 thru 4, N½NE¼, E½NW¼and E½SW¼;
sec. 32, E½NE¼, W½NW¼, E½SW¼, and SE¼;
sec. 33, all;
sec. 34, all;
sec. 35, W½NW¼, NW¼SW¼, and S½SE¼;
sec. 36, all.

T. 15 N., R. 114 W.,
sec. 1, lots 3 and 4, S½NE¼, S½NW¼ and S½;
sec. 2, lot 1;
sec. 12, all;
sec. 13, all;
sec. 14, E½NE¼ and E½SE¼;
sec. 23, E½NE¼ and SE¼SE¼;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, NE¼, NE¼NW¼, S½NW¼, and S½;
sec. 28, S½NE¼, S½NW¼ and S½;
sec. 29, all;
sec. 30, SE¼SE¼;
sec. 31, lots 3 and 4, NE¼, E½NW¼, E½SW¼, and N½SE¼;
sec. 32, N½, N½SW¼, SE¼SW¼, and SE¼;
sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 36, all.

T. 16 N., R. 114 W.,
sec. 1, lots 1 thru 4, 9, and 10, and N½SW¼;
sec. 2, lots 1 thru 4 and l9 thru 12, N½SW¼, and N½SE¼;
sec. 3, lots 1 thru 4 and l9 thru 12, S½NE¼, S½NW¼, N½SW¼, and N½SE¼;
sec. 4, lots 1 thru 4 and l9 thru 12, S½NE¼, S½NW¼, N½SW¼, and N½SE¼;
sec. 5, lots 1 thru 4 and l9 thru 12, N½SW¼, and N½SE¼;
sec. 6, lots 1 thru 4;
sec. 7, lots 1 thru 4, NE¼, E½NW¼, and E½SW¼;
sec. 8, NW¼;
sec. 10, N½NE¼;
sec. 11, S½NE¼, S¼NW¼ and S½;
sec. 12, SW¼NE¼, W½, W½SE¼, and SE¼SE¼;
sec. 13, N½, SW¼ and E½SE¼;
sec. 14, all;
sec. 15, E½NE¼, SW¼NE¼, N½SE¼, SE¼SE¼;
sec. 18, N½NE¼;
sec. 22, E½NE¼;
sec. 23, W½NW¼ and SE¼NW¼;
sec. 24, E½NE¼, N½NW¼, SE¼SW¼, and SE¼;

sec. 25, W½NE¼, E½NW¼ and SW¼;
sec. 26, E½SE¼;
sec. 28, NW¼NW¼;
sec. 35, E½NE¼ and NE¼SE¼;
sec. 36, W½.

T. 17 N., R. 114 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 28, E½
sec. 30, all.

T. 18 N., R. 114 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, NW¼NW¼ and SE¼SE¼;
sec. 12, all;
sec. 14, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 19 N., R. 114 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;

sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 20 N., R. 114 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 21 N., R. 114 W.,
sec. 1, lots 1 thru 4;
sec. 2, all;
sec. 3, lots 1 thru 4, SW¼NE¼, S½NW¼, N½SW¼, and NW¼SE¼;
sec. 4, all;
sec. 5, lots 1 thru 4, S½NE¼, S½NW¼, N½SW¼and N½SE¼;
sec. 6, all;
sec. 7, lot 1 and NE¼NW¼;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 25, lots 1, 2, and 4;
sec. 26, lots 1 thru 4, 6, and 10;
sec. 27, lots 2 and 3;

sec. 28, lots 1 thru 7, N½NE¼, and NE¼NW¼;
sec. 30, lots 1 thru 4, NE¼, E½NW¼and E½SW¼;
sec. 32, S½NE¼, S½NW¼ and S½;
sec. 34, lots 1 thru 6, E½SW¼, and SE¼.

T. 22 N., R. 114 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, all;
sec. 6, lots 1 thru 7, S½NE¼, SE¼NW¼, NE¼SW¼, and SE¼;
sec. 7, NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 8, NE¼, W½NW¼, SE¼NW¼, and S½;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, lots 1, 2, 5, and 6, NE¼, N½NW¼, and NE¼SE¼;
sec. 27, lots 1 thru 8, N½NE¼and N½NW¼;
sec. 28, lots 1 thru 4 and 6 thru 9, and N½NE¼;
sec. 29, lots 1, 2, 6, and 7, NW¼NE¼, NE¼NW¼, NE¼SW¼, S½SW¼and S½SE¼;
sec. 30, lots 1, 2 and 5 thru 10, SE¼SW¼, and S½SE¼;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all.

T. 23 N., R. 114 W.,
sec. 1, all;
sec. 2, all;
sec. 3, all;
sec. 4, all;
sec. 5, lots 1 thru 4, S½NE¼, SW¼NW¼, W½SW¼, SE¼SW¼, and SE¼;
sec. 6, all;
sec. 7, all;

sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, all;
sec. 12, all;
sec. 13, all;
sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;
sec. 22, all;
sec. 23, all;
sec. 24, N½, N½SW¼, SW¼SW¼, and NW¼SE¼;
sec. 25, S½NE¼, NW¼NW¼, S½;
sec. 26, N½NE¼, SW¼NE¼, NW¼, and S½;
sec. 27, all;
sec. 28, all;
sec. 29, all;
sec. 30, all;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 35, all.

T. 24 N., R. 114 W.,
sec. 3, lots 15, 16, 17, 19, 20 and SW¼SW¼;
sec. 4, lots 11 thru 14, and S½;
sec. 5, lots 12 thru 16, and S½;
sec. 6, lots 16 thru 21, E½SW¼, and SW¼;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, all;
sec. 11, lots 1 thru 5, W½SW¼, SE¼SW¼, and S½SE¼;
sec. 12, lots 1 thru 5, S½SW¼, and SW¼SE¼;
sec. 13, all;
sec. 14, all;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, all;
sec. 19, all;
sec. 20, all;
sec. 21, all;

sec. 22, all;
sec. 23, all;
sec. 24, all;
sec. 25, all;
sec. 26, all;
sec. 27, all;
sec. 28, N½, S½SW¼ and S½SE¼;
sec. 29, N½, S½SW¼ and S½SE¼;
sec. 30, lots 5, 6, and 8, NE¼, E½NW¼, SE¼SW¼ and S½SE¼;
sec. 31, all;
sec. 32, all;
sec. 33, all;
sec. 34, all;
sec. 35, all;
sec. 36, all.

T. 13 N., R. 115 W.,
sec. 1, lots 1 thru 4, S½NE¼, S½NW¼, and W½SW¼;
sec. 2, all;
sec. 3, lots 1 and 4, SE¼NE¼, SW¼NW¼, NW¼SW¼, NE¼SE¼, and S½SE¼;
sec. 4, lot 2, SW¼NE¼, and SE¼;
sec. 5, lots 1 thru 4, S½NE¼, S½NW¼, and SE¼;
sec. 6, lot 1;
sec. 8, E½,
sec. 9, NE¼, E½NW¼, and E½SE¼;
sec. 10, E½NE¼ and S½;
sec. 11, N½, SW¼ and W½SE¼;
sec. 12, NE¼, W½NW¼, E½SW¼, and SE¼;
sec. 13, NE¼, E½NW¼, NE¼SW¼, S½SW¼, and N½SE¼;
sec. 14, W½NE¼, NW¼, W½SW¼;
sec. 15, all;
sec. 16, E½NE¼, S½SW¼;
sec. 17, all;
sec. 20, N½NE¼, SE¼NE¼, NW¼, and S½SW¼;
sec. 21, all;
sec. 22, all;
sec. 23, NE¼NE¼, W½NW¼, and S½;
sec. 24, N½NW¼ and E½SE¼;
sec. 26, NW¼NE¼, W½ and NW¼SE¼;
sec. 27, NE¼, NE¼NW¼, NE¼SW¼, S½SW¼, and SE¼;
sec. 28, W½NE¼, NW¼, E½SW¼, and SE¼;
sec. 29, SE¼NE¼, E½NW¼, and W½SE¼;
sec. 30, lots 3 and 4, SE¼NE¼, and E½SW¼.

T. 14 N., R. 115 W.,
sec. 1, SE¼SE¼;
sec. 11, E½NE¼, E½SW¼, N½SE¼, and SW¼SE¼;
sec. 12, all;
sec. 13, N½NW¼, SW¼NW¼, S½SW¼, NE¼SE¼, and S½SE¼;
sec. 14, W½ and NW¼SE¼;

sec. 15, N½SE¼ and SE¼SE¼;
sec. 20, SE¼SE¼;
sec. 22, SE¼NE¼, NE¼SW¼, and SE¼SE¼;
sec. 23, NE¼NE¼, S½NE¼, NW¼NW¼, NE¼SW¼, S½SW¼, and SE¼;
sec. 24, all;
sec. 25, E½NE¼, NW¼NW¼, SE¼SW¼, and NE¼SE¼;
sec. 26, N½, SW¼, and NW¼SE¼;
sec. 27, NE¼ and S½;
sec. 28, SE¼NE¼ and E½SE¼;
sec. 29, E½NE¼, NE¼NW¼, S½SW¼, and E½SE¼;
sec. 31, S½SE¼;
sec. 32, W½;
sec. 33, N½SE¼ and SW¼SE¼;
sec. 34, W½NE¼, SE¼NW¼, NE¼SW¼, and NW¼SE¼;
sec. 35, E½NW¼, E½SW¼ and W½SE¼;
sec. 36, W½NE¼, NE¼NW¼, SE¼SW¼, and SE¼.

T. 15 N., R. 115 W.,
sec. 5, lots 4 and 5 and SE¼SW¼
sec. 7, lots 2;
sec. 31, SE¼NE¼.

T. 16 N., R. 115 W.,
sec. 1, lots 1 thru 4;
sec. 2, all;
sec. 3 lots 1 thru 4;
sec. 4, all;
sec. 5, lots 1 thru 4;
sec. 6, all;
sec. 7, all;
sec. 8, all;
sec. 9, all;
sec. 10, N½, SW¼, W½W½SE¼, S½NE¼SW¼SE¼, SE¼SW¼SE¼, E½E½SE¼,
S½NW¼SE¼SE¼ and SW¼SE¼SE¼;
sec. 11, S½NW¼ and SW¼;
sec. 12, NE¼, NE¼NW¼, E½SW¼, and SE¼;
sec. 13, NW¼NE¼;
sec. 14, SW¼NW¼;
sec. 15, all;
sec. 16, all;
sec. 17, all;
sec. 18, lots 1 and 4, N½NE¼, NE¼NW¼, SE¼SW¼, S½SE¼;
sec. 19, all;
sec. 20, lots 1, 2 and 4, N½, N½SW¼, and N½SE¼;
sec. 21, all;
sec. 22, NW¼;
sec. 28, N½NE¼, SW¼NE¼, NW¼, NE¼SW¼, and NW¼SE¼;
sec. 29, lots 1 thru 4 and 6 thru 8, and NW¼NE¼;
sec. 30, all;
sec. 31, lot 4;

sec. 32, lot 1.

T. 17 N., R. 115 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, N½ and SW¼;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 18 N., R. 115 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 19 N., R. 115 W.,
sec. 2, all;
sec. 4, all;
sec. 6, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;

sec. 16, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 20 N., R. 115 W.,
sec. 2, all;
sec. 4, all;
sec. 8, all;
sec. 10, all;
sec. 12, all;
sec. 14, all;
sec. 18, all;
sec. 20, all;
sec. 22, all;
sec. 24, all;
sec. 26, all;
sec. 28, all;
sec. 30, all;
sec. 32, all;
sec. 34, all;
sec. 36, all.

T. 13 N., R. 116 W.,
sec. 1, lot 2, SW¼NE¼, SE¼NW¼, and SW¼;
sec. 2, lot 2;
sec. 11, E½NE¼ and SE¼;
sec. 12, NW¼NE¼, NW¼, N½SW¼, SW¼SW¼, and W½SE¼;
sec. 13, W½NE¼, NW¼NW¼, and W½SW¼;
sec. 14, E½;
sec. 23, NE¼ and S½SE¼;
sec. 25, S½;
sec. 26, SE¼.

T. 14 N., R. 116 W.,
sec. 35, E½;
sec. 36, NW¼NW¼.

T. 15 N., R. 116 W.,
sec. 1, lot 4, SW¼NW¼ and W½SW¼;
sec. 2, lots 1 and 2, S½NE¼ and SE¼;
sec. 11, NW¼NE¼ and NW¼SE¼;
sec. 12, NW¼NE¼, SE¼NE¼ and NE¼NW¼;

sec. 23, SE¼SE¼;
sec. 25, N½NW¼ and SW¼NW¼;
sec. 26, E½NE¼.

T. 16 N., R. 116 W.,
sec. 1, lots 1 thru 4;
sec. 2, lots 1, 2, 5, 6, 11, and 12, S½NE¼, and N½SE¼;
sec. 11, E½;
sec. 12, all;
sec. 13, all;
sec. 14, E½;
sec. 23, E½;
sec. 24, all;
sec. 25, N½, N½SW¼, SE¼SW¼, and SE¼;
sec. 26, E½;
sec. 35, NE¼ and NW¼SE¼;
sec. 36, S½SE¼.

Appendix 4 – Proposed Right-of Way-Stipulations

Standard

1. 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.
2. The Holder is responsible for informing all persons associated with this project that they shall be subject to prosecution for intentionally damaging, altering, excavating, or removing any archeological, historical, or vertebrate fossil objects or sites. If archeological, historical, or vertebrate fossil materials are discovered, the Holder is to suspend all operations that further disturb such materials immediately and contact the Authorized Officer. Operations are not to resume until written authorization to proceed is issued by the Authorized Officer (BLM 8100.02.E; Title 16 U.S.C. § 470aa-470mm).
3. 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 (add date). 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.

Pore Space Stipulations

1. The Holder must avoid unreasonable interference with operations on existing mineral leases authorized under the Mineral Leasing Act of 1920 (MLA), as amended, by preventing unnecessary or unreasonable damage or material interference to surface and subsurface authorized uses and economically recoverable mineral resources.
2. Locations of CO_2 sequestration wells located on or affecting federal lands that penetrate structural closure along the Moxa arch or within the WY Thrust Belt should be evaluated for the presence of hydrocarbons and helium within the targeted injection formation(s) before injection of CO_2 begins. The BLM AO may request results of the evaluations for each well at the time of drilling.

Notice to Proceed (NTP)

1. The Holder shall not initiate any injection activities under the right-of-way grant

without the prior written authorization of the BLM authorized officer. Such authorization shall be a written notice to proceed issued by the BLM authorized officer. Any notice to proceed shall authorize injection or use of the BLM-administered federal pore space only as therein expressly stated and only for the particular location or use therein described.

   i. The Holder must submit the Class VI well authorization(s) to inject and operate from the Wyoming Department of Environmental Quality – Water Quality Division to the BLM authorized officer with their request for BLM approval of the NTP.

2. The authorized officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

Bonding

1. A bond, acceptable to the authorized officer, shall be furnished by the Holder before a notice to proceed is issued or at such earlier date as may be specified by the authorized officer.

Mitigation Measures/Conditions of Approval

Greater Sage-Grouse General Habitat

1. Surface occupancy and surface disturbing activities would be prohibited or restricted within a 0.25-mile radius of the perimeter of occupied sage-grouse leks within GHMA.
2. Avoid human activity between 8pm and 8 am from March 1 to May 15 within 0.25 miles of the perimeter of occupied greater sage-grouse leks.

Greater Sage-Grouse Priority Habitat

1. Surface disturbing and/or disruptive activities would be prohibited from March 15 to June 30 to protect sage-grouse nesting and early brood rearing habitats within 2 miles of the perimeter of any occupied lek within GHMA.
2. Construction activity and surface disturbance would be prohibited during the periods of March 15 – June 30 for the protection of Greater Sage-grouse PHMA habitat. Any exceptions to this requirement must have prior written approval from the authorized officer.
3. Surface disturbing and disruptive activities would be restricted to 1 disturbance per 640-acre average or less than 5% disturbance in PHMA.
4. Surface occupancy and surface disturbing activities would be prohibited or restricted within a 0.6-mile radius of the perimeter of occupied sage-grouse leks within PHMA.
5. Avoid human activity between 8pm and 8 am from March 1 to May 15 within 0.25 miles of the perimeter of occupied greater sage-grouse leks.

Big Game Crucial Winter Range Habitat

1. No disruptive activities will be allowed in big game crucial winter range between November 15 and April 30.

Elk Parturition Habitat

1. No disruptive activities will be allowed in elk parturition habitat between May 1 and June 30.

Raptor Nesting

1. No surface occupancy or disturbing activities within a 0.75-mile radius during American Kestrel seasonal restrictions (February 1-August 15) unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policy to raptor nests.
2. No surface occupancy or disturbing activities within a 0.75-mile radius during Burrowing Owl seasonal restrictions (April 1-September 15) unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policy to raptor nests.
3. No surface occupancy or disturbing activities within a 1-mile radius during Ferruginous Hawk seasonal restrictions (February 1-July 31) unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policy to raptor nests.
4. No surface occupancy or disturbing activities within a 0.75-mile radius during Golden Eagle seasonal restrictions (February 1-July 31) unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policy to raptor nests.
5. No surface occupancy or disturbing activities within a 0.75-mile radius during other raptor (Great Horned Owl, Northern Harrier, Osprey, Prairie Falcon, Red-tailed Hawk, Swainson's Hawk, and general raptor) seasonal restrictions (February 1-August 15) unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policy to raptor nests.

Pygmy Rabbit

1. Pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied pygmy rabbit habitat.

White-tailed Prairie Dogs

1. To minimize impacts described above, pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied white-tailed prairie dog habitat. Surface disturbance and disruptive activities in occupied white-tailed prairie dog colonies or complexes of 200 acres or greater would be prohibited.

Idaho Pocket Gopher

1. To minimize impacts described above, pre-construction surveys would be required in areas of proposed development. Surface disturbing activities will be avoided in occupied Idaho pocket gopher habitat.

BLM Sensitive Bats

1. Pre-construction surveys and avoidance of habitat where possible would help reduce impacts to bat species.

Migratory Birds

1. Pre-construction surveys and avoidance of habitat where possible would help reduce impacts to migratory bird species.

Mountain Plover

1. No surface disturbing or disruptive activities in area of mountain plover nesting habitat until a survey is conducted by a qualified biologist and a plan following best available science is submitted to the AO that will protect the area during nesting season (April 10-July 10).

BLM Sensitive Species - Amphibians

1. Impacts would be reduced by prohibiting surface disturbance within 500 feet of surface water and/or riparian areas.

Paleontological Resources

1. (Construction Monitor) A certified paleontologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior will be on site at all times during construction. Any paleontological materials located during construction will be reported to the authorized officer. Procedures for determining significance and/or effect will be established at that time. Cost of any further paleontological work will be borne by the holder.
2. (Open Trench Inspection) A certified paleontologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior will inspect the open pipeline trench after construction and before the pipeline is placed into the trench. Any paleontological materials located during construction will be reported to the authorized officer. Procedures for determining significance and/or effect will be established at that time. Cost of any further paleontological work will be borne by the holder.
3. (Spot Check) A certified paleontologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior will be on site at all times during construction and shall inspect any bedrock exposed during surface disturbing activities (such as the construction of the reserve pit, well pad, access road, etc.). Any paleontological materials located during construction will be reported to the authorized officer. Procedures for determining significance and/or effect will be established at that time. Cost of any further paleontological work will be borne by the holder.

BLM Special Status Plant Species ACEC

1. Surface occupancy and use would be prohibited within the Special Status Plant Species ACEC.

BLM Special Status Plants

1. Pre-construction surveys would be required in areas of sensitive plant species habitat. Surface disturbing activities will be restricted unless the operator submits a plan that adequately addresses mitigation of impacts following the BLM mitigation policies for Special Status plant species.

National Historic Trails

1. To minimize impacts, sections of the proposed project area located within the RSFO boundary, are restricted to surface-disturbing activities within the National Trails Management Corridor if the project will cause an adverse effect or cause more than a weak contrast to the setting of the NHT (BLM 2024).

Appendix 5 – Public Scoping Comments

Table 1- Public Scoping Comments

Submission ID/Type	Name	Substantive	Concern/Issue	Response
SWWyoming CO2-1-500337171	Scared by the climate crisis	N	Nonspecific general support for the project	
SWWyoming CO2-1-500338082	Kathy& Ken Scott	N	Nonspecific general opposition to the project	
SWWyoming CO2-1-500338126	Britton Liedtke	N	Nonspecific general support for the project	
SWWyoming CO2-1-500338425	Ranie Lynds, Wyoming State Geological Survey	Y	Comments concerning oil, gas and helium.	See the summary of the RMG report.
SWWyoming CO2-1-500338525	Concerned citizen	N	Nonspecific general support for the project	
SWWyoming CO2-1-500338660	Not Provided	N	Statement neither in direct support or opposition to the project.	
SWWyoming CO2-1-500338708	Richard Spotts	N	No specific issues related to the project were raised. Commenter is concerned on many BLM practices as a whole, all unrelated to this project.	
SWWyoming CO2-1-500338739	Robert F. Rockey, Frontier Carbon Solutions, LLC		Concerns about overlapping ROWs with Frontier's Proposal	
SWWyoming CO2-1-500338758	Jennifer Zygmunt, Wyoming DEQ	Y	Wyoming DEQ requests to participate as a cooperating agency for the. DEQ also notes that Class VI wells are permitted by the state.	BLM notes in section 2.0 of the EA that the BLM is just authorizing a pore space ROW and that DEQ permits Class VI injection wells.
SWWyoming CO2-1-500338761	Wyoming Coalition of Local Governments	Y	The Coalition of Local governments concerns are, impacts to resource development, impacts to water quality/Class VI well permitting, private land owner surface/pore space rights, and cumulative impacts.	As stated in the section 2.0 Proposed Action and Alternatives, the BLM's ROW authorization would only provide for use of the subsurface BLM-administered federal pore space within the project area, and not State of

				Wyoming or private surface or subsurface pore space. Additionally section 2.0 it explains that approval from the State of Wyoming Department of Environmental Quality, not BLM, is needed for the permitting of Class VI wells. Cumulative impacts for each resource impacted are analyzed in detail under the section 3.0 Affected Environment/Environmental Effects under each resource subsection.
Mail	Lane Allred	N	Nonspecific general support for the project	
Email	Will Schultz, WGFD	N	WGFD has no concerns with the current proposal. Seeks to provide input if surface disturbance is proposed in the future.	

Appendix 6 – Draft EA Public Comments

Comment #	Issue/Action	Comment Text	Comment Response
#11-2	110.02 - Coordination, Consultation	Several Endangered Species Act (ESA) listed and candidate species are within the Project area. Because injected CO2 can harm-or even kill-plant and animal species, and future surface-disturbing activities have the potential to cause species take and habitat harms, BLM must therefore formally consult with the U.S. Fish and Wildlife Service (USFWS).	As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development, and therefore does not require consultation with USFWS. If surface disturbance or disruptive activities were to be proposed under further ROWs with the BLM, appropriate consultation would take place at that time, as explained in Sections 3.13-3.15 of the EA.
#17-22	110.02 - Coordination, Consultation	The EA states that the BLM currently manages GRSG through the 2015 Resource Management Plan (RMP) (p. 7) and it includes an analysis of potential impacts to GRSG (pp. 9-11). As the BLM acknowledges in the EA, it is in the process of amending the GRSG RMP. These revisions will include revised Habitat Management Area boundaries, ACECs, stipulations, and mitigation. We recommend coordinating with the BLM GRSG planning group to incorporate into the NEPA document the best available GRSG science and Habitat Management Area evaluations the BLM has completed thus far for the GRSG RMP amendment and use that information to evaluate the potential impacts to GRSG from all phases of development. We also recommend including a commitment in the NEPA document to incorporate the requirements from the Final GRSG RMP. This will be important because GRSG populations continue to decline because of habitat loss and fragmentation and the overall project has the potential for significant surface disturbance and infrastructural development.	Section 2.1 of the EA confirms conformance with the current Sage Grouse ARMPA and acknowledges that any future applications by the proponent could be subject to the pending Greater Sage Grouse Land Use Plan Amendments ROD. Analysis of impacts to greater sage grouse under the no action and proposed action alternatives are presented in Sections 3.1 and 3.2 of the EA.
#6-1	110.04 - Laws, Policies	The BLM must do more than reference its Instruction Memorandum on UIC Class VI CO2 wells when reviewing the environmental consequences of these projects and	See updated Background Section in the EA for information about the DEQ process and Section 1.1 for the purpose and need for federal action.

		should show stakeholders that it is, at the very least, following the outlines of this IM.	
#6-5	110.04 - Laws, Policies	As a preliminary matter, the Draft EA for the Moxa CO2 Project is legally deficient due to the BLM's acknowledged segmenting of the project into different development stages. Federal regulations and the courts have made clear that federal agencies are prohibited from segmenting their National Environmental Policy Act (NEPA) reviews of proposed projects by "divid[ing] connected, cumulative, or similar federal actions into separate projects and thereby fail[ing] to address the true scope and impact of the activities that should be under consideration."11 The NEPA regulations that entered into force on July 1, 2024, reiterate this longstanding prohibition by stating that an agency cannot avoid considering an action "significant" by "segmenting an action into smaller component parts.	As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development. Any future ROW actions are dependent on the proponent's ability to successfully obtain Class VI well permits from the WY DEQ (see background section of EA) and are too speculative at this time to determine potential locations and possible infrastructure.
#11-3	110.04 - Laws, Policies	The proposed ROWs must conform with the relevant land use and resource management plans (RMPs). Based on our analysis, the RMPs do not contemplate this type of activity, and should be amended to evaluate whether this type of action (namely, a ROW for federal subsurface pore space) conforms with the land use plans	See Section 2.1 for conformance of the proposed action with the RMPs for the respective field offices.
#6-2	120 - Proposed Action, Decision	The Draft EA prepared for the Moxa CO2 Project contains virtually no information about the project's plan of operation. Because this information is lacking-and there is no evidence that the BLM itself has received anything from Moxa Carbon describing the company's actual plans-the entire document is devoid of meaningful consideration of the foreseeable impacts relating to injection of CO2 into the pore space in question. As touched on in Section II, infra, depending on information and analysis not presented in the Draft EA, those impacts could be quite significant. But the lack of even basic operational plans also means that it is especially difficult for interested stakeholders to understand what Moxa Carbon is	See updated Background Section in the EA for clarification of the proponent's current application and WY DEQ process for Class VI wells. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.

		proposing and, by extension, what the BLM is considering permitting.	
#6-3	120 - Proposed Action, Decision	there is no information available in the Draft EA or elsewhere online to demonstrate how CO2 will reach the project area. There are no existing CO2 pipelines that appear to serve the area proposed for carbon dioxide injection. While pipelines are therefore almost certain to be proposed, the review and permitting of CO2 pipelines can be time-consuming and the lack of an identifiable proposal for this area suggests this project is in such an early developmental stage that consideration of a right-of-way permit for use of pore space is extremely premature.	See updated Background Section in the EA for clarification of the proponent's current application and WY DEQ process for Class VI wells. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.
#6-4	120 - Proposed Action, Decision	Finally, and most critically, the Draft EA is completely silent regarding the volume, quality, injection depth, monitoring plan, etc. of CO2 that could be or that will be injected or the time period for injection. These factors will have a profound impact on the eventual magnitude of surface-disturbing activities and are of direct relevance to the pore space ROW permit being requested.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#11-4	121 - Issues, Alternatives	The Draft EA erroneously excludes crucial and foreseeably significant issue areas from analysis, such as climate, air quality, seismicity, water resources, and more.	See Appendix 1 for more information on Issues Not Carried Forward for Detailed Analysis. See also the updated Background Section in the EA for requirements for obtaining Class VI well authorizations, including water resource concerns.
#11-14	121 - Issues, Alternatives	BLM failed entirely to consider the potentially devastating impact of a CO2 leak on any environmental or human factor.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well

			authorizations from Wyoming Department of Environmental Quality.
#11-15	121 - Issues, Alternatives	BLM also improperly excluded issue areas-including climate change, cultural/Tribal resources, recreation, vegetation, and soils-from its Draft EA largely because the Draft EA assumes only surface infrastructure has impacts, not dangerous injected waste.62 BLM must gather data on how the specific plants, animals, and environmental features could be impacted by injected CO2 (leaks, seismicity, water contamination, etc.), as well as the attendant surface infrastructure. The Project's effects on these excluded resources are both foreseeably significant and in need of further data collection.	See Appendix 1 for more information on Issues Not Carried Forward for Detailed Analysis. See also the updated Background Section in the EA for requirements for obtaining Class VI well authorizations, including leak prevention, and water resource concerns.
#6-7	122 - Effects Analysis	In addition, despite limited available information, Moxa Carbon's application suggests that a key source of the CO2 that would be injected by this project will come from "planned ammonia production facilities,"24 which media reports suggest involve currently unbuilt coal-to-ammonia processing plants to be constructed in relative proximity to the Moxa CO2 Project.25 In practice, this means the BLM, in its decision not to analyze the greenhouse gas effects of this project,26 has ignored that this project may help justify the construction of new major point sources of CO2 and other pollutants that are not currently in operation. At the same time, it may also be used to justify continued or expanded coal mining, which comes with its own pollution and emissions consequences. These are all "reasonably foreseeable" consequences-that the project proponent has directly mentioned-with significant impacts on the environment.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development. See also Appendix 1 for more information on Issues Not Carried Forward for Detailed Analysis, including GHGs.

#6-8	122 - Effects Analysis	Following a presumption that utilization of the pore space Moxa Carbon seeks to access will take many decades to fill with injected CO2, the BLM should have significantly expanded its environmental analysis to address, at minimum, the following questions: * What effect on surface level resources will changing intensities and types of use have over the next century? * Will the necessity for long-term surface monitoring and regular human presence create additional, unanalyzed impacts on threatened and endangered species present within the project area? * Based on established science and existing data, what environmental changes are likely to occur in the project area that may impact surface level resources and operations? For example, to what extent will changes expected due to climate change further exacerbate the expected environmental impacts of the project, necessitating new or different avoidance or mitigation measures?27 * What risks may be present in the environment that could increase the likelihood of accidental releases of CO2 from project infrastructure, especially risks tied to changing environmental conditions (i.e., drought, flooding, higher temperatures, etc.) over the next century?	Evaluating changing intensities and types of use for the next century is outside scope of the EA. See Section 1.1 for the purpose and need for the federal action. In addition, see updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.
#7-1	122 - Effects Analysis	With a limited understanding of carbon sequestration, we have safety concerns and insist on a minimum 2-mile buffer between the expected CO2 storage plume and the Genesis Alkali mineral leases and/or KSLA boundaty to avoid any potential migration of gas into existing mining operations and future planned mining areas.	See Appendix 1 "Solid Minerals/Geologic Resources" Rationale for Determination for more information on the proposed project, the KSLA, and the MMTA. See also the updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#7-2	122 - Effects Analysis	It appears the BLM has not considered the potential hazard of seismic activity or other mechanisms that could result in the fracturing or migration of gas to faults. Because the eastern boundary of the Moxa Carbon project abuts the KSLA, any fracturing could result in migration to the KSLA.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for obtaining Class VI well authorizations from Wyoming Department of

			Environmental Quality, including seismicity and leak prevention.
#8-3	122 - Effects Analysis	While we realize that the BLM cannot predict when, where or if surface occupancy and disturbing activities will take place, we are concerned that the BLM has not reasonably considered the future actions of Moxa Carbon in the Environmental Assessment. According to the EA, Moxa Carbon, in a letter to the BLM, admits that obtaining a subsurface ROW is the first step in the process and that they will seek to use federal surface lands within the planning area through a separate ROW application at a later date. Given this admission, the BLM should view surface disturbing activities as highly probable within their RFFA framework.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.
#9-4	122 - Effects Analysis	While the Wyoming Department of Environmental Quality will address any concerns about potential impacts of CO2 traveling laterally or vertically during the Class VI permitting process, this does not excuse the BLM from discussion the potential impacts during this NEPA process.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#9-6	122 - Effects Analysis	The proposed Southwest Wyoming CO2 Sequestration Project area is next to the Fontenelle Reservoir and the Green River, which is a major source of water in the southwestern part of the state. The BLM must analyze the potential impacts to groundwater and surface water before the federal pore space is used for CO2 Sequestration to avoid any adverse impacts to these important water sources.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#11-8	122 - Effects Analysis	Last, the "whole of the project" requirement is not just limited to project infrastructure and activities; it also embodies a temporal requirement.14 Most CO2 injection projects span decades, in that they propose to inject CO2 for many years, and then are subject to post-injection site care that can span years.15 BLM is therefore required to analyze impacts for the lifetime of the injection period, as well as the post-injection site closure period.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.

#11-10	122 - Effects Analysis	As explained by the UN's Intergovernmental Panel on Climate Change, "CO2 is denser than air and can therefore accumulate to potentially dangerous concentrations," and "any leak transfers CO2 to the atmosphere."51 BLM must take these risks into account when evaluating the Moxa Project. Even ROWs only for CO2 occupation of pore space could lead to significant harms to workers, nearby residents, recreationalists, wildlife, and ecosystems.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality, including leak prevention.
#11-16	122 - Effects Analysis	not only must BLM analyze the impacts of granting ROWs for CO2 injection (though the impacts of injecting CO2 beneath 605,000 acres of federal lands certainly must be addressed); BLM must also disclose and analyze the totality of the Moxa Project's activities on the climate, air quality, community and wildlife safety, water, and more.13 As reiterated throughout this comment, BLM must disclose and analyze information such as the sources of CO2, how it will arrive at/be injected under federal lands, the composition of the CO2, etc., as well as impacts from the any CO2 pipelines (and possibly other CO2 transport methods), injection wells, etc.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.
#17-2	122 - Effects Analysis	While the BLM mentions that the instant ROW applies only to the subsurface federal pore space, it is reasonably foreseeable that BLM would need to grant future ROWs authorizing surface use and occupancy for the CO2 sequestration project (see page 4 of EA). Therefore, these future ROW authorizations appear to be connected actions and should be included in the same NEPA review per 40 CFR § 1501.3(b) because the surface occupancy ROWs would be "interdependent parts of a larger action and depend on the larger action [in this case the entire CO2 sequestration project] for their justification."	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.

#18-3	122 - Effects Analysis	According to records maintained by the Wyoming Department of Environmental Quality, there are at least ten active mining operations within the proposed project area.5 Given resources being mined-sand and gravel and Trona- it is not immediately clear whether this activity could affect the geologic integrity of the proposed project. Nonetheless, consideration of this risk should have been part of the Draft EA	See Appendix 1 for further information on issues not carried forward for detailed analysis, including solid minerals.
#6-9	122.01 - Cumulative Effects Analysis	Of particular concern is the BLM's disclosure that there are "existing land use activities" that include "oil and gas production [and] mining."28 Despite mentioning these current activities within the project area, the Draft EA is silent as to the location, timeframe, and extensiveness of these activities. This is a critical oversight, as the existence of operating oil and gas wells and mines as well as the possible existence of abandoned and/or orphaned oil and gas wells or mines could pose significant risks to the geologic integrity of the planned injection formation. More information and analysis of this risk is required.	See Appendix 1 for further information on issues not carried forward for detailed analysis, including fluid minerals and solid minerals. See also the addition of Section 3.25 analyzing impacts from the proposed action to other rights-of-way.
#9-1	122.01 - Cumulative Effects Analysis	However, the BLM is still not addressing the other reasonably foreseeable surface disturbance related to the other right-of-way request for pore space in the same area as this current project. While the subsurface right-of-way has not been granted, it is at a similar stage in the environmental review process and will also see some type of surface disturbance once it has received necessary permits from the state for the injection wells. The BLM must at least acknowledge this other right-of-way application.	See addition of Section 3.25 analyzing impacts from the proposed action to other rights-of-way.

#9-2	122.01 - Cumulative Effects Analysis	The EA also describes the total amount of current surface disturbance within the project area, but only generally describes the existing uses as grazing, oil and gas production, and recreation activities. See e.g. EA at 10. There is no additional information provided that breaks down the uses and their associated surface disturbance nor does the BLM provide any maps of the existing uses in the project area. Without this information, it is impossible to discern whether the information is accurate and what specific disturbances are accounted for in the calculation. For instance, what surface disturbance acreage is associated with grazing? Is this only limited to specific range improvements? The same questions arise in relation to recreational activities. The BLM should provide maps that document the existing disturbance in the project area to support its cumulative impact analysis section. A visual of the existing surface disturbance locations compared to the proposed project area also provides more information relevant to possible locations of any future infrastructure to support the CO2 Sequestration Project.	See added WYGIS citation for the total disturbance estimate.
#9-5	122.01 - Cumulative Effects Analysis	The project area contains many producing oil and gas wells and neighbors the Known Sodium Leasing Area and the Mechanically Mineable Trona Area. The BLM must assess the potential impact the CO2 Sequestration Project may have on this existing development as part of the cumulative impact analysis and ensure that the use of the subsurface pore space for CO2 storage will not adversely affect existing development and any potential future development in this area.	See addition of Section 3.25 analyzing impacts from the proposed action to other rights-of-way. See also Appendix 1 for Issues Considered but not Carried Forward for Detailed Analysis regarding impacts to fluid mineral leasing as well as the KSLA and MMTA.

#11-6	122.01 - Cumulative Effects Analysis	BLM is misconstruing the meaning of "reasonably foreseeable future actions," a term defined in regulation as "federal and non-federal activities not yet undertaken, but sufficiently likely to occur, that a Responsible Official of ordinary prudence would take such activities into account in reaching a decision."8 Such activities "must be taken into account in the analysis of cumulative impact[s].9" Reasonably foreseeable future actions "do not include those actions that are highly speculative or indefinite."10 The Draft EA asserts (in direct contradiction to the letter from Moxa quoted above) that the "only actions for the project area which are highly probable are continued livestock grazing, range improvement projects and recreation."11 That CO2 occupation of federal pore space will require injection wells and surface infrastructure, however, is also "probable" and is not "highly speculative."	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. Without any proposed infrastructure or wells, it is too speculative to analyze potential cumulative effects.
#4-1	123 - Technical, Editorial	The proposed right-of-way is for 605,091 acres of pore space underneath federal managed lands in Lincoln, Uinta, and Sweetwater counties in southwest Wyoming for storage of carbon dioxide. (EA, pg. 38 of 59). 1. Why is the BLM denoting that authorization will ONLY be for the proposed ROW of Unita and Sweetwater counties? (EA, Pg. 4 of 59).	Updated to state, "Lincoln, Uinta, and Sweetwater counties" in the Proposed Action on pg. 6 of 59 (previously pg. 4 of 59).
#5-1	123 - Technical, Editorial	WDEQ/WQD recommends that clarification be made as to the exclusivity of the ROW prior to and after issuance of the NTP.	See addition of Section 3.25 analyzing impacts from the proposed action to other rights-of-way.
#9-3	123 - Technical, Editorial	In addition, there appears to be a typo on Pages 10 and 11 of the EA. It currently states "[t]here are currently 143,972 acres of disturbance within the project area" on Page 10 and then states "[t]here are currently 43,972 acres of disturbance within the project area" on Page 11. Based on the discussion of impacts to Greater Sage-Grouse habitat, it is likely that the BLM meant to reference the amount of surface disturbance within general habitat management areas and priority habitat management areas that fall within the project area. These two sentences need revision.	Updated to state, "143,972 acres of disturbance in GHMA within the project area" and "43,972 acres of disturbance in PHMA within the project area" in the cumulative impacts analysis of Sections 3.1 and 3.2 of the EA, respectively.

#17-3	132 - Water, Watershed Mgmt	Evaluating CO2 confining zone integrity to ensure proper containment of the injected gas informs whether there could be impacts to water quality and therefore the feasibility of the project. This should be analyzed in the EA rather than deferred to future WYDEQ UIC permitting actions because it is integral to informed BLM decision making.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#17-5	132 - Water, Watershed Mgmt	To support a full impacts analysis, the EPA recommends the BLM include detailed water resource information in the NEPA document to create an inventory of existing water resources and to understand any potential impacts to them related to the development and operation of the project.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#17-6	132 - Water, Watershed Mgmt	We recommend the NEPA document include a description of the impacts that may result from project activities to wetlands and any springs and spring runs. These include impacts related to project construction and operations which may influence aquifer water quality and the quality of groundwater supported wetlands or other aquatic resources.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#17-7	132 - Water, Watershed Mgmt	The EPA recommends that the NEPA document identify foreseeable impacts to regional waters and their overall water quality. This assessment should include the disclosure of which waters may be impacted, the nature of the impacts, and the specific pollutants involved.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#17-8	132 - Water, Watershed Mgmt	The EPA recommends the NEPA document identify and discuss how surface water quality will be protected during construction activities. To this end, we recommend the NEPA analysis include: * A list of BMPs that will be required to protect surface water resources; * A discussion of the circumstances under which the BMPs would be applied (e.g., proximity to surface water resources, presence of subsidence, erosive soils, slopes, etc.); and 8 * A monitoring and compliance plan detailing how the BLM, or another government entity, would ensure the timely and correct implementation of the BMPs as well as timely maintenance.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.

#17-9	133 - Air and Climate	The EA dismissed air resources from further analysis in Appendix 1 on the basis that the project will conform with all applicable local, state, and federal laws regarding air quality. However, adherence to permitting requirements and potential application of undescribed best management practices is not a substitute for analysis of impacts under NEPA and this approach lacks an evaluation of potential impacts, including indirect and cumulative impacts, related to project construction and development that will occur despite conformance with laws and future unknown conditions of approval. The NEPA analysis should evaluate the full range of potential direct, indirect, and cumulative impacts of the BLM's ROW decision.	See Appendix 1 for further information on issues not carried forward for detailed analysis, including air resources. See also the Proposed Action for what authorization is being requested at this time.
#17-10	133 - Air and Climate	We recommend developing an emissions inventory for the CO2 sequestration development activities that are planned for the project, based on a POD or information requested of Moxa. These activities likely include, but are not limited to, drilling of wells and the construction and operation of compression facilities which generate their own emissions and create reasonably foreseeable indirect and cumulative impacts associated with the project that should be explored in the NEPA document.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also the Proposed Action for what authorization is being requested at this time.
#17-12	133 - Air and Climate	Appendix 1 of the EA dismissed climate change and GHG emissions from further analysis because "[t]he proposed action would not produce or contribute to the environment hydrocarbons or other potential 'downstream' sources of GHGs." However, construction, well development, and operational activities associated with future actions and potential ROWs connected to the project would result in GHG emissions, creating a reasonably foreseeable impact. There are also potential upstream emissions associated with CO2 sequestration projects	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions.
#17-13	133 - Air and Climate	The EPA recommends using the CEQ's interim guidance to inform the development of a climate and GHG analysis in the NEPA document,	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well

			authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions.
#17-14	133 - Air and Climate	Estimate the anticipated net direct and indirect GHG emissions (or reductions thereof) associated with the project alternatives.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions.
#17-15	133 - Air and Climate	Include a discussion of the reasonably foreseeable range of GHG emissions or emissions reductions associated with the project in the context of state, national, and international GHG emissions reduction goals, including the U.S. 2030 Paris GHG reduction target and 2050 net-zero pathway.15 This discussion should address how reasonably foreseeable GHG emissions and storage activities associated with the planning effort are, or are not, consistent with these policies and goals.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions.
#17-16	133 - Air and Climate	Account for the project's climate impacts by utilizing EPA's values for the social cost of GHG emissions	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions.
#17-17	133 - Air and Climate	Consistent with the CEQ's interim guidance, the EPA further recommends that the EA also provide GHG emission estimates from the upstream carbon-producing source, including not only CO2 but other GHG emissions such as methane and nitrous oxides.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for

			detailed analysis, including GHG emissions and air resources.
#17-23	133 - Air and Climate	We recommend that the BLM work with the EPA, FLMs, and state agencies to address the following analysis components: * Impacts from each of the criteria pollutants (ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead), including with respect to their respective NAAQS; * Impacts to AQRVs in potentially impacted Class I areas and any other relevant areas identified in collaboration with Cooperating Agencies and FLMs; and * Impacts that could result from exposure to HAPs based on relevant health-based risk thresholds for HAPs.	See Appendix 1 for further information on issues not carried forward for detailed analysis, including air resources. See also the Proposed Action for what authorization is being requested at this time.
#17-24	133 - Air and Climate	Estimate the anticipated net direct and indirect GHG emissions (or reductions thereof) associated with the project alternatives. This should include information on the CO2 sequestration rates expected after any wells are developed and any known CO2 capture technology efficiency rates.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions and air resources.
#17-25	133 - Air and Climate	Include a discussion of the reasonably foreseeable range of GHG emissions or emissions reductions associated with the project in the context of state, national, and international GHG emissions reduction goals, including the U.S. 2030 Paris GHG reduction target and 2050 net-zero pathway.15 This discussion should address how reasonably foreseeable GHG emissions and storage activities associated with the planning effort are, or are not, consistent with these policies and goals.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions and air resources. See also the Proposed Action for what authorization is being requested at this time.
#17-26	133 - Air and Climate	Account for the project's climate impacts by utilizing EPA's values for the social cost of GHG emissions described further below.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications,

			including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions.
#11-13	141 - Vegetation Mgmt	Similarly, for some plants, the Project will underlay vast swaths of their known habitat-such as the Uinta green-thread, where 80% of the plant's habitat occurs within the Project area.57 As noted in the section below, CO2 leaks can harm soil microbiomes and even kill plants.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality, including leak prevention. See also Sections 3.19 and 3.20 for analysis of impacts to special status plant species.
#11-12	143 - Wildlife/Animals Mgmt	For one, the Project area is within greater sage-grouse (GRSG) General Habitat Management Area and Priority Habitat Management Areas (PHMAs), containing 51 active leks.56 A CO2 leak could harm, or even kill, the GRSG and other animals.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality.
#17-18	180 - Econ. & Soc. Actions, Analyses	The EPA recommends the BLM use EPA's 2023 SC-GHG estimates to monetize the value of net changes in direct and indirect GHG emissions resulting from the project and its related components such as CO2 capture, refinement, and transmission to the planned sequestration facilities. This analysis would assess climate impacts and benefits of the project.	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions and air resources.
#17-19	180 - Econ. & Soc. Actions, Analyses	The EPA also recommends that SC-GHG calculations give specific information regarding the social cost estimate related to individual gases (i.e., use SC-CO2 to monetize CO2 emissions changes, and use SC-CH4 to monetize CH4 emissions changes).	See updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. See also Appendix 1 for further information on issues not carried forward for detailed analysis, including GHG emissions and air resources.

#17-20	180 - Econ. & Soc. Actions, Analyses	The EPA therefore recommends including a detailed analysis of the potential impacts to communities with environmental justice concerns in the NEPA document in order to fully evaluate direct, indirect, and cumulative effects associated with authorizing CO2 sequestration and construction/development activities around these communities. The environmental justice analysis should also consider measures to mitigate the potential effects identified.	See rationale under "Environmental Justice [EJ]" in Appendix 1 for explanation of determining that EJ concerns would not be carried forward for detailed analysis.
#17-21	180 - Econ. & Soc. Actions, Analyses	The EPA further recommends detailing effective public involvement and communication strategies regarding the potential hazards associated with these types of projects in the environmental justice analysis. The EPA also recommends the NEPA document contain ROW stipulations to mitigate potential impacts to public health	See rationale under "Environmental Justice [EJ]" in Appendix 1 for explanation of determining that EJ concerns would not be carried forward for detailed analysis. Appendix 1 also includes further information regarding not carrying forward Wastes (hazardous or solid) for detailed analysis. See also updated Background Section in the EA for clarification of the proponent's current application and requirements for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality, including leak prevention.
#11-11	182.01 - Cultural, Hist., Anthro. Mgmt	Moreover, the subregion "contains the greatest concentration of cultural resources" in the Kemmerer Field Office.54 Dismissing the impacts of dangerous CO2 as having "no potential to affect historic properties" ignores the evidence of CO2 harms.	Analysis of impacts from the proposed action on cultural resources is presented in Section 3.22 of the EA. See also the updated Background Section in the EA for clarification of the proponent's current application and requirements for any future applications, including those for obtaining Class VI well authorizations from Wyoming Department of Environmental Quality. As stated in the Proposed Action and Alternatives (Section 2.0 of the EA), the current application does not include any related surface infrastructure or disturbance, or well development. The BLM's pore space ROW grant would not authorize surface-disturbing activities, surface occupancy of BLM-administered public lands, or well development.

#16-1	235 - Minerals & Geol. Resources	Moxa Carbon Storage recommends that this stipulation be revised as follows to protect existing mineral lessees while also encouraging the development of CO2 sequestration projects: To prevent unreasonable interference with operations on existing mineral leases, the Holder must prevent unnecessary or unreasonable damage or material interference to (a) surface operations of existing leases, and (b) economically recoverable minerals in the injection and confining zones.	BLM will determine appropriate stipulation language for any issued ROW grant. See accepted changes in Appendix 4.
#16-2	235 - Minerals & Geol. Resources	To harmonize this stipulation with WDEQ's Class VI regulatory process, Moxa Carbon Storage recommends that NTP stipulation 1(i) be revised as follows: The Holder must submit the Class VI well permit from the Wyoming Department of Environmental Quality to the BLM authorized officer with their request for BLM approval of the NTP.	BLM will determine appropriate stipulation language for any issued ROW grant. See accepted changes in Appendix 4.
#16-3	249 - Facilities, Structures	Because its ROW application does not include the request to use any surface of any BLM-administered lands, Moxa Carbon Storage recommends that BLM remove these surface-related Mitigation Measures/COAs until BLM is presented with a specific request to use BLM-administered surface. Once BLM is presented with a request for specific surface ROW(s), the agency will be positioned to assess which surface-related mitigation measures and COAs are appropriate to address resource concerns related to the use of particular BLM surface area.	BLM will determine appropriate stipulation language for any issued ROW grant. See accepted changes in Appendix 4.