# APPENDIX E. CONSTRUCTION, MITIGATION, AND RECLAMATION PLAN

Page Intentionally Left Blank

NORTH PLAINS CONNECTOR

A Grid United Project

# DRAFT
# CONSTRUCTION, MITIGATION, AND RECLAMATION PLAN

**Prepared by:**

**North Plains Connector LLC, a Grid United LLC Company**

GRID UNITED

**August 2025**

**NORTH PLAINS CONNECTOR LLC**
**NORTH PLAINS CONNECTOR PROJECT**

# DRAFT CONSTRUCTION, MITIGATION, AND RECLAMATION PLAN

## TABLE OF CONTENTS

## LIST OF TABLES



## LIST OF FIGURES



## LIST OF APPENDICES

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AC | alternating current |
| AIMP | Draft Agricultural Impact Mitigation Plan |
| APLIC | Avian Power Line Interaction Committee |
| ATV | all-terrain vehicle |
| BLM | Bureau of Land Management |
| BMP | best management practice |
| CMRP | Draft Construction, Mitigation, and Reclamation Plan |
| DC | direct current |
| EHV | extra high voltage |
| EI | Environmental Inspector |
| FSH | Forest Service Handbook |
| Grid United | Grid United, LLC |
| HVDC | high-voltage direct current |
| HVDC Transmission Line | new 525-kV HVDC electric transmission line |
| INS | invasive and noxious species |
| kV | kilovolt |
| MBTA | Migratory Bird Treaty Act |
| MDEQ | Montana Department of Environmental Quality |
| MISO | Midcontinent Independent System Operator |
| Morton County Converter Station | new AC/DC converter station in Morton County, North Dakota |
| Morton County Switchyard | new switchyard in Morton County, North Dakota |
| Morton Transmission Line | new 345-kV EHV AC transmission line in Morton County, North Dakota |
| NDDEQ | North Dakota Department of Environmental Quality |
| NERC | North American Electric Reliability Corporation |
| North Plains | North Plains Connector LLC |
| NRCS | National Resource Conservation Service |
| OHWM | Ordinary High Water Mark |
| Oliver Transmission Line | new 345-kV EHV AC transmission line in Morton and Oliver counties, North Dakota |
| Oliver County Substation | new Oliver County Substation, North Dakota constructed by a third party |
| OPGW | optical ground wire |
| Plan | Draft Construction, Mitigation, and Reclamation Plan |
| Project | North Plains Connector Project |
| Project workspace | specific workspaces used to perform construction activities |
| Rosebud County Converter Station | new AC/DC converter station in Rosebud County, Montana |
| Rosebud Transmission Line | Four new single circuit 500-kV EHV AC electrical transmission lines in Rosebud County, Montana |
| SPP | Southwest Power Pool |
| SWPPP | Stormwater Pollution Prevention Plan |

| | |
|---|---|
| USACE | U.S. Army Corps of Engineers |
| USDA ARS | U.S. Department of Agriculture – Agricultural Research Station |
| USFS | U.S. Forest Service |
| USFWS | U.S. Fish and Wildlife Service |
| WECC | Western Electricity Coordinating Council |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Construction, Mitigation, and Reclamation Plan (CMRP or Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, indirect single-purpose subsidiary of Grid United LLC (Grid United), a Houston, Texas-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States power grid more modern, efficient, reliable, and secure.

As proposed, the Project will extend approximately 422 miles from a location near Colstrip, Montana to two separate end points in North Dakota—one near the town of Center and the other near St. Anthony, as shown on Figure 1.0-1. The Project is a bidirectional line to move electricity east or west between the Eastern and Western Interconnections (also referred to as the eastern and western grids) in response to the growing need to move power across long distances to improve the reliability and resiliency of the grid. The Eastern and Western Interconnections are the two largest electrical grids in North America. Specifically, the Project will connect the Western Electricity Coordinating Council (WECC) electrical power markets in the western grid with the Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) of the eastern grid. The Project will sell capacity without preference towards a particular generation technology. Portions of the Project or capacity rights may be owned by electric utilities, cooperatives, government entities, corporate energy providers, or independent generators in the WECC, MISO, or SPP regional power systems.

The Project will consist of four transmission line segments and associated aboveground facilities, as follows:

- A new 500-kilovolt (kV) extra high voltage (EHV) alternating current (AC) electrical transmission line in Rosebud County, Montana (Rosebud Transmission Line). The new line will consist of two single-circuit transmission line segments consisting of one 2.8-mile segment and another 3.2-mile segment connecting with the northeast side of Rosebud County Converter Station. Additionally, two 0.3- and 0.4-mile single-circuit lines connect the converter station to the substation that are collectively part of the Rosebud County Converter Station. The Rosebud Transmission Line will extend east from the existing Colstrip Substation owned by a third-party, to a new AC/direct current (DC) converter station in Rosebud County. The Colstrip Substation will serve as the interconnection point to the WECC power system for the western grid. The associated right-of-way is 200 feet wide and up to approximately 320 feet wide where the lines are co-located. Approximately 2.2 miles of the Rosebud Transmission Line occurs on Montana State Trust Lands.

- One new AC/DC converter station in Rosebud County, Montana (Rosebud County Converter Station). The converter station will connect the eastern terminus of the Rosebud Transmission Line to the western terminus of the new 525 kV high-voltage direct current (HVDC) electrical transmission line.

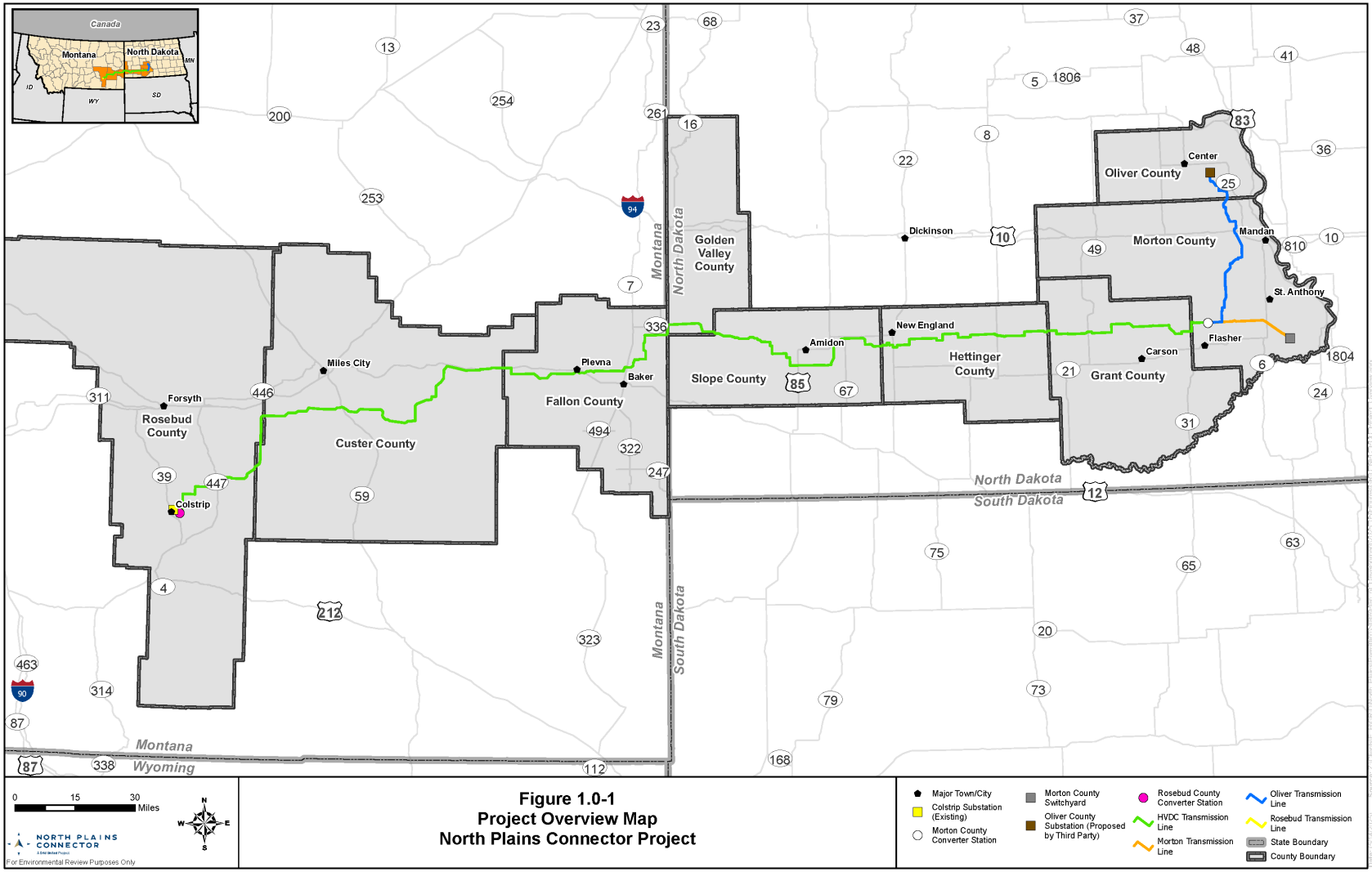



**Figure 1.0-1**
**Project Overview Map**
**North Plains Connector Project**

- A 341-mile 525-kV HVDC transmission line (HVDC Transmission Line) from Montana into North Dakota with associated 200-foot-wide right-of-way; the right-of-way is 150 feet wide at limited locations.

    - Montana: North Plains will install approximately 173 miles of the HVDC Transmission Line in Rosebud, Custer, and Fallon counties. The line will extend east from the new Rosebud County Converter Station to the Montana-North Dakota state line in Fallon County. Approximately 10 miles of the HVDC Transmission Line occurs on Bureau of Land Management (BLM)-managed lands and 8 miles occurs on U.S. Department of Agriculture, Agricultural Research Service (USDA ARS)-managed lands in Montana. Additionally, 15 miles of the HVDC Transmission Line occur on Montana State Trust Lands.

    - North Dakota: North Plains will install approximately 168 miles of the HVDC Transmission Line in Golden Valley, Slope, Hettinger, Grant, and Morton counties. The line will extend east from the Montana-North Dakota state line in Golden Valley County to a new AC/DC converter station in Morton County, North Dakota. Approximately 10 miles of the HVDC Transmission Line occurs on U.S. Forest Service (USFS)-managed lands in North Dakota. Additionally, approximately 5 miles of the HVDC Transmission Line occur on North Dakota Department of Land Trust lands.

- One new AC/DC converter station in Morton County, North Dakota (Morton County Converter Station). The converter station will connect the eastern terminus of the new HVDC Transmission Line to the western terminus of two new 345-kV EHV AC electric transmission line segments.

- Approximately 52 miles of new 345-kV EHV AC transmission line will be located in Morton and Oliver counties, North Dakota (Oliver Transmission Line) with an associated right-of-way approximately 125 to 300 feet wide. The line will extend east and north from the Morton County Converter Station in Morton County to a separately planned substation in Oliver County, North Dakota (Oliver County Substation). Less than 1 mile of the Oliver Transmission Line occurs on North Dakota Department of Land Trust lands.

    - The planned Oliver County Substation is a 345-kV/230-kV substation under development by Minnesota Power as part of a separate, independent project. The Oliver County Substation has independent utility from North Plains and is a part of the Minnesota Power HVDC Modernization Project, which is modernizing the existing Square Butte HVDC System between North Dakota and Minnesota that was built in the 1970s. The Minnesota Power HVDC Modernization Project was approved by the North Dakota Public Service Commission on June 4, 2025 in case number PU-24-381. Minnesota Power and the MISO have been studying the Minnesota Power HVDC Modernization Project since 2020, as shown through a series of Long-Term Firm Transmission Service Facilities Studies on MISO's OASIS Studies Page (MISO, 2023). According to Federal Energy Regulatory Commission Filings of the Facilities Construction Agreement for the Minnesota Power HVDC Modernization Project, Minnesota Power anticipates beginning construction in 2025 to have an In-Service Date of

2030 (Minnesota Power, 2024). North Plains submitted a MISO Transmission Connection Request to connect to the planned Oliver County Substation being developed by Minnesota Power on June 27, 2023. The Oliver County Substation will serve as the interconnection point to MISO for the eastern grid.

- Approximately 22 miles of new 345-kV EHV AC transmission line in Morton County, North Dakota (Morton Transmission Line) with an associated right-of-way approximately 200 feet wide, and up to 300 feet wide where co-located with the Oliver Transmission Line. The line will extend east and southeast from the Morton County Converter Station to a new switchyard.

- A new switchyard in Morton County, North Dakota (Morton County Switchyard) will serve as the interconnection point to the SPP system for the eastern grid.

The Project will include appurtenances and equipment, including telecommunication systems and grounding components. The Project will also require temporary workspaces during the construction phase to access the construction site, stage equipment and material, and install the various Project components.

## 1.1 PLAN PURPOSE

North Plains developed this CMRP to describe the construction procedures and mitigation that North Plains will implement during construction to reduce potential impacts related to the Project. The CMRP also describes the restoration and reclamation process that North Plains will implement when construction is complete and long-term vegetation management procedures that North Plains will implement during operations.

The Plan is based on industry best management practices (BMPs), North American Electric Reliability Corporation (NERC) requirements, and federal, state, and local authorizations applicable to the Project. North Plains will attempt to consolidate the mitigation measures required for this Project in the CMRP and associated plans to the extent practicable both to facilitate review by the agencies and to facilitate compliance. However, where permits, grants, licenses, or easements conflict with this Plan, the requirements in the permits, grants, licenses, or easements will take precedent over this Plan to the extent they do not violate any other permit conditions.

## 2.0 OTHER PROJECT-SPECIFIC PLANS

Based on the evaluation of resources crossed by the Project, past Project experience, and agency coordination, North Plains has prepared or is currently preparing the following Project-specific mitigation plans to be incorporated as attachments to this CMRP.

- Agricultural Impact Mitigation Plan (AIMP) (see Attachment A): The Project crosses agricultural land use areas, including rangeland that is managed for livestock. This includes the USDA ARS – Fort Keogh site. The AIMP includes avoidance, minimization, and mitigation measures to address potential damage to drain tile/lines, interference with irrigation system, segregation of topsoil, soil decompaction, fence repair, livestock management, stone removal, and special mitigation where crossing or adjacent to specialty practices such as organic farms or apiaries.

- Avian Protection Plan (in preparation): North Plains will develop an Avian Protection Plan in coordination with Project operators that will describe the measures that North Plains will implement to mitigate the risk of bird collisions with power lines. North Plains will develop this Avian Protection Plan in accordance with the Avian Power Line Interaction Committee's (APLIC's) Suggested Practices for Avian Protection on Power Lines (2006), APLIC's Reducing Avian Collisions with Power Lines (2012), and APLIC's and U.S. Fish and Wildlife Service's (USFWS) Avian Protection Plan Guidelines (2005). The Avian Protection Plan will be provided prior to Project construction.

- Blasting Plan (see Attachment B): The Project is located in an area of shallow bedrock and North Plains may need to perform blasting to facilitate the excavation of foundations for transmission pole and facility infrastructure. The Blasting Plan outlines the standard procedures that North Plains will implement during blasting, including safety precautions and notification procedures.

- Fire Prevention and Suppression Plan (see Attachment C): The Fire Prevention and Suppression Plan describes the safety measures that North Plains will implement during construction activities to prevent fires, and the emergency procedures North Plains will implement in the event of a fire, including notifications.

- Hazardous Materials and Waste Management Plan (see Attachment D): The Hazardous Materials and Waste Management Plan describes the procedures that will be implemented during construction to outline proper handling, storage, and disposal of all solid and hazardous materials and wastes that are used or generated as a result of the Project.

- Invasive and Noxious Species (INS) Management Plan (see Attachment E): The INS Management Plan includes both the Montana Noxious Weed and Aquatic Invasive Species Management Plan and North Dakota Noxious Weed Management Plan. These plans describe the applicable laws and invasive and noxious species management requirements specified by federal and state agencies. Additionally, these plans describe the measures that North Plains will implement to manage the spread of these species during construction.

- Migratory Bird Treaty Act (MBTA) Compliance Plan (in preparation): The MBTA Compliance Plan will document the measures North Plains has implemented or will implement to avoid, minimize, and mitigate potential impacts on migratory birds, including bald and golden eagles, consistent with the MBTA and the Bald and Golden Eagle Protection Act. The MTBA Compliance Plan will be provided in 2025 and will be developed in coordination with the applicable agencies

- Paleontological Resources Management and Mitigation Plan (see Attachment F): The Paleontological Resources Management and Mitigation Plan outlines the procedures to be followed upon an unanticipated discovery of paleontological resources, including the notification procedures for findings on federal and state lands.

- Plan for the Unanticipated Discovery of Contaminated Materials (see Attachment G): The Plan for the Unanticipated Discovery of Contaminated Materials presents key procedures for managing contaminated material encountered during Project

work. This Plan applies to material contaminated as a result of historical activities or events that occurred prior to the Project commencing.

- Post-Review Discovery Plan for Cultural Resources and Human Remains (see Attachment H): The Post-Review Discovery Plan for Cultural Resources and Human Remains outlines the procedures that North Plains will follow upon an unanticipated discovery of an archaeological or historic resource or human remains. This includes the notification procedures for findings on federal and state lands and stop work procedures.

- Montana Greater Sage Grouse Mitigation Plan (in preparation): North Plains will develop the Sage Grouse Mitigation Plan to ensure compliance with the requirements of Executive Order 12-2015, the Montana Greater Sage Grouse Stewardship Act of 2015, and to support state permitting in Montana. This Plan will be provided in fourth quarter 2025 and will be developed in coordination with the applicable agencies.

- Spill Prevention and Response Plan (see Attachment I): The Spill Prevention and Response Plan describes the methods used to prevent, control, and respond to spills of hazardous substances that may affect surface waters. The Spill Prevention and Response Plan also discusses the proper storage and handling of hazardous substances.

- Traffic and Transportation Management Plan (see Attachment J): The Traffic and Transportation Management Plan describes the safety measures to be employed when construction activities are occurring at road, highway, and railroad intersections.

## 2.1 CONSTRAINTS MAPPING

Prior to construction, North Plains will prepare constraints maps for the Project that will identify environmental features such as wetlands, waterbodies, and buffer zones for sensitive features. North Plains will include notations on the constraints map to direct the personnel to the appropriate environmental plans/or permit conditions that stipulate the activities, restrictions, and/or BMPs to be employed at each environmental feature.

# 3.0 LANDOWNER COORDINATION

North Plains will work cooperatively with landowners before, during, and after the construction process regarding easements, rights-of-way, structure locations, restoration, and maintenance. This coordination and cooperation are in recognition of the fact that, in most locations under private ownership, North Plains will have an easement for the Project right-of-way. North Plains does not own the property in fee simple and, in large part, the landowners' use of their property, including the right-of-way, will continue after the Project is constructed and operational.

For example, land that is in agricultural production will likely return to agricultural production; similarly, landowners with pasture will typically want the right-of-way restored with grasses and forbs similar to the rest of the parcel for grazing. In this way, a transmission line right-of-way is distinct from vegetation management for other types of energy infrastructure wherein the project operator owns the associated property. Therefore, restoration is anticipated to be consistent with

pre-existing conditions and use, where practicable, and consistent with safe and reliable transmission line operation.

## 3.1 LANDOWNER NOTIFICATIONS

North Plains will notify landowners prior to vegetation clearing activities, as required by applicable permit conditions or in agreement with the landowner.

## 3.2 LANDOWNER COMPENSATION

North Plains' agreements with landowners will address restoration and/or compensation obligations regarding damages to private property caused by construction, operation, maintenance, and repairs of the Project.

# 4.0 LAND REQUIREMENTS

The height and span of the pole structures along each centerline will vary between the four transmission line segments; however, will generally consist of 100- to 195-foot monopole steel structures with average distance between structures (i.e., spans) of 1,200 feet. Operation of the Project will require easements that allow for a typical right-of-way width of 200 feet, typically 100 feet of each side of the Project centerline; however, right-of-way widths will vary.

North Plains does not plan to use the entire right-of-way to construct the transmission line segments. Instead, North Plains will perform construction activities within specific workspaces, referred to collectively as the Project workspace. Some portions of the right-of-way cross steep topography that prevents safe travel along the right-of-way. Some portions of the right-of-way cross culturally or environmentally sensitive resources. North Plains has designed the Project workspace to avoid these areas to the extent practicable.

North Plains will need the following temporary construction workspaces, described in more detail in Section 5.

- Structure pads to prepare the foundation and erect each structure
- Fiber/line splicing areas between structures
- Wire pulling and tensioning areas
- Temporary guard structures
- Temporary construction workspace for the construction of the converter stations, switchyard, and fiber repeater stations
- Contractor laydown yards
- Helicopter fly yards and landing areas
- Access roads, overland travel, and turnaround areas

In addition, the Project workspace encompasses the permanent footprints associated with pole structures, converter stations, the switchyard, and fiber repeater stations.

## 4.1 CONSTRUCTION SCHEDULE

North Plains anticipates the total construction timeframe for the Project to be approximately three to four years. North Plains will perform transmission line construction concurrent with converter station and switchyard construction. North Plains currently anticipates starting construction in 2028 and placing the facility in service by the end of 2032. Construction is anticipated to occur year-round, weather permitting, except for areas that have applicable timing restrictions to protect sensitive species. Delays due to weather, material delivery, and natural resource time of year restrictions may extend the construction timeline. Further, the start of construction will be dependent upon receipt of required permits and authorizations.

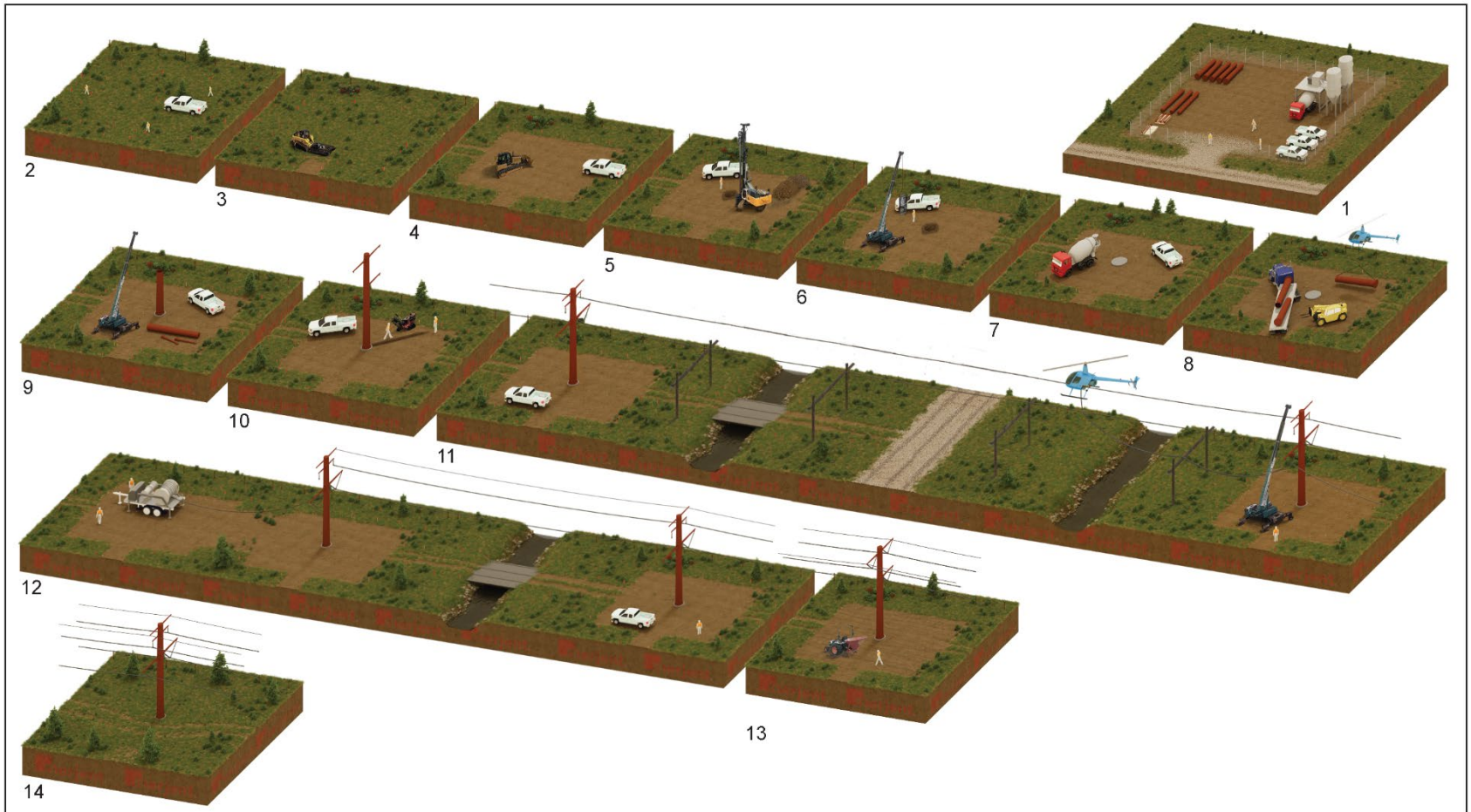
Project construction will typically occur during a 6-day work week, Monday through Saturday. A typical construction workday will consist of at least 10 hours, occurring mostly during daytime hours, between 7:00 a.m. and 7:00 p.m. in the summertime. However, weather conditions, site conditions, emergencies, or other atypical circumstances may necessitate extended work outside of typical workday hours, including work at night and on Sundays and holidays.

# 5.0 CONSTRUCTION PROCEDURES AND BEST MANAGEMENT PRACTICES

Construction of an overhead transmission line requires several sequential activities in a coordinated manner within the Project workspace. Figure 5.0-1 and this section describe the major construction activities listed below and approximate construction sequence.

- Mobilization and preparation of contractor laydown yards and helicopter fly yards
- Surveying and staking
- Development of access roads and overland travel
- Vegetation clearing
- Installation of erosion and sediment control BMPS
- Foundation installation
- Structure setting
- Installation of ground rods or counterpoise
- Installation of conductors and optical ground wire (OPGW)
- Wire stringing and clipping
- Site cleanup and reclamation

Some construction techniques are a form of mitigation designed to reduce potential impacts to resources. This section describes these construction techniques, in addition to the BMPs that North Plains will implement during the execution of construction activities to further avoid, minimize, or mitigate resource impacts.




NORTH PLAINS CONNECTOR
A Grid United Project

Graphic is not to scale and for environmental review purposes only.


**Figure 5.0-1**
**Typical Construction Sequence**
**North Plains Connector Project**

1. Material yard and/or concrete batch plant
2. Survey and staking
3. Workspace clearing and access road construction
4. Grading and/or site preparation
5. Foundation hole drilling
6. Foundation cage installation
7. Concrete foundation poured
8. Material delivery to site
9. Tower structure assembly
10. Grounding system and guy wire installation
11. Conductor and optical ground wire stringing
12. Tensioning
13. Site cleanup and restoration
14. Operation and maintenance

## 5.1 CONTRACTOR LAYDOWN YARDS AND HELICOPTER FLY YARDS

As the first step in the construction process, North Plains will mobilize staff and equipment to prepare contractor laydown yards. The contractor laydown yards will house temporary trailer(s) and portable concrete batch plants, include space for helicopter fly yards, and serve as a delivery and staging area for construction materials. Contractor laydown yards will stage materials, such as storage containers, portable toilets, dumpsters, construction mats, tools, and equipment.

North Plains will prepare the contractor laydown yards by:

- installing erosion and sediment control BMPs described in Section 5.7;
- grading and leveling uneven surfaces, as described in Section 5.8;
- stripping and stockpiling of topsoil, if necessary, as described in Section 5.8.1;
- installing gravel or rock tracking pads near entry/exit points, if needed, as described in Section 5.3;
- installing culvert(s) as described in Section 5.3.1; and
- installing power, security measures, and fencing.

North Plains will typically complete this work using standard construction equipment such as bulldozers and dump trucks.

Fill materials that may be used to construct and maintain the contractor yards and helicopter fly yards during construction of the Project may include aggregate materials such as gravel, sand, and clay. North Plains will purchase these materials as needed from local commercial operations. Fill materials will not contain unsuitable material (e.g., trash, debris, asphalt) and will be free of toxic pollutants in toxic amounts. Topsoil will not be used as fill.

Depending on landowner preferences, North Plains may leave contractor laydown yards in place or return the yards to prior conditions following completion of construction activities, as described in Section 6.

North Plains will use portable concrete batch plants at contractor laydown yards to dispense concrete for use in structure foundations. Equipment typically required at a batch plant site includes gas- or diesel-powered generators, concrete trucks, front-end loaders, skid loaders, dump trucks, transport trucks and trailers, water tanks, concrete storage tanks, scales, and job site trailers. North Plains may use commercial ready-mix concrete instead of installing a concrete batch plant when access by commercial transport trucks to structure construction sites is economically feasible.

North Plains may use helicopters to facilitate structure setting and/or wire pulling/tensioning of the lines. Therefore, North Plains may require helicopter fly yards. North Plains will preferably site helicopter fly yards adjacent to the contractor laydown yards. North Plains will prepare the helicopter fly yards in the same way as a contractor laydown yard, including grading or leveling of uneven surfaces; stripping and stockpiling of topsoil; installing gravel or rock tracking pads near entry and exit points; and installing culvert(s), power, and fencing.

## 5.2 SURVEYING AND STAKING

North Plains will confine all construction equipment and vehicles to the Project workspace described in Section 4. North Plains will flag or stake the boundaries of the Project workspace in a manner that readily identifies the boundaries of the Project workspace and keeps construction activities within the authorized Project workspace. In addition, North Plains will install signs, flagging, or construction fencing for the following environmental features along the Project workspace and access roads so they can be easily identified by Project personnel and managed as described in the applicable permit applications.

- Wetland boundaries and waterbody access crossing locations.
- Drainages/drain tiles as identified by counties and landowners.
- Hiking and hunter walking trails, snowmobile, and all-terrain vehicle (ATV) trails, winter access roads, and other recreational areas as required by permit conditions.
- Buffer zones for environmentally sensitive features, including archaeological and historic sites, rare plants or ecological communities, and other sensitive wildlife species and/or habitats per agency consultations. Signs will not disclose the specific location and/or species or feature type where laws require resource protection.

North Plains will contact the state One Call systems in both Montana and North Dakota to locate, identify, and flag existing underground utilities to prevent accidental damage during construction. Utility companies generally complete these activities by a two-person crew travelling by foot, ATV, or pick-up truck.

## 5.3 ACCESS ROADS

North Plains will use existing roads, develop new temporary and permanent access roads, and use overland travel to access the Project.

North Plains will maintain existing roads without improvement, improve existing roads, or build new roads as needed and approved through applicable permits. Maintenance activities may include tree trimming, back-blading, and placement of fill where needed on the existing road grade and as agreed upon with the road authority. North Plains may add soil or gravel fill to maintain or improve existing roads or to develop permanent access roads, if needed.

Activities that occur beyond an existing road footprint, such as widening and tree removal, or development of a new road, are considered improvements requiring environmental survey and applicable permits and authorizations. Wetland and waterbody crossings are discussed in greater detail in Sections 5.3.1 and 5.3.2. North Plains will confine maintenance and improvements on existing roads to the legal road easement as established by the corresponding road authority.

The Project will use overland travel in some locations to allow for the safe passage of construction vehicles and equipment to the Project workspace. Overland travel lanes will typically consist of a 25-foot-wide path within the right-of-way and adjacent routes leading to the right-of-way and other Project areas where there are no pre-existing roads. For overland travel, construction of a temporary access road with corresponding vegetation clearing and grading is typically unnecessary.

North Plains will construct temporary access roads typically 25 feet wide for use during construction. Temporary access road construction may include clearing of vegetation, rock, and debris; cutting-and-filling and grading; establishing drainage features; laying aggregate; and, performing other improvements to provide an adequate surface to support construction vehicles.

On BLM lands, North Plains will install construction mats for temporary overland travel and temporary access roads that are used by equipment weighing over 10 tons, while soils are wet or moist. Where mats are not installed, North Plains will ***strip the topsoil on temporary overland travel and temporary access roads across BLM-managed lands that are used by equipment weighing over 10 tons while soils are wet or moist (BLM, 2015).*** Topsoil will be segregated and stored as described in Section 5.8.1.

Fill materials that may be used to construct and maintain access roads during construction of the Project may include aggregate materials such as gravel, sand, and clay. North Plains will purchase these materials as needed from local commercial operations. Fill materials will not contain unsuitable material (e.g., trash, debris, asphalt) and will be free of toxic pollutants in toxic amounts. Topsoil will not be used as fill.

North Plains will minimize vehicle tracking of soil from construction sites by implementing BMPs such as installing rock access pads or construction mats, reducing equipment/vehicle access to the construction workspace where practicable, and using off-right-of-way parking or equivalent practices. North Plains will install rock or construction mat access pads in accordance with state or local road authority specifications. If such BMPs are not adequately preventing sediment from being tracked onto paved public roads, North Plains will conduct street sweeping or other equivalent means of collecting sediment in accordance with the Storm Water Construction General Permits administered by the Montana Department of Environmental Quality (MDEQ) and the North Dakota Department of Environmental Quality (NDDEQ) (provided in Attachment K). If soil is tracked onto a paved roadway, North Plains will remove accumulated material from the road and return it to the construction workspace in an upland area as soon as possible, but in no circumstances more than 24 hours after discovery. In addition, North Plains will not broom, wash, or grade soil on paved roadways into the road ditch or onto the shoulder.

The Project may require snow removal to allow safe access to the Project workspace. North Plains will push snow off the Project workspace with equipment such as a grader, snowplow, or bulldozer and then stockpile the snow along the edge of the Project workspace. North Plains will install snowblower attachments on compatible equipment to minimize scraping off underlying soil or gravel during snow removal. North Plains will confine equipment to the Project workspace and will not push or blow snow onto environmentally sensitive features outside of the Project workspace.

After construction, North Plains will return temporary access roads and overland travel lanes to their pre-construction condition unless the road authority, landowner, or land-managing agency requests that the improvements be left in place or they are required for Project operation and the following conditions are met:

- the access road does not cross wetland features, and
- North Plains did not install new temporary crossing techniques such as bridges and culverts at waterbody features crossed by the road.

North Plains will perform restoration of improved and temporary access roads and overland travel lanes as described in Section 6. Regardless of landowner, road authority, or land-managing agency preference, North Plains will remove all temporary infrastructure in wetlands or waterbodies such as bridges, construction mats, and other fill material as required by applicable permits and authorizations.

During operations, North Plains will maintain access roads to facilities and to facilitate maintenance of the transmission line segments throughout Project operation. Access roads may consist of dirt, gravel, asphalt, concrete, or another hard surface. Also, once reclaimed, the areas previously occupied by temporary access roads may be used for overland travel during operation.

North Plains will design access roads in accordance with federal, state and local requirements, and design standards established by federal land-managing agencies. North Plains will obtain the applicable permits or authorizations for access roads located on federally-managed lands.

Surface cross drains, such as drivable dips, waterbars, rolls in profile, open slotted culverts, metal bars or rubber water diverters will be incorporated into the design of roads, as appropriate based on site-specific conditions. Permanent features will be built into the design of the permanent access roads. The intent of cross drains is to collect and discharge water from the road in a manner that minimizes impacts to the watershed and maintains the integrity of the road (Copstead et al., 1998). Additional erosion and sediment control BMPs, described in Section 5.7, will also be installed during the construction and use of access roads, as appropriate.

### 5.3.1 Waterbody Crossings

Generally, the bridges and culverts associated with existing roads will be sufficient to allow the passage of construction equipment and vehicles. However, in some cases, the Project may require improvements to existing infrastructure, such as:

- air bridges or construction mats over existing infrastructure;
- extension of culverts to widen the travel lane; and
- additional in-stream supports.

North Plains will use temporary equipment bridges, upon approval by the appropriate agencies, at waterbody crossings within the Project workspace and along temporary access roads where there is a potential for stormwater runoff or rain events to transport sediment downstream from equipment crossing the waterway. For new access roads over a waterbody, and road approaches to the Project workspace, North Plains may install the following infrastructure as appropriate for site-specific conditions:

- Clear span bridges: Typically used to cross narrow waterbodies from top of bank to top of bank with stable banks. No direct excavation of the waterbody bed or in-stream supports is required. The bridge deck is often composed of construction mats, but other material may be used. See typical design provided in Attachment L.

- Non-clear span bridges: Typically used to cross wider waterbodies, or where additional stabilization is required to ensure the bridge installation allows for the safe passage of construction equipment and vehicles. Installation of infrastructure or supports within the ordinary high water mark (OHWM) are required. The bridge deck is often composed of construction mats, but other material may be used. See

typical design provided in Attachment L.

- Culverts/flumes: Cylinder or box-shaped structures placed in the waterbody channel within the OHWM to allow water flow. The size, number, and shape of the culvert is dependent on the waterbody and the watershed that drains to that point. See Culvert Detail in the Typical included in Attachment L.

- Low-Water Crossing Types: Low water crossings are deployed when the ephemeral stream channel depth is shallow relative to the width of the channel. This method is applied when channels have evidence of low velocity or no flow. For low water crossings, the rock surface is coarse to resist movement of the ford. Low water crossings are typically topped with finer gravel to accommodate vehicle traffic. See Rock Low Water Crossing Types design provided in Attachment L.

    - Rockfill fords: Appropriate in debris prone headwater channels. Class V to VII riprap is keyed into the channel banks, and then Class III riprap is placed on top of the porous rock as a cap. See Rockfill Ford (without pipe) detail provided in Attachment L.

    - Vented rockfill fords: Appropriate in steep topography or incised highly channelized streams where the channel depth is greater than the stream width, particularly in headwater areas. This design type is used especially to retro-fit undersized culverts or prevent stream diversion. A culvert, referred to as the vent, is placed on the stream bottom. Porous rock, typically measuring 15 to 27 inches, is then placed on top of the culvert. Class III rip rap is placed on top of the porous rock as a cap. See Vented Rockfill Ford with Pipes detail provided in Attachment L.

- Permanent culverts/bridges: North Plains will design permanent culverts or bridges in accordance with federal, state, and local requirements, and land-managing agency specifications. The design of permanent culverts or bridges will be dependent on site-specific conditions.

As required by the U.S. Army Corps of Engineers (USACE) Nationwide Permit 57 for Utility Line and Telecommunications Activities (2021) (provided in Attachment K), all permanent and temporary crossings of waterbodies will be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of aquatic species. If a bottomless culvert cannot be used, then the crossing will be designed and constructed to minimize adverse effects to aquatic life movements. Further, waterbody crossings will be constructed to withstand expected high flows and will not restrict or impede the passage of normal or high flows. These design requirements are also consistent with Forest Service Handbook (FSH) 2509.25 (USFS, 2006).

North Plains will also seek and comply with the design specifications required by state permits, and by the BLM, USFS, and USDA ARS for waterbody crossings on federal lands.

North Plains will maintain equipment bridges and culverts in good working order, and in accordance with the applicable permits and authorizations. North Plains will install infrastructure as close as perpendicular to the axis of the stream channel as engineering constraints allow, creating the shortest and most stable crossing as required by FSH 2509.25. North Plains will remove debris or vegetation that becomes lodged on the bridge support and will dispose of the

removed material in an upland area. North Plains will maintain bridges to prevent soil from entering the waterbody. North Plains will remove soil that accumulates on the bridge decking in accordance with regulations and permit conditions.

**In accordance with FSH 2509.25, North Plains will remove temporary waterbody crossings seasonally on USFS- and USDA ARS-managed lands.** Temporary waterbody crossings will be removed during final cleanup or, if access is needed, after final cleanup and permanent seeding. Equipment bridge decking will be removed to ensure sediment and debris are collected by geotextile fabric secured below decking during bridge construction. Subsequently, geotextile fabric will be removed to prevent debris from entering the waterbody.

North Plains will restore bridges and culverts that existed prior to construction to meet or exceed pre-construction conditions.

Once temporary crossings are removed, North Plains will conduct additional seeding and/or implement erosion and sediment control BMPs where vegetation and soils have been disturbed. North Plains will follow the restoration procedures described in Section 6.

### 5.3.2 Wetland Crossings

North Plains will traverse wetlands occurring within the Project workspace using either low ground pressure equipment or by installing construction mats in saturated or inundated wetlands to minimize impacts. Construction mats or rock on top of geotextile fabric may be used for roads within wetlands. North Plains may also use construction mats in conditions such as unstable soils. Most matted travel lanes will be 16 feet wide (see Matted Wetland Crossing Detail on the Typical provided in Attachment L). Matted travel lanes are typically a single layer; however, there may be cases in saturated areas where North Plains must place more than one layer of mats to provide a stable working surface. North Plains may use multiple mat configurations in inundated areas depending upon the depth of inundation and will install mats to maintain surface flow. North Plains may use the following types of construction mats:

- Composite Mats: Composite mats are built out of high-density polyethylene material. Mats are typically 4 inches thick and 8 feet wide by 14 feet in length. Mats are interlocking, have a treaded traction surface, and are flexible and extremely durable. These mats are also typically lighter in weight than traditional timber mats. Heavy duty mats support construction equipment of all types, sizes, and weights, with load-bearing capabilities up to 600 pounds per square inch. Light duty mats are also available.

- Timber Mats: Timber mats are available in a variety of sizes and are constructed of hardwood materials that are bolted together. Timber mats are suitable for all vehicle types present on the Project workspace, have high durability under traffic, and are easily installed and removed using typical construction equipment. Timber mats are suitable for use in all soil conditions for all transmission line construction activities.

- Laminated Mats: Laminated mats are available in a variety of sizes and are constructed of laminated wood materials. Laminated mats are suitable for all vehicle types but are limited in their weight bearing capacity. They have high durability and are easily installed and removed using typical construction equipment. Laminated mats are suitable for use in most soil conditions but are not

suitable for use in extremely saturated conditions. Laminated mats can be used on access roads, at drill pads, and for storage and staging of equipment.

North Plains will install construction mats using low ground pressure equipment. Vegetation clearing crews will typically bring mats with the mechanized equipment and "leap frog" the mats forward as construction progresses across wetland features.

During frozen conditions, North Plains may use ice roads along temporary access roads and overland travel lanes through wetland features. North Plains will begin the development of ice roads as soon as weather conditions allow. North Plains will use low ground pressure equipment, such as snowcats and amphibious all-terrain vehicles, such as Argos, to push and pack existing ice and snow together to provide the foundation for the ice roads. As the snowpack builds up and hardens, North Plains will use larger and heavier equipment to progressively increase the thickness and density of the snowpack. In some cases, North Plains may add water to the surface to help build snowpack from the top. If there is insufficient snowpack to safely support construction activities, North Plains may install construction mats in addition to snowpack. Ice bridges will not be used to cross waterbody features; North Plains will use the appropriate bridge type described in Section 5.3.1 to cross waterbody features. **In accordance with FSH 2509.25, North Plains will not use ice roads in wetlands until there is at least 1 foot of packed snow or 2 inches of frozen soil on USFS- and USDA ARS-managed lands.**

North Plains will remove construction mats during final cleanup or, if access is needed, after final cleanup and permanent seeding. Once mats are removed, North Plains will follow the restoration procedures described in Section 6.

## 5.4 VEGETATION CLEARING

To facilitate construction equipment access and provide for safe clearances between vegetation and the transmission line during operations, North Plains will clear trees and tall vegetation from the right-of-way. North Plains will also clear vegetation, as needed, from the Project workspace including new and improved access roads. North Plains will perform clearing with mechanical equipment such as mechanized mowers, sky trips, process harvesters, feller bunchers, or brush cutters. In areas where clearing with large equipment is not feasible, North Plains will clear with hand tools such as chain saws.

North Plains will conduct timber removal operations using cut-off-type saw equipment. North Plains will undertake felling in a manner that minimizes shatter, breakage, and disturbance outside of the Project workspace. North Plains will use skid loaders or alternate equipment to transport logs to stacking sites. North Plains will fell trees toward the Project workspace to avoid breaking trees and branches off outside of the Project workspace. North Plains will remove "leaners," which are felled trees that inadvertently fall into adjacent undisturbed vegetation. North Plains will recover trees and slash that fall outside the Project workspace. North Plains will dispose of this recovered material in accordance with landowner or land-managing agency requirements. North Plains will limb and top logs before removal from the Project workspace. North Plains will orient any required log decks to best facilitate loading by picker trucks.

North Plains will manage all merchantable timber in accordance with landowner agreements and applicable permits and licenses. North Plains will stack all materials that a landowner has requested to keep outside the right-of-way in upland areas. North Plains will stack all materials that a landowner does not wish to keep inside the right-of-way in upland areas for further processing and disposition. North Plains will remove any materials that a landowner does not

wish to keep from their property. North Plains will dispose of these unwanted materials by offering the materials to other landowners, offering the materials for sale, placing the materials in a composting site, or disposing of the materials at a mill or other North Plains approved location.

Unless otherwise agreed upon between North Plains and the applicable landowner or land-managing agency, North Plains will dispose of non-merchantable timber and slash by mowing, cutting, chipping, mulching, and leaving in upland areas; hauling off-site to an approved location; or using in stabilizing erodible slopes or construction entrances. In non-agricultural, non-wetland areas, North Plains may uniformly broadcast chips, mulch, or mechanically cut woody debris across the Project workspace in a manner that avoids inhibiting revegetation. North Plains may also incorporate this material into the topsoil layer during grading activities, with landowner approval. North Plains will not dispose of chips, mulch, or mechanically cut woody debris in waterbodies or wetlands, including agricultural wetlands.

During construction, North Plains will cut vegetation within the right-of-way and Project workspace at or slightly above the ground surface. To minimize soil impacts and erosion potential, North Plains will not typically grub stumps or roots; however, North Plains may need to remove stumps in some locations within the Project workspace to facilitate the movement of construction equipment, where excavation will occur, or when reasonably requested by the landowner.

During construction, North Plains may allow the burning of non-merchantable wood in accordance with all state and local regulations where North Plains has acquired the applicable permits and approvals from applicable agencies and landowners. Burning will not be allowed in wetlands or agricultural lands. Burning within 100 feet of a wetland or waterway will be prohibited without site-specific approval in advance from North Plains and in accordance with applicable permits and approvals. Refer to the Fire Prevention and Suppression Plan (see Attachment C) for additional information regarding the standard controls that North Plains will implement to minimize the risk of construction induced fires.

## 5.5 FIRE MANAGEMENT

North Plains will comply with all applicable federal, state, county, and local fire regulations pertaining to the prevention of uncontrolled fires. North Plains will maintain a list of relevant fire authorities and their designated representatives on site throughout construction. North Plains will post the fire danger rating at the construction office in a place accessible and visible to all workers, to inform workers of the hazard level and related implications. North Plains will review the fire danger rating with construction crews in daily safety talks.

North Plains will store flammable materials in approved containers away from ignition sources. North Plains will remove flammable waste from the construction site as needed. North Plains will designate areas for smoking. North Plains will prohibit smoking around flammable materials and on within the Project workspace. North Plains will have adequate firefighting equipment on site in accordance with the applicable regulatory requirements. This may include water trucks; portable water pumps; chemical fire extinguishers; hand tools such as shovels, axes, and chain saws; and, heavy equipment adequate for the construction of fire breaks.

Hot engines and vehicular components such as mufflers can potentially increase the risk of fire ignitions in vegetated areas. Certain activities, such as cutting, grinding, and burning brush or vegetative debris, also increase the risk of fires. Where or when there is a high fire risk, North Plains will restrict vehicle and equipment use to areas free of vegetation or where North Plains have mitigated the risk of igniting vegetation. North Plains will conduct burning, if necessary,

within the Project workspace and in compliance with applicable federal, state, and local regulations.

## 5.6 FUGITIVE DUST CONTROL

Construction of the Project may temporarily increase fugitive dust particularly in areas with erosion-prone soils where vegetation clearing and surface disturbance by heavy equipment occurs. Precipitation, or lack thereof, and wind are also factors that may contribute to fugitive dust in the Project area. The following construction activities have the potential to generate fugitive dust emissions:

- vehicle and equipment movement on paved and unpaved surfaces;
- track-outs onto roads;
- use of parking, staging, and storage areas;
- vegetation removal;
- clearing, grading, and excavation;
- topsoil stripping;
- topsoil/spoil storage;
- blasting;
- cleanup; and
- bulk/pile material loading, unloading, and hauling.

North Plains will obtain and use water under the appropriate state water use permitting system as an approved dust control method during construction, where necessary, on unpaved roads, material stockpiles, and other surfaces which can create airborne dust. North Plains will not use used oil for dust abatement. Chemical additives such as surfactants may be used for dust suppression; however, **North Plains will not use chemical additives on BLM-managed lands.**

If the Project requires blasting, North Plains may use matting in rock blasting operations to minimize and control dust, discussed in greater detail in Section 5.8.3. As discussed in Section 5.3, North Plains will access the Project from public roadways, permitted new temporary and permanent access roads, and overland travel routes. North Plains will implement reduced speed limits on unpaved access roads and will also minimize tracking of sediment onto public roadways. If soil is tracked onto a paved roadway, North Plains will remove accumulated material from the road.

North Plains will minimize wind and water erosion, surface disturbance, and construction activities in highly erodible soils, and will cover material stockpiles and equipment transporting dust-producing materials. In areas of steep terrain with high potential for erosion, North Plains will conduct vegetation clearing and grading in a manner to minimize dust impacts. North Plains will implement soil stabilization and reclamation practices to reduce erosion following ground-disturbing activities, as discussed in Sections 5.7 and 6.

## 5.7 TEMPORARY EROSION AND SEDIMENT CONTROL BMPS

Ground disturbance activities may not occur across the entire Project workspace. North Plains will limit ground disturbance activities to the areas around pole structures, along access roads, within temporary construction workspaces where needed, and at the new facilities. North Plains will prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the Storm Water Construction General Permits administered by the MDEQ and the NDDEQ. **On NFS-managed lands, North Plains will implement erosion and sediment control BMPs in**

**accordance with the National Best Management Practices for Water Quality Management on National Forest System Lands.**[1] As required by the Storm Water Construction General Permits, the SWPPP will describe the timing for installation of all erosion prevention and sediment control BMPs, include the location and type of temporary and permanent erosion and sediment control BMPs, and the procedures used to establish additional temporary BMPs as necessary for the site conditions during construction. The SWPPP will identify surface waters and existing wetlands that will receive stormwater from the construction site during or after construction, and will also identify state and impaired waters, as designated by the agencies. The SWPPP will also include a description of permanent stormwater treatment systems required at the permanent facilities or permanent access roads by the Storm Water Construction General Permits.

Erosion and sediment control BMPs include but are not limited to sediment barriers such as silt fence, sediment traps and basins, check dams, and fiber rolls; compost socks; brush/sandbag barriers; and slope breakers such as earthen berms. The equipment used during installation of erosion and sediment control BMPs typically includes ATVs and trucks for crew transportation, as well as skid loaders, tractors, backhoes, hydro-seeders, and other light-duty equipment. North Plains will consult the Montana Department of Transportation Erosion and Sediment Control Best Management Practices Manual (Montana Department of Transportation, 2016) and the North Dakota Department of Transportation Erosion and Sediment Control Construction on-line resources (North Dakota Department of Transportation, 2024) during the development of the SWPPP and during field implementation of appropriate erosion and sediment control BMPs, based on site-specific conditions.

North Plains will maintain erosion and sediment control BMPs as required in the Project construction documents and as required by all applicable permits and plans, including the SWPPP. North Plains will perform stormwater inspections of erosion and sediment control BMPs as required by the Storm Water Construction General Permits. North Plains will repair, replace, or supplement non-functional erosion and sediment control BMPs with functional materials within 24 hours after discovery, or as otherwise specified in Project permits.

North Plains will install temporary erosion and sediment control BMPs prior to as ground disturbing activities such as grading and excavation at the base of sloped approaches to streams, wetlands, water conveyances such as ditches and swales, and roads. North Plains will install temporary erosion and sediment control BMPs at the edge of the Project workspace as needed, and in other areas to slow water leaving the site and prevent siltation of waterbodies and wetlands downslope or outside of the Project workspace such as swales and side slopes. North Plains will place temporary erosion and sediment control BMPs across the entire Project workspace at the base of slopes greater than three percent and at site-specific locations identified in the SWPPP until the area is revegetated and there is no potential scouring of, or sediment transport to surface waters, including wetlands. North Plains will ensure that adequate room is available between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition. North Plains will maintain temporary erosion and sediment control BMPs until final stabilization or permanent cover is established.[2]

---

[1] USFS. 2012. National Best Management Practices for Water Quality Management on National Forest System Lands. Volume 1: National Core BMP Technical Guide. USDA Forest Service FS-990a. April 2012. Available online: https://www.fs.usda.gov/naturalresources/watershed/pubs/FS_National_Core_BMPs_April2012.pdf. Access April 2025.

[2] General Permit MTR100000, Montana Department of Environmental Quality, defines “final stabilization” as all soil-disturbing activities at the site have been completed, and a vegetative cover has been established with a density of at least 70 percent of the pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed. Final stabilization using vegetation must be accomplished using seeding mixtures or forbs, grasses and shrubs that are adapted to the conditions

North Plains may remove temporary erosion and sediment control BMPs installed across the travel lane during active daytime construction; however, North Plains will properly reinstall erosion and sediment control BMPs after equipment passage, or after construction crews complete activities in the area for the day. As necessary, North Plains will repair or replace erosion and sediment control BMPs prior to inclement weather. North Plains will be responsible for monitoring weather conditions and adjusting resources as needed to address pending and existing weather conditions.

### 5.7.1 Erosion Prevention

During construction, North Plains may suspend certain activities in wet soil conditions based on consideration of the following factors:

- extent of surface ponding;
- potential for rutting, defined as the creation of linear depressions made by tire tracks of machinery that results in the mixing of topsoil and subsoil;
- extent and location of potential rutting and compaction and determining whether traffic can be rerouted around the wet area; and
- type of equipment and nature of the construction operations proposed for that day.

North Plains will monitor upcoming weather forecasts to determine if significant rainfall is anticipated during construction. North Plains will plan work considering the potential for wet conditions and prepare to implement mitigation measures in the event of wet weather conditions and excessive waterflow. North Plains will implement such corrective measures should conditions subsequently worsen. North Plains will cease work in the applicable area until North Plains determines that site conditions are such that work may continue in conformance with the required regulatory authorizations.

**On BLM-managed lands, all construction activities will cease when ruts greater than 4 inches occur (BLM, 2015).**

### 5.7.2 Temporary Stabilization

North Plains will initiate temporary stabilization[3] of all exposed areas, including spoil piles, to limit soil erosion when construction crews have permanently or temporarily ceased construction activity on any portion of the site and will not resume activity for a period exceeding 14 calendar days. North Plains will complete stabilization no later than 14 calendar days after construction crews temporarily ceased the construction activity. This timeframe may be reduced in areas where the Project discharges to an agency-designated special or impaired water.

of the site. Establishment of vegetative cover capable of providing erosion control equivalent to pre-existing conditions at the site will be considered final stabilization. North Dakota Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity NDR11-0000 defines “permanent cover” as the exposed ground surface has been covered by appropriate material such as grass, gravel, asphalt, and concrete or other material that prevents erosion from occurring.

[3] Temporary stabilization means a condition where exposed soils or disturbed areas are provided a temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

**All topsoil piles on BLM-managed lands that are not returned within 30 days of disturbance will be seeded with BLM-approved seed mix (see Attachment M) to maintain soil biological activity (BLM, 2015).**

### 5.7.3 Mulch

North Plains will stabilize exposed ground surfaces within the periods described in Section 5.7.2. In most cases, North Plains will use mulch such as certified weed-free straw, wood fiber hydromulch, or a functional equivalent on disturbed areas, except for actively cultivated land and wetlands, as required by the applicable permits and authorizations, and as approved by the landowner or land-managing agency. North Plains may use other stabilization methods, such as staked sod, erosion control blanket, mats, or other material that prevents erosion from occurring based on site-specific conditions. Mulch will not be used in wetlands.

North Plains will uniformly distribute mulch by a mechanical mulch blower or by hand in areas not accessible to the mulch blower. North Plains will size strands of mulch to allow proper anchoring. North Plains will anchor or crimp mulch using a mulch-anchoring tool or disc set in the straight position to minimize loss by wind and water, as site conditions allow. In areas not accessible to a mulch-anchoring tool or too steep for safe operation, North Plains may anchor the mulch by liquid tackifiers. North Plains will follow the liquid tackifier manufacturer's recommended method and rate of application.

North Plains may use hydromulch and liquid tackifier in place of certified weed-free straw mulch. North Plains may use hydromulch on steep slopes to prevent erosion until final stabilization or permanent cover has been established.

### 5.7.4 Temporary Slope Breakers

North Plains will install temporary slope breakers to minimize concentrated or sheet flow runoff in disturbed areas with exposed soils. North Plains will follow the maximum allowable spacing identified in Table 5.7.4-1 unless otherwise specified in permit conditions.

TABLE 5.7.4-1

**Maximum Allowable Spacing of Slope Breakers**

| Slope (percent) | Approximate Spacing (feet) |
|---|---|
| <10 | 100-400 |
| 10-19 | 75-200 |
| 20-39 | 50 |
| >39 | 25 |

Source: BLM, 2015

If the length of the slope is less than the distance of the required spacing, slope breakers are not required unless a sensitive resource area, such as a wetland or public roadway, is located immediately down slope, or as determined to be needed by North Plains. North Plains may construct temporary slope breakers using earthen subsoil material, silt fence, certified weed-free straw bales, or may use rocked trenches in non-agricultural land. On highly erodible slopes, North Plains will use slope breakers in the form of earthen berms whenever possible.

North Plains will construct temporary slope breakers according to the following specifications:

- promptly intercept surface water before the volume of water and velocity increase enough to generate erosion;
- facilitate drainage toward natural dips, rocky ground, or vegetation to intercept sediment;
- height of the slope breaker will be 4 to 6 inches, but could be higher depending on site conditions;
- be at a 20-degree angle to the slope and channel water to the downhill side;
- avoid directing sediment into drainages;
- certified weed-free straw bales used as slope breakers will be trenched in and staked to not allow spacing between bales or allow flow underneath the bales;
- the outfall of temporary slope breakers will be directed off the Project workspace into an appropriate energy-dissipating sediment control device, such as filter socks, silt fence, straw bales, rock aprons, or sumps, to prevent the discharge of sediments, and the area will be inspected to ensure stabilization;
- proper slope breaker outfalls will be established where topsoil segregation or grading has created a barrier at the edge of the Project workspace;
- J-hook sediment traps will be installed at the perimeter of the erosion control zones on the downslope side of the Project workspace; and
- gaps will be created through spoil piles where necessary to allow proper out-letting of temporary berms.

## 5.8 GRADING, EXCAVATION AND FOUNDATION INSTALLATION

### 5.8.1 Grading And Topsoil Segregation

Prior to foundation installation, North Plains will establish a structure pad around the structure location to ensure a level and safe working area. In areas with uneven terrain, North Plains may need to grade the area around the foundation. North Plains will not perform grading in wetland areas unless grading is required to restore inadvertent disturbance to a wetland during placement or removal of construction mats across the wetland. Where grading is required, North Plains will strip the topsoil layer and potentially part of the subsoil layer and will separate the topsoil and subsoil in storage piles within the Project workspace. North Plains will leave gaps between the spoil piles and will install erosion and sediment control BMPs where stockpiled topsoil and subsoil piles intersect with water conveyances, such as ditches or swales, to maintain natural drainage. North Plains will maintain separation in the form of a gap or a physical barrier, such as a thick layer of mulch or silt fence between the topsoil and subsoil piles to prevent mixing.

North Plains will segregate up to 12 inches of topsoil, unless otherwise dictated by applicable permits or regulations or requested by the landowner in areas of deep topsoil. Under no circumstances will North Plains use topsoil to fill a low area or backfill structure holes. If required

due to excessively windy conditions, North Plains will tackify topsoil using either water or a suitable tackifier such as liquid mulch binder, as discussed in Section 5.7.3. North Plains will not use topsoil to construct ramps at road or waterbody crossings.

### 5.8.2 Excavation

The Project will require excavation for the drilled concrete pier foundations associated with the pole structures and foundations associated with the permanent facilities. In general, the excavated holes for each tubular monopole structure type will range from 7 to 17 feet in diameter to accommodate 5- to 15-foot diameter foundations, and extend 20 to 60 feet in depth, depending on soil conditions and structure heights. For lattice structures, the excavation for each of the four legs will be 5 to 8 feet in diameter and extend 20 to 50 feet deep. Each lattice structure will also have a concrete pad measuring between 25 feet by 25 feet, up to 55 feet by 55 feet. North Plains will only use lattice structures in areas with engineering or constructability constraints.

To construct a cast-in-place foundation, North Plains will first make a vertical hole using power drilling equipment, such as truck- or track-mounted augers. In rocky areas, North Plains may excavate the foundation holes by blasting or by installing special rock anchor or micro-pile type foundations. North Plains will cover augured structure holes if construction crews are unable to fill the hole in the same day. North Plains will not place excess spoils from augured structure holes in wetlands, waterbodies, drainages that lead to waterbodies, or other environmentally sensitive areas. North Plains will either reincorporate excess rocks and gravel in the immediate vicinity of the excavation on the right-of-way or will remove excess rock and gravel for disposal as requested by the landowner or land-managing agency.

### 5.8.3 Blasting

If North Plains encounter hard rock during grading or excavation for structure foundations, North Plains may need to perform blasting using explosives to loosen or fracture the rock to reach the required depth. Blasting will occur in accordance with the Blasting Plan in Attachment B. North Plains requires construction crews and the blasting supervisor to be thoroughly familiar with and comply with the rules and regulations of Occupational Safety and Health Administration and all federal, state, county, and local regulations governing blasting operations.

### 5.8.4 Foundation Installation

Once the hole is excavated as described in Section 5.8.2, North Plains will place structure bases into the excavated hole or, if soils are unstable, into a culvert, and the area around the pole will be backfilled with clean granular fill or concrete. For structures requiring a reinforced concrete foundation, North Plains will excavate the required hole and will place a rebar cage and anchor bolts into the excavation. Typically, North Plains will assemble the cages at the nearest staging area and deliver the cages to the structure site via flatbed truck. North Plains will then fill the excavation with concrete to a point where the rebar cage and anchor bolts are covered, leaving a typical one to two-foot reveal of the foundation above grade with exposed threaded anchor bolts. North Plains will then allow the complete caisson to cure. Typical equipment for this phase of construction includes dump trucks, drill rigs, cranes, vacuum trucks, concrete mixers, and tanker trucks.

North Plains will follow the BMPs described in Section 5.8.5 regarding concrete work, and Section 5.8.6 regarding construction dewatering.

### 5.8.5 Concrete Work

North Plains will mix concrete for the pole structure and facility foundations typically off-site at the contractor laydown yards and transport the concrete to the Project workspace. North Plains may perform some limited mixing outside of the Project workspace. North Plains will not perform washing of equipment used for mixing, pouring, or casting within 100 feet of any wetland or other environmentally sensitive feature. North Plains will collect and retain all the concrete washout water and solids in a leak proof containment. North Plains will limit wash water disposal to a defined area or to an area designated for concrete washout within the Project workspace, which will be identified on SWPPP maps. The area(s) will be sufficient to contain the wash water and residual cement and will include equipment capable of reclaiming wash water during washout. North Plains will conduct concrete washout activities in compliance with Project permits and authorizations.

### 5.8.6 Construction Dewatering and Discharge

In areas with high water tables, or where water is needed to stabilize the hole during drilling, it may be necessary to dewater the excavation. North Plains will typically use portable pumps to dewater the excavation; North Plains will base the number and size of pumps employed on the volume of water to be removed.

Prior to initiating dewatering activities, North Plains will approve the water discharge plan to ensure that erosion and sediment control BMPs are installed in such a way as to minimize the potential for water containing sediment from reaching a wetland or waterbody. North Plains will locate dewatering structures to avoid sensitive resources that may be affected by the discharges. North Plains will not directly discharge water from construction dewatering into surface waters. North Plains will conduct all dewatering activities in accordance with the applicable permits, including the MDEQ General Permit for Construction Dewatering (GP MTG070000) and NDDEQ Temporary Discharge Permit (GP NDG0700000) (see Attachment K) and applicable water quality standards. Where required by permits, North Plains will conduct water quality sampling during construction dewatering activities.

Typically, North Plains will direct water to a well-vegetated upland area through a geotextile filter bag. North Plains will size geotextile bags for the discharge flow and suspended sediment particle size. Where the dewatering discharge point cannot be in an upland area due to site conditions and/or distance, North Plains will direct the discharge into a straw bale dewatering structure designed based on the maximum water discharge rate. North Plains will use a straw bale dewatering structure in conjunction with a geotextile filter bag to provide additional filtration near sensitive resource areas.

If the Project requires construction dewatering during frozen conditions, North Plains will take measures to protect pumps from freezing to avoid disruptions in dewatering and potential spills or leaks of lubricants or fuel. These measures may include placing pumps inside portable shelters with heaters. North Plains will install structures early in the construction process before frozen ground conditions exist, where feasible, and will mark the locations of the filter bags placed outside of the Project workspace with lathe or a similar method to assist crews in relocating the filter bag for proper disposal. North Plains will remove dewatering structures as soon as practicable after completion of dewatering to remove the structure and filter bags before they are frozen.

Construction dewatering and discharging activities will follow applicable regulations and permit requirements to maintain compliance with Montana and North Dakota water quality standards.

## 5.9 ASSEMBLY AND ERECTION OF STRUCTURES

North Plains will transport monopole structures to each structure work area in sections by truck or helicopter, depending on topography and access. At the structure site, North Plains will place each pole section on wood blocking. First, North Plains will use a large crane to hoist the bottom pole section onto the structure foundation and mound the anchor bolts. Next, North Plains will lift the middle section(s) into place, using guide brackets to align the section. North Plains will then ensure proper alignment and secure the fitting. Finally, North Plains will guide and secure the top section into place to complete the structure.

Lattice tower assembly is similar to monopole structure assembly. North Plains will transport bundles of steel members and associated hardware and wood to each structure site by truck. Next, North Plains will lay out wood blocking, open the structure steel bundles, and place the structure steel bundles on the wood blocking for assembly. Typically, North Plains will assemble the leg extensions for the structures first using a small crane. Similar to monopole assembly, North Plains will then assemble subsections and hoist the subsections into place with a large crane. North Plains will fasten the subsections together to form a complete structure. A follow-up crew then tightens the bolts in the joints.

North Plains may use helicopters to erect structures. The use of helicopters for structure erection is typically limited to areas that are difficult to access, either due to a lack of roads, rough terrain, or both. North Plains will consider several site- and region-specific factors when deciding whether to use helicopters, including access to structure locations, presence of sensitive resources, permitting restrictions, landowner needs and preferences, construction schedule, weight of structural components, time of year, elevation, availability of heavy lift helicopters, weather, and construction economics.

North Plains will transport the structure sections and associated hardware including insulators, hardware, blocking, and stringing sheaves to the helicopter fly yard by truck, where North Plains will assemble sections of each structure and stage the sections for transport to the right-of-way. Once staged for transport, North Plains will attach structure sections by cables from the helicopter to the top of the structure section and will airlift the structure section to the structure location. Upon arrival, North Plains will place the section directly onto the foundation or stack on top of the previously erected structure section.

North Plains will plan and communicate the assembly and erection activities to landowners and other impacted stakeholders in advance of structure construction activities to provide a safe work area. North Plains will implement good housekeeping practices to contain and remove construction related waste and debris during these activities in accordance with Section 5.12.

## 5.10 INSTALLATION OF CONDUCTORS AND WIRE PULLING AND TENSIONING

North Plains will erect temporary guard structures at road and railroad crossing locations where necessary to protect the public during stringing activities. The erection and dismantling of these temporary guard structures may require short-term traffic diversions. Traffic impacts resulting from wire-stringing include short-term traffic diversions, traffic congestion, and brief road closures. North Plains proposes mitigation to address these impacts in the Traffic and Transportation Management Plan (see Attachment J).

North Plains will deliver insulators, hardware, and stringing sheaves to each structure site. North Plains will rig the structures with insulator strings and stringing sheaves at each conductor, dedicated metallic returns conductor, and OPGW position. For safety and efficiency reasons, North Plains will typically perform wire stringing and tensioning activities during daylight hours and typically schedule these activities at roadway crossings, coinciding with periods of minimal road traffic and minimizing traffic disruptions.

North Plains will pull or string pilot lines from structure to structure by either a helicopter or land-operated equipment, then thread the pilot line through the stringing sheaves at each structure. North Plains will use a helicopter to pull the pilot lines at roadway crossings to minimize or avoid impacts to road traffic.

Following pilot lines, North Plains will attach a stronger, larger-diameter line to conductors to pull them onto structures. North Plains will repeat this process until the conductor and OPGW are pulled through the sheaves. Stringing will use powered pulling equipment at one end and powered braking or tensioning equipment at the other end of a conductor segment. The tensioner, in concert with the puller, will maintain tension on the wires while they are fastened to the structures. Once each type of wire has been pulled in, North Plains will adjust the tension and sag, remove the stringing sheaves, and permanently attach the conductors to the insulators.

At tangent structures, North Plains will attach conductors to insulators using clamps, and at dead-end structures, North Plains will cut the conductors and attach the conductors to the insulator assemblies by “dead-ending” the conductors either with a compression fitting or an implosive-type fitting. Before proceeding with the implosive-type fitting, North Plains will notify appropriate land management agencies, private landowners, and public safety organizations.

North Plains will plan and communicate the installation of conductors and wire pulling and tensioning activities to landowners and other impacted stakeholders in advance to provide a safe work area, avoid disruptions to adjacent activities, and to avoid environmental damage or the creation of nuisance conditions. North Plains will implement good housekeeping practices to contain and remove construction related waste and debris during these activities.

Following stringing and tensioning, North Plains will remove guard structures and reclaim the area as described in Section 6.

## 5.11 FACILITY CONSTRUCTION

North Plains will implement safety precautions during converter station and switchyard modifications and construction to protect human health. North Plains will set up barriers between energized facilities and the active workspace, restrict untrained personnel from entering the Project site, and meet equipment clearance requirements. When construction commences at the facilities, North Plains will remove the existing fence around the expansion area, grade the expansion, and replace the fence prior to further work at the site.

### 5.11.1 Converter Station Construction

North Plains will begin construction of the converter stations by surveying and staking the site as described in Section 5.2. North Plains will conduct soil borings at the approximate location of large structures and equipment and obtain soil resistivity measurements to confirm site characteristics. North Plains will conduct borings with truck- or track-mounted equipment. These borings will be approximately 4 inches in diameter and will range from 20 to 50 feet deep. North Plains will

backfill the boreholes upon completion of soil sampling. Depending on the soil characteristics, North Plains may backfill the boreholes with a bentonite plug to prevent subsidence. Next, North Plains will perform site preparation work, including vegetation clearing, previously discussed in Section 5.4, and soil grading to establish a clear and flat working surface, discussed further in Section 5.8. North Plains will also construct permanent and temporary access roads, previously discussed in Section 5.3.

North Plains will compact the area for the structure foundation to the densities required for foundations to support buildings and structures. North Plains will use three types of foundations, as described below.

- Spread footings are placed by: excavating the foundation area; placing forms, reinforced steel, and anchor bolts; and, pouring concrete into the forms. After the foundation has been poured, the forms are removed, and the surface of the foundation is finished.

- Drilled pier foundations are placed in a hole made by a track- or truck-mounted auger. Reinforced steel and anchor bolts are placed into the hole using a track- or truck-mounted crane. The portion of the foundation above ground is formed. The portion below ground uses the undisturbed earth of the augured hole or a prefabricated cylinder as the form. After the concrete foundation has been poured, the form is removed, the excavation is backfilled, and the surface of the foundation finished.

- Slab-on-grade construction is like spread footing construction, except that a spread footing is a circular, square, or rectangular slab that is provided to support an individual column. Many spread footings may be needed to support a single large structure or building. A slab-on-grade foundation is a concrete slab that is poured at ground level and is used as the foundation of the entire building. Slab-on-grade foundations are typically used for smaller structures and prefabricated buildings.

Concurrent with or following foundation installation, North Plains will install oil containment structures, as required to prevent oil from transformers, reactors, circuit breakers, and other oil-containing equipment from seeping into the ground in the event of a rupture or leak. Then, North Plains will install underground electrical raceways and copper ground grid, followed by steel structure and area lighting. North Plains will then erect the converter valve hall and ancillary buildings, along with various high-voltage apparatus typical of a converter station. The installation of high-voltage transformers will require special, high-capacity cranes and specially trained crews for the unloading, setting into place, and final assembly of the transformers. North Plains will place a final 4- to 6-inch-deep crushed rock surface on the ground to create a stable, all-weather working surface with high resistivity, which increases allowable step and touch voltages, reducing risk of shocks to humans near the grounding system during an earth fault.

Fill materials that may be used to construct and maintain the converter stations may include aggregate materials such as gravel, sand, and clay. North Plains will purchase these materials as needed from local commercial operations. Fill materials will not contain unsuitable material (e.g., trash, debris, asphalt) and will be free of toxic pollutants in toxic amounts. Topsoil will not be used as fill.

North Plains will install a security fence around the portion of the site that will enclose the converter stations. North Plains will install locked gates at appropriate locations along the security fence

for authorized access. North Plains may use the area outside the fence temporarily during construction to stage activities and store materials. Upon completion of construction, North Plains will restore this area in accordance with Section 6.

After North Plains has installed the equipment, North Plains will test the converter stations' systems. North Plains will then complete electrical energization of the facility. North Plains will time the energization of the facility to take place with the completion of construction of the transmission line and other Project facilities. After construction is completed, North Plains will remove and dispose of debris and unused materials from the site and will restore disturbed areas within the temporary workspace as described in Sections 5.12 and 6.

### 5.11.2 Switchyard

It is expected that the utility Owner (Basin Electric Power Cooperative) will construct and operate the Morton County Switchyard. The Owner will perform soil borings, followed by clearing, grading, and site preparation. The Owner will install foundations, electrical raceways, interconnection apparatus, lighting, crushed rock, and security fence if needed, depending on existing conditions. Once construction is completed, the Owner will remove and dispose of debris and unused materials from the site and will restore disturbed areas within the temporary workspace as described in Sections 5.12 and 6.

Fill materials that may be used to construct and maintain the switchyard may include aggregate materials such as gravel, sand, and clay. North Plains will purchase these materials as needed from local commercial operations. Fill materials will not contain unsuitable material (e.g., trash, debris, asphalt) and will be free of toxic pollutants in toxic amounts. Topsoil will not be used as fill.

## 5.12 CLEANUP AND ROUGH/FINAL GRADING

North Plains will dispose of all waste materials, including litter generated by construction crews, daily. Initial cleanup and rough grading activities may take place simultaneously. North Plains will perform cleanup immediately following construction when weather or seasonal conditions allow. Cleanup will involve the following:

- North Plains will remove construction debris, including litter generated by construction crews, and large woody debris.
- North Plains will either reincorporate excess rocks and gravel in the immediate vicinity of the excavation on the right-of-way, or remove excess rock and gravel for disposal as requested by the landowner or land-managing agency. North Plains will install warning signs in locations in compliance with applicable regulations.
- North Plains will replace all temporary gates installed during construction with permanent gates, unless otherwise requested by the landowner.
- North Plains will repair or replace fences or other infrastructure removed or damaged during construction as agreed upon with the landowner or land-managing agency.

Rough grading includes restoring disturbed subsoil to as near as practicable to pre-construction conditions to provide proper drainage and decompacting subsoil, where applicable, as discussed

in Section 6.2. Final grading consists of returning the topsoil to the location from which it was stripped and final contouring to near as practicable to pre-construction conditions. This includes repairing any rutting observed within the Project workspace. North Plains will either reincorporate excess subsoil in the immediate vicinity of the excavation on the right-of-way or remove and dispose of any remaining excess subsoil from excavations at an approved off-site location as needed to ensure contours are restored to as near as practicable to pre-construction conditions, and as requested by the landowner or land-managing agency.

For temporary access roads that are not to be left in place per landowner agreement or permits and authorizations, North Plains will grade the road area to near as practicable to pre-construction conditions. North Plains will then prepare the seedbed and install or repair erosion control measures as described in Section 6.

North Plains will remove construction mats and temporary bridges once restoration activities have been completed and access to the Project workspace is no longer required.

## 6.0 RESTORATION

As previously described, North Plains will limit the areas of ground disturbance mainly to structure locations and along access roads. North Plains will cut tall vegetation along the full width of the right-of-way; however, herbaceous vegetation and root stock will typically remain in place. Restoration activities will include the following activities:

- North Plains will inspect, maintain, repair, and replace temporary erosion and sediment control BMPs until permanent cover is achieved as discussed in Section 5.7.
- North Plains will conduct decompaction in areas where temporary access roads were developed and where grading occurred, as needed.
- North Plains will install permanent erosion and sediment control measures where needed.
- North Plains will apply temporary seed mix to minimize erosion potential to the extent practicable.
- North Plains will conduct permanent seeding in non-agricultural areas disturbed by construction activities.
- North Plains will remove construction mats and temporary bridges/culvert after restoration activities are complete.

North Plains will comply with the restoration conditions stipulated in the permits and authorizations issued by the federal land-managing agencies for the portions of the Project that cross federal lands.

## 6.1 ROCK REMOVAL

North Plains will remove rocks exposed due to construction activity from the Project workspace prior to and after topsoil replacement. This effort will result in an equivalent quantity, size, and distribution of rocks to that found on adjacent lands, as determined by North Plains. North Plains

will haul rocks removed from the construction area to a licensed disposal facility or will dispose of the rocks on the landowner's premises away from environmentally sensitive features with prior approval from the landowner or land-managing agency.

## 6.2 DECOMPACTION

In areas where grading has occurred particularly along upland temporary access roads, North Plains may decompact soils. North Plains will decompact the subsoil after rough grading and before topsoil replacement, in actively cultivated areas to relieve soil compaction and promote root penetration. North Plains will decompact soils on federally-managed lands as requested by the federal land-managing agencies.

North Plains will rip or chisel compacted cultivated cropland and pasture a minimum of three passes up to 12 inches deep unless specifically requested otherwise by the landowner and in compliance with permits and federal and state laws. Soil conditions must be dry enough to shatter the compacted soil between the points of a subsoiler or chisel plow to lower the bulk density of soil and reduce compaction. Soil at the compacted depth must not be wet and plastic at the time of tilling, otherwise it will not reduce compaction. If subsequent construction and cleanup activities result in further compaction, North Plains will complete the measures described above a second time to alleviate the soil compaction.

If there is any dispute between the landowner and North Plains as to what areas need to be ripped or chiseled, the depth at which compacted areas should be ripped or chiseled, North Plains will consult with the Natural Resources Conservation Service (NRCS).

North Plains will test the decompacted Project workspace at regular intervals for compaction in agricultural lands. North Plains will use penetrometers or other appropriate devices and will conduct tests on the same soil type under similar moisture conditions in undisturbed areas immediately adjacent to the construction area to approximate pre-construction conditions.

If mechanical relief of compaction is deemed unsatisfactory by the landowner, North Plains will consider plowing under organic matter including wood chips and manure, planting a green crop such as alfalfa to decrease soil bulk density and improve soil structure, or other measures in consultation with the NRCS.

North Plains will replace topsoil to pre-existing depths once ripping and discing of subsoil is complete. After topsoil replacement, North Plains will till the soil with a disc or rolling harrow, drag harrow, Harley rake, field cultivator, chisel plow, or equivalent to break up large clods and to prepare the soil surface. Suitable conditions generally include a firm soil surface that is not too loose or too compacted. North Plains will prepare the soil to accommodate the seeding equipment and method to be used.

Some short-term decreases in agricultural productivity are possible in areas where ground disturbance has occurred, particularly access roads. North Plains will make reasonable efforts to restore agricultural productivity of the Project workspace and will address any related compensation obligations through agreements with landowners.

**Where topsoil is stripped for the construction of temporary overland travel and temporary access roads on BLM lands, after construction is complete, North Plains will decompact to a minimum depth of 18 inches in two perpendicular passes (BLM, 2015). The topsoil**

**will then be returned, and the site seeded with a BLM-approved native seed mix based on soil types provided by the BLM (see Attachment M).**

## 6.3 PERMANENT EROSION AND SEDIMENT CONTROL BMPS

During final grading, North Plains will stabilize slopes in areas other than cropland with erosion and sediment control BMPs. With exception for actively cultivated areas, North Plains will install permanent berms (i.e., diversion dikes or slope breakers) on slopes where ground disturbance has occurred, or where otherwise deemed necessary, according to the following maximum spacing requirements unless otherwise specified in permit conditions.

TABLE 6.3-1

**Maximum Allowable Spacing of Permanent Berms**

| Slope (percent) | Approximate Spacing (feet) |
|---|---|
| <10 | 100-400 |
| 10-19 | 75-200 |
| 20-39 | 50 |
| >39 | 25 |

Source: BLM, 2015

Measures for the construction of permanent berms will include the following:

- North Plains will construct permanent berms to facilitate drainage toward natural dips, rocky ground, or vegetation to intercept sediment.
- North Plains will construct permanent berms to a minimum height of 4 to 6 inches, but could be higher depending on site conditions.
- North Plains will construct permanent berms to be at a 20-degree angle to the slope and channel water to the downhill side.
- North Plains will construct permanent berms to avoid directing sediment into drainages.
- North Plains will construct permanent berms of compacted earth, stone, or functional equivalent in conformance with the required regulatory authorizations and all applicable regulations governing this activity.
- North Plains will divert berm outfalls into an appropriate energy-dissipating sediment control device, such as filter socks, silt fence, or straw bales, until permanent cover or final stabilization is established to prevent discharge of sediment (see Section 5.7). North Plains will extend berms slightly beyond the edge of the Project workspace if possible; however, only with the appropriate sediment capturing device. North Plains will inspect outfalls to ensure stabilization.
- North Plains will inspect and repair permanent berms as deemed necessary by North Plains to maintain function and prevent erosion.

Erosion and sediment control techniques for access roads will be built into the design, as further described in Section 5.3.

### 6.3.1 Erosion Control Blankets

North Plains will prepare the soil surface and install the erosion control matting to ensure it is stable and the matting makes uniform contact with the soil of the slope face or stream bank with no bridging of rills, gullies, or other low areas. North Plains will install the appropriate class of erosion control blanket in accordance with manufacturer recommendations and specifications on steep slopes that drain to surface waters, and at other locations based on site-specific conditions. North Plains will install erosion control blankets parallel with the direction of the slope and will anchor erosion control blankets in accordance with manufacturer recommendations. North Plains will use erosion control matting made of biodegradable, natural fiber such as straw or coir.

### 6.3.2 Project Seed Specifications

North Plains will purchase seeds that follow the seed and label specifications established by the Montana and North Dakota Departments of Agriculture. The Montana and North Dakota Departments of Agriculture require certificates of seed analysis for all seed mixes to manage the introduction of noxious weeds. North Plains will confirm seeds have been tested in accordance with state law(s) and within six months prior to purchase. Commercial seed will be either certified or registered seed. Seed mixture containers will be tagged in accordance with state law(s) and available for inspection. North Plains will collect seed tags during seeding activities. North Plains will review the tags prior to installation to confirm the seed mix complies with regulations and that the appropriate seed mix is applied in the correct location. Seeding will follow cleanup as closely as possible. North Plains will base seeding rates on Pure Live Seed.

If used, North Plains will treat legume seed with an inoculant specific to the species to enhance vigor and health of the plants and thereby increase nitrogen available in the soil for other plants. Inoculant will be applied in accordance with the manufacturer's recommended rate of inoculant appropriate for the seeding method, such as broadcasting, drilling, or hydroseeding.

North Plains will apply amendments, such as fertilizer and soil pH modifier materials, based on landowner agreements, except in wetlands. North Plains will consult with the local soil conservation authority and land-managing agency or landowner on the type and application of soil amendments recommended to establish the desired vegetative cover at that location. This may include soil testing. **Fertilizer will not be applied on BLM-managed lands (BLM, 2015).**

North Plains will incorporate soil amendments into the normal plow layer as soon as possible after application.

## 6.4 SEEDING METHODS

North Plains will apply seed uniformly at specified rates by broadcasting, hydroseeding, or drill seeding. North Plains will ensure the seeding equipment is appropriate for the seed mix and is capable of dispensing native seeds without plugging or unevenly distributing the seed. To minimize ground disturbance along the entire corridor, North Plains will clear forested areas, but will leave roots and stumps in place. Within areas of cleared forest, it may not be practical to access large areas of ground with seeding and seedbed preparation equipment. In these areas, North Plains may require smaller vehicles to perform tasks such as preparing seedbeds with small rakes and surface packing after seeding. North Plains will suspend seeding activities if conditions are such that equipment will cause rutting of the surface in the designated seeding areas.

North Plains may use broadcast seeding at all disturbed areas with exposed soil. North Plains will perform broadcast seeding at the rate specified in the mixture tabulation. North Plains will uniformly distribute seed by a mechanical hand-operated seeder or, in small seeding areas, by hand. Following seeding, North Plains will rake the surface with a cultipacker, harrow, or hand rake and firm the soil bed as appropriate to site conditions.

North Plains may use hydroseeding at disturbed upland areas where there is exposed soil. North Plains will not apply hydroseed in wetland locations. North Plains will perform hydroseeding at rate specified in the mixture tabulation. North Plains will apply seed in a broadcast, hydromulch slurry to clearly see any gaps in application and ensure uniform coverage of the seeding area. North Plains will ensure the hydroseeder provides for continuous agitation of slurry and a uniform flow of slurry. North Plains will pre-approve all hydromulch products.

North Plains may use seed drilling in areas where North Plains has removed stumps and have prepared a seed bed. North Plains will sow drilled seed at a depth of 0.25 inch. Seeding equipment will be able to accommodate and uniformly distribute different sizes of seed at the required depth. Feeding mechanisms will be able to evenly distribute different seed types at the rates specified. North Plains will suitably firm the seedbed soil immediately following seed drilling.

**On BLM-managed lands, drill seeding will be conducted using a rangeland drill spaced no greater than 6 inches and equipped with a depth regulator to ensure proper depth of planting. The seed mixture will be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first. North Plains will take appropriate measures to ensure this does not occur (BLM, 2015).**

**Where drilling is not possible on BLM-managed lands, seed will be broadcast, and the area will be raked or chained to cover the seed. When broadcasting the seed, the seeding rate will be doubled. The seeding will be repeated until satisfactory vegetative cover is established as determined by the BLM. Evaluation of growth will not be made before completion of the second growing season after seeding. The BLM will be notified a minimum of seven days prior to seeding of the Project (BLM, 2015).**

**On USFS- and USDA ARS-managed lands, North Plains will comply with the seed specifications provided in USFS Seed Scenario #13 included in Attachment M.**

## 6.5 TEMPORARY REVEGETATION

North Plains may use temporary cover or seeding as a quick means to minimize soil erosion and reduce the potential for the establishment of noxious weeds. Temporary seed mixes are considered a cover crop and are made up of annual grasses, have rapid germination, and provide quick ground cover. These seed mixes are not intended to provide multi-year cover. Unless specifically requested by landowners or regulatory agencies, North Plains will not establish temporary vegetation on cultivated land or in inundated areas. North Plains will develop the temporary seed mixes to be used on this Project in coordination with the NRCS and the affected land-managing agencies. Seed mixes required by state and federal land managing agencies are provided in Attachment M.

North Plains will establish temporary erosion and sediment control BMPs as described in Section 5.7 until permanent cover or final stabilization has been established.

## 6.6 PERMANENT REVEGETATION

North Plains will establish permanent vegetation in areas of exposed soils, such as graded areas, within the Project workspace and along temporary access roads that are to be restored to pre-construction conditions, except in actively cultivated areas and inundated wetlands. North Plains will select permanent seed mixes to augment revegetation via natural recruitment from native seed stock in the topsoil and not to change the natural species composition.

North Plains will develop the permanent seed mixes to be used on this Project in coordination with the NRCS and state and federal land managing agencies. North Plains will consult with the landowner regarding the desired seed mixes to be used on their property. Seed mixes requested by state and federal land managing agencies are provided in Attachment M. North Plains will utilize a native prairie seed mix when seeding in areas of native prairie/unbroken grasslands, unless a different seed mix is required by the landowner.

**On BLM-managed lands, seed mixes will not contain primary or secondary noxious weed seed in the seed mixture (see BLM seed mixes and installation requirements provided in Attachment M). On USFS- and USDA ARS-managed lands, North Plains will comply with the seed specifications provided in USFS Seed Scenario #13 included in Attachment M. On North Dakota Department of Land Trust lands, North Plains will use the North Dakota Department of Land Trust -provided seeding specifications included in Attachment M.**

North Plains will coordinate with the USFWS and state wildlife agencies to identify appropriate seed mixes on private lands near sensitive resources such as suitable habitat for federal- or state-listed species.

Native seed mixes can take two to three years to fully germinate depending on soil, site, weather conditions and the time of year that the seeds were installed. During the first year, native plants will grow to only about 1 to 3 inches tall. By the second year, some native grasses, sedges, and flowers may reach mature height, and some may flower, alongside many first-year native seedlings as well. Many of the native plants will mature and start flowering by the third year. Depending on the seed mix, other plants will not appear or mature for several years.

### 6.6.1 Permanent Seeding of Upland Areas

The Project primarily occurs within managed rangeland. North Plains does not intend to seed actively cultivated areas; however, North Plains will seed with temporary cover crops or other mixes at the landowner request. In landscaped or lawn areas, North Plains will use turf grass seed mixes requested by the landowner. North Plains may reseed roadside areas with seed mixes that most closely resemble the current vegetation community, unless otherwise agreed upon with the landowner and/or road authorities.

### 6.6.2 Permanent Seeding of Wetland Areas

The Project will cross wetlands consisting of forested, scrub-shrub, and emergent wetland types. North Plains will use low ground pressure vehicles or construction mats in these wetlands for vegetation clearing and access; however, North Plains plans to span these wetlands to avoid structure placement within the wetlands to the extent practicable. Therefore, North Plains will avoid grading within these wetland communities, unless grading is required to restore inadvertent disturbance to a wetland during placement or removal of construction mats across the wetland.

North Plains will continue to manage woody vegetation within these wetlands as further discussed in Section 8.

In wetlands, the preferred method for revegetation of disturbed areas is reliance on revegetation by resident plant communities. However, supplemental seeding may be beneficial at some locations to improve cover of bare soils and increase diversity. North Plains will use a wetland seed mix on exposed soils that most closely corresponds to the native vegetation community identified during North Plains wetland surveys conducted in accordance with USACE delineation protocols. North Plains will not apply fertilizer, lime, or mulch in wetlands.

### 6.6.3 Permanent Seeding of Waterbody Banks

The Project will cross waterbodies located in the Project workspace using the techniques described in Section 5.3.1. However, North Plains plans to span these waterbodies to avoid structure placement within bed or banks. Therefore, disturbance to waterbodies should be limited to the installation and removal of bridges, culverts, or fords. North Plains will continue to manage tall-growing woody vegetation within riparian areas as further discussed in Section 8.

North Plains will reestablish stream bank vegetation using a riparian seed mix that most closely corresponds to the native vegetation community to seed areas of exposed soils. North Plains will install temporary and permanent erosion and sediment control BMPs such as erosion control blankets until permanent cover or final stabilization is achieved, previously discussed in Sections 5.7.2 and 6.3.

### 6.6.4 Timing

North Plains will seed as soon as possible following final grading and seed bed preparation when the environmental conditions are appropriate. North Plains will typically plant native plant seed mixes in the fall when temperatures are below 40 degrees Fahrenheit for 10 days or more and before the ground freezes to stratify the seeds to break their seed dormancy. North Plains may also conduct snow seeding in early or late winter when there is less than 4 inches of snow on sunny days. North Plains will perform spring seedings, particularly of warm season species, when soil temperatures are at least 55 degrees Fahrenheit, but preferably before August 15 (BLM, 2015). Outside of these time windows, North Plains will apply the temporary cover crop seed mixes according to temporary cover crop seed mix specifications.

## 7.0 ENVIRONMENTAL COMPLIANCE

During construction, North Plains will employ Environmental Inspectors (EIs) responsible for ensuring compliance with environmental plans; permit and authorization conditions; and company commitments during Project activities. The EIs will report directly to a North Plains representative who has overall responsibility for successful implementation of all environmental permits and plans during construction. If required by permits and authorizations, North Plains will also employ Compliance Monitors who will report directly to the applicable agency.

During construction, the EIs will be on-site daily while construction activities are occurring. The EIs will be responsible for collecting the information required by the federal, state, and local permits and authorizations. North Plains' Environmental Project Manager will use this information to develop reports required by permits and authorizations. The EIs specific duties will include:

- attending daily construction meetings to discuss compliance issues with North

Plains' Construction Team;

- managing and updating for environmental task punch list restoration tracking spreadsheets;
- serving as the point of contact for agency and Tribal authority staff who visit the construction site;
- recommending changes to EI staffing to maintain appropriate levels of environmental oversight necessary to ensure compliance with all environmental plans and regulatory permits and authorizations;
- immediately communicating any non-compliance or potential non-compliance to North Plains' Environmental Project Manager;
- verifying compliance with the conditions of environmental regulatory authorizations, environmental plans, and environmental requirements in landowner easement agreements. These requirements include, but are not limited to:
    - verifying that the limits of authorized construction work areas and locations of access roads are properly marked before the initiation of construction activities;
    - verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, such as wetlands, waterbodies, threatened and endangered species' habitat, or areas with special requirements along the construction work area;
    - verifying that the location of dewatering structures will not direct water into known cultural resources sites or locations of sensitive species or resources;
    - verifying that authorized dewatering and discharge activities are following state water quality standards, are not adversely impacting water chemistry in accordance with permits, and that there are no unauthorized deposition of silt and/or sediment into a wetland or waterbodies;
    - verifying that subsoil and topsoil are tested, as deemed necessary, in agricultural and residential areas to measure compaction and determine the need for corrective action;
    - advising North Plains when conditions such as wet weather make it advisable to restrict construction activities to avoid rutting;
    - verifying that the contours and topsoil are restored to their pre-construction conditions where grading activities have occurred;
    - using the SWPPP and depicting BMP locations and techniques to verify that temporary and permanent erosion prevention and sediment control

BMPs are installed in the proper locations to prevent sediment flow into wetland, waterbodies, sensitive areas, and onto roads;

- inspecting temporary erosion and sediment control BMPs to ensure compliance with the SWPPP and water quality standards;
- verifying that non-functional erosion and sediment control BMPs are repaired, replaced, or supplemented within 24 hours after discovery, or as soon as field conditions allow them to be repaired;
- identifying areas that will be given special attention to ensure stabilization and restoration after the construction phase, such as steeply sloped areas and waterbody crossings; and
- verifying that timing restrictions such as seasonal prohibitions as stipulated in permits are followed.

- identifying, documenting, and overseeing corrective actions, as necessary, to ensure compliance with regulatory permits and certifications; and
- documenting daily observations.

After construction activities are complete, North Plains' EIs will continue to inspect the Project workspace in accordance with the Montana and North Dakota Storm Water Construction General Permits. EIs will inspect areas where seeding and sediment and erosion control BMPs have been implemented and will follow up with reseeding measures where vegetative cover by the specified seed mix, or revegetation by the local, native seed source, is inadequate to provide final stabilization. EIs will inspect the Project right-of-way until final stabilization or permanent cover, as defined by the applicable Storm Water Construction General Permit, is achieved (see Section 5.7).

## 8.0 OPERATION AND MAINTENANCE

North Plains' primary goal is to construct the Project and then operate and maintain the Project and its right-of-way in a manner that ensures a safe and reliable transmission line. Clearing and managing vegetation is crucial for the Project's reliability and safety and to prevent vegetation-related outages. The NERC established the reliability standard FAC-003-4 to prevent vegetation-related outages from occurring on electrical transmission systems operating at 200 kV or higher (NERC, 2016). The HVDC Transmission Line, Rosebud Transmission Line, Oliver Transmission Line, and Morton Transmission Line will be subject to FAC-003-4. The standard requires transmission line operators to implement a documented vegetation management program with an established Minimum Vegetation Clearing Distance[4] to prevent flashover between conductors and vegetation. North Plains will implement a vegetation management program and will comply with the Minimum Vegetation Clearing Distance.

## 8.1 ROUTINE INSPECTIONS

North Plains will conduct routine and preventative maintenance activities to identify and repair any deficiencies recorded by the inspector during routine monitoring and inspections. Routine

[4] The Minimum Vegetation Clearing Distance is the calculated minimum distance in feet to prevent flashover between conductors and vegetation at various altitudes for both HVDC and EHV AC operating voltages.

and preventative maintenance activities can typically be performed in a short timeframe and do not result in ground disturbance. Examples of routine maintenance activities that will occur during the life of the Project are listed below:

- Fast Aerial Patrol: This inspection is planned to occur annually and includes a single day flyover of the transmission line with primary focus on gross defects.

- Climbing Inspection: This inspection technique is planned to occur approximately every three years at varying locations. This will include personnel climbing the pole structures with a primary focus on structure components and secondary focus on wire systems and insulator assemblies.

- Detailed Aerial Inspection: This inspection technique is planned to occur approximately every three years. This will include an extensive flyover effort with a primary focus on wire systems and insulators assemblies and a secondary focus on pole structure components.

- Ground Based Inspection: This inspection technique is planned to occur approximately every three years at varying locations. This will include personnel traveling to the structure site and reviewing the structure from the ground with a primary focus on guys, anchors, structure plumbness and orientation, and arrester condition. The secondary focus during this inspection will be on wire systems and insulator assemblies.

- Special Inspections: This inspection technique describes possible special inspections that may occur over time as the need is determined and may include detailed foundation inspection, infrared inspection, and corrosion detection.

North Plains will notify the applicable jurisdictional agency and landowners or land-managing agencies of routine and preventative maintenance activities prior to the start of work. North Plains will obtain prior approval from the appropriate jurisdictional agencies and landowners or land-managing agencies prior to conducting routine or preventative maintenance that falls outside the Project right-of-way, permanent access roads, or ownership. In the event of an emergency, North Plains will conduct maintenance that is deemed necessary to protect the health and safety of the public and contact the appropriate jurisdictional agencies and landowners as soon as it is safe to do so.

## 9.0 PLAN REVISIONS

TABLE 9.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 0 | Initial draft plan. | March 2023 |
| Rev 1 | Revised per agency and North Plains comments. | August 2024 |
| Rev 2 | Revised to reflect Project changes. Updated language for consistency across all project plans. | August 2025 |
| | | |

## 10.0 REFERENCES

Avian Power Line Interaction Committee (APLIC) and U.S. Fish and Wildlife Service (USFWS). 2005. Avian Protection Plan Guidelines. Available online at: https://www.aplic.org/uploads/files/2634/APPguidelines_final-draft_Aprl2005.pdf. Accessed May 2024.

APLIC. 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C., and Sacramento, CA. Available online at: https://www.nrc.gov/docs/ML1224/ML12243A391.pdf. Accessed May 2024.

APLIC. 2012. Reducing Avian Collisions with Power Lines. Edison Electric Institute and APLIC. Washington, D.C. Available online at: https://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf. Accessed May 2024.

Bureau of Land Management (BLM). 2015. Miles City Field Office Approved Resource Management Plan. Attachment 9 from the Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region. Prepared by U.S. Department of Interior Bureau of Land Management Miles City Field Office, Montana. September 2015. BLM/MT/PL-15/010+1610.

Copstead, R.L.; D.K. Johansen; and J. Moll. 1998. Water/Road Interaction: Introduction to Surface Cross Drains. Report 9877 1806-SDTDC. San Dimas, California: U.S. Department of Agriculture, Forest Service, Technology and Development Program. 15 p.

Midcontinent Independent System Operator, Inc. (MISO). 2023. Facility Study for Long-Term Transmission Service. MISO Project F118. OASIS Reference # 90481206, 95418167, 91365462. Published April 25, 2023. Available online at: F118_Revised_V4_Final_Report.pdf (oati.com). Accessed August 2024.

Minnesota Power. 2024. Facilities Construction Agreement entered into by MISO and Minnesota Power, a division of ALLETE, Inc. for Square Butte TSR 91365462. February 2024. Public Version filed on the Federal Energy Regulatory Commission Docket No. ER24-1440.

Montana Department of Transportation (MDT). 2016. Erosion and Sediment Control Best Management Practices. Available online at: https://www.mdt.mt.gov/publications/docs/manuals/env/bmp-manual-dec16.PDF. Accessed August 2024.

North American Electric Reliability Corporation (NERC). (2016). FAC-003-4 Transmission Vegetation Management. Available online at: https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-003-4.pdf

North Dakota Department of Transportation (NDDOT). 2024. Erosion and Sediment Control. Available online at: https://www.dot.nd.gov/construction-and-planning/construction-planning/environmental/erosion-and-sediment-control. Accessed August 2024.

U.S. Army Corps of Engineers (USACE). 2021. Nationwide Permit 57 Electric Utility Line and Telecommunications Activities. Effective Date: March 15, 2021 / Expiration Date: March 14, 2026. Authorities: Sections 10 and 404. Available on-line at: https://saw-reg.usace.army.mil/NWP2021/NWP57.pdf. Accessed August 2024.

U.S. Forest Service. 2006. Forest Service Handbook (FSH) 2509.25 – Watershed Conservation Practices – Handbook, Chapter 10 – Management Measures and Design Criteria. Amendment No. 2509.25-2006-2. Effective May 5, 2006. USDA Forest Service, Rocky Mountain Region (Region 2), Denver, CO.

# NORTH PLAINS CONNECTOR PROJECT

# ATTACHMENT A

# Draft Agricultural Impact Mitigation Plan

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Agricultural Impact Mitigation Plan



**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**August 2025**

## TABLE OF CONTENTS



## LIST OF TABLES



## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AIMP | Draft Agricultural Impact and Mitigation Plan |
| CMRP | Construction Mitigation and Reclamation Plan |
| Contractor | construction contractor |
| EI | Environmental Inspector |
| Grid United | Grid United LLC |
| North Plains | North Plains Connector LLC |
| NRCS | Natural Resources Conservation Service |
| Plan | Draft Agricultural Impact and Mitigation Plan |
| Project | North Plains Connector Project |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Agricultural Impact Mitigation Plan (AIMP or Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, indirect single-purpose subsidiary of Grid United LLC (Grid United), a Houston, Texas-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the U.S. power grid more modern, efficient, reliable, and secure.

## 2.0 PLAN PURPOSE

This AIMP outlines the standard procedures that North Plains will implement throughout Project construction to minimize and mitigate construction-related impacts to agricultural land use, such as remediation of damage to drain tile and lines, prevention of interference with irrigation systems, segregation of topsoil, decompaction of soil, repair of fence, management of livestock, and removal of stone, in addition to special mitigation where crossing or adjacent to specialty practices, such as organic farms or apiaries.

North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Plan references the CMRP where additional guidance is provided therein.

## 3.0 REGULATORY COMPLIANCE

North Plains will coordinate with the Montana and North Dakota Departments of Agriculture, federal and state land management agencies, and other applicable federal, state, and local agencies regarding implementation of the AIMP. North Plains will comply with all applicable federal, state, county, and local regulations pertaining to the preservation of agricultural land.

Where permit and agency requirements differ, North Plains will follow the more stringent requirements.

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The construction contractor (Contractor) will be responsible for site preparation, installation of support structures, general Project construction, testing and commissioning, health and safety, and environmental compliance including agricultural mitigation and restoration. However, North Plains is responsible for construction of all associated facilities.

For the duration of the Project construction, North Plains will implement and maintain the measures outlined in this Plan, the CMRP, and in all applicable Project permits.

### 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ Environmental Inspectors (EI) during the construction phase. Further information on EIs and their responsibilities is provided in the CMRP.

## 5.0 TRAINING

Before commencing construction, North Plains will organize environmental training sessions for relevant Project personnel. These training programs will cover relevant construction, restoration, and mitigation plans, including this Plan, along with any applicable permit conditions. Furthermore, North Plains will conduct large-group training sessions before each work crew begins construction, followed by periodic follow-up training for newly assigned personnel. Training will be documented, and training records will be saved with Project files.

## 6.0 AGRICULTURAL PROTECTION MEASURES

North Plains will reclaim the land to its former condition to the extent possible, or compensate each landowner, as appropriate, for damages and/or impacts to agricultural operations caused resulting from construction activities. North Plains will determine reclamation and compensation needs after discussion with the landowner or their designee.

## 6.1 ADVANCE NOTICE OF ACCESS TO PRIVATE PROPERTY

Once North Plains and landowners have reached agreements and construction activities have been scheduled, North Plains will provide the landowner or the landowner's designee with advance notice before beginning construction on the property. Prior notice will consist of a personal contact, email, letter, or a telephone contact informing the landowner or landowner's designee of North Plain's intent to access the land. North Plains will document all contact with landowners and, if requested, will provide copies of such documentation and any correspondence to North Plains.

North Plains will consult with landowners when planning the construction schedule to minimize impacts on livestock practices, calving, planting, harvesting, or other agricultural activities.

Where feasible, North Plains will coordinate Project activities to provide access for farm equipment and livestock to fields otherwise isolated by construction activities. North Plains will construct temporary fences and gates across the construction area to prevent entry by livestock, as necessary.

## 6.2 LIVESTOCK OPERATIONS

North Plains will construct temporary fences and gates during construction, as necessary. Any fences, gates, cattle guards, or corrals damaged by construction will be immediately repaired or replaced. Landowners may negotiate to assume the responsibility for repair, relocation, reconfiguration, or replacement of damaged fences or other livestock-related infrastructure in fair settlement with North Plains. In the event livestock requires temporary relocation or supplemental feed, North Plains will reimburse a reasonable cost incurred for the transport of livestock, acquisition of temporary pastureland, or additional supplemental feed during construction and reclamation activities in accordance with easement stipulations. Removal or alteration of existing range improvements on public land will be prohibited.

## 6.3 IRRIGATION SYSTEMS

If Project construction activities or Project workspace intersect an operational or planned spray irrigation system, North Plains will work with the landowner or landowner's designee to establish an acceptable amount of time during which the irrigation system may be out of service.

If feasible and mutually acceptable to North Plains and the landowner(s), temporary measures will be implemented to allow an irrigation system to continue to operate across land on which the transmission lines are being constructed. North Plains will work with the landowner or landowner's designee to identify a preferable construction time. To avoid damaging the pipes or impeding access to the irrigation lines for maintenance, North Plains will work with landowners to identify the locations of underground water lines prior to finalizing structure locations to avoid siting the structures above or adjacent to buried lines.

If irrigation lines, or access to those lines for maintenance, are adversely impacted by construction activities associated with the Project, North Plains will restore the irrigation lines, including the relocation, reconfiguration, and replacement of existing lines, as needed. Landowners may negotiate to undertake the responsibility for repair, relocation, reconfiguration, or replacement of damaged lines in fair settlement with the North Plains. In the event a landowner chooses to undertake this responsibility, North Plains will not be responsible for correcting repairs after construction is complete.

## 6.4 ACCESS ROADS

If public roads do not provide sufficient access, North Plains will attempt to use existing private roads for access to and from the construction workspace. The location of access roads to be used for construction purposes requires agreement with the landowner or their designee. Temporary bridges, culverts, or other methods will be implemented so as not to impede proper drainage, as further described in the CMRP. Temporary roads will be removed upon Project completion. The land will be returned to its previous use and reclaimed as nearly as possible to the conditions that existed prior to construction, to include decompaction, where needed. Reclamation measures are described further in the CMRP and Section 6.12 of this Plan.

## 6.5 DUST CONTROL

North Plains will implement dust control measures during construction in accordance with the CMRP. North Plains will coordinate with farm operators to provide adequate dust control in areas where specialty crops are susceptible to damage from dust.

## 6.6 WEED CONTROL

Weed control will be carried out in accordance with the CMRP and Invasive and Noxious Weed Management Plans.

## 6.7 CONSTRUCTION IN WET CONDITIONS

During construction, North Plains may suspend certain activities in wet soil conditions based on consideration of the following factors:

- extent of surface ponding;

- potential for rutting, defined as the creation of linear depressions made by tire tracks of machinery that results in the mixing of topsoil and subsoil;
- extent and location of potential rutting and compaction and determining whether traffic can be rerouted around the wet area; and
- type of equipment and nature of the construction operations proposed for that day.

North Plains will monitor upcoming weather forecasts to determine if significant rainfall is anticipated during construction. North Plains will appropriately plan work considering the potential for wet conditions and prepare to implement mitigation measures in the event of wet weather conditions and excessive waterflow. North Plains will implement such corrective measures should conditions subsequently worsen. North Plains will cease work in the applicable area until North Plains determines that site conditions are such that work may continue in conformance with the required regulatory authorizations.

## 6.8 PREVENTION OF SOIL EROSION

North Plains will implement erosion prevention and sediment control measures during construction in accordance with the CMRP.

Following construction, agricultural lands will be returned to the landowner, unless other arrangements have been made between North Plains and the landowner. North Plains will reseed and mulch non-cultivated agricultural land, such as pastures and perennial grass hayfields, in consultation with landowners or will make arrangements with landowners who prefer to conduct the reseeding of these areas. North Plains will work with the landowner or landowner's designee to prevent erosion on cultivated agricultural lands in instances where disturbed areas cannot be planted before the first winter season.

## 6.9 TOPSOIL SEPARATION AND STORAGE

Where grading is required, North Plains will strip the topsoil layer and potentially into the subsoil layer and will separate the topsoil and subsoil in storage piles within the Project workspace. North Plains will maintain separation in the form of a gap or a physical barrier, such as a thick layer of mulch or silt fence between the topsoil and subsoil piles to prevent mixing, as further described in the CMRP.

North Plains will segregate up to 12 inches of topsoil, unless otherwise dictated by applicable permits or regulations or requested by the landowner in areas of deep topsoil. Under no circumstances will North Plains use topsoil to fill a low area or backfill structure holes. North Plains will not use topsoil to construct ramps at road or waterbody crossings.

## 6.10 CONSTRUCTION WATER DISCHARGES

Appropriation and discharging activities will follow the requirements identified in the CMRP and applicable regulations and permit requirements to ensure compliance with Montana and North Dakota water quality standards.

In areas with high water tables, or where water is needed to stabilize the hole during drilling, it may be necessary to dewater the excavation. North Plains will typically use portable pumps to

dewater the excavation; North Plains will base the number and size of pumps employed on the volume of water to be removed.

Prior to initiating dewatering activities, North Plains will identify locations to discharge water in consultation with the EI and Landowner, to the extent practicable. Typically, North Plains will direct water to a well-vegetated upland area through a geotextile filter bag. North Plains will size geotextile bags for the discharge flow and suspended sediment particle size. Where the dewatering discharge point cannot be in an upland area due to site conditions and/or distance, North Plains will direct the discharge into a straw bale dewatering structure designed based on the maximum water discharge rate. North Plains will use a straw bale dewatering structure in conjunction with a geotextile filter bag to provide additional filtration near sensitive resource areas.

If the Project requires construction dewatering during frozen conditions, North Plains will take measures to protect pumps from freezing to avoid disruptions in dewatering and potential spills or leaks of lubricants or fuel. These measures may include placing pumps inside portable shelters with heaters. North Plains will install structures early in the construction process before frozen ground conditions exist, where feasible, and will mark the locations of the filter bags placed outside of the Project workspace with lathe or a similar method to assist crews in relocating the filter bag for proper disposal. North Plains will remove dewatering structures as soon as practicable after completion of dewatering to remove the structure and filter bags before they are frozen.

## 6.11 LAND LEVELING

Following the completion of construction, North Plains will restore the Project workspace to as close to the original pre-construction conditions as practicable. If uneven settling occurs or surface drainage problems develop as a result of construction, North Plains will provide additional land leveling services upon landowner's written notice, or as required by the conditions of permits and authorizations. The completion of land leveling will be scheduled in coordination with the landowner, weather and soil conditions permitting. Alternatively, North Plains will negotiate with the landowner for reasonable compensation in lieu of restoration.

## 6.12 COMPACTION, RUTTING, AND SOIL RESTORATION

After rough grading and before topsoil replacement, North Plains will decompact the subsoil in actively cultivated areas to relieve soil compaction and promote root penetration. North Plains will also decompact soil on improved upland temporary access roads as appropriate.

North Plains will rip or chisel compacted cultivated cropland and pasture a minimum of three passes up to 12 inches deep unless specifically requested otherwise by the landowner and in compliance with permits and federal and state laws. Soil conditions will be dry enough to shatter the compacted soil between the points of a subsoiler or chisel plow to lower the bulk density of soil and reduce compaction. Soil at the compacted depth will not be wet and plastic at the time of tilling, otherwise it will not reduce compaction. If subsequent construction and cleanup activities result in further compaction, North Plains will complete the measures described above a second time to alleviate the soil compaction.

If there is any dispute between the landowner and North Plains as to what areas need to be ripped or chiseled, or the depth at which compacted areas should be ripped or chiseled, North Plains will consult with the Natural Resources Conservation Service (NRCS).

North Plains will test the decompacted Project workspace at regular intervals for compaction in agricultural lands. North Plains will use penetrometers or other appropriate devices and will conduct tests on the same soil type under similar moisture conditions in undisturbed areas immediately adjacent to the construction area to approximate pre-construction conditions.

If mechanical relief of compaction is deemed unsatisfactory by the landowner, North Plains will consider plowing under organic matter including wood chips and manure, planting a green crop such as alfalfa to decrease soil bulk density and improve soil structure, or other measures in consultation with the NRCS.

North Plains will replace topsoil to pre-existing depths once ripping and discing of subsoil is complete. After topsoil replacement, North Plains will till the soil with a disc or rolling harrow, drag harrow, Harley rake, field cultivator, chisel plow, or equivalent to break up large clods and to prepare the soil surface. Suitable conditions generally include a firm soil surface that is not too loose or too compacted. North Plains will prepare the soil to accommodate the seeding equipment and method to be used.

Some short-term decreases in agricultural productivity are possible in areas where ground disturbance has occurred, particularly access roads. North Plains will make reasonable efforts to restore agricultural productivity of the Project workspace and will address any related compensation obligations through agreements with landowners.

North Plains will reclaim rutted land as near as practical to its pre-construction condition. North Plains will compensate landowners, as appropriate, for damages caused by construction.

## 6.13 EXCESS ROCK

North Plains will remove rocks exposed due to construction activity from the Project workspace prior to and after topsoil replacement. This effort will result in an equivalent quantity, size, and distribution of rocks to that found on adjacent lands, as determined by North Plains. North Plains will haul rocks removed from the construction area to a licensed disposal facility or will dispose of the rocks on the landowner's premises away from environmentally sensitive features with prior approval from the landowner and North Plains.

## 6.14 SOIL AMENDMENTS

North Plains will apply amendments, such as fertilizer and soil pH modifier materials, based on landowner agreements, except in wetlands. North Plains will consult with the local soil conservation authority and land-managing agency or landowner on the type and application of soil amendments recommended to establish the desired vegetative cover at that location. This may include soil testing. **Fertilizer will not be applied within 500 feet of wetlands or waterbodies on Bureau of Land Management managed lands.**

## 6.15 DAMAGED SOIL CONSERVATION PRACTICES

Soil conservation practices in place in the Project workspace, such as terraces and vegetated swales, that are damaged by construction activities will be restored to the extent practicable to their pre-construction condition.

## 7.0 PLAN REVISIONS

Table 7.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 0 | Initial Plan draft. | May 2025 |
| Rev 1 | Updated language for consistency across all project plans. | August 2025 |
| | | |
| | | |
| | | |
| | | |
| | | |

# NORTH PLAINS CONNECTOR PROJECT

## ATTACHMENT B

## Draft Blasting Plan

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Blasting Plan



**Submitted by:**

**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**August 2025**

## TABLE OF CONTENTS



## LIST OF TABLES



## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| CFR | Code of Federal Regulations |
| CMRP | Construction Mitigation and Reclamation Plan |
| Contractor | construction contractor |
| Grid United | Grid United LLC |
| North Plains | North Plains Connector LLC |
| Project | North Plains Connector Project |
| Plan | Draft Blasting Plan |
| USFWS | U.S. Fish and Wildlife Service |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Blasting Plan (Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, indirect single-purpose subsidiary of Grid United LLC (Grid United), a Houston, Texas-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States' power grid more modern, efficient, reliable, and secure.

## 2.0 PLAN PURPOSE

Shallow bedrock is found through an extensive portion of the Project area, which may necessitate blasting to facilitate the excavation of foundations for transmission structures and facility infrastructure. If construction crews encounter hard rock during grading or excavation for structure foundations, crews may need to perform blasting using explosives to loosen or fracture the rock to reach the required depth. This Plan outlines the standard procedures that North Plains will implement during blasting, including safety precautions and notifications.

North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Plan references the CMRP where additional guidance is provided therein.

## 3.0 REGULATORY COMPLIANCE

North Plains will obtain all necessary permits and will comply with all legal requirements in connection with the use, storage, and transportation of explosives including Title 29 Part 1926 Subpart U of the Code of Federal Regulations (CFR), Title 49 CFR Chapter III. The State of Montana has incorporated federal regulations 29 CFR 1926.860, 29 CFR 1926.900 through 1926.914, and 29 CFR 1910.109) regarding the use of explosives into the Administrative Rules of Montana 24.131.406.

Additionally, North Plains will adhere to recommendations and requirements issued by the applicable land-managing agency, such as the U.S. Forest Service, the Bureau of Land Management, U.S. Department of Agriculture, or State Trust Lands.

North Plains will employ qualified, experienced, and licensed professionals to perform blasting operations. North Plains will require the blasting supervisor to be thoroughly familiar with and comply with the rules, regulations, requirements, and conditions of the Occupational Safety and Health Administration and all federal, state, county and local regulations governing blasting operations. North Plains will require evidence of experience, licenses, certifications, and permits required to complete blasting operations.

Blasting operations will not proceed until appropriate permits have been obtained and approval by North Plains has been issued. Where requirements or conditions differ, the more stringent will apply.

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The construction contractor (Contractor) will be responsible for site preparation, installation of support structures, general Project construction, testing and commissioning, health and safety, and environmental compliance, including the contents of this Plan. However, North Plains is responsible for construction of all associated facilities.

For the duration of the Project construction, North Plains will implement and maintain the measures outlined in this Plan, the CMRP, and in all applicable Project permits.

### 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ environmental inspectors (EIs) during the construction phase. Further information on EIs and their responsibilities is provided in the CMRP.

## 5.0 TRAINING

Before commencing construction, North Plains will organize environmental training sessions for relevant Project personnel. These training programs will cover relevant construction, restoration, and mitigation plans, including this Plan, along with any applicable permit conditions. Furthermore, North Plains will conduct large-group training sessions before each work crew begins construction, followed by periodic follow-up training for newly assigned personnel. Training will be documented, and training records will be saved with Project files.

## 6.0 STANDARD BLASTING PROCEDURES AND COMMITMENTS

North Plains will implement standard blasting best management practices throughout the duration of the Project. Only workers thoroughly experienced and licensed in handling explosives will be allowed to supervise, handle, haul, load, or shoot explosives. In those jurisdictions where the licensing of blasters is mandatory, the blasting supervisor will provide North Plains with proof of the required certification. No blasting will be done without approval from North Plains and the blasting supervisor.

Additionally, North Plains will conduct blasting in accordance with best management practices, such as the following:

- All blasting will be performed by current registered licensed blasters and will comply with regulatory requirements in connection with the transportation, storage, and use of explosives and blast vibration limits for nearby structures, utilities, and wildlife.
- North Plains will always protect workers and the public from any injury or harm that might arise from drilling dust and the use of explosives.
- North Plains will conduct blasting activities during regular, daylight working hours.
- North Plains will clear and clean up each blasting location before and after all blasting operations.

    - North Plains will conduct blasting in a manner to achieve small rock fragmentation of a maximum of 1 foot in diameter.

    - North Plains may pile blasting mats or subsoil over the blast location to prevent flyrock from being blown outside the construction area.

- North Plains will use appropriate flags, barricades, and warning signals to ensure safety during blasting operations.

- North Plains will carefully plan and control all blasting activities near buildings, structures, and other facilities susceptible to vibration or air blast damage to eliminate the possibility of damage to such facilities and structures.

- Where blasting will be conducted in the vicinity of pipelines, North Plains will coordinate with the appropriate pipeline operator and will follow operator-specific procedures, as applicable.

- North Plains will perform blasting testing of surface-water resources and water wells within the distance established by applicable permits.

- Where damages result from blasting, the North Plains will repair such damage or provide fair compensation to the landowner or land managing agency.

## 6.1 SENSITIVE SPECIES

North Plains will avoid blasting activities within 0.5 mile of occupied bat hibernacula, if present, between November 1 and April 14, when hibernacula may be occupied. North Plains will develop site-specific blasting plans if blasting is proposed within 0.5 mile of an occupied bat hibernacula.

Based on the U.S. Fish and Wildlife Service (USFWS) 2024 Eagle Rule and coordination with USFWS to date, North Plains will seek a disturbance permit if construction or blasting are required within 0.5 mile of a bald or golden eagle nest or potential bald or golden eagle nest.

# 7.0 TRANSPORTATION OF EXPLOSIVES

Transportation of explosives will comply with all applicable federal, state, and local laws, including Title 29 CFR Part 1926 Subpart U and Title 49 CFR Chapter III. These regulations are administered by the U.S. Department of Transportation and regulate the packaging, labeling, materials compatibility, driver qualifications, and safety of transported explosives. Every effort will be made to minimize the transportation of explosives through congested or heavily populated areas.

## 7.1 FEDERAL REGULATIONS

Per Title 29 CFR Part 1926 Subpart U Section 1926.902:

- Motor vehicles or conveyances transporting explosives will only be driven by a licensed driver who is physically fit and familiar with the local, state, and federal regulations governing the transportation of explosives.

- Smoking or carrying matches or any other flame-producing device, firearm, or loaded cartridges will be prohibited while in or near a motor vehicle transporting explosives.

- Explosives, blasting agents, and blasting supplies will not be transported with other materials. Blasting caps, including electric, will not be transported in the same vehicle with other explosives.

- Vehicles used for transporting explosives will be strong enough to carry the load without difficulty and will be maintained in good mechanical condition.

- When explosives are transported by an open-body vehicle, a Class II magazine or original manufacturer's container will be securely mounted on the bed to contain the cargo.

- All vehicles used for the transportation of explosives will have tight floors and any exposed spark-producing metal on the inside of the body will be covered with wood or other non-sparking material to prevent contact with containers of explosives.

- Every motor vehicle or conveyance used for transporting explosives will be marked or placarded on both sides, the front, and the rear with the word “Explosives” in red letters, not less than 4 inches in height, on white background.

- Each vehicle used for transportation of explosives will be equipped with a fully charged fire extinguisher, in good condition. An Underwriters Laboratory-approved extinguisher of not less than 10-ABC rating will meet the minimum requirement. The driver will be trained in the use of the extinguisher on his vehicle.

- Motor vehicles or conveyances carrying explosives, blasting agents, or blasting supplies, will not be taken inside a garage or shop for repairs or servicing.

- Motor vehicles carrying explosives will not be left unattended at any time.

Per Title 49 CFR Chapter III Parts 390-397:

- Every motor vehicle containing hazardous materials will be driven and parked in compliance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated.

Where requirements differ, the more stringent will apply.

## 7.2 STATE REGULATIONS

### 7.2.1 Montana

Per the Administrative Rules of Montana 61-9-413, the State of Montana has the following requirements for vehicles transporting explosives.

- Any person operating any vehicle transporting any explosive as a cargo or part of a cargo upon a highway will at all times comply with the provisions of this section.

- Vehicles transporting explosives will be marked or placarded on each side and the rear with the word "EXPLOSIVES" in letters not less than 8 inches high, or there will be displayed on the rear of such vehicle a red flag not less than 24 inches square marked with the word "DANGER" in white letters 6 inches high.

- Vehicles transporting explosives will be equipped with not less than two fire extinguishers, filled and ready for immediate use, and placed at a convenient point on the vehicle so used.

### 7.2.2 North Dakota

Per the North Dakota Century Code Section 39-21-44, any vehicle transporting any explosive or hazardous material as a cargo or part of a cargo upon a highway must be equipped with at least one fire extinguisher, filled and ready for immediate use, and placed at a convenient point on the vehicle.

North Plains will adhere to the Montana requirement of two fire extinguishers per vehicle, as it is the more stringent requirement.

## 8.0 ATTENDANCE AND SURVEILLANCE OF MOTOR VEHICLES

Class I explosives are defined in Title 49 CFR Part 173 as follows:

- Division 1.1: explosives that have a mass explosion hazard. A mass explosion is one which affects almost the entire load instantaneously.

- Division 1.2: explosives that have a projection hazard but not a mass explosion hazard.

- Division 1.3: explosives that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard.

- Division 1.4: explosives that present a minor explosion hazard. The explosive effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package.

- Division 1.5: very insensitive explosives. This division is comprised of substances which have a mass explosion hazard but are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport.

- Division 1.6: extremely insensitive articles that do not have a mass explosion hazard. This division is comprised of articles which predominately contain extremely insensitive substances and that demonstrate a negligible probability of accidental initiation or propagation.

Class 2 materials explosives are defined in Title 49 CFR Part 173 as follows:

- Division 2.1: flammable gas

- Division 2.2: non-flammable gas
- Division 2.3: poisonous gas

Class 3 materials explosives are defined in Title 49 CFR Part 173 as “flammable and combustible liquids.”

Class 4 materials explosives are defined in Title 49 CFR Part 173 as follows:

- Division 4.1: flammable solid
- Division 4.2: spontaneously combustible material
- Division 4.3: dangerous when wet material

Class 5 materials explosives are defined in Title 49 CFR Part 173 as follows:

- Division 5.1: oxidizer
- Division 5.2: organic peroxide

A motor vehicle which contains a Division 1.1, 1.2, or 1.3 material will be attended at all times by its driver or a qualified representative of the motor carrier that operates it, unless all the following conditions exist:

- the vehicle is located on the property of a motor carrier, on the property of a shipper or consignee of the explosives, in a safe haven, or, in the case of a vehicle containing 50 pounds or less of a Division 1.1, 1.2, or 1.3 material, on a construction or survey site;

- the lawful custodian of the explosives is aware of the nature of the explosives the vehicle contains and has been instructed in the procedures which will be followed in emergencies; and

- the vehicle is within the lawful custodian's unobstructed field of view or is located in a safe haven.

For purposes of this section:

- A motor vehicle will be considered attended when the person in charge of the vehicle is in the vehicle, awake, and not in a sleeper berth, or is within 100 feet of the vehicle and has it within their unobstructed field of view.

- A qualified representative of a motor carrier is a person who:

    - has been designated by the carrier to attend the vehicle;

    - is aware of the nature of the hazardous materials contained in the vehicle they attend;

    - as been instructed in the procedures they will follow in emergencies; and

    - is authorized to move the vehicle and has the means and ability to do so.

- A safe haven is an area specifically approved in writing by local, state, or federal governmental authorities for the parking of unattended vehicles containing Division 1.1, 1.2, or 1.3 materials.

- The rules in this section do not relieve the driver from any obligation imposed by law relating to the placing of warning devices when a motor vehicle is stopped on a public street or highway.

## 8.1 PARKING

A motor vehicle which contains Division 1.1, 1.2, or 1.3 materials will not be parked under any of the following circumstances:

- on or within 5 feet of the traveled portion of a public street or highway;

- on private property, including on the premises of a fueling or eating facility, without the knowledge and consent of the person who is in charge of the property and who is aware of the nature of the hazardous materials the vehicle contains; or

- within 300 feet of a bridge, tunnel, dwelling, or place where people work, congregate, or assemble, except for brief periods when the necessities of operation require the vehicle to be parked and make it impracticable to park the vehicle in any other place.

A motor vehicle containing hazardous materials other than Division 1.1, 1.2, or 1.3 materials will not be parked on or within five feet of the traveled portion of public street or highway except for brief periods when the necessities of operation require the vehicle to be parked and make it infeasible to park the vehicle or equipment in any other place.

## 8.2 FUELING

Vehicle engines will remain off during fueling and personnel will be present and in control of the fueling process at the fuel tank until fueling is complete.

## 8.3 TIRES

A driver will examine each tire on a motor vehicle at the beginning of each use and each time the vehicle is parked. If a tire is found to be flat, leaking, or improperly inflated, the driver will repair, replace, or properly inflate the tire before the vehicle is driven again. However, if necessary, the vehicle may be driven to the nearest safe place to perform the required repair, replacement, or inflation.

If a tire is found to have overheated, the driver will immediately remove the overheated tire and place it at a safe distance from the vehicle. The driver will not operate the vehicle until the cause of the overheating is determined and corrected.

## 8.4 SMOKING

Smoking will be prohibited during the loading, transporting, or unloading of explosives. Additionally, smoking or carrying of a lighted cigarette, cigar, or pipe will be prohibited on or within 25 feet of:

- a motor vehicle which contains Class 1 materials, Class 5 materials, or flammable materials classified as Division 2.1, Class 3, Divisions 4.1 and 4.2; or
- an empty tank motor vehicle which has been used to transport Class 3, flammable materials, or Division 2.1 flammable gases, which when so used, was required to be marked or placarded with the contents.

Smoking restrictions issued by land-managing agencies will be adhered to. Where requirements differ, the more stringent will apply.

## 8.5 DOCUMENTATION

A motor carrier that transports Division 1.1, 1.2, or 1.3 materials will furnish the driver of each motor vehicle in which the explosives are transported with a copy of the rules in this Plan and a document containing instructions on procedures to be followed in the event of accident or delay. The documents will include the nature of the explosives being transported, the precautions to be taken in emergencies such as fires, accidents, or leakages, and the names and telephone numbers of persons to be contacted in the event of an emergency. Drivers will sign a receipt for all received documents and will maintain the receipt for a minimum of one year from the date of signature.

# 9.0 SAFETY PROCEDURES

Safe storage and use of explosive materials will be a top priority during construction. North Plains will comply with all federal, state, and local laws and permit conditions regarding blasting safety.

## 9.1 STORAGE

At a minimum, the following storage requirements will be implemented:

- Explosives will be stored in an approved structure and storage facilities will be bullet-resistant, weather-resistant, theft-resistant, and fire-resistant.
- Storage sites will be located in out-of-sight areas with restricted access; kept cool, dry, and well ventilated; and will be properly labeled and signed.
- Detonators will be stored separately from other explosive materials.
- The most stringent spacing between individual magazines will be determined according to the guidelines contained in state or local explosive storage regulations.
- Both the quantity and duration of temporary on-site explosives storage will be minimized.

- North Plains will handle and dispose of dynamite storage boxes in accordance with relevant federal, state, and local laws.

## 9.2 BLASTING NOTIFICATION AND SAFETY PROCEDURES

North Plains will obtain appropriate permits from the appropriate county as needed, for the period when blasting may occur. North Plains will follow best management practices for blasting, including the following:

- North Plains will post warning signs at all Project entry points. Warning signs will include information on blasting, including the general hours blasting might take place, and audible signals to be used warning of impending blasting and to indicate that the site is all clear.

- Access points to areas where blasting will take place will be blocked at least 30 minutes prior to blasting to prevent access by the public. The site will be swept 5 minutes prior to blasting to ensure no unauthorized personnel have wandered onto the site. An audible warning signal, capable of carrying for one-half mile, will be used at least 2 minutes prior to blasting. An all-clear signal will be given once it has been determined the area is safe.

- Blasting in the vicinity of pipelines will be coordinated with the pipeline operator and will follow operator-specific procedures, as necessary.

- A determination of all clear danger will be derived once the blasting area has been inspected for undetonated or misfired explosives. The blasting area will also be inspected for hazards such as falling rock and rock slides. Once the area has been inspected and these issues have been addressed, the all-clear signal as described above will sound and persons will be able to safely re-enter the blast zone.

- Additional safety precautions will be developed to address site-specific conditions at the time of the blast. Special attention will be given to preventing potential hazards in the blasting area resulting from flying rock, destabilized walls, structures, presence of low flying aircraft, and dispersion of smoke and gases.

- Damages that result solely from the blasting activity will be repaired or the owner fairly compensated.

## 9.3 FIRE SAFETY

The presence of explosive materials on the Project site could potentially increase the risk of fire during construction. Special precautions will be taken to minimize this risk including, but not limited to:

- prohibiting ignition devices within 50 feet of explosives storage areas;

- properly maintaining magazine and explosive storage locations so they are clear of fuels and combustible materials, well ventilated, and fire-resistant;

- protecting stored magazines and explosives from wildfires that could potentially occur in the immediate area;
- posting fire suppression personnel at the blast site during periods of high fire danger;
- prohibiting operation of motor vehicles containing hazardous materials near open flames unless the driver has taken precautions and determined that the vehicle can safely pass the fire without stopping;
- prohibiting parking of motor vehicles containing hazardous materials within 300 feet of an open fire; and
- prohibiting blasting during applicable fire restriction periods as established by the Montana Department of Natural Resources and Conservation Interactive Fire Map (Montana Department of Natural Resources and Conservation, 2024) and the North Dakota Department of Emergency Services Fire Declarations and Burn Restrictions (North Dakota Department of Emergency Services, 2024) (see the Draft Fire Prevention and Suppression Plan for further information on monitoring activities).

## 10.0 PLAN REVISIONS

Table 10.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 0 | Initial Plan draft. | February 2025 |
| Rev 1 | Updated language for consistency across all project plans. | August 2025 |
| | | |
| | | |
| | | |
| | | |

## 11.0 REFERENCES

Montana Department of Natural Resources and Conservation (DNRC). 2024. DNRC Interactive Fire Map. Available online at: https://mtdnrc.maps.arcgis.com/apps/webappviewer/index.html?id=6bea18851bec440d9260cb0d28f53281. Accessed July 2024.

North Dakota Department of Emergency Services. 2024. North Dakota Fire Declarations and Burn Restrictions Mapper. Available online at: https://experience.arcgis.com/experience/c5da309af17b4c48a3b953675a77f654. Accessed July 2024.

# NORTH PLAINS CONNECTOR PROJECT

# ATTACHMENT C

# Draft Fire Prevention and Suppression Plan

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Fire Prevention and Suppression Plan



**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**August 2025**

## TABLE OF CONTENTS



## LIST OF TABLES

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| BLM | Bureau of Land Management |
| CMRP | Construction Mitigation and Reclamation Plan |
| Contractor | construction contractor |
| Grid United | Grid United LLC |
| MTDNRC | Montana Department of Natural Resources and Conservation |
| NDDES | North Dakota Department of Emergency Services |
| NOAA | National Oceanic and Atmospheric Administration |
| NWS | National Weather Service |
| North Plains | North Plains Connector LLC |
| Project | North Plains Connector Project |
| Plan | Draft Fire Prevention and Suppression Plan |
| USDA | U.S. Department of Agriculture |
| USFS | U.S. Forest Service |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Fire Prevention and Suppression (Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, indirect single-purpose subsidiary of Grid United LLC (Grid United), a Houston, Texas-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States' power grid more modern, efficient, reliable, and secure.

## 2.0 PLAN PURPOSE

This Plan provides measures that North Plains will implement throughout construction activities to reduce the potential for fires, the emergency procedures to be implemented in the event of a fire, including agency notifications, and procedures for restoration of a burned area.

North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Plan references the CMRP where additional guidance is provided therein.

## 3.0 REGULATORY COMPLIANCE

The prevention and suppression of wildfires in the Project area is carried out by the Bureau of Land Management (BLM), U.S. Department of Agriculture (USDA) Forest Service (USFS), and local fire districts and agencies. Individual fire crews from BLM Field Offices and USFS Ranger Districts coordinate fire suppression activities on federal land within their jurisdictions.

During implementation of Project construction activities, North Plains will:

- ensure that prevention, detection, pre-suppression, and suppression activities are conducted in accordance with this Plan; federal, state, and county laws; ordinances; and regulations pertaining to fire;
- accompany agency representatives on inspections and take corrective action upon notification that North Plains is out of compliance with fire-protection requirements; and
- restrict ground disturbance activities during applicable fire restriction periods as established by the Montana Department of Natural Resources and Conservation (MTDNRC) Interactive Fire Map (MTDNRC, 2024) and the North Dakota Department of Emergency Services (NDDES) Fire Declarations and Burn Restrictions (NDDES, 2024).

Contact information for reporting fires is presented in Table 7.1.1-1 of this Plan.

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The construction contractor (Contractor) will be responsible for site preparation, installation of support

structures, general Project construction, testing and commissioning, health and safety, and environmental compliance, to include hazardous materials management. However, North Plains is responsible for construction of all associated facilities.

For the duration of the Project construction, North Plains will implement and maintain the measures outlined in this Plan, the CMRP, and in all applicable Project permits.

North Plains will be responsible for providing all necessary fire suppression equipment to their employees and operating under the requirements of this Plan. All federal, state, and county laws, ordinances, rules, and regulations, which pertain to prevention, pre-suppression, and suppression of fires, will be strictly adhered to by North Plains. All personnel will be advised of their responsibilities under the applicable fire laws and regulations and the contents of this Plan.

The fire prevention and suppression measures described in this Plan will be in effect during the execution of Project construction activities. These restrictions may change by advance written notice by fire-control or federal authorities and where requirements differ, the more stringent will be applied.

## 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ Environmental Inspectors during the construction phase. Further information on Environmental Inspectors and their responsibilities is provided in the CMRP.

## 5.0 TRAINING

Before commencing construction, North Plains will conduct environmental training sessions for relevant Project personnel. These training programs will cover relevant construction, restoration, and mitigation plans, including this Plan, along with any applicable permit conditions. Furthermore, North Plains will conduct periodic follow-up training for newly assigned personnel and as needed. Training will be documented, and the training records will be saved with Project files.

## 6.0 WILDFIRE AWARENESS

North Plains will monitor daily for local land management agency or other state- or local agency-issued fire warnings or restrictions for the Project area and adhere to any guidance provided.

The MTDNRC Interactive Fire Map (MTDNRC, 2024) identifies locations of fires, fire restrictions, smoke and air conditions, and Agency Protection Boundaries. The NDDES North Dakota Fire Declarations and Burn Restrictions Mapper (NDDES, 2024) lists burn restrictions, fire danger ratings, red flag warnings, and fire weather watches.

## 6.1 FIRE DANGER RATINGS

North Plains will use Fire Danger Ratings to direct daily activities and in-field crew safety meetings. Fire Danger Ratings consider current and recent weather, fuel types, and fuel moisture, and are used by agencies in determining mitigation or curtailment of operations.

Fire Danger Ratings and their descriptions are available on the Wildland Fire Assessment website (Wildland Fire Assessment, 2024), the MTDNRC Interactive Fire Map (MTDNRC, 2024), and the NDDES Declarations and Burn Restrictions Mapper (NDDES, 2024).

## 6.2 RED FLAG EVENTS

The National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) Red Flag program issues Red Flag Warnings when warm temperatures, very low humidities, and stronger winds are expected to combine to produce an increased risk of fire danger. A Red Flag Warning is issued to advise of occurring or imminent red flag conditions, generally anticipated within the next 12 to 24 hours. The NWS may also issue a Fire Weather Watch to advise of the possible development of red flag conditions in the near future, generally anticipated within the next 24 to 72 hours (about 3 days).

Red Flag Warnings are posted on the NOAA NWS website at https://www.weather.gov/ (NOAA-NWS, 2024a).

NOAA criteria (NOAA-NWS, 2024b) for issuing a Red Flag Warning include the following:

- Relative humidity of 15 percent or less in addition to sustained surface winds, or frequent gusts, of 25 miles per hour or greater. Both conditions must occur simultaneously for at least 3 hours in a 12-hour period.
- Temperature higher than 75 degrees Fahrenheit.
- Widely scattered dry thunderstorms with 15 percent or more coverage over the area. A thunderstorm is considered “dry” if it produces less than 0.10 inch rainfall.

Additional factors that may contribute to a Red Flag Warning include:

- significant lightning occurrence after a hot, dry period;
- a significant cold frontal passage, which is expected to cause strong sustained and gusty winds, and an abrupt wind shift, especially dry cold fronts with little or no rainfall; and
- any combination of weather and fuels conditions such as long term drought, much higher than normal maximum temperatures coupled with very low humidity, and low fuel moisture.

Current fire conditions, dangers, and restrictions will be addressed in daily safety briefings and used to direct daily activities.

- North Plains will maintain awareness of active fires in the vicinity of the Project workspace including containment status, fire-fighting deployment activities, and potential for fire to interact with Project activities.
- North Plains will monitor meteorological and environmental conditions in the field to assess the risk and potential for fire for increased risk of conditions.

- North Plains will discuss the evacuation plan prior to leaving vehicle parking locations.
- All personnel will identify and inform North Plains and other personnel of signs of an active fire, such as smoky smell or visible smoke.
- All personnel will be aware of other natural factors and human-induced activities in the Project area that increase exposure to a wildland fire, such as thunderstorms or non-project construction activities.

## 7.0 FIRE PREVENTION MEASURES

## 7.1 PRE-CONSTRUCTION AND CONSTRUCTION PHASES

### 7.1.1 Notifications

North Plains will notify the applicable agency(s) when a Project-related fire occurs within or adjacent to the construction area. North Plains will immediately take safe actions to prevent and suppress fires on and adjacent to the Project area that are a result of Project-related activities. Unless the fire exceeds immediate control, North Plains will employ its workers and equipment to prevent fire spread. If immediate control is not possible, all personnel will immediately exit the area to predetermined muster locations a safe distance from the fire and follow the steps outlined in this Plan.

Prior to construction, North Plains will contact the appropriate fire-control authorities to establish communications, obtain any required permits, such as burning or fire waiver permits prior to conducting burning activities, and/or fulfill other obligations as directed by fire-control authorities.

Table 7.1.1-1 below provides contact information for reporting fires within the Project area.

TABLE 7.1.1-1

**Contact Information for Reporting Fire**

| Regulatory Authority | Address | Phone |
|---|---|---|
| **U.S. Department of Agriculture – National Forest System Lands** | | |
| Dakota Prairie Grasslands | 2000 Miriam Circle<br>Bismarck, ND 58501 | (701) 989-7300 |
| Little Missouri National Grasslands | 99 23rd Ave. W. Suite B<br>Dickinson, ND 58601 | (701) 227-7800 |
| **U.S. Department of Agriculture - Agricultural Research Station** | | |
| Fort Keough | 243 Fort Keogh Road<br>Miles City, MT 59301 | (406) 874-8200 |
| **Bureau of Land Management** | | |
| Montana | 111 Garryowen Road<br>Miles City, MT 59301 | (406) 233-2800<br>911 |
| **Montana Department of Natural Resources and Conservation** | | |
| Custer County | County Fire Warden<br>1010 Main Street<br>Miles City, MT 59301 | (406) 542-4304<br>911 |
| Fallon County | Disaster Emergency Services<br>10 W Fallon Ave<br>Baker MT 59313 | (406)-778-7121<br>911 |

| TABLE 7.1.1-1<br>**Contact Information for Reporting Fire** | | |
|---|---|---|
| Regulatory Authority | Address | Phone |
| Rosebud County | Fire Chief<br>242 East Front St<br>Forsyth, MT 59327 | (406) 253-0208<br>(406) 346-4270<br>911 |
| **North Dakota Department of Emergency Services** | | |
| Golden Valley County | Emergency Manager<br>PO Box 67<br>Beach, ND 58621-0067 | (701) 872-3713<br>911 |
| Grant County | Emergency Manager<br>PO Box 261<br>Carson, ND 58529-0261 | (701) 622-3944<br>911 |
| Hettinger County | Emergency Manager<br>336 Pacific Ave<br>Mott, ND 58646-7502 | (701) 824-4227<br>911 |
| Morton County | Emergency Manager<br>210 2nd Ave NW<br>Mandan, ND 58554-3124 | (701) 667-3290<br>911 |
| Oliver County | Emergency Manager<br>PO Box 39<br>Stanton, ND 58571-0039 | Office: (701) 745-3022<br>Cell: (701) 301-0446<br>911 |
| Slope County | Emergency Manager<br>Amidon, ND 58620-9691 | (701) 879-6329<br>911 |

### 7.1.2 Equipment

North Plains' Contractor will have adequate suppression equipment on site in sufficient numbers so each employee on-site has access to fire suppression equipment commensurate with the types of activities performed.

- Equipment may include water trucks; portable water pumps; water backpacks; chemical fire extinguishers; hand tools such as shovels, axes, Pulaski fire tools, and chain saws; and heavy equipment adequate to construct fire breaks.
- Personnel will also be equipped with appropriate personal protective equipment, such as a hard hat, work gloves, and eye protection. Fire retardant clothing will be used in accordance with federal regulations.
- All equipment will be maintained in a serviceable condition and will be readily available.

### 7.1.3 Communications

North Plains will be responsible for maintaining contact with fire-control agencies and will be equipped with a radio, satellite, or cellular telephone to enable immediate contact with local fire-control agencies. If telephone coverage is not available, North Plains will use the radio to contact their base, who will telephone emergency dispatch.

### 7.1.4 Restricted Operations

North Plains will restrict or cease operations in specified locations during periods of high fire danger at the direction of the land management agency's closure order. Restrictions may vary from stopping certain operations at a given time to stopping all operations. It will be North Plains' responsibility to ensure personnel are aware of and following area fire orders.

### 7.1.5 Smoking

- North Plains will designate areas for smoking and will prohibit smoking of any kind around flammable materials at all times and on the entire construction site when the fire hazard is high.
- Smoking will be strictly prohibited on private lands, as well as anywhere there is vegetation or other combustible fuel source in the immediate vicinity and/or on/along any public roads that are not improved, such as gravel or pavement.
- On public lands where conditions allow smoking, unfinished product and cigarette filters will be disposed of via appropriate means, such as in a bottle with water or other device designed for the purpose of safe disposal of such products.

### 7.1.6 Parking

- Motorized equipment, including worker transportation vehicles, will only be driven or parked within the designated and approved work limits.
- Equipment and personal vehicle parking areas, staging areas, and designated vehicle-parking areas may be cleared to remove potentially flammable vegetation material. Clearing will extend a minimum of 2 feet beyond the edge of the area to be occupied but not beyond the boundaries of the approved Project workspace.
- Whenever possible, parking will be avoided in, on, and over vegetation or any other combustible material.
- Hot engines and equipment components such as mufflers can potentially increase the risk of fire ignitions in vegetated areas. Where vegetation is present, and prior to parking, personnel will first stomp down the vegetation and then use water distribution systems to wet the vegetation beneath and immediately adjacent to where each vehicle will be parked.
- After parking, vehicle undercarriages will be visibly inspected for signs of debris or vegetation contact with the vehicle heat sources.
- Whenever possible, vehicles will be backed into their parking spots to allow for a quick exit in the event of an emergency. Where backing in is not viable, space will be maintained between parallel parked vehicles, so vehicles are able to freely leave the area. When and where safe to do so, keys will be left in the vehicle so that any driver can quickly move the vehicle.

### 7.1.7 Maintenance

- Vehicles, including utility terrain vehicles, will be regularly washed and serviced to ensure vehicle cooling systems are efficient and as often as needed to remove vegetation that could become a combustible fuel source. While performing morning vehicle walkaround inspections, North Plains' Contractor will also inspect vehicle radiators and the undercarriage.

- Water storage systems will be full at the start of every day and refilled during the day, as necessary.

- Fire extinguishers will be inspected at the start of each day to ensure proper charge.

- Batteries for communications devices, such as cellular phones, satellite phones, SPOT Beacons, or similar devices will be fully charged at the start of each day.

### 7.1.8 Refueling

- Fuel trucks will have a large fire extinguisher charged with the appropriate chemical to control electrical and gas fires.

- All equipment and vehicle refueling will be done in a designated area that has been cleared of flammable material prior to initiating refueling activities.

### 7.1.9 Welding

- Standard fire equipment will be located in all vehicles and at welding sites. A spark shield will be required. All equipment will be kept in a serviceable condition and readily available.

- Flammable vegetation will be soaked with water or removed from an area large enough to contain all sparks from any spark-producing equipment or tools, including welding, cutting, drilling steel, or grinding.

- A spotter will be designated to watch for fire while equipped with suppression tools including fire extinguishers, a shovel, and a backpack water pump.

- Spark-producing activities will be completed while fire suppression personnel are present within the construction area to monitor for the possibility of ignition from smoldering embers.

### 7.1.10 Blasting

The presence of explosive materials on the Project site could potentially increase the risk of fire during construction. Special precautions will be taken to minimize this risk in conjunction with this Plan, the Draft Blasting Plan, and the CMRP including, but not limited to:

- prohibiting ignition devices within 50 feet of explosives storage areas;

- properly maintaining magazine storage sites so they are clear of fuels and combustible materials, well ventilated, and fire-resistant;
- protecting magazines and magazine storage sites from wildfires that could occur in the immediate area;
- posting fire suppression personnel at blast sites during high fire danger periods; and
- prohibiting blasting during extreme fire danger periods or as directed by agencies.

### 7.1.11 Burning

- North Plains may allow the burning of non-merchantable wood in accordance with all state and local regulations where North Plains has acquired the applicable permits and approvals from applicable agencies and landowners.
- Burning will not be allowed in wetlands or agricultural lands.
- Burning within 100 feet of a wetland or waterway will be prohibited without site-specific approval in advance from North Plains and in accordance with applicable permits and approvals.
- Crews will conduct burning, if necessary, in compliance with fire danger ratings and warnings.

### 7.1.12 Flammable Liquids and Explosives

- The handling and use of explosives will be conducted in strict conformance with all local, state, and federal regulations, and as detailed in this Plan, Draft Blasting Plan, and the Hazardous Materials and Waste Management Plan.
- North Plains will store flammable materials in approved containers away from ignition sources and remove flammable waste from the construction site.
- Glass containers will not be used to store gasoline or other flammables.

### 7.1.13 Spark Arrestors

All equipment assigned to the Project will be inspected and approved by North Plains. Stationary and mobile internal combustion engines will be equipped with spark arrestors that meet agency standards, and for which the following standards will apply:

- Light trucks and cars with factory-installed mufflers in good condition may be used on roads where the roadway is cleared of all vegetation.
- Vehicles equipped with catalytic converters may present potential fire hazards and will be parked in areas where vegetation is less than 8 inches tall.

- Spark arrestors will be used on roads where vegetation exists and will be maintained in good working order.

### 7.1.14 Road Closures

North Plains will coordinate with local road authorities and the appropriate fire-suppression agencies of any scheduled road closures to ensure emergency routes are available. North Plains will minimize, to the extent possible, the duration of road closures. North Plains will work with the local road authorities to identify a bypass or detour if necessary. North Plains will clearly mark all bypasses or detours and will designate one person to direct traffic for the duration the bypass or detour is in use.

### 7.1.15 Inspections and Monitoring

North Plains will ensure flammable operations, such as welding, and suppressed fires are monitored until determined completely extinguished. Federal, state, and local fire-control agencies may perform inspections in areas under their jurisdiction at their discretion.

## 8.0 FIRE SUPPRESSION MEASURES

### 8.1 PRE-CONSTRUCTION AND CONSTRUCTION

If a fire occurs within the Project area during construction, North Plains will take the following actions:

- Ensure the safety of all personnel in the area.
- Take immediate action to suppress fires using available manpower and equipment.
- Immediately notify the nearest fire-suppression agency of the fire location, action taken, and status.
- Relinquish fire-suppression activities to agency fire-management officers upon their arrival.

If a reported fire is controlled, North Plains will note the location and monitor the progress in extinguishing the fire. North Plains will designate an employee to remain at the scene until the fire is fully extinguished. The extinguished fire will be monitored in accordance with procedures described in this Plan.

- If the fire is unmanageable field crews will, in the following order:
    - evacuate via planned routes to predetermined safe locations,
    - call 911, and
    - call the district dispatch for the area.

## 9.0 PLAN REVISIONS

TABLE 9.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 0 | Initial plan draft. | March 2025 |
| Rev 1 | Updated language for consistency across all project plans. | August 2025 |
| | | |
| | | |
| | | |
| | | |
| | | |

## 10.0 REFERENCES

Montana Department of Natural Resources and Conservation. 2024. DNRC Interactive Fire Map. Available online at: https://mtdnrc.maps.arcgis.com/apps/webappviewer/index.html?id=6bea18851bec440d9260cb0d28f53281. Accessed July 2024.

North Dakota Department of Emergency Services. 2024. North Dakota Fire Declarations and Burn Restrictions Mapper. Available online at: https://experience.arcgis.com/experience/c5da309af17b4c48a3b953675a77f654. Accessed July 2024.

National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS). 2024a. Available online at: https://www.weather.gov/ Accessed July 2024.

NOAA-NWS. 2024b. Available online at: https://tidesandcurrents.noaa.gov/ofs/nws_forecastinfo.html. Accessed July 2024.

Wildland Fire Assessment System. 2024. Available online at: https://www.wfas.net/. Accessed July 2024.

# NORTH PLAINS CONNECTOR PROJECT

# ATTACHMENT D

# Draft Hazardous Materials and Waste Management Plan

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Hazardous Materials and Waste Management Plan



**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**August 2025**

## TABLE OF CONTENTS



## LIST OF TABLES



## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| CMRP | Construction Mitigation and Reclamation Plan |
| Contractor | construction contractor |
| DOT | Department of Transportation |
| EPA | U.S. Environmental Protection Agency |
| Grid United | Grid United LLC |
| North Plains | North Plains Connector LLC |
| Plan | Draft Hazardous Materials and Waste Management Plan |
| Project | North Plains Connector Project |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Hazardous Materials and Waste Management Plan for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, indirect single-purpose subsidiary of Grid United LLC (Grid United), a Houston, Texas-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States' power grid more modern, efficient, reliable, and secure.

## 2.0 PLAN PURPOSE

This Plan provides measures North Plains will use throughout construction to reduce the risks associated with the use, storage, transportation, production, and disposal of hazardous materials, including hazardous substances and wastes.

The objectives of this Plan are to minimize the potential for a spill of fuel or other hazardous material, contain any spill to the smallest possible area, mitigate any hazardous material spill, and protect areas that are environmentally sensitive.

North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Plan references the CMRP where additional guidance is provided therein.

## 3.0 REGULATORY COMPLIANCE

Construction activities associated with the Project are subject to various regulations regarding the storage and handling of hazardous materials. When assessing which mitigation measures are appropriate for a specific area, North Plains will adhere to this Plan and the applicable federal, state, and local permits that condition or regulate hazardous waste management. Where permit and agency requirements differ, the more stringent requirements will be followed.

In the event of an unanticipated release, North Plains will follow the steps and notification requirements outlined in the Spill Prevention and Response Plan to maintain compliance with regulatory reporting requirements.

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The construction contractor (Contractor) will be responsible for site preparation, installation of support structures, general Project construction, testing and commissioning, health and safety, and environmental compliance, to include hazardous materials management. However, North Plains is responsible for construction of all associated facilities.

For the duration of Project construction activities, North Plains will implement and maintain the measures outlined in this Plan and in all applicable Project permits.

## 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ Environmental Inspectors during the construction phase. Further information on Environmental Inspectors and their responsibilities is provided in the CMRP.

## 5.0 TRAINING

Before commencing construction, North Plains will organize environmental training sessions for relevant Project personnel. These training sessions will cover relevant construction, restoration, and mitigation plans, including this Plan, along with any applicable permit conditions. Construction staff will be trained on the hazardous material management requirements, including proper handling, storage, and disposal. Furthermore, North Plains will conduct large-group training sessions before each work crew begins construction, followed by periodic follow-up training for newly assigned personnel. Training will be documented, and training records will be saved with Project files.

## 6.0 HAZARDOUS MATERIAL AND WASTE MANAGEMENT

Construction of the Project will require the use of certain potentially hazardous materials, such as fuels, oils, explosives, as well as herbicides or pesticides. Hazardous materials have the potential to pose a significant threat to human health and the environment based upon their quantity, concentration, or chemical composition.

Potential risks associated with these materials can be reduced substantially when stored, used, transported, and disposed of properly, as described in the following sections.

North Plains will also follow cleanup procedures outlined in the Spill Prevention and Response Plan in the event of spills of potentially hazardous materials during construction and operation of the Project.

## 6.1 OVERVIEW OF HAZARDOUS MATERIALS PROPOSED FOR USE

To the maximum extent possible, North Plains will minimize the use and generation of hazardous waste during the Project, including, but not limited to, minimizing the amount of hazardous materials needed for the Project; using alternative non-hazardous substances; recycling usable material such as oils, paints, and batteries; and filtering and reusing solvents and thinners.

Hazardous materials used during Project construction may include petroleum products such as gasoline, diesel fuel, and hydraulic fluids; lubricating oils and solvents; cleansers; explosives; and pesticides, herbicides, and fertilizers. North Plains will prepare a complete inventory of all hazardous materials onsite during Project construction. North Plains will maintain copies of the required Safety Data Sheet for each hazardous chemical onsite and will ensure that copies are readily accessible during each work shift to all employees within their respective work areas.

All materials used during construction will be used according to manufacturer recommendations; labeling; federal, state, and local regulations; and as outlined in the Project CMRP. Herbicide storage and application will follow the requirements described in the Invasive and Noxious Management Plan.

North Plains will be responsible for consulting with the applicable agencies if extremely hazardous substances are to be used during Project activities.

## 6.2 STORAGE OF HAZARDOUS MATERIALS

Hazardous materials will be stored in designated locations only. Hazardous materials will not be stored in surface water conveyances, or within the 100-year floodplain. North Plains will prohibit storage of hazardous materials within 100 feet of a waterbody, wetland boundary, spring, environmentally sensitive area, or within a municipal watershed. North Plains will also prohibit use and storage of hazardous materials, chemicals, fuels, lubricating oils, and other petroleum products within 200 feet of active private water wells and identified public or municipal water wells.

Secondary containment will be of sufficient size to contain the contents of the single largest unit stored at any one time, plus 10 percent. Additional precautions will include limiting the quantity and amount of time such materials are stored near surface waters, implementing barriers between hazardous materials and the surface waters, and employing trained personnel to monitor activities at the storage location(s). Cleanup materials, including absorbent spill pads, booms, and plastic bags will also be stored in these areas and in quantities sufficient to contain a release, should one occur. No smoking signs will be conspicuously placed wherever there is a hazard from a flammable or reactive material. Explosives storage is discussed in detail in the Project CMRP and Blasting Plan. North Plains will maintain records of stored hazardous waste or materials throughout Project construction.

### 6.2.1 Storage Containers

Containers storing hazardous waste or materials will be compatible with the wastes or materials stored. Materials will not be stored in containers that previously held an incompatible waste or material. Containers storing hazardous wastes will be labeled, dated, and kept sealed at all times, except when adding or removing contents. Hazardous wastes and materials will be secured in a manner which prevents damage, vandalism, or theft. All storage areas will be secured via gates, locks, or guard personnel at night and during periods of non-construction.

Secondary containment will be provided for all hazardous liquid materials stored on-site and will consist of bermed or diked areas, spill pallets, or other appropriate storage capable of holding 110 percent of the volume of the largest volume of stored material. North Plains will inspect containers weekly at a minimum to verify the integrity of the containers and secondary containment systems. If a container is damaged or leaks, the waste will be transferred to an appropriate container in good condition.

### 6.2.2 Container Labeling Requirements

North Plains will comply with the following labeling requirements for any container used on site to store hazardous wastes. Containers will be labeled with the information below and as required in 40 CFR 262:

- the waste accumulation start date and the words “hazardous waste;”
- the composition and physical state of the waste; and

- warning words indicating the particular hazards of the waste, such as flammable, corrosive, reactive, or toxic.

## 6.3 TRANSPORTATION OF HAZARDOUS MATERIALS

Procedures for loading and transporting fuels and other hazardous materials will meet the minimum requirements established by the U.S. Department of Transportation (DOT), Montana and North Dakota DOTs, U.S. Forest Service, and Bureau of Land Management, as well as other pertinent regulations.

Hazardous materials used for the Project will, at all times, be properly stored in approved containers and labeled, including during transportation. Containers used for transportation will comply with U.S. DOT and applicable state transportation requirements. Smaller containers will be used on site to transport needed amounts of hazardous materials to a specific location. Transfer of materials from large to small containers will be performed using the appropriate equipment, including pumps, hoses, and safety equipment; hand pouring techniques will not be used.

Prior to transporting hazardous materials, appropriate shipping papers will be completed, and North Plains will inspect the containers to ensure they are sealed in such a manner that no material will be released. Transportation of hazardous materials will be performed by a licensed hazardous materials transport contractor in accordance with all federal, state, and local regulations. In addition, North Plains will ensure all handling or packaging of hazardous materials and all paperwork for transport of hazardous materials is performed by properly trained personnel in accordance with applicable federal and state regulations.

Special provisions apply to the transportation of explosives and are discussed in greater detail in the Project CMRP and Blasting Plan. Additional requirements regarding liquids transfer and transport are included in the Spill Prevention and Response Plan.

## 6.4 REFUELING AND SERVICING

North Plains will make every reasonable effort to minimize the threat of a fuel spill during refueling and servicing. Fuel/service vehicles will carry a suitable absorbent material to collect approximately 20 gallons of spilled materials. In addition, all vehicles will be inspected for leaks prior to entering or exiting the Project site, and regularly throughout Project construction. North Plains will perform regular maintenance and inspection of equipment and vehicles that Project construction crews will operate near or cross over waterbodies or wetlands.

Construction equipment will be removed from wetlands and parked a minimum of 100 feet away from surface waters, including waterbodies, wetlands, and springs, at the end of each workday. Where no accessible or suitable upland areas are available, and upon approval from North Plains, stationary equipment located within 100 feet of a surface water or conveyance will be placed within secondary containment appropriate for the largest volume contained within the equipment.

Maintenance, refueling, and lubrication of equipment and vehicles will not be allowed within 100 feet of a waterbody, wetland boundary, spring, active private water well and identified public or municipal water well, environmentally sensitive area, or within a municipal watershed. Construction vehicles such as trucks, bulldozers, and excavators, helicopters, and equipment such as pumps and generators will be fueled and serviced in designated areas.

Refueling locations will generally be located in level, upland locations to minimize the potential for a spilled substance to reach a surface water. Typically, smaller rubber-tired and personnel vehicles will be refueled and serviced at local gas stations or material yards, and tracked vehicles will be refueled and serviced on-site. In some cases, pickup trucks or fuel tankers may be used to refuel and service construction vehicles on the right-of-way.

Washing of construction vehicles, such as concrete trucks, will be allowed only in designated areas at least 100 feet from a waterbody, wetland boundary, spring, active private water well and identified public or municipal water well, environmentally sensitive area, or within a municipal watershed. Washing areas will be contained with berms or other barriers to prevent transport of wastewater or sediments into surface waters or stormwater conveyances. Waste concrete material will be removed and properly disposed of once it has hardened.

Refueling or use of other hazardous liquids may occur within these setback areas only if the Environmental Inspector has determined that there is no reasonable alternative, and the Contractor has taken appropriate steps (including secondary containment structures) to prevent spills. North Plains will monitor the activity and will have spill response equipment onsite and readily available. Should a spill occur, North Plains will notify the appropriate agency and/or emergency response authorities.

Refueling, vehicle washing and maintenance, and spill prevention and response are discussed in greater detail in the CMRP and Spill Prevention and Response Plan.

## 7.0 DISPOSAL OF HAZARDOUS WASTES

Hazardous wastes will be regularly collected and disposed of in accordance with all applicable federal, state, and local regulations. North Plains will assign hazardous materials oversight to specific individuals prior to, and throughout, construction of the Project.

While not anticipated, should hazardous wastes be generated and stored onsite for greater than 90 days, North Plains will apply for a U.S. Environmental Protection Agency (EPA) Identification Number, which is needed to complete the Uniform Hazardous Waste Manifest to ship wastes off-site.

## 7.1 CONTAMINATED CONTAINERS

Any container that once held hazardous material products or wastes will be deemed potentially hazardous due to the potential presence of residual hazardous material within the container. To be managed as a non-hazardous waste, the containers will meet the following requirements:

- The containers will be empty, which means as much of the contents have been removed as possible using practices commonly used to remove materials from that type of container so none will be released regardless of the position of the container.

- A container previously storing compressed gas will be considered empty when the pressure in the container approaches atmospheric.

- Empty containers with a volume of less than five gallons may be disposed of as a non-hazardous solid waste or scrapped.

- Empty containers with a volume greater than five gallons will be returned to the vendor for re-use, sent to a drum recycler for reconditioning, or used or recycled on-site.

The above requirements will occur within one year of the container being emptied.

## 7.2 WASTE OIL FILTERS

Used metal canister oil filters may be managed as non-hazardous wastes provided:

- filters are thoroughly drained of free flowing oil. Oil which drips out of a filter drop-by-drop will not be considered free flowing;
- filters are accumulated, stored, and transferred in a closed, rainproof container;
- filters are transferred for the purposes of recycling; and
- filters are not terne-plated (an alloy of tin and lead).

Terne-plated oil filters are considered a hazardous waste and, if not recycled, will be managed as such.

## 7.3 USED OILS

Used oils are defined by the EPA (2024) as:

- used synthetic oil, usually derived from coal, shale, or polymer-based starting material;
- used engine oil typically includes gasoline and diesel engine crankcase oils and piston-engine oils for automobiles, trucks, boats, airplanes, locomotives, and heavy equipment;
- used transmission fluid;
- used refrigeration oil;
- used compressor oil;
- any oil that has been refined from crude oil and, as a result of use, has been contaminated with physical or chemical impurities;
- any oil that has been refined from crude oil and, as a consequence of extended storage, spillage, or contamination with non-hazardous impurities such as dirt, rags, and water, is no longer useful for its intended purpose; and
- spent lubricating fluids that have been removed from a truck, heavy equipment, automobile, or bus.

The following are not considered used oils:

- waste oil that is bottom clean-out waste from virgin fuel storage tanks, virgin fuel oil spill cleanups, or other oil wastes that have not actually been used;
- products such as antifreeze and kerosene;
- vegetable and animal oil; and
- petroleum distillates used as solvents.

Used oil may be considered a hazardous waste if:

- the concentrations of polychlorinated biphenyls exceed 50 parts per million;
- total halogens exceed 1,000 parts per million and/or
- it is mixed with a hazardous waste.

Used oil not being burned or recycled will be managed as a hazardous waste unless laboratory analysis determined it to be non-hazardous.

## 8.0 PLAN REVISIONS

Table 8.0-1
**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 0 | Initial Plan draft. | February 2025 |
| Rev 1 | Revised Plan for North Plains Comments. Updated language for consistency across all project plans. | August 2025 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

## 9.0 REFERENCES

U.S. Environmental Protection Agency. 2024. Reference Table for What is Used Oil. Available online at https://www.epa.gov/hw/reference-table-question-what-used-oil. Accessed August 12, 2024.

# NORTH PLAINS CONNECTOR PROJECT

# ATTACHMENT E

# Draft Invasive and Noxious Species Management Plans

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Noxious Weed and Aquatic Invasive Species Management Plan

# Montana



**Prepared by:**

**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**Revised July 2025**

## TABLE OF CONTENTS



## LIST OF TABLES

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AIS | aquatic invasive species |
| AIS Act | Montana Aquatic Invasive Species Act |
| ANS | Montana Aquatic Nuisance Species |
| APHIS | Animal and Plant Health Inspection Service |
| ARM | Administrative Rules of Montana |
| ARS | Agriculture Research Service |
| BLM | Bureau of Land Management |
| CMRP | Construction Mitigation and Reclamation Plan |
| County Weed Boards | Rosebud County Weed Board, Custer County Weed and Pest Board, and Fallon County Noxious Weed Board |
| CWD | County Weed District |
| Grid United | Grid United LLC |
| MCA | Montana Code Annotated |
| MDA | Montana Department of Agriculture |
| MFWP | Montana Fish, Wildlife, and Parks |
| North Plains | North Plains Connector LLC |
| Plan | Draft Draft Noxious Weed and Aquatic Invasive Species Management Plan – Montana |
| Project | North Plains Connector Project |
| the Departments | Montana Department of Agriculture; Montana Fish, Wildlife and Parks; Montana Department of Natural Resources and Conservation; and Montana Department of Transportation |
| USDA | U.S. Department of Agriculture |
| USDOI | U.S. Department of the Interior |
| Weed Control Act | Montana County Weed Control Act |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Noxious Weed and Aquatic Invasive Species Management Plan – Montana (Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, single-purpose subsidiary of Grid United LLC (Grid United), a Houston-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make our power grid more modern, efficient, reliable, and secure.

The Project is located in Custer, Fallon, and Rosebud counties in Montana and crosses lands owned by state and federal agencies, as well as private landowners.

## 2.0 PLAN PURPOSE

North Plains recognizes that construction activities may promote the spread of noxious weeds and aquatic invasive species (AIS) on public and private lands along the Project. The invasion of noxious weeds and AIS can reduce the economic productivity and ecological integrity of lands and waters in Montana (Montana Aquatic Nuisance Species [ANS] Technical Committee, 2002; Montana Department of Agriculture [MDA], 2017). Soil disturbance may stimulate weed seeds already present in the soil seed bank to germinate and establish, and movement of equipment used in weed-infested areas or AIS-infested waters during construction of the Project could promote the spread of noxious weeds and AIS species to new lands and waters.

North Plains' goal is to outline the management strategies that will be used to minimize the spread of noxious weeds and AIS identified within the Project workspace in compliance with law or regulation. Management strategies will be implemented where applicable and appropriate prior to construction, and during Project construction, reclamation, and operation phases. Existing noxious weed occurrences will be documented throughout the Project workspace through pre-construction surveys, publicly available datasets, or monitoring.

North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Draft Plan references the CMRP where additional guidance is provided therein.

## 3.0 REGULATORY COMPLIANCE

This section provides a brief overview of federal and state legislation and regulatory compliance applicable to noxious weeds and AIS in the Project area. North Plains will conduct Project activities in accordance with all local, state, and federal regulations regarding the control and management of noxious weeds and AIS.

## 3.1 FEDERAL REGULATIONS

### 3.1.1 U.S. Department of Agriculture

#### 3.1.1.1 U.S. Department of Agriculture- Animal and Plant Health Inspection Service

The U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) is a federal noxious weed program designed to prevent the introduction of nonindigenous invasive plants into the U.S. APHIS noxious weed activities include exclusion and permitting in cooperation with other agencies and state agencies, and integrated management of introduced weeds, including biological control.

#### 3.1.1.2 USDA - Agricultural Research Service - Fort Keogh

The Project crosses the USDA Agriculture Research Service (ARS) – Fort Keogh site, at which rangeland is managed for livestock. All Project activities within this area will be conducted in accordance with federal, state, and local regulations, Project permits, and with any additional requirements or stipulations put forth by the ARS.

### 3.1.2 U.S. Department of the Interior

The U.S. Department of the Interior (USDOI) defines an invasive species as a "non-native organism whose introduction causes or is likely to cause economic or environmental harm or harm to human, animal, or plant health" (USDOI, 2021). The USDOI Invasive Species Strategic Plan (2021) provides a comprehensive management strategy for agencies within the USDOI, and builds on agencies' existing invasive species management plans and collaborative partnerships to describe strategic on-the-ground actions to reduce the threat of invasive species.

In addition to the state and county listed noxious weeds, discussed in Section 3.3, the USDOI lists the following species that may be present in the Project area as invasive species:

- Elodea (waterweed);
- Cheatgrass; and
- Emerald ash borer.

### 3.1.3 Bureau of Land Management

USDOI Bureau of Land Management (BLM) Manual 9015 (1992) defines a noxious weed as "a plant that interferes with management objectives for a given area of land at a given point in time" and an invasive species as "a non-native species whose introduction causes or is likely to cause economic or environmental harm or harm to human, animal, or plant health. Invasive species include plants, animals, pathogens, and other organisms in terrestrial and aquatic habitats."

BLM Manual 9015 (1992) directs the BLM to manage noxious weeds and undesirable plants on BLM lands by reducing existing population levels, managing and controlling existing infestations, preventing the establishment and spread of new infestations. The BLM requires Project owners to evaluate the risk of spreading noxious weeds throughout the Project and ensure that Project contracts contain commitments which hold North Plains responsible for the prevention and control of noxious weeds associated with Project activities.

## 3.2 STATE REGULATIONS

### 3.2.1 Noxious and Regulated Weeds

The Administrative Rules of Montana (ARM) 4.5.201 designates certain exotic plants as noxious weeds under the Montana County Weed Control Act (Weed Control Act) and requires all counties to implement management guidelines consistent with the criteria outlined in the Weed Control Act, as described below. Noxious weeds are assigned a priority level depending on the species' known presence in Montana, which determines the required management criteria for all species within a given priority level, as described below:

- Priority 1A species are not present or have limited presence in Montana and require eradication if detected, education, and prevention (ARM 4.5.206).
- Priority 1B species have limited presence in Montana and require eradication or containment and education (ARM 4.5.207).
- Priority 2A species are common in isolated areas of the state. Management is prioritized by the Rosebud County Weed Board, the Custer County Weed and Pest Board, and the Fallon County Noxious Weed Board (collectively, County Weed Boards) and includes eradication or containment and management of these species (ARM 4.5.208).
- Priority 2B species are abundant in Montana and widespread in many counties. Management is prioritized by the County Weed Boards and includes eradication or containment and management of these species (ARM 4.5.209).
- ARM 4.5.102 does not designate Priority 3 regulated plants as noxious weeds, but ARM 4.5.210 does recognize under them as species with the potential to cause significant negative impacts. Priority 3 regulated plants may not be intentionally spread or sold other than as a contaminant in agriculture products. The state recommends research, education, and prevention of these species, but does not require control, unless required by individual counties.

The Weed Control Act defines a noxious weed as any exotic terrestrial or aquatic plant species established or introduced in the state that may negatively impact agriculture, forestry, livestock, wildlife, or other beneficial uses or harm native plant communities (7-22-2101, Montana Code Annotated [MCA]). The MDA is responsible for designating statewide noxious weeds and provides leadership and coordination for noxious weed management throughout Montana.

The Weed Control Act establishes weed management districts composed of one or more counties, also referred to as County Weed Districts (CWDs), across the state and assigns the responsibility of administering each CWD's noxious weed management program to their respective County Weed Board (7-22-2102, MCA). The CWDs are responsible for developing noxious weed management plans, implementing the Weed Control Act, designating additional noxious weeds relevant to each CWD, and coordinating with state and federal agencies on public lands (MDA, 2017).

According to the Weed Control Act, it is unlawful to allow a noxious weed to propagate or go to seed, except where a noxious weed management program or agreement has been made (7-22-2116, MCA).

Per MCA 7-22-2152, developments that require state or local approval and may result in potential noxious weed spread, including major facility developments proposed under the Montana Major Facility Siting Act (70-20, MCA), must submit a written revegetation plan to the relevant County Weed Board(s) for approval prior to construction. The revegetation plan will describe the proposed seeding and/or planting methods intended to reestablish cover and provide weed management in disturbed areas. North Plains will notify the County Weed Board(s) at least 15 days prior to construction commencement, and construction activity will not commence in a given county until the revegetation plan has been approved.

### 3.2.2 Aquatic Invasive Species

The Montana Aquatic Invasive Species Act (AIS Act) defines an AIS as a non-native aquatic species that has potential to cause harm to the economy, environment, recreation, or human health (80-7-1003, MCA). According to the 2002 Montana ANS Management Plan, AIS are assigned a priority level (listed below) based the species' establishment in the state and the availability of management strategies for those species (Montana ANS Technical Committee, 2002):

- Priority Class 1 species are not established in Montana but have a high potential for invasion. Limited management strategies are available and include prevention and eradication of new populations.
- Priority Class 2 species are established and have potential to spread in Montana. Limited management strategies are available and include prevention, impact mitigation, and population size control.
- Priority Class 3 species are not established in Montana but have a high potential for invasion. Available management strategies include prevention and eradication of new populations.
- Priority Class 4 species are established and have potential to spread in Montana. Management strategies are available and include prevention, impact mitigation, and population size control.

Per the AIS Act, there is no centralized authority for coordinating AIS management activities in the state. Instead, the MDA; Montana Fish, Wildlife, and Parks (MFWP); Montana Department of Natural Resources and Conservation; and Montana Department of Transportation (collectively, the Departments) all have the authority to manage AIS as necessary, based on their existing responsibilities in the state (Montana ANS Technical Committee, 2002). MCA 80-7-1007 allows the Departments to develop and implement individual or Department-wide invasive species management plan(s) to detect, prevent, and control invasive species under each agency's individual or collective jurisdiction. These plan(s) address the transport of AIS; designation and treatment of AIS within invasive species management areas, such as designated areas or bodies of water where the Departments regulate AIS or potential carriers of AIS; and rules for inspection and quarantine of vessels and equipment, such as any implement or machinery that has been at

least partially immersed in surface waters, traveling within the state or into Montana from a neighboring state.

MCA 80-7-1012 states it is unlawful to, "purchase, sell, barter, distribute, propagate, transport, introduce, or possess an invasive species," except for approved purposes. After use within an invasive species management area, North Plains will drain all vessels and equipment of water or implement other reasonable measures to drain water if North Plains cannot disengage a drain plug or a drain plug does not exist, prior to being transported on land or a public highway (80-7-1010, MCA). Currently, there are no invasive species management areas within Rosebud, Custer, or Fallon Counties in Montana (MFWP, 2024); however, MCA 80-7-1015 establishes a statewide invasive species management area and requires mandatory inspection of vessels and equipment entering the state.

Vessels and equipment transported into the state or within the state from west of the Continental Divide require inspection prior to in-water use (MFWP, 2023a; MFWP, 2024). North Plains may use existing check stations, if present along the Project, or may coordinate with the MFWP AIS Program to receive the required inspections. Prior to inspection, vessels and equipment will be clean and dry, with no visible mud or vegetation (MFWP, 2024). If North Plains identifies an AIS on a vessel or equipment, they will clean and decontaminate that vessel or equipment before it is allowed to leave the inspection site or check station (80-7-1011, MCA). North Plains will coordinate with MFWP to notify the Department with primary jurisdiction immediately and the equipment owner will comply with required treatment and control procedures.

## 3.3 STATE AND COUNTY LISTED NOXIOUS WEEDS AND AQUATIC INVASIVE SPECIES

Montana has 36 Priority 1A, 1B, 2A, and 2B designated statewide noxious weeds and 5 designated statewide Priority 3 regulated plants (ARM 4.5.210), where control is enforced by all counties in Montana (MDA, 2019b). As noted in Section 3.2.1, control of Priority 3 regulated species is recommended, but not required under the Weed Control Act. One or more CWDs lists six additional plants that they enforce within the jurisdiction of those districts.

According to the MFWP, Montana has 29 AIS, including 1 amphibian, 3 crustaceans, 9 fish, 1 mammal, 7 mollusks, and 8 plants (MFWP, 2023b). MFWP also lists five fish parasites and pathogens as AIS; however, these are not discussed in this Plan. Of the eight aquatic invasive plants listed, three are also designated by MDA as statewide noxious weeds and three are Priority 3 regulated plants. Of the AIS species listed by MFWP, 18 of 29 have not yet been detected in Montana. Table 3.3-1 includes a list of the statewide noxious and regulated weeds, CWD-listed noxious weeds, and AIS enforced within the counties crossed by the Project.

TABLE 3.3-1

**State and County Enforced Noxious Weeds and Aquatic Invasive Species**

| Common Name/Species Category | Scientific Name | State Priority [a] | Habitat [b] | Enforcement Area |
|---|---|---|---|---|
| **NOXIOUS AND REGULATED WEEDS** | | | | |
| **Plants** [c] | | | | |
| Black henbane | *Hyoscyamus albus* | None | Terrestrial | Rosebud County, Montana |
| Blueweed | *Echium vulgare* | Priority 1B | Terrestrial | All counties in Montana |
| Brazilian waterweed [c,d] | *Egeria densa* | Priority 3 | Aquatic | All counties in Montana |
| Canada thistle | *Cirsium arvense* | Priority 2B | Terrestrial | All counties in Montana |

TABLE 3.3-1

**State and County Enforced Noxious Weeds and Aquatic Invasive Species**

| Common Name/Species Category | Scientific Name | State Priority [a] | Habitat [b] | Enforcement Area |
|---|---|---|---|---|
| Cheatgrass | *Bromus tectorum* | Priority 3 | Terrestrial | All counties in Montana |
| Common buckthorn | *Rhamnus cathartica* | Priority 2A | Terrestrial | All counties in Montana |
| Common burdock | *Arctium minus* | None | Terrestrial | Fallon County, Montana |
| Common reed | *Phragmites australis* ssp. *australis* | Priority 1A | Terrestrial | All counties in Montana |
| Common tansy | *Tanacetum vulgare* | Priority 2B | Terrestrial | All counties in Montana |
| Curlyleaf pondweed [c] | *Potamogeton crispus* | Priority 2B | Aquatic | All counties in Montana |
| Dalmatian toadflax | *Linaria dalmatica* | Priority 2B | Terrestrial | All counties in Montana |
| Diffuse knapweed | *Centaurea diffusa* | Priority 2B | Terrestrial | All counties in Montana |
| Dyer's woad | *Isatis tinctoria* | Priority 1A | Terrestrial | All counties in Montana |
| Eurasian watermilfoil [c] | *Myriophyllum spicatum, M. spicatum* x *M. sibiricum* | Priority 2A | Aquatic | All counties in Montana |
| Field bindweed | *Convolvulus arvensis* | Priority 2B | Terrestrial | All counties in Montana |
| Flowering rush [c] | *Butomus umbellatus* | Priority 2A | Aquatic | All counties in Montana |
| Hoary alyssum | *Berteroa incana* | Priority 2B | Terrestrial | All counties in Montana |
| Houndstongue | *Cynoglossum officinale* | Priority 2B | Terrestrial | All counties in Montana |
| Hydrilla [c,d] | *Hydrilla verticillata* | Priority 3 | Aquatic | All counties in Montana |
| Knotweed complex | *Polygonum cuspidatum, P. sachalinense, P.* x *bohemicum, Fallopia japonica, F. sachalinensis, F.* x *bohemica, Reynoutria japonica, R. sachalinensis, and R.* x *bohemica* | Priority 1B | Terrestrial | All counties in Montana |
| Kochia | *Bassia scoparia* | None | Terrestrial | Rosebud County, Montana |
| Leafy spurge | *Euphorbia esula* | Priority 2B | Terrestrial | All counties in Montana |
| Meadow hawkweed complex | *Hieracium caespitosum, H. praealturm, H. floridundum,* and *Pilosella caespitosa* | Priority 2A | Terrestrial | All counties in Montana |
| Medusahead | *Taeniatherum caput-medusae* | Priority 1A | Terrestrial | All counties in Montana |
| Orange hawkweed | *Hieracium aurantiacum, Pilosella aurantiaca* | Priority 2A | Terrestrial | All counties in Montana |
| Oxeye daisy | *Leucanthemum vulgare* | Priority 2B | Terrestrial | All counties in Montana |
| Parrot feather watermilfoil [c,d] | *Myriophyllum aquaticum or M. brasiliense* | Priority 3 | Aquatic | All counties in Montana |
| Perennial pepperweed | *Lepidium latifolium* | Priority 2A | Terrestrial | All counties in Montana |
| Poison hemlock | *Conium maculatum* | None | Terrestrial | Fallon and Rosebud counties, Montana |
| Puncture vine | *Tribulus terrestris* | None | Terrestrial | Rosebud County, Montana |
| Purple loosestrife | *Lythrum salicaria* | Priority 1B | Aquatic | All counties in Montana |
| Rush skeletonweed | *Chondrilla juncea* | Priority 1B | Terrestrial | All counties in Montana |
| Russian knapweed | *Acroptilon repens, Rhaponticum repens* | Priority 2B | Terrestrial | All counties in Montana |
| Russian olive | *Elaeagnus angustifolia* | Priority 3 | Terrestrial | All counties in Montana |
| Saltcedar | *Tamarix* spp. | Priority 2B | Terrestrial | All counties in Montana |
| Scotch broom | *Cytisus scoparius* | Priority 1B | Terrestrial | All counties in Montana |
| Scotch thistle | *Onopordum acanthium* | None | Terrestrial | Rosebud County, Montana |
| Spotted knapweed | *Centaurea stoebe, C. maculosa* | Priority 2B | Terrestrial | All counties in Montana |
| St. Johnswort | *Hypericum perforatum* | Priority 2B | Terrestrial | All counties in Montana |
| Sulfur cinquefoil | *Potentilla recta* | Priority 2B | Terrestrial | All counties in Montana |
| Tall buttercup | *Ranunculus acris* | Priority 2A | Terrestrial | All counties in Montana |

TABLE 3.3-1

**State and County Enforced Noxious Weeds and Aquatic Invasive Species**

| Common Name/Species Category | Scientific Name | State Priority [a] | Habitat [b] | Enforcement Area |
|---|---|---|---|---|
| Tansy ragwort | *Senecio jacobaea, Jacobaea vulgaris* | Priority 2A | Terrestrial | All counties in Montana |
| Ventenata | *Ventenata dubia* | Priority 2A | Terrestrial | All counties in Montana |
| Whitetop | *Cardaria draba, Lepidium draba* | Priority 2B | Terrestrial | All counties in Montana |
| Yellow starthistle | *Centaurea solstitialis* | Priority 1A | Terrestrial | All counties in Montana |
| Yellow toadflax | *Linaria vulgaris* | Priority 2B | Terrestrial | All counties in Montana |
| Yellowflag iris | *Iris pseudacorus* | Priority 2A | Aquatic | All counties in Montana |
| **AQUATIC INVASIVE SPECIES** | | | | |
| **Amphibian** | | | | |
| American bullfrog | *Lithobates catesbeianus* | Class 4 | Aquatic | All counties in Montana |
| **Crustaceans** | | | | |
| Fishhook waterflea [e] | *Cercopagis pengoi* | Unknown | Aquatic | All counties in Montana |
| Rusty crayfish [e] | *Orconectes rusticus* | Class 1 | Aquatic | All counties in Montana |
| Spiny waterflea [e] | *Bythotrephes longimanus* | Class 1 | Aquatic | All counties in Montana |
| **Fish** | | | | |
| Bighead carp [e] | *Hypopthalmichthys nobilis* | Class 1 | Aquatic | All counties in Montana |
| Black carp [e] | *Mylopharyngodon piceus* | Class 1 | Aquatic | All counties in Montana |
| Grass carp [e] | *Ctenopharyngodon idella* | Class 1 | Aquatic | All counties in Montana |
| Northern snakehead [e] | *Channa argus* | Unknown | Aquatic | All counties in Montana |
| Round goby [e] | *Neogobius melanostomus* | Class 1 | Aquatic | All counties in Montana |
| Ruffe [e] | *Gymnocephalus cerna* | Class 1 | Aquatic | All counties in Montana |
| Silver carp [e] | *Hypopthalmichthys molitrix* | Class 1 | Aquatic | All counties in Montana |
| Tench [e] | *Tinca tinca* | Class 1 | Aquatic | All counties in Montana |
| Zander [e] | *Sander lucioperca* | Class 1 | Aquatic | All counties in Montana |
| **Mammals** | | | | |
| Nutria [e] | *Myocastor coypus* | Class 1 | Aquatic | All counties in Montana |
| **Mollusks** | | | | |
| Asian clam | *Corbicula* spp. | Unknown | Aquatic | All counties in Montana |
| Chinese mystery snail [e] | *Cipangopaludina chinensis malleat* | Unknown | Aquatic | All counties in Montana |
| Faucet snail | *Bithynia tentaculata* | Unknown | Aquatic | All counties in Montana |
| New Zealand mudsnail | *Potamopyrgus antipodarum* | Class 2 | Aquatic | All counties in Montana |
| Quagga mussel | *Dreissena rostriformis bugensis* | Unknown | Aquatic | All counties in Montana |
| Red-rim melania | *Melanoides tuberculata* | Unknown | Aquatic | All counties in Montana |
| Zebra mussel | *Dreissena polymorpha* | Class 1 | Aquatic | All counties in Montana |
| **Plants** | | | | |
| Brazilian waterweed [c,e] | *Egeria densa* | Priority 3 | Aquatic | All counties in Montana |
| Curlyleaf pondweed [c] | *Potamogeton crispus* | Priority 2B/ Class4 | Aquatic | All counties in Montana |
| Eurasian watermilfoil [c] | *Myriophyllum spicatum, M. spicatum* x *M. sibiricum* | Priority 2A/Class 3 | Aquatic | All counties in Montana |
| Flowering rush [c] | *Butomus umbellatus* | Priority 2A/Class4 | Aquatic | All counties in Montana |
| Fragrant waterlily [d] | *Nymphaea odorata* | Unknown | Aquatic | All counties in Montana |
| Hydrilla [c,e] | *Hydrilla verticillata* | Priority 3/ Class 1 | Aquatic | All counties in Montana |
| Parrot feather watermilfoil [c,e] | *Myriophyllum aquaticum or M. brasiliense* | Priority 3 | Aquatic | All counties in Montana |
| Yellow floating heart [d,e] | *Nymphoides peltata* | Unknown | Aquatic | All counties in Montana |

TABLE 3.3-1

**State and County Enforced Noxious Weeds and Aquatic Invasive Species**

| Common Name/Species Category | Scientific Name | State Priority [a] | Habitat [b] | Enforcement Area |
|---|---|---|---|---|

[a] Noxious weed priority levels include Priority 1A, Priority 1B, Priority 2A, Priority 2B, and Priority 3; AIS priority levels include Class 1, Class 2, Class 3, and Class 4.
[b] For noxious weeds, the aquatic habitat descriptor includes both submerged and emergent aquatic plant species.
[c] Identified as both a noxious weed or regulated weed by MDA (2019b) and an aquatic invasive plant by MFWP (2023b).
[d] Identified as an aquatic invasive plant by the MFWP (2023b), but not listed as a statewide noxious or regulated plant by MDA (2019b).
[e] AIS currently undetected in Montana, according to MFWP (2023b).
Sources: MDA, 2019a and 2019b; MFWP, 2023b; Montana ANS Technical Committee, 2002.

## 3.4 NOXIOUS WEED PRESENCE

North Plains conducted surveys for state- and county-listed noxious weed species within the Project survey corridor. Noxious weed surveys were conducted concurrently with the wetland and waterbody surveys during the growing season between 2022 and 2025; surveys were not timed to coincide with any species-specific morphological state. Table 3.4-1 shows noxious weeds with confirmed presence in the Project survey corridor based on occurrences documented during noxious weed surveys in 2022, 2023, and 2024. Surveys in 2025 are ongoing and are not included in Table 3.4-1.

TABLE 3.4-1

**Confirmed Noxious Weed Presence by County within the Project Survey Corridor**

| Species | Rosebud | Custer | Fallon |
|---|---|---|---|
| Canada Thistle | X | X | X |
| Cheatgrass [a] | | | X |
| Field Bindweed | X | X | X |
| Houndstongue | | | |
| Leafy Spurge | | X | X |
| Saltcedar | X | X | |
| Spotted Knapweed | | | X |
| Tall Buttercup | | X | |
| Tansy Ragwort | | | X |

[a] Not considered a noxious weed in Montana but is considered a statewide regulated plant with potential to have significant negative impacts.
Source: Western EcoSystems Technology, Inc, 2025

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The primary construction contractor (Contractor) will be responsible for site preparation, installation of support structures, general Project construction, testing and commissioning, health and safety, and environmental compliance including noxious weed and AIS management and control, as described in this Plan. However, North Plains is responsible for construction of all associated facilities.

For the duration of the Project, North Plains will implement and maintain the measures outlined in this Plan, the CMRP, and in all applicable Project permits.

## 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ Environmental Inspectors during the construction phase. Further information on Environmental Inspectors and their responsibilities is provided in the CMRP.

## 4.2 COUNTY WEED BOARDS

The public is encouraged to work with County Weed Board coordinators, extension agents, and other experts to identify and report suspected noxious and regulated weeds. In addition to the functions described in Section 3.2.1, the role of the County Weed Boards is to provide guidance regarding noxious weed detection and control by landowners and land occupants within each county and to investigate signed complaints received by a County Weed Board coordinator regarding noxious weeds. County Weed Boards can offer assistance as it relates to identification, prevention, and treatment of noxious weeds.

Table 4.2-1 includes the primary contact information for the Custer, Fallon, and Rosebud County Weed Boards, according to the Montana Weed Control Association (2020).

TABLE 4.2-1

**County Weed Board Coordinator Contact Information**

| County / Contact Title | Name | Phone | Email |
|---|---|---|---|
| **CUSTER** | | | |
| Weed Coordinator | Byron Hould | (406) 874-3370 | b.hould@co.custer.mt.us |
| **FALLON** | | | |
| Weed Coordinator | Sara Berger | (406) 778-8131 | bergers@falloncounty.net |
| **ROSEBUD** | | | |
| Weed Coordinator | Amy Adler | (406) 346-7608 | aadler@rosebudcountymt.com |

Source: Montana Weed Control Association, 2020.

## 5.0 TRAINING

Before commencing construction, North Plains will organize environmental training sessions for relevant Project personnel. These training programs will cover relevant construction, restoration, and mitigation plans, including this Plan, along with any applicable permit conditions. Furthermore, North Plains will conduct large-group training sessions before each work crew begins construction, followed by periodic follow-up training for newly assigned personnel. Training will be documented, and training records will be saved with Project files.

North Plains will provide noxious weed identification, management, and control training to Project personnel prior to commencing construction. As part of this training, North Plains will review and ensure Project personnel understand the contents of this Plan and the CMRP. As needed, North Plains will make available a copy of *Montana's Noxious Weeds* (Montana State University Extension, 2020), which includes photos of all Montana statewide designated noxious weeds and Priority 3 regulated plants.

# 6.0 NOXIOUS WEED MANAGEMENT AND CONTROL

## 6.1 PREVENTATIVE MEASURES

### 6.1.1 Noxious and Regulated Weeds

Noxious weeds can be spread by natural processes, such as wildlife and wind, as well as through human means involving vehicles, construction equipment, and construction or restoration activities. Implementation of preventative measures to control the spread of noxious weeds is the most cost-effective management approach. North Plains will implement noxious weed preventative measures that are consistent with state and county regulations, and will work with County Weed Board coordinators, as necessary.

North Plains will implement the following preventative measures within the Project workspace for statewide and CWD-listed noxious weeds and, when feasible, Priority 3 regulated plants (collectively, noxious and regulated weeds):

- Prior to moving equipment to the Project area, North Plains will thoroughly clean construction equipment, including construction mats, to limit the potential for the spread of noxious and regulated weeds. North Plains will clean the equipment at designated wash stations in upland areas.

- Prior to construction, North Plains will complete noxious weed surveys within the Project workspaces to map known populations of noxious and regulated weeds. North Plains will mark areas of the Project workspace that contain documented occurrences of noxious and regulated weeds (i.e., infested areas). Such markings will clearly indicate the limits of the infestation within the construction workspace.

- During construction, North Plains will clean the tracks, tires, and blades of equipment by hand or compressed air to remove excess soil prior to moving equipment out of mapped noxious weed infested areas or use wash stations to remove vegetative materials.

- North Plains will use mulch and straw or hay bales that are certified free of noxious weeds for temporary erosion and sediment control in disturbed areas.

- North Plains will implement pre-construction control treatments, such as mowing prior to seed development and/or herbicide treatments by a state-certified applicator in infested areas prior to vegetation clearing; site grading, excavation, or other soil-disturbing work; or overland travel within or through infested areas identified during the noxious weed surveys.

- Pre-construction control treatments will avoid the use of herbicides within 100 feet of a waterbody or wetland.

### 6.1.2 Aquatic Invasive Species

Like noxious and regulated weeds, AIS can be spread by natural processes and human means. The movement of vehicles and construction equipment from infested waters can allow for AIS, including plants and animals, to be transported to new locations and water diversions can allow

for AIS from different areas to invade new habitats (Montana ANS Technical Committee, 2002). Since there are limited acceptable controls available for use in aquatic habitats once an AIS has been established, implementation of preventative measures to control the spread of AIS is the most cost-effective management approach.

North Plains will implement the following preventative measures in wetlands and waterbodies:

- Vehicles and equipment intended for in-water use in Montana will be inspected when entering the state or crossing the Continental Divide. North Plains will be responsible for initiating vehicle and equipment inspections prior to Project use. Inspections may occur at existing state check stations, or by coordinating with the MFWP AIS Program for alternative inspection options. Check station locations can be found at https://fwp.mt.gov/conservation/aquatic-invasive-species/watercraft-inspection-stations. If the inspection uncovers an AIS, North Plains will remain at the check station until the vehicle or equipment is cleaned and decontaminated.

- Upon completion of in-water work activities, North Plains will remove all visible mud, vegetation, or aquatic debris from the vehicles or equipment, drain areas that may retain or store water, and dry or disinfect the vehicles and equipment prior to relocation to another Project site or transport on a public highway. North Plains may clean the equipment with high-pressure washing equipment at designated wash stations in upland areas, if necessary to fully remove the debris.

- North Plains will coordinate with MFWP to identify any new AIS management areas along the Project prior to construction commencement. After in-water use within an AIS management area, North Plains will inspect in-water work vehicles and equipment at a state watercraft check station or by coordinating with the MFWP AIS Program. If the inspection uncovers an AIS, North Plains will remain at the check station until the vehicle or equipment is cleaned and decontaminated.

- North Plains will not wash equipment within 100 feet of wetlands or waterbodies.

- North Plains will clean and dry equipment such as temporary flumes, culverts, timber mats, or bridge structures after removal from a wetland or waterbody and prior to Project relocation or transport.

## 6.2 TREATMENT AND CONTROL METHODS

North Plains will conduct noxious and regulated weed treatments in accordance with existing regulations and landowner or agency agreements. Pre-treatment of noxious weed infestations will be conducted prior to vegetation clearing or ground-disturbing construction activities if pre-treatment will aid in controlling the spread of weeds during construction. North Plains will choose the best available treatment and control methods based on site-specific information, including the season, location, and the noxious or regulated weed species present. Control methods may include herbicide application or mechanical measures, such as mowing or manual removal.

During construction, North Plains will periodically monitor the construction areas to allow for early detection of noxious weed infestations. If noxious or regulated weeds are observed within construction areas, North Plains or a state-certified herbicide applicator will implement appropriate

control measures in an attempt to control the identified infestations and to reduce the spread or proliferation of weeds within the construction area.

During inactive periods of construction, defined as periods of 120 days or longer, North Plains will treat any previously identified noxious weed or regulated weed-infested areas, as well as any new infestations areas within the construction corridor, as determined necessary.

After construction activities are complete, North Plains will reclaim the Project workspace in accordance with the CMRP and using seed mixes approved by the landowner and land-managing agencies.

After Project construction has been completed in areas disturbed by construction and areas over which North Plains will retain surface use control, such as converter stations, North Plains will provide weed control to limit the potential spread of noxious or regulated weeds onto adjacent lands. Any herbicide spraying performed by North Plains will be done by a state-licensed or state-certified applicator.

### 6.2.1 Control Methods

North Plains will determine appropriate weed management techniques based on the current conditions at the location of infestation. Weed management techniques may include hand-pulling, mechanical removal, or the use of herbicides. These methods are discussed below.

Before using a noxious weed control method not outlined in this Plan, North Plains will consult with the appropriate County Weed Board(s).

#### 6.2.1.1 Hand-pulling or Pulling Tools

Hand-pulling weeds has a small ecological impact, causes minimal damage to neighboring vegetation, and has low to no cost. It does, however, require significant labor and, thus, can only be used as a control method for small infestations. Hand-pulling may be used when individual or small numbers of weeds are observed in the right-of-way.

Handheld tools are available to remove weeds in the same manner as hand-pulling. These tools provide additional leverage and the capability to remove weeds with deeper and/or larger roots. As with hand-pulling, this method, if used, will be limited to small infestations.

#### 6.2.1.2 Mechanical

Mowing or brushing can quickly remove large swaths of weeds, but care must be taken that cuttings are removed promptly to prevent regrowth or prevent weeds from being carried offsite via wind or water to germinate in adjacent uninfested areas. Additionally, if mowing or brushing is used, North Plains will identify the weed(s) present and confirm the species' life cycle and control timing requirements to ensure that they are cut at the appropriate point in development (e.g., prior to flowering or seed maturation) to prevent regrowth or spread.

#### 6.2.1.3 Chemical (Herbicides)

North Plains will base herbicide selection on information gathered from local County Weed Boards and/or the MDA. Prior to herbicide application, North Plains or the state-certified applicator will

obtain any required permits or approvals from the CWD and landowner. Herbicide type(s) will be determined based on the weed species present and existing land use and land cover in the areas where the herbicide will be applied. Whenever possible, the state-certified applicator will select effective, species-appropriate herbicides that are unlikely to drift, leach to groundwater or wash into streams, are nontoxic to people and other organisms, and easy to apply. The state-certified applicator will make every effort to minimize negative environmental impacts when conducting herbicide applications.

A state-certified applicator will conduct herbicide applications in accordance with all applicable laws and regulations. The state-certified applicator will strictly adhere to all label instructions and implement all manufacture guidelines for the type of herbicide and application used and based on conditions in the field at the time. For example, manufacturer's guidelines recommend that users only apply herbicides under appropriate weather conditions, that application sprayers be mounted low to the ground, and that sprayer booms incorporate specialized nozzles designed to produce large droplet sizes with limited drift potential. Adherence to these specifications and manufacturer label directions will minimize the potential for drift or transport of herbicides to off right-of-way areas. All herbicides applied prior to or during construction will be non-residual or will have a significant residual effect no longer than 30 days. The state-certified applicator will keep a copy of the herbicide Safety Data Sheets at work sites.

The state-certified applicator may employ vehicle-mounted sprayers and/or hand application methods depending on the infestation location(s) and conditions in the field. Vehicle-mounted sprayers (e.g., handgun, boom, and injector) will be used primarily in open areas that are readily accessible by vehicle. The state-certified applicator will use hand application methods (e.g., backpack spraying) that target individual plants to treat small scattered noxious weed populations in rough terrain or where required due to the proximity to sensitive plants, wetlands or waterbodies, or other sensitive wildlife habitats. The state-certified applicator(s) will complete calibration checks of equipment at the beginning of spraying and periodically thereafter to ensure proper application rates are achieved. Industry standards and/or manufacturer's guidelines will determine the required or appropriate application equipment calibration checks. The state-certified applicator will maintain application records, including: the active ingredient; formulation; application rate; date, time, and location; and provide copies, as requested.

The state-certified applicator will manage and use herbicides according to the provisions listed below.

- Herbicide application procedures will be conducted by a licensed, state-certified commercial applicator to ensure that proper mixing, application, cleanup, personal protection, and safety procedures are followed.

- The state-certified applicator will bring herbicides to the Project site premixed or mix them in a closed transfer system, in returnable/refillable containers, and transfer contents by closed transfer system to application tanks to limit worker and environmental exposure and eliminate the need for disposal of herbicide containers in area landfills.

- The state-certified applicator will transport herbicides in a manner that will prevent tipping or spilling, and the inspections staff will monitor all herbicide equipment and containers daily for leaks.

- North Plains will prepare a Spill Prevention and Response Plan to address handling, storage, and spill response prior to herbicide use.

- The state-certified applicator will not use, store, or mix herbicides within 100 feet of a wetland or waterbody, or as specified in permits for federal or state lands, whichever is more stringent.

- North Plains will not apply herbicide using aerial methods; state-certified applicator will apply herbicides using vehicle-mounted sprayers and/or hand application methods.

- After herbicide application on public lands, the state-certified applicator will post signage indicating the extent of the treated areas.

#### 6.2.1.4 BLM-Managed Lands

In accordance with Appendix B of the BLM Vegetation Treatments Using Herbicides Final Programmatic Environmental Impact Statement Record of Decision (2007), North Plains will implement the following measures within the Project workspace on BLM lands:

- Prior to herbicide use on BLM land, North Plains will coordinate with BLM to identify applicable procedures that would be implemented within the Project workspace on BLM land. These will include a subset of the Standard Operating Procedures for Applying Herbicides identified within Appendix B PEIS Record of Decision (2007).

- Coordinate with BLM regarding special status species that may occur or are known to occur on the BLM lands crossed by the Project. North Plains will consider effects to special status species when selecting herbicide treatments before treating an infested area.

- The state-certified applicator will not apply herbicides within 100 feet of known special status plant occurrences within BLM lands without prior approval. Herbicides used within 100 feet of special status plant species will be selected to minimize risks to sensitive plants and restricted to hand application methods.

- Avoid treating vegetation during time-sensitive periods (e.g., nesting and migration, sensitive life stages) for special status species with documented presence within 100 feet of the area to be treated, unless doing so is required for effective control of the noxious weed species.

- Minimize treatments near waterbodies during periods when fish or aquatic special status species are in life stages most sensitive to the herbicide(s) used and use spot rather than broadcast or aerial treatments.

- North Plains will use the requested seed mixes and procedures provided by the BLM and described in Section 6 of the CMRP.

# 7.0 POST CONSTRUCTION RESTORATION AND REVEGETATION

## 7.1 SITE RESTORATION AND REVEGETATION

After construction activities are complete, North Plains will reclaim the Project workspace in accordance with the CMRP and using seed mixes approved by the landowner and land-managing agencies. North Plains will coordinate with the BLM and ARS regarding preferred seed mixes to be used on the portions of the Project that cross these federally managed lands. Site restoration will involve grading disturbed work areas to approximate pre-construction contours and natural drainage patterns as closely as possible. North Plains will maintain temporary erosion controls until replaced by permanent erosion control structures or until restoration is complete.

## 7.2 MONITORING AND OPERATION

Following construction, North Plains' on-site operations staff will monitor all mapped or newly identified infestation sites within the areas disturbed by Project construction and all areas over which North Plains retains control of the surface use. North Plains will perform monitoring annually for a minimum of three years following construction or per mutual agreement between North Plains and the appropriate County Weed Board. In addition, North Plains will conduct reseeding, as needed, to re-establish a desirable vegetative cover to stabilize the soils and slow the potential for re-invasion of noxious and regulated weeds.

In areas with continued presence of noxious or regulated weeds, the weed treatment and control measure(s) chosen will be the best available for the season, location, and species, as described in Section 6.2. Where necessary, a state-certified applicator will complete herbicide applications. The County Weed Coordinator(s) may inspect all sites of concern, as they deem necessary, and will determine if the infestation sites have been eradicated.

# 8.0 PLAN REVISIONS

TABLE 8.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 1 | Initial draft plan | August 2024 |
| Rev 2 | 2024 Noxious weed survey and other minor updates incorporated | July 2025 |
| | | |
| | | |
| | | |

## 9.0 REFERENCES

Bureau of Land Management (BLM). 1992. Manual 9015 – Integrated Weed Management. Available online at: https://www.ntc.blm.gov/krc/system/files/legacy/uploads/25333/9015%20-%20Integrated%20Weed%20Management%20Manual.doc. Accessed August 2024.

BLM. 2007. Final Vegetation Treatments Using Herbicides Programmatic Environmental Impact Statement. FES 07-21. USDI BLM. Available online at: https://eplanning.blm.gov/eplanning-ui/project/70300/570. Accessed July 2024.

Montana Aquatic Nuisance Species (ANS) Technical Committee. 2002. Montana Aquatic Nuisance Species (ANS) Management Plan. Available online at: https://fwp.mt.gov/binaries/content/assets/fwp/conservation/ais/reports/montana-ans-plan---final---edited-for-printing-10-16-02.pdf. Accessed August 2024.

Montana Department of Agriculture (MDA). 2017. Montana Noxious Weed Management Plan. Available online at: https://agr.mt.gov/_docs/NWTF-docs/MT-Noxious-Weed-Management-Plan--Update-2017.pdf. Accessed August 2024.

MDA. 2019a. County Listed Noxious Weeds 2018-19. Available online at: https://agr.mt.gov/_docs/weeds-docs/County-Listed-Noxious-Weeds-2019.pdf. Accessed August 2024.

MDA. 2019b. Montana Noxious Weed List. Effective June 21, 2019. Available online at: https://agr.mt.gov/_docs/weeds-docs/2019-Montana-Noxious-Weed-List.pdf. Accessed August 2024.

Montana Fish, Wildlife, and Parks (MFWP). 2023a. AIS Laws and Rules. Available online at: https://fwp.mt.gov/conservation/aquatic-invasive-species/rules. Accessed December 2023.

MFWP. 2023b. AIS Species Identification Guide. Available online at: https://fwp.mt.gov/conservation/aquatic-invasive-species/species-identification. Accessed December 2023.

MFWP. 2024. Email Dated June 12 from T. Woolf (MFWP) to M. Voth (Western EcoSystems Technology, Inc.).

Montana State University Extension. 2020. Montana's Noxious Weeds. Available online at: https://issuu.com/msuextension/docs/eb0159?e=33838256/63057008. Accessed August 2024.

Montana Weed Control Association. 2020. Montana Weed Control Association 2020 Directory. Available online at: https://www.mtweed.org/wp-content/uploads/2020/04/2020-MWCA-Directory.pdf. Accessed August 2024.

United States Department of the Interior. 2021 Invasive Species Strategic Plan 2021-2025. Available online at: https://www.doi.gov/sites/doi.gov/files/doi-invasive-species-strategic-plan-2021-2025-508.pdf. Accessed August 2024.

Western EcoSystems Technology, Inc (WEST). 2025. 2022-2025 General Habitat Survey Report, Montana and North Dakota. Prepared for North Plains Connector LLC, Houston, Texas. Prepared by WEST, Golden Valley, Minnesota. Submission pending.

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Noxious Weed Management Plan North Dakota



**Prepared by:**

**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**August 2025**

## TABLE OF CONTENTS



## LIST OF TABLES



## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| APHIS | Animal and Plant Health Inspection Service |
| CFR | Code of Federal Regulations |
| CMRP | Construction Mitigation and Reclamation Plan |
| County Weed Boards | Morton, Golden Valley, Grant, Hettinger, Oliver, and Slope County Weed Boards |

| | |
|---|---|
| CTS | closed transfer system |
| FEIS | Final Environmental Impact Statement |
| Grid United | Grid United LLC |
| NDCC | North Dakota Century Code |
| NDDA | North Dakota Department of Agriculture |
| NDDTL | North Dakota Department of Trust Lands |
| NFS | National Forest System |
| North Plains | North Plains Connector LLC |
| Plan | Draft Noxious Weed Management Plan – North Dakota |
| Project | North Plains Connector Project |
| State certified applicator | State certified contractor for herbicide applications |
| USDA | U.S. Department of Agriculture |
| USDA - FS | U.S. Forest Service |

# 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Noxious Weed Management Plan (Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, single-purpose subsidiary of Grid United LLC (Grid United), a Houston-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States' power grid more modern, efficient, reliable, and secure.

# 2.0 PLAN PURPOSE

North Plains recognizes that construction activities may promote the spread of noxious weeds on public and private lands. Soil disturbance may stimulate weed seeds already present in the soil seed bank to germinate and establish, and movement of equipment used in weed-infested areas during construction of the Project could promote the spread of noxious weeds to new lands and waters.

North Plains' goal is to outline the management strategies that will be used to minimize the spread of noxious weeds identified within the Project workspace in compliance with law or regulation. Management strategies will be implemented where applicable and appropriate prior to construction, and during Project construction, reclamation, and operation phases. Existing noxious weed occurrences will be documented throughout the Project workspace through pre-construction surveys, publicly available datasets, or monitoring.

North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Plan references the CMRP where additional guidance is provided therein.

# 3.0 REGULATORY COMPLIANCE

This section provides a brief overview of federal and state legislation and regulatory compliance applicable to noxious weeds in the Project area. North Plains will conduct Project activities in accordance with all local, state, and federal regulations regarding the control and management of noxious weeds.

## 3.1 FEDERAL REGULATIONS

### 3.1.1 U.S. Department of Agriculture

#### 3.1.1.1 U.S. Department of Agriculture - Animal and Plant Health Inspection Service

The U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) is a federal noxious weed program designed to prevent the introduction of nonindigenous invasive plants into the U.S. APHIS noxious weed activities include exclusion and permitting and in cooperation with other agencies and state agencies, and integrated management of introduced weeds, including biological control.

#### 3.1.1.2 USDA – U.S. Forest Service

The authority to manage for invasive species on National Forest System (NFS) lands and other lands under USDA - Forest Service (USDA - FS) control is delegated at Title 7, Code of Federal Regulations (CFR), section 2.20 (7 CFR 2.20) and Title 7, CFR, section 2.60 (7 CFR 2.60). Title 36, CFR Parts 221, 222, 228, 241, 251, 261, 290, 292, 293, 296, and 297 provide additional authorities to manage and regulate invasive species across NFS lands, including establishing requirements and prohibitions to prevent and control aquatic and terrestrial invasive species. In addition, USDA - FS regulations at 36 CFR 222.8 outline the Agency's obligation to work cooperatively in identifying invasive species, including noxious weeds, problems, and initiating control programs in aquatic and terrestrial areas of the USDA - FS (USDA-FS, 2011).

#### 3.1.1.3 USDA – FS Dakota Prairie Grasslands/Little Missouri National Grasslands

The USDA Dakota Prairie Grasslands Noxious Weed Management Project Final Environmental Impact Statement (FEIS) describes the USDA - FS approach to treat and control existing infestation sites, as well as an adaptive strategy for treating up to 13,900 acres of new or previously unknown noxious weed infestations. The FEIS (USDA-FS, 2007) also documents analysis conducted to determine the potential environmental consequences of treating noxious weeds on the Dakota Prairie Grasslands. North Plains will adhere to Appendix F of the FEIS (2007), USDA – Forest Service Guide To Noxious Weed Prevention Practices, and any other USDA - FS recommendations and requirements when conducting weed control and reclamation activities on NFS lands.

The FEIS and Land and Resource Management Plan For the Dakota Prairie Grasslands Northern Region (USDA-FS, 2001) addresses control and management of noxious weeds species as a high priority for ensuring long-term health of national grasslands and includes national goals relevant to land and resource management based on USDA - FS manual objective statements.

## 3.2 STATE REGULATIONS

### 3.2.1 Noxious and Regulated Weeds

The Project is located in Golden Valley, Slope, Hettinger, Grant, Morton and Oliver Counties in North Dakota. At the state and county levels, the Agricultural Commissioner and County Weed Officers are responsible for organizing a noxious weed control or eradication program with all political subdivisions within North Dakota that own, control, or have jurisdiction over land (North Dakota Century Code [NDCC], 2024).

NDCC Chapter 4.1-47 defines a noxious weed as a plant propagated by either seed or vegetative parts, and determined to be injurious to public health, crops, livestock, land, or other property. Additionally, this chapter states that each person must do all things necessary and proper to control the spread of noxious weeds; makes it illegal for any person to distribute, sell, or offer for sale a noxious weed within the state; and defines the duties of the Agriculture Commissioner, including maintaining the State Noxious Weed List (NDCC, 2024).

Per NDCC Chapter 4.1-47-30:

- a person may not willfully transport any material that contains noxious weed seeds or propagating parts on a public road, in a manner that allows for the dissemination of noxious weeds;
- a person may not willfully drive or transport any equipment on a public road, in a manner that allows for the dissemination of noxious weeds; and
- a person may not willfully dispose of any material that contains noxious weed seeds or propagating parts in a manner that allows for the dissemination of noxious weeds.

#### 3.2.1.1 North Dakota Department of Trust Lands

In accordance with North Dakota Department of Trust Lands (NDDTL) land leases, noxious weeds must be controlled. The NDDTL does not list any additional weeds beyond those listed in at the state and county levels; however, they do list the following six 'watch list' species as having potential to become a nuisance to the land.

- yellow starthistle;
- black henbane;
- hoary cress;
- common tansy;
- Palmer amaranth; and
- waterhemp.

## 3.3 STATE AND COUNTY LISTED NOXIOUS WEEDS

The control of thirteen declared state noxious weeds is enforced by all cities and counties within North Dakota. Cities and counties have the option to add additional weeds for control enforcement only in their jurisdiction. Table 3.3-1 provides a list of the declared noxious weeds enforced within the counties and cities crossed by the Project, according to the State Noxious Weeds List (North Dakota Department of Agriculture [NDDA], 2023a) and the County and City Noxious Weeds List (NDDA, 2023b). The Project is not located within the jurisdiction of any city.

Table 3.3-1 includes a list of the statewide noxious and regulated weeds enforced within the counties crossed by the Project.

TABLE 3.3-1

**State and County Enforced Noxious Weeds**

| Species Category / Common Name | Scientific Name | State Priority | Habitat | Enforcement Area |
|---|---|---|---|---|
| **PLANTS** | | | | |
| Absinth wormwood | *Artemisia absinthium L.* | NA | Terrestrial | All cities and counties in North Dakota [a] |
| Baby's breath | *Gypsophila paniculata L.* | NA | Terrestrial | Grant County [b] |
| Black henbane | *Hyoscyamus albus* | NA | Terrestrial | Grant, Slope, and Golden Valley Counties |
| Canada thistle | *Cirsium arvense* | NA | Terrestrial | All cities and counties in North Dakota |

TABLE 3.3-1

**State and County Enforced Noxious Weeds**

| Species Category / Common Name | Scientific Name | State Priority | Habitat | Enforcement Area |
|---|---|---|---|---|
| Common burdock | *Arctium minus* | NA | Terrestrial | Golden Valley County |
| Common mullein | *Verbascum thapsus L.* | NA | | Golden Valley County |
| Dalmatian toadflax | *Linaria dalmatica* | NA | Terrestrial | All cities and counties in North Dakota |
| Diffuse knapweed | *Centaurea diffusa* | NA | Terrestrial | All cities and counties in North Dakota |
| Hoary cress | *Cardaria draba (L.) Desv.* | NA | | Grant and Golden Valley Counties, State of North Dakota |
| Houndstongue | *Cynoglossum officinale* | NA | Terrestrial | All cities and counties in North Dakota |
| Leafy spurge | *Euphorbia esula* | NA | Terrestrial | All cities and counties in North Dakota |
| Musk thistle | *Carduus nutans L.* | NA | | All cities and counties in North Dakota |
| Palmer amaranth | *Amaranthus palmeri* | NA | | All cities and counties in North Dakota |
| Purple loosestrife | *Lythrum salicaria* | NA | Aquatic | All cities and counties in North Dakota |
| Russian knapweed | *Acroptilon repens, Rhaponticum repens* | NA | Terrestrial | All cities and counties in North Dakota |
| Saltcedar | *Tamarix spp.* | NA | Terrestrial | All cities and counties in North Dakota |
| Spotted knapweed | *Centaurea stoebe, C. maculosa* | NA | Terrestrial | Slope County [c] |
| Ventenata grass | *Ventenata dubia* | NA | Terrestrial | Grant County |
| Waterhemp | *A. rudis tuberculatus (Moq.)* | NA | Terrestrial | All cities and counties in North Dakota |
| Yellow toadflax | *Linaria vulgaris* | NA | Terrestrial | All cities and counties in North Dakota |

[a] Source: https://www.ndda.nd.gov/divisions/plant-industries/noxious-weeds (2023a).
[b] Source: https://www.ndda.nd.gov/sites/www/files/documents/files.pdf (2023b).
[c] Included at the request of Slope County. While not designated a noxious weed in North Dakota, ventenata grass (*Ventenata dubia)* is present across the state line in Montana counties crossed by the Project.

## 3.4 NOXIOUS WEED PRESENCE

North Plains conducted surveys for state- and county-listed noxious weed species within the Project survey corridor. Noxious weed surveys were conducted concurrently with the wetland and waterbody surveys and were not timed to coincide with any species-specific morphological state. Table 3.4-1 shows noxious weeds with confirmed presence in the Project survey corridor based on occurrences documented during noxious weed surveys.

TABLE 3.4-1

**Confirmed Noxious Weed Presence by County within the Project Survey Corridor**

| Species | Golden Valley | Slope | Hettinger | Grant | Morton | Oliver |
|---|---|---|---|---|---|---|
| Absinth Wormwood | | X | X | X | X | |
| Canada Thistle | X | X | X | X | X | X |
| Cheatgrass [a] | | | | | | |
| Cicer Milkvetch [a] | | | X | | | |
| Crested Wheatgrass [a] | X | X | | | | |
| Field Bindweed | X | X | X | X | X | |
| Field Brome [a] | X | X | | | | |
| Houndstongue | | X | | | | |
| Intermediate Wheatgrass [a] | X | | | | | |
| Kentucky Bluegrass [a] | X | X | | | | |
| Leafy Spurge | | X | X | X | X | X |
| Musk Thistle | | | | | X | |

TABLE 3.4-1

**Confirmed Noxious Weed Presence by County within the Project Survey Corridor**

| Species | Golden Valley | Slope | Hettinger | Grant | Morton | Oliver |
|---|---|---|---|---|---|---|
| Saltcedar | | | | | | |
| Smooth Brome [a] | X | | | | | |
| Spotted Knapweed | | | | | | |
| Tall Buttercup | | | | | | |
| Tansy Ragwort | | | | | | |

[a] Non-native or invasive plant species recognized by the USDA - FS but not considered a statewide noxious weed in North Dakota

Source: WEST, 2024

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The construction contractor (Contractor) will be responsible for site preparation, installation of support structures, general Project construction, testing and commissioning, health and safety, and environmental compliance, to include hazardous materials management. However, North Plains is responsible for construction of all associated facilities.

For the duration of the Project construction, North Plains will implement and maintain the measures outlined in this Plan, the CMRP, and in all applicable Project permits.

## 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ Environmental Inspectors during the construction phase. Further information on Environmental Inspectors and their responsibilities is provided in the CMRP.

## 4.2 COUNTY WEED BOARD

North Dakota County Weed Boards encourage noxious weed control by landowners and land occupants within the county and investigate signed complaints received by the County Weed Officer regarding noxious weeds.

The jurisdiction of a County Weed Board extends to all land within the county but does not include any land within the corporate limits of a city if that city has established its own noxious weed control program under the conditions of NDCC Chapter 4.1-47; no city programs are crossed by the Project. North Plains will collaborate with county weed boards, as needed, in the identification, prevention, and treatment of noxious weeds. County Weed Boards can offer assistance as it relates to identification, prevention, and treatment of noxious weeds.

### 4.2.1 County Weed Officers

County Weed Officer responsibilities include, but are not limited to:

- cooperating with the board and the operation and enforcement of NDCC Chapter 4.1-47 within the county;
- maintaining awareness of the location of noxious weeds within the county;

- meeting the pesticide certification requirements set forth in NDCC Chapter 4.1-33;
- encouraging noxious weed control by all landowners and land occupants within the county; and
- investigating all signed complaints received by the officer regarding noxious weeds.

Table 4.2.1-1 provides the primary contact information of the Morton, Golden Valley, Grant, Hettinger, Oliver, and Slope County Weed Boards (County Weed Boards), according to the 2023 County and City Weed Board Directory.

TABLE 4.2.1-1

**County Weed Board Contact Information**

| County / Contact Title | Name | Phone | Email Address |
|---|---|---|---|
| **GOLDEN VALLEY** | | | |
| Chair | Gerald Streitz | (701) 690-7923 | melland4@hotmail.com |
| Secretary/Treasurer | Ashley Ueckert | (701) 340-4685 | ashley.uekert@ndsu.edu |
| **SLOPE** | | | |
| Weed Officer/Secretary | Joan Lorge | (701) 523-6675 | jolorge@nd.gov |
| Chair | Dale Klug | (701) 523-5562 | |
| **HETTINGER** | | | |
| Weed Officer | Tim Milliren | (701) 852-2952 | rooster@ndsupernet.com |
| Chair | Devan Laufer | (701) 928-0100 | dlaufer@nd.gov |
| **GRANT** | | | |
| Weed Officer/Secretary | Merlin Leithold | (701) 220-7908 | leithold@westriv.com |
| Chair | Leonard Gerhardt | (701) 597-3591 | |
| **MORTON** | | | |
| Weed Officer | Cody Schnabel | (701) 391-8006 | cody.schnabel@mortonnd.org |
| Chair | Kevin Schmidt | (701) 220-9891 | koschmidt@msn.com |
| **OLIVER** | | | |
| Weed Officer | Rick Schmidt | (701) 207-0010 | rick.schmidt@ndsu.edu |
| Chair | Linda Nelson | (701) 794-8721 | linelson@nd.gov |

Source: NDDA, 2025. County and City Weed Boards. Available online at: https://www.ndda.nd.gov/sites/www/files/documents/files/WeedBoardDirectory_5_2025.pdf. Accessed August 2025.

## 5.0 TRAINING

North Plains will provide noxious weed identification, management, and control training as part of Contractor orientation. As part of this training, North Plains will review and ensure Project personnel understand the contents of this Plan. As needed, North Plains will make available a copy of *A Guide to North Dakota Noxious and Troublesome Weeds* (North Dakota State University, 2020), which includes photos of all North Dakota state and county listed noxious weeds.

# 6.0 NOXIOUS WEED MANAGEMENT AND CONTROL

## 6.1 PREVENTIVE MEASURES

### 6.1.1 Noxious and Regulated Weeds

Noxious weeds can be spread by natural processes, such as wildlife and wind, as well as through human means involving vehicles and construction equipment, construction activities, farm equipment, and livestock. The most effective management approach to control the spread of noxious weeds is implementation of preventative measures.

North Plains will implement noxious weed preventative measures that are consistent with state and county regulations, and will work with County Weed Boards, as necessary.

- Prior to moving equipment to the Project area, North Plains will thoroughly clean construction equipment, including construction mats, to limit the potential for the spread of noxious weeds.
- North Plains will clean the equipment at designated wash stations in upland areas.
- Prior to construction, North Plains will complete noxious weed surveys within the Project workspace to map known populations of noxious and regulated weeds. North Plains will mark areas of the Project workspace that contain documented occurrences of noxious and regulated weeds (i.e., infested areas). Such markings will clearly indicate the limits of the infestation(s) within the construction area.
- A third-party contractor approved by the County Weed Officer, or a County Weed Officer familiar with the identification of listed state and county noxious weeds will perform surveying and mapping using geographical information systems/geographical positioning systems.
- During construction, North Plains will clean the tracks, tires, and blades of equipment by hand or compressed air to remove excess soil prior to movement of equipment out of noxious weed infested areas or use cleaning stations to remove vegetative materials.
- North Plains will use mulch and straw or hay bales that are certified free of noxious weeds for temporary erosion and sediment control in disturbed areas.
- North Plains will implement pre-construction treatments, such as mowing, prior to seed development or a state-certified contractor(s) will apply herbicide to areas of noxious weed infestation prior to other clearing, site grading, excavation, or other soil disturbing work at locations identified during the noxious weed surveys.
- Pre-construction control treatments will avoid the use of herbicides within 100 feet of a waterbody or wetland.
- While not designated a noxious weed in North Dakota, ventenata grass (*Ventenata dubia*) is present in western Montana counties crossed by the route. Slope County has requested ventenata grass be added to the list of weeds to be controlled by

North Plains. North Plains will monitor for, and control, ventenata grass and report according to the procedures listed in Section 6.2.

## 6.2 TREATMENT AND CONTROL METHODS

North Plains will conduct noxious weed treatment methods in accordance with existing regulations and landowner or agency agreements. North Plains will adhere to Appendix F of the FEIS (2007), USDA – Forest Service Guide To Noxious Weed Prevention Practices, and any other USDA - FS recommendations and requirements when conducting weed control and reclamation activities on NFS lands. Pre-treatment of noxious weed infestations will be conducted prior to vegetation clearing or ground-disturbing construction activities if pre-treatment will aid in controlling the spread of weeds during construction. North Plains and inspections staff will choose the best available treatment and control methods based on site-specific information, including the season, location, and the noxious or regulated weed species present. Control methods may include herbicide application or mechanical measures, such as mowing or manual removal.

During construction, North Plains will periodically monitor the construction areas to allow for early detection of infestations of noxious weeds. If noxious or regulated weeds are observed within construction areas, North Plains or a state-certified herbicide applicator will implement appropriate control measures in an attempt to control the identified infestations and to reduce the spread or proliferation of weeds within the construction area.

During inactive periods of construction, defined as periods of 120 days or longer, North Plains will treat any previously identified noxious weeds of concern sites, as well as any new areas within the construction corridor, as determined necessary by North Plains.

After construction activities are complete, North Plains will reclaim the Project workspace in accordance with the CMRP and using seed mixes approved by the landowner and land-managing agencies. North Plains will coordinate with the USDA - FS regarding preferred seed mixes to be used on the portions of the Project that cross these federally managed lands.

After Project construction has been completed in areas disturbed by construction and areas over which North Plains will retain surface use control, such as converter stations, North Plains will provide weed control to limit the potential spread of noxious weeds onto adjacent lands. Any herbicide spraying performed by North Plains will be done by a state-licensed or state-certified applicator.

### 6.2.1 Control Methods

North Plains will determine appropriate weed management techniques based on the current conditions at the location of infestation. Weed management techniques may include hand-pulling, mechanical removal, or the use of herbicides. These methods are discussed below.

Before using a noxious weed control method not outlined in this Plan, North Plains will consult with the appropriate County Weed Board(s).

#### 6.2.1.1 Hand-pulling or Pulling Tools

Hand-pulling weeds has a small ecological impact, causes minimal damage to neighboring vegetation, and has low to no cost. It does, however, require significant labor and thus can only

be used in areas of small infestation. Hand-pulling may be used when individual or small numbers of weeds are observed cropping up in the right-of-way.

Handheld tools are available to remove weeds in the same manner as hand-pulling. These tools provide additional leverage and are able to remove weeds with deeper and/or larger roots. As with hand-pulling, this method, if used, will be limited to areas of small infestations.

#### 6.2.1.2 Mechanical

Mowing or brushing can quickly remove large swaths of weeds, but care will be taken that cuttings are removed promptly to prevent regrowth or from being carried offsite via wind or water to germinate in uninfested areas. Additionally, if mowing or brushing is used, North Plains will identify the weed and be aware of that species timing requirements to ensure that they are cut at the appropriate point in development (e.g., prior to flowering) to prevent regrowth or spread.

#### 6.2.1.3 Chemical (herbicides)

North Plains will base herbicide selection on information gathered from local county weed boards and/or the NDDA. Prior to herbicide application, the state-certified applicator will obtain any required permits or approvals from the local weed district and landowner. North Plains will adhere to Appendix F of the FEIS (2007), USDA – Forest Service Guide to Noxious Weed Prevention Practices, and any other USDA - FS recommendations and requirements when conducting weed control and reclamation activities on NFS lands. Herbicide type(s) will be determined based on the weed species required to be controlled and existing land use of the area in which it will be applied. Whenever possible, the state-certified applicator will select effective, species-appropriate herbicides that are unlikely to drift, leach to groundwater or wash into streams, are nontoxic to people and other organisms, and easy to apply. The state-certified applicator will make every effort to minimize negative environmental impacts when conducting herbicide applications.

A state-certified applicator will conduct herbicide applications in accordance with this Plan and NDCC Chapter 4.1-47. The state-certified applicator will strictly adhere to all label instructions and implement all manufacture guidelines for the type of herbicide and application used and based on conditions in the field at the time. For example, manufacturer's guidelines might recommend that herbicides only be applied under appropriate weather conditions, that application sprayers be mounted low to the ground, and that sprayer booms incorporate specialized nozzles designed to produce large droplet sizes with limited drift potential. Adherence to these specifications and manufacturer label directions will minimize the potential for drift or transport of herbicides to off right-of-way areas. All herbicides applied prior to or during construction will be non-residual or will have a significant residual effect no longer than 30 days.

The state-certified applicator may employ vehicle-mounted sprayers and/or hand application methods depending on location(s) of infestation(s) and conditions in the field. The state-certified applicator will implement best management practices when applying herbicides in the construction area to reduce potential impacts to avian and wildlife species. The state-certified applicator will complete calibration checks of equipment at the beginning of spraying and periodically thereafter to ensure proper application rates are achieved. Industry standards and/or manufacturer's guidelines will determine the required or appropriate application equipment calibration checks. The state-certified applicator will maintain application records and provide copies, as requested,

The state-certified applicator will manage and use herbicides according to the provisions listed below.

- Application procedures will be conducted by a licensed commercial applicator to ensure that proper mixing, application, cleanup, personal protection, and safety procedures are followed.

- The state-certified applicator will bring herbicides to the Project site premixed or mix in a closed transfer system (CTS), in returnable/refillable containers, and transfer contents by CTS to application tanks to limit worker and environmental exposure and eliminate the need for disposal of herbicide containers in area landfills.

- The state-certified applicator will transport herbicides in a manner that will prevent tipping or spilling, and the inspections staff will inspect all herbicide equipment and containers daily for leaks.

- The state-certified applicator will not use, store, or mix herbicides in or within 100 feet of a wetland or waterbody or as specified in permits for federal or state lands, whichever is more stringent.

- The state-certified applicator will not apply herbicides within 100 feet of known Regional Forester's Sensitive Species plant occurrences within U.S. Forest Service lands without prior regulatory approval.

- Herbicide applications on NFS lands will be approved by the USDA - FS prior to use and applied in accordance with all applicable conditions of the Noxious Weed FEIS (2007).

## 7.0 POST CONSTRUCTION NOXIOUS WEED MANAGEMENT AND CONTROL

### 7.1 SITE RESTORATION AND REVEGETATION

After construction activities are complete, North Plains will reclaim the Project workspace in accordance with the CMRP and using seed mixes approved by the landowner and land-managing agencies. North Plains will coordinate with the USDA - FS regarding preferred seed mixes to be used on the portions of the Project that cross these federally managed lands. Site restoration will involve grading disturbed work areas to approximate preconstruction contours and natural drainage patterns as closely as possible. North Plains will maintain temporary erosion controls until replaced by permanent erosion control structures or until restoration is complete.

### 7.2 MONITORING AND OPERATION

Following construction, North Plains' on-site operations staff will monitor all mapped and newly identified sites of infestation within areas disturbed by construction and all areas over which North Plains retains control of the surface use. North Plains will perform monitoring annually for a minimum of 5 years or per mutual agreement between North Plains and the appropriate County Weed Board. In addition, North Plains will conduct reseeding, as needed, to re-establish a desirable vegetative cover to stabilize the soils and slow the potential for re-invasion of noxious weeds.

In areas with continued presence of noxious or regulated weeds, the weed treatment and control measure(s) chosen will be the best available for the season, location, and species, as described in Section 6.2. Where necessary, a state-certified applicator will complete herbicide applications. The County Weed Officer(s) may inspect all sites of concern, as they deem necessary, and will determine if the infestation sites have been eradicated.

## 8.0 PLAN REVISIONS

Table 8.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 1 | Initial Plan draft. | April 2023 |
| Rev 2 | Global revisions based on agency comments. | May 2024 |
| Rev 3 | Global revisions based on Montana Noxious Weed review. | August 2024 |
| Rev 4 | Updated language for consistency across all project plans. | August 2025 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

## 9.0 REFERENCES

North Dakota Century Code. 2024. Chapter 4.1-47 – Noxious Weed Control. Available online at: https://ndlegis.gov/general-information/north-dakota-century-code/index.html. Accessed April 2024.

North Dakota Department of Agriculture (NDDA). 2023a. County and City Weed Board Directory. Available online at https://www.ndda.nd.gov/sites/www/files/documents/files/WeedBoard. Accessed April 2024.

NDDA. 2023b. State Noxious Weeds List. Available online at https://www.ndda.nd.gov/divisions/plant-industries/noxious-weeds. Accessed April 2024.

NDDA. 2025. City and County Weed Boards. Available online at https://www.ndda.nd.gov/sites/www/files/documents/files/WeedBoardDirectory_5_2025.pdf . Accessed August 2025.

North Dakota Department of Trust Lands. 2019. Available online at https://www.land.nd.gov/weedandpest. Accessed July 2024.

North Dakota State University. 2020. A Guide to North Dakota Noxious and Troublesome Weeds (W1691). Available online at https://www.ndsu.edu/agriculture/sites. Accessed April 2024.

U.S. Department of Agriculture (USDA) – Forest Service (FS). 2001. Final Environmental Impact Statement and Land and Resource Management Plan. Available online at

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1082488.pdf. Accessed July 2024.

USDA-FS. 2007. Final Environmental Impact Statement Noxious Weed Management Project for the Dakota Prairie Grasslands. Available online at https://www.fs.usda.gov/project/?project=4060. Accessed July 2024.

USDA-FS. 2011. Field Service Manual 2900 - Invasive Species Management, Chapter - Zero Code. Available online at: https://www.fs.usda.gov/about-agency/regulations-policies/manual/2900-zero-code. Accessed August 2024.

USDA-FS. 2013. National Strategic Framework for Invasive Species Management. Available online at https://www.fs.usda.gov/foresthealth/publications/Framework_for_Invasive_Species_FS-1017.pdf. Accessed July 2024.

U.S. Department of the Interior. 2021. U.S. Department of the Interior Invasive Species Strategic Plan, Fiscal Years 2021-2025. Washington, D.C., 54p.

WEST. 2024. 2022-2023 General Habitat Survey Report, Montana and North Dakota. Prepared for North Plains Connector LLC, Houston, Texas. Prepared by WEST, Golden Valley, Minnesota. Submission pending.

# NORTH PLAINS CONNECTOR PROJECT

# ATTACHMENT F

# Draft Paleontological Resources Management and Mitigation Plan

NORTH PLAINS CONNECTOR

A Grid United Project

# Draft Paleontological Resources Monitoring and Mitigation Plan



**Submitted by:**

**North Plains Connector LLC**

**A Grid United LLC Company**

GRID UNITED

**August 2025**

## TABLE OF CONTENTS



## LIST OF TABLES



## LIST OF FIGURES



## LIST OF APPENDICES

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ARS | Agricultural Research Service |
| BLM | Bureau of Land Management |
| CFR | Code of Federal Regulations |
| CMRP | Construction Mitigation and Reclamation Plan |
| Contractor | construction contractor |
| EI | Environmental Inspector |
| Grid United | Grid United LLC |
| KLJ | KLJ Engineering |
| North Plains | North Plains Connector LLC |
| PFYC | Potential Fossil Yield Classification |
| PI | Principal Investigator |
| Plan | Draft Paleontological Resources Monitoring and Mitigation Plan |
| PLSS | Public Land Survey System |
| Project | North Plains Connector Project |
| SVP | Society of Vertebrate Paleontology |
| USDA | U.S. Department of Agriculture |
| USFA | U.S. Forest Service |

## 1.0 INTRODUCTION

North Plains Connector LLC (North Plains), a Delaware limited liability company formed pursuant to Section 18-201 of the Delaware Limited Liability Company Act, has prepared this Draft Paleontological Resources Monitoring and Mitigation Plan (Plan) for the North Plains Connector Project (Project), a proposed interregional electric connector line. North Plains is a wholly owned, indirect single-purpose subsidiary of Grid United LLC (Grid United), a Houston, Texas-based company developing next generation energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States' power grid more modern, efficient, reliable, and secure.

The proposed transmission line and access roads cross lands administered by the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS), Bureau of Land Management (BLM), U.S. Forest Service (USFS), State of Montana, State of North Dakota, and privately-owned lands, as shown on the maps in Appendix A.

## 2.0 PLAN PURPOSE

KLJ Engineering (KLJ) prepared this Plan based on the results of geologic maps reviews, literature searches, previous locality searches, and the results of paleontological field surveys completed in 2023 and 2024 for the Project. This Plan will be implemented to fulfill the federal and state requirements for protecting paleontological resources and mitigating potential effects of Project construction.

Construction ground disturbing activities can potentially impact surficial and subsurface paleontological resources. Prior to these activities, paleontological resource surveys are performed within defined Project areas to document these resources and recommend clearance, avoidance, or mitigation measures for scientifically significant specimens. After review, these recommendations can include required spot-checking or full-time monitoring of subsurface (bedrock) disturbance to mitigate the loss of significant resources. Multiple federal agencies adhere to the guidelines set forth by the BLM to define the potential for paleontological resources in geologic formations. From these guidelines, a Potential Fossil Yield Classification (PFYC) of high (4) potential may require a pedestrian survey and recommendation for monitoring based on paleontological resources identified during the survey. A PFYC classification of very high (5) requires both pedestrian survey and subsequent full-time monitoring for all subsurface ground disturbance activities.

The following sections of the Plan present the paleontological resource requirements and recommendations for the Project. This plan details the procedures pertinent to mitigate impacts to paleontological resources during Project construction. North Plains has also developed a Construction Mitigation and Reclamation Plan (CMRP), which describes the construction procedures and mitigation measures North Plains will implement to reduce potential Project-related impacts. This Plan references the CMRP where additional guidance is provided therein.

## 3.0 REGULATORY COMPLIANCE

The Project is subject to federal environmental laws governing paleontological resources as it crosses BLM, USDA, and USFS-managed lands, requiring federal permits. These federal laws and regulations include:

- Antiquities Act of 1906, (16 U.S. Code 431-433, chapter 3060, §2, 34 Stat. 225 or 16 U.S.C. 431, et seq. 54 U.S.C. §§320301-320303, P.L. 113-287.

- The National Environmental Policy Act of 1969, as amended (P. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by P. L. 94-52, July 3, 1975, P. L. 94-83, August 9, 1975, and P. L. 97-258 § 4(b), Sept. 13, 1982).

- Federal Land Policy and Management Act of 1976, (43 U.S. Code 1712[c], 1732[b]); sec. 2, Federal Land Management and Policy Act of 1962 [30 U.S.C. 611]; Subpart 3631.0 et seq.), Federal Register Vol. 47, No. 159, 1982.

- Paleontological Resources Preservation Act, Title VI, Subtitle D in the Omnibus Public Land Management Act of 2009, P. L. 111-011.

Along with federal lands, the Project is required to comply with state laws as the Project is partially sited over state lands in North Dakota and Montana. State laws include:

- Paleontological Resource Protection and Geological Survey Paleontological Resource Protection, North Dakota State Century and Administrative Codes NDCC § 54-17.3; NDAC § 43-04 (State of North Dakota, 1990, 2016).

- Paleontological Resource Protection, Montana Code Annotated § 22-3

- Montana Major Facility Siting Act of the Montana Department of Environmental Quality, Montana Code Annotated 75-20-102. Chapter 20 of Title 75.

The BLM has set forth guidelines for the management of paleontological resources (BLM, 2008; BLM, 2015; BLM, 2016; BLM, 2022). This monitoring plan complies with these guidelines as well as professional standards set forth by the Society of Vertebrate Paleontology (SVP) (2010) and the paper “Best Practices in Mitigation Paleontology” (Murphey et al., 2019).

## 3.1 PERMITS AND REPOSITORIES

All paleontological work on BLM lands will be approved and coordinated by the BLM Miles City Field Office. The paleontological Principal Investigator (PI) must have a current BLM Paleontological Resources Use Permit. All paleontological work on USDA lands will be approved and coordinated by the USDA ARS Fort Keough Livestock and Range Research Laboratory. All fossils collected from BLM and USDA lands must be reposited in a federally approved repository.

All paleontological work on Montana state lands will be approved and coordinated by the Department of Natural Resources and Conservation Archaeologist. The current designated repository for Montana state lands is the Museum of the Rockies in Bozeman, Montana.

All paleontological work on USFS lands will be approved and coordinated by the USFS Dakota Prairie Grasslands  Dickinson Field Office. The PI must have a current USDA Forest Service Authorization to Conduct Paleontological Resources Research or Collection.

All paleontological work on North Dakota state lands will be approved and coordinated by the North Dakota Geologic Survey Paleontologist. All monitors must have a current North Dakota Paleontological Resource Collecting Permit. All fossils collected from USFS and North Dakota

state lands must be reposited in a federally approved repository. The current designated repository for North Dakota state lands is the North Dakota Heritage Center and State Museum in Bismarck, North Dakota.

## 3.2 SIGNIFICANCE AND SENSITIVITY OF PALEONTOLOGICAL RESOURCES

From Murphey and Daitch (2007): "Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or un-mineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. Paleontological resources include not only fossils themselves, but also the associated rocks or organic matter and the physical characteristics of the fossils' associated sedimentary matrix".

"The fossil record is the only evidence that life on earth has existed for more than 3.6 billion years. Fossils are considered non-renewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced".

Murphey and Daitch (2007) have determined that fossils are important scientific and educational resources and can be used to:

- study the phylogenetic relationships amongst extinct organisms, as well as their relationships to modern groups;
- elucidate the taphonomic, behavioral, temporal, and diagenetic pathways responsible for fossil preservation, including the biases inherent in the fossil record;
- econstruct ancient environments, climate change, and palaeoecological relationships;
- provide a measure of relative geologic dating which forms the basis for biochronology and biostratigraphy, and which is an independent and corroborating line of evidence for isotopic dating;
- study the geographic distribution of organisms and tectonic movements of land masses and ocean basins through time;
- study patterns and processes of evolution, extinction, and speciation; and
- identify past and potential future human-caused effects to global environments and climates

The BLM defines a significant paleontological resource as, "any paleontological resource that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be scientifically important because it is a rare or previously unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other

characteristic, provides new information about the history of life on earth, or has identified educational or recreational value" (BLM, 2008).

As defined by the SVP, "significant paleontological resources are fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)" (SVP, 2010).

## 3.3 POTENTIAL FOSSIL YIELD CLASSIFICATION

Along with significance, the sensitivity of paleontological resources to adverse impacts has been classified. Under the Paleontological Resources Preservation Act, the highest federal standard and laws dictate the utilization of the unified PFYC system to rank the paleontological resources potential of geologic units on federal lands . Each geologic unit is given a class ranking (low [1] to very high [5]) dependent on the probability of significant fossil resources found therein (BLM, 2022). This classification system is summarized in Table 3.3-1. These rankings provide an initial cursory potential for significant fossil resources in geologic formations based on literature reviews, known fossil localities, and aerial surveillance of outcrop exposures. PFYC evaluations are included in Section 4.0 for each respective formation and member within the Project. These values also provide guidance to the need for monitoring ground disturbing activities that may impact surficial and subsurface bedrock.

Table 3.3-1

**Summary of BLM Potential Fossil Yield Classification**

| Class | Potential | Description | Characteristics | Comments |
|---|---|---|---|---|
| 1 | Very Low | Geologic units unlikely to contain recognizable paleontological resources. | Geologic units that are Igneous or metamorphic (excluding air-fall and reworked volcanic ash units, or Precambrian in age. | Management concern for paleontological resources is negligible or not applicable. Assessment or mitigation is unnecessary or very rare except in isolated circumstances. |
| 2 | Low | Geologic units that are not likely to contain paleontological resources. | Field surveys have verified no significant paleontological resources present or are very rare, generally younger than 10,000 years before present, recent eolian deposits, and diagenetic alteration of sediments. | Management concern for paleontological resources is low and further assessment is usually unnecessary except in isolated instances. Mitigation where paleontological resources are known to exist. Determined on a case-by-case basis. |
| 3 | Moderate | Geologic units with fossil content being variable in significance, abundance, and predictability. | Paleontological resources may occur intermittently with low abundance, are widely scattered, of a marine origin with sporadic known occurrences, or surface impact is known to be low-to-moderate. | Management concern for paleontological resources is moderate. Ground disturbing activities may require a field survey by a qualified paleontologist. Considerations range from record searches to monitoring dependent on the proposed action. |
| 4 | High | Geologic units with a high occurrence of paleontological resources. | Significant paleontological resources previously documented but varying in occurrence and predictability, susceptible to adverse impacts from surface disturbing activities, rare fossils, and looting activities. | Management concern for paleontological resources is moderate to high. A field survey by a qualified paleontologist is often needed to assess paleontological resources and potential action impacts. On-site monitoring may be necessary during ground disturbing activities. Avoidance or resource preservation should be considered. |

Table 3.3-1

**Summary of BLM Potential Fossil Yield Classification**

| Class | Potential | Description | Characteristics | Comments |
|---|---|---|---|---|
| 5 | Very High | Highly fossiliferous geologic units that regularly and predictably produce significant paleontological resources. | Significant paleontological resources previously documented and occur consistently, highly susceptible to adverse impacts from surface disturbing activities, and frequency of looting. | Management concern for paleontological resources is high to very high. A field survey by a qualified paleontologist is almost always needed prior to ground disturbing activities. On-site monitoring may be necessary during land use and ground disturbing activities. Avoidance or resource preservation should be considered. |
| U | Unknown | Geologic units cannot receive a PFYC assignment. | Often geologic units that have limited information due to lack of scientific literature, field study, or BLM has not yet verified or assessed the unit. | Management concern for paleontological resources is medium to high and field surveys are normally necessary to determine the resource potential. |
| W | Water | Any surface area mapped as water | Bodies of water do not normally contain paleontological resources. Shorelines should be carefully considered for uncovered or transported paleontological resources. | Reservoirs are a special concern because important paleontological resources are often exposed during low water intervals. In areas of karst sinkholes and cenotes may trap animals and contain paleontological resources. Dredging river systems may result in the disturbance of sediments that contain paleontological resources |
| I | Ice | Any surface area mapped as ice or snow | Receding glaciers, including exposed lateral and terminal moraines should be considered for their potential to reveal recently exposed paleontological resources | Other considerations include melting snow fields that may contain paleontological resources with possible soft-tissue preservation |

Source: BLM, 2022

## 4.0 ROLES AND RESPONSIBILITIES

North Plains will select a third-party construction contractor to construct the Project. The construction contractor (Contractor) will be responsible for site preparation, installation of support structures, general Project construction, testing and commissioning, health and safety, and environmental compliance, including the contents of this Plan. However, North Plains is responsible for construction of all associated facilities.

For the duration of the Project construction, North Plains will implement and maintain the measures outlined in this Plan, the CMRP, and in all applicable Project permits.

### 4.1 ENVIRONMENTAL INSPECTION

North Plains will employ environmental inspectors (EIs) during the construction phase. Further information on EIs and their responsibilities is provided in the CMRP.

## 5.0 TRAINING

Before commencing construction, North Plains will organize environmental training sessions for relevant Project personnel. These training programs will cover relevant construction, restoration, and mitigation plans, including this Plan, along with any applicable permit conditions.

Furthermore, North Plains will conduct large-group training sessions before each work crew begins construction, followed by periodic follow-up training for newly assigned personnel. Training will be documented, and training records will be saved with Project files.

## 6.0 SUMMARY OF EXISTING DATA AND FIELD SURVEY RESULTS

Although the Project crosses federal, state, and mostly private lands in Montana and North Dakota, only federal and state lands underwent pedestrian field surveys. Along with the field surveys, a paleontological assessment for the entire Project including a previous localities search, geologic map review, and a review of the relevant scientific literature was completed by KLJ (Lukens and Shaw, 2024; Shaw et al., 2024). Utilizing this information, the geology and paleontology of the Project were determined. This section summarizes the geologic and paleontological context, previously documented fossil localities, and fossil localities discovered during the field surveys.

### 6.1 GEOLOGIC AND PALEONTOLOGICAL CONTEXT

The Project in Montana is directly underlain by the Paleocene Fort Union Formation (PFYC 4); the Cretaceous Hell Creek (PFYC 5), Fox Hills (PFYC 4), and Pierre (PFYC 4) Formations; and Quaternary deposits (PFYC 2, U) (Vuke et al., 2001a, b, c, d; Vuke and Colton, 2003; Vuke et al., 2003; BLM, 2022). In North Dakota, the Project is directly underlain by the Oligocene/Eocene White River Group (PFYC 4-5); the Eocene Golden Valley Formation (PFYC 4); the Paleocene Fort Union Group (PFYC 4); the Cretaceous Hell Creek Formation (PFYC 5); and Quaternary deposits (PFYC 2, U) (Clayton et. al, 1980; Carlson, 1982; Carlson, 1983; BLM, 2022) (see Figure 6.1.1-1 and Appendix B).

Most of the Project is directly underlain by the Fort Union Formation/Group. The Fort Union Formation/Group is separated into the following members/formations: Tullock, Lebo, Ludlow, Tongue River, Sentinel Butte, and Cannonball.

Paleontologically, all the geologic units underlying the Project have a high to very high fossil potential (except the Quaternary deposits) and preserve diverse vertebrate, invertebrate, and plant taxa in localized deposits (see Table 6.1.1). Additional information regarding the geologic units and their paleontological resources can be found in the field survey reports (Lukens and Shaw, 2024; Shaw et al., 2024).

Table 6.1-1

**Summary of Geologic Units in the Project with PFYC and Paleontological Resources**

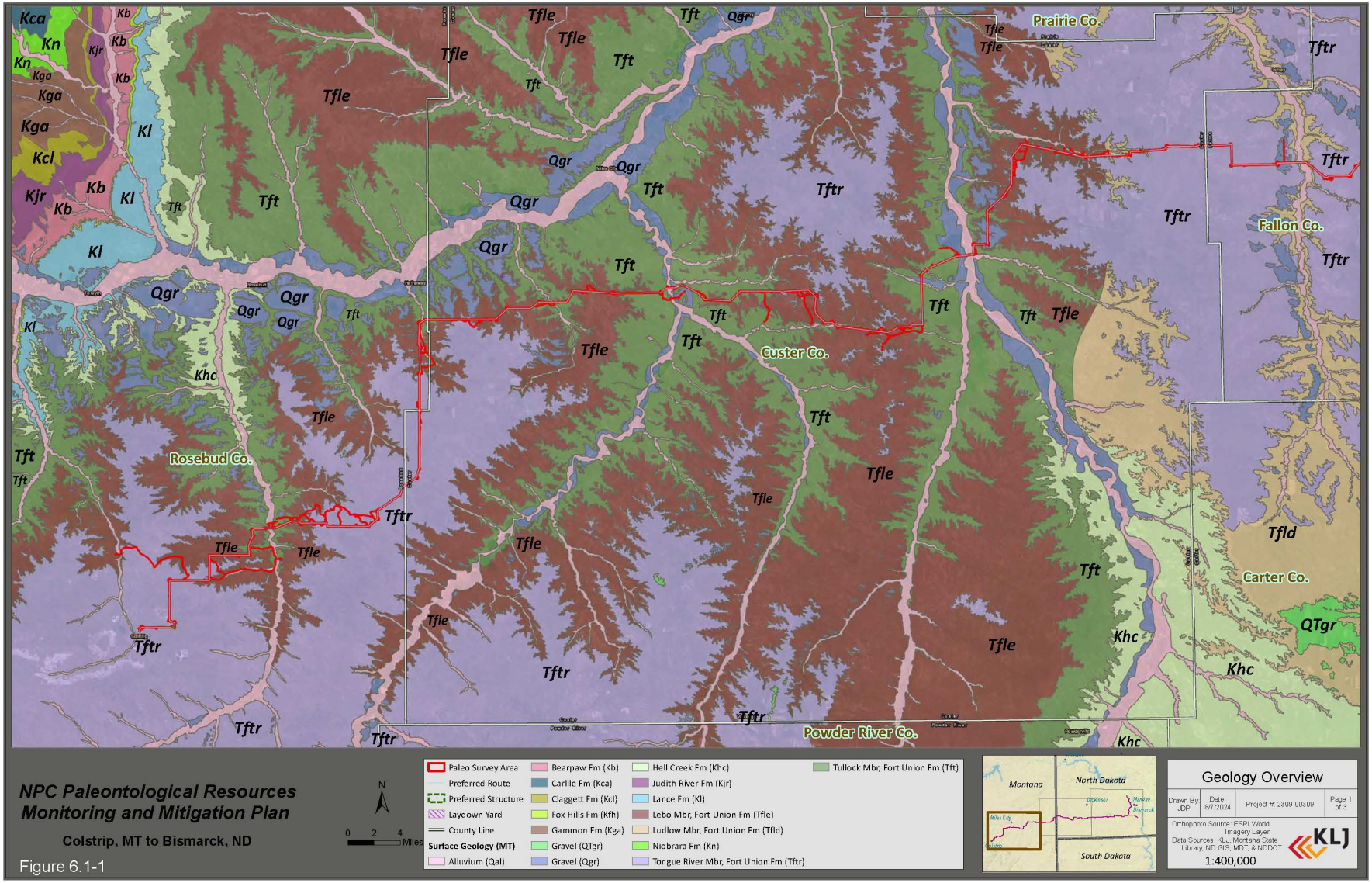
| Series | Geologic Unit | PFYC | Location | Typical Paleontological Resources |
|---|---|---|---|---|
| Quaternary | Quaternary Deposits (terrace gravels, alluvium, and colluvium | 2, U | ND, MT | None or Unknown |
| Eocene/ Oligocene | White River Group | 4-5 | ND | Vertebrate taxa include fish, amphibians, reptiles, birds, and a wide variety of mammals. Invertebrate taxa include gastropods and ostracods. |
| Eocene | Golden Valley Formation | 4 | ND | Vertebrate taxa are less common and include fish, amphibians, reptiles, birds, and mammals. Invertebrate taxa and plants are common and include gastropods, bivalves, leaves, and pollen. |

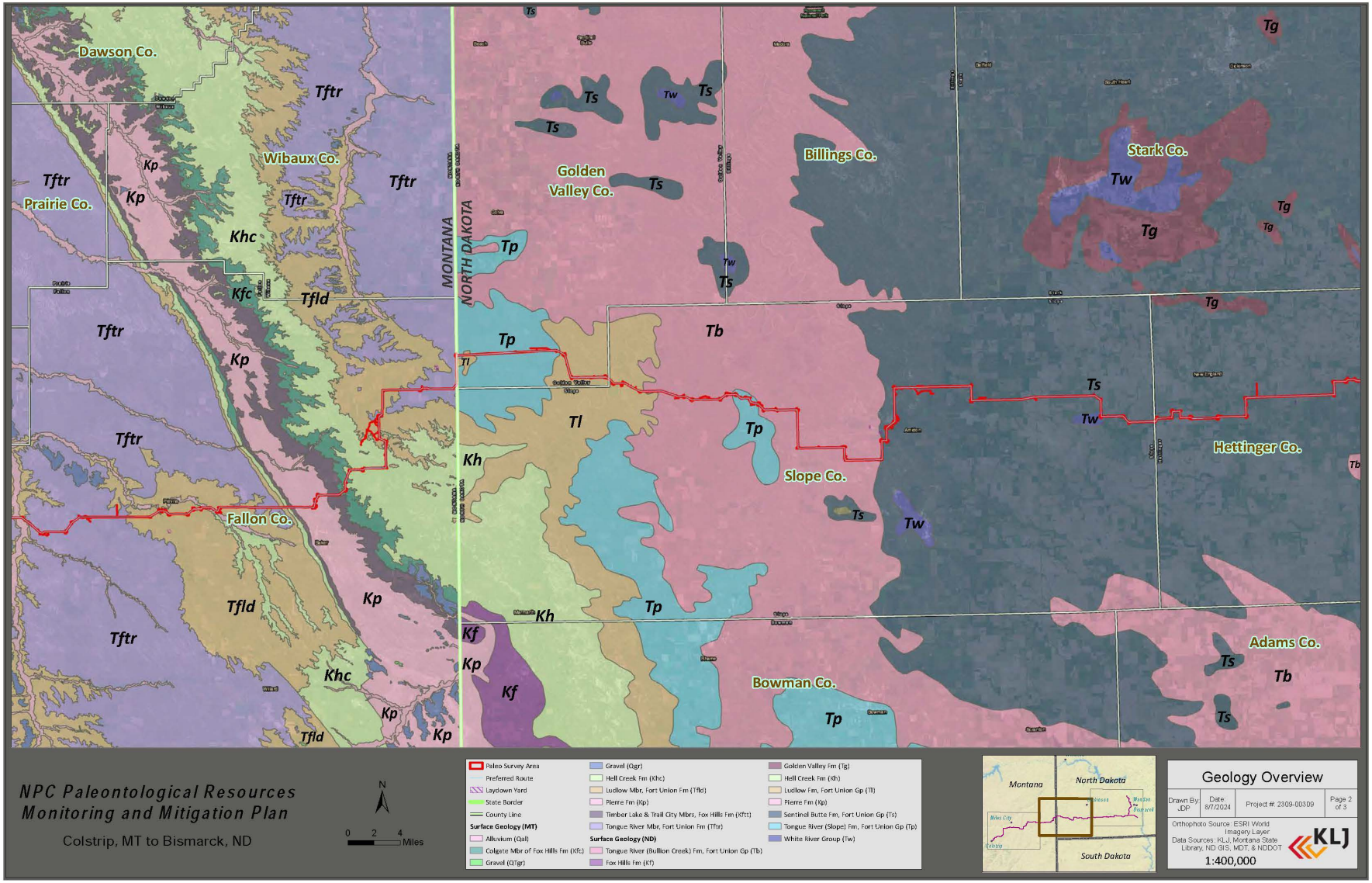
Table 6.1-1

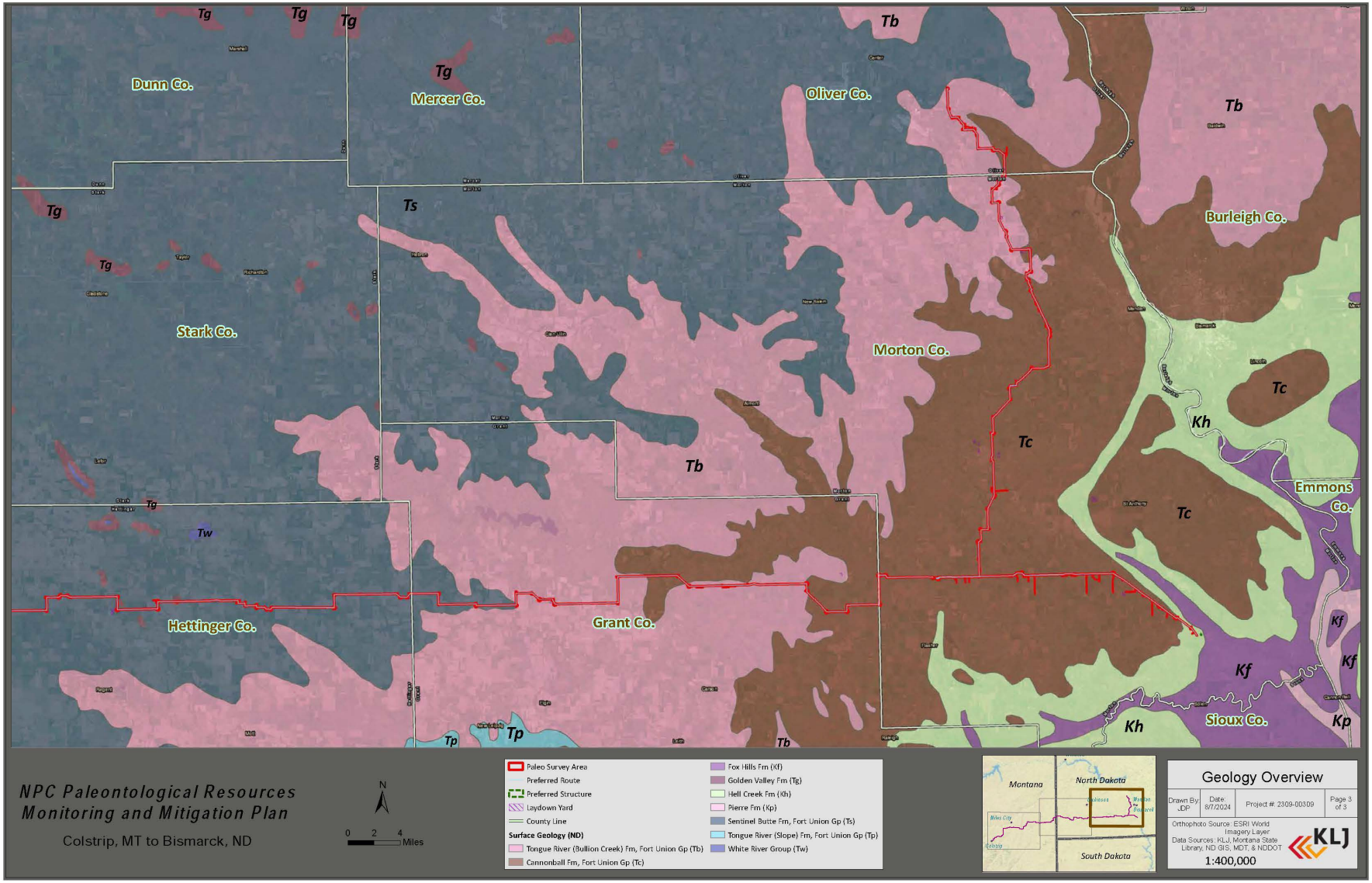
**Summary of Geologic Units in the Project with PFYC and Paleontological Resources**

| Series | Geologic Unit | PFYC | Location | Typical Paleontological Resources |
|---|---|---|---|---|
| Paleocene | Fort Union Formation/Group | | | |
| | Sentinel Butte | 4 | ND | Vertebrate taxa are rare and include fish, salamanders, reptiles, birds, and mammals. Invertebrate taxa are common and include bivalves and gastropods. Plants are common and include leaves, seeds, fruits, logs, and stumps. |
| | Tongue River | 4 | ND, MT | Vertebrate taxa recovered are rare and include fish, salamanders, reptiles, birds, and mammals. Invertebrate taxa and plants are very common and include bivalves and gastropods along with many leaves, seeds, fruits, and pollen. |
| | Lebo | 4 | MT | Vertebrate taxa recovered include amphibian, bird, reptile and a wide variety of mammals. Invertebrate taxa and plants are very common and include bivalves and gastropods along with many leaf impressions. |
| | Cannonball | 4 | ND | Vertebrate taxa are rare and include sharks, rays, bony fish, turtles, crocodilians, and champsosaurs. Invertebrates are common and include bivalves, gastropods, foraminfera, crabs, lobsters, corals, ostracodes, bryozoans, and echinoids. |
| | Ludlow | 4 | ND, MT | Vertebrate taxa are rare and include amphibian, bird, reptile, and mammals. Invertebrate taxa and plants are the most common and include bivalves, gastropods, leaves, seeds, fruits, flowers, cones, and pollen. |
| | Tullock | 4 | MT | Vertebrate taxa are rare and include amphibian, bird, reptile, and mammals. |
| Cretaceous | Hell Creek Formation | 5 | ND, MT | Vertebrate taxa recovered include sharks, rays, bony fishes, amphibians, turtles, crocodilians, pterosaurs, a diverse dinosaur assemblage, birds, and mammals. Invertebrate taxa include insects, bivalves, gastropods, and rare ammonites. Plants are known from leaves, seeds, flowers, cones, roots and fruits. |
| | Fox Hills Formation | 4 | MT | Vertebrate taxa recovered include sharks, amphibians, mosasaurs, other marine reptiles, and birds. Common invertebrate taxa include pelecypods, bryozoans, and rare crabs. |
| | Pierre Shale | 4 | MT | Vertebrate taxa recovered include bony fishes, sharks, turtles, crocodilians, mosasaurs, plesiosaurs, rare dinosaurs, pterosaurs, and birds. Invertebrate fossils are very common and include bivalves, cephalopods, gastropods, echinoderms, arthropods, corals, bryozoans, and brachiopods. |

Source: BLM, 2015; BLM, 2022


Prairie Co.
Fallon Co.
Custer Co.
Rosebud Co.
Carter Co.
Powder River Co.
Kca
Kn
Kjr
Kga
Kcl
Kb
Kl
Khc
Qgr
Tft
Tfle
Tftr
Tfld
QTgr
NPC Paleontological Resources Monitoring and Mitigation Plan
Colstrip, MT to Bismarck, ND
N
0 2 4 Miles
Paleo Survey Area
Preferred Route
Preferred Structure
Laydown Yard
County Line
Surface Geology (MT)
Alluvium (Qal)
Bearpaw Fm (Kb)
Carlile Fm (Kca)
Claggett Fm (Kcl)
Fox Hills Fm (Kfh)
Gammon Fm (Kga)
Gravel (QTgr)
Gravel (Qgr)
Hell Creek Fm (Khc)
Judith River Fm (Kjr)
Lance Fm (Kl)
Lebo Mbr, Fort Union Fm (Tfle)
Ludlow Mbr, Fort Union Fm (Tfld)
Niobrara Fm (Kn)
Tongue River Mbr, Fort Union Fm (Tftr)
Tullock Mbr, Fort Union Fm (Tft)
Montana
North Dakota
South Dakota
Geology Overview
Drawn By: JDF
Date: 8/7/2024
Project #: 2309-00309
Page 1 of 3
Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT
1:400,000
KLJ
Figure 6.1-1


Dawson Co.
Prairie Co.
Wibaux Co.
Fallon Co.
Golden Valley Co.
Billings Co.
Stark Co.
Slope Co.
Hettinger Co.
Adams Co.
Bowman Co.
MONTANA
NORTH DAKOTA
Tftr
Kp
Khc
Kfc
Tfld
Tp
Tb
Tl
Kh
Kf
Ts
Tw
Tg
NPC Paleontological Resources Monitoring and Mitigation Plan
Colstrip, MT to Bismarck, ND
N
0 2 4 Miles
Paleo Survey Area
Preferred Route
Laydown Yard
State Border
County Line
Surface Geology (MT)
Alluvium (Qal)
Colgate Mbr of Fox Hills Fm (Kfc)
Gravel (QTgr)
Gravel (Qgr)
Hell Creek Fm (Khc)
Ludlow Mbr, Fort Union Fm (Tfld)
Pierre Fm (Kp)
Timber Lake & Trail City Mbrs, Fox Hills Fm (Kftt)
Tongue River Mbr, Fort Union Fm (Tftr)
Surface Geology (ND)
Tongue River (Bullion Creek) Fm, Fort Union Gp (Tb)
Fox Hills Fm (Kf)
Golden Valley Fm (Tg)
Hell Creek Fm (Kh)
Ludlow Fm, Fort Union Gp (Tl)
Pierre Fm (Kp)
Sentinel Butte Fm, Fort Union Gp (Ts)
Tongue River (Slope) Fm, Fort Union Gp (Tp)
White River Group (Tw)
Montana
North Dakota
South Dakota
Geology Overview
Drawn By: JDF
Date: 8/7/2024
Project #: 2309-00309
Page 2 of 3
Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT
1:400,000
KLJ


Tg
Tb
Dunn Co.
Mercer Co.
Oliver Co.
Burleigh Co.
Ts
Stark Co.
Morton Co.
Tc
Kh
Tw
Emmons Co.
Hettinger Co.
Grant Co.
Kf
Sioux Co.
Kp
Tp
NPC Paleontological Resources Monitoring and Mitigation Plan
Colstrip, MT to Bismarck, ND
N
0 2 4 Miles
Paleo Survey Area
Preferred Route
Preferred Structure
Laydown Yard
County Line
Surface Geology (ND)
Tongue River (Bullion Creek) Fm, Fort Union Gp (Tb)
Cannonball Fm, Fort Union Gp (Tc)
Fox Hills Fm (Kf)
Golden Valley Fm (Tg)
Hell Creek Fm (Kh)
Pierre Fm (Kp)
Sentinel Butte Fm, Fort Union Gp (Ts)
Tongue River (Slope) Fm, Fort Union Gp (Tp)
White River Group (Tw)
Montana
North Dakota
South Dakota
Geology Overview
Drawn By: JDF
Date: 8/7/2024
Project #: 2309-00309
Page 3 of 3
Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT
1:400,000
KLJ

## 6.2 PREVIOUSLY DOCUMENTED FOSSIL LOCALITIES

Previously documented locality searches were conducted for the Project during the field surveys. The locality searches encompassed all proposed areas of the Project right-of-way plus a one-mile buffer with a focus on where the Project crosses lands managed by the BLM, USFS, USDA ARS, in addition to Montana and North Dakota State lands. Public Land Survey System (PLSS) information for these parcels was submitted for analysis to respective agencies, repositories, and databases to find previously studied or published localities. Online databases, mindat.org (Hudson Institute of Mineralogy, 2024), University of California Museum of Paleontology (2024), and the Yale Peabody Museum (2024), were also searched for known localities. More than 50 localities were identified across the Project right-of-way and one-mile buffer in the Fort Union, Hell Creek, Fox Hills, and Pierre Shale Formations. The previous localities consisted of a variety of vertebrate, invertebrate, and plant taxa.

A complete listing is available in the field survey reports (Lukens and Shaw, 2024; Shaw et al., 2024).

## 6.3 FIELD SURVEY FOSSIL LOCALITIES

During the field surveys, vertebrate, invertebrate, and plant fossil localities were found. In 2023, a total of 82 fossil localities were documented with 17 localities representing vertebrates, one locality representing invertebrates, and 64 localities representing plants (Lukens and Shaw, 2024).

The vertebrate fossils range from solitary turtle shell fragments to partial turtle carapaces and plastrons, and crocodilian dermal ossicles, skeletal elements, and a tooth. Most of these fossils, exhibiting rounding from transportation prior to burial, were found as float and are weathered. The one invertebrate locality is found within a road cut that exposed a yellow-tan, medium to coarse-grained, cross-bedded sandstone channel deposit. Both Unionidae (freshwater clams) and Gastropoda (snail) shells are found within the channel on cross-bedding surfaces. The valves and shells are highly weathered with the shells delaminating. Trionychidae carapace fragments, a crocodilian tooth, and several unidentifiable bone fragments were also found in this deposit.

The plant localities ranged from well-preserved leaves that exhibit first and second order venation with well-defined margins to partial silicified logs that exhibit poor to excellent preservation and carbonized plant hash found within thinly laminated, light grey siltstones. Notably, two logs found on USDA ARS-administered Ft. Keogh exhibit excellent preservation tentatively identified as cf. Ginkgo. In the Project area, leaf and vegetative impressions were found on the surfaces of red-to-orange, iron concretionary material largely within sandstones and siltstones, and on parting surfaces of the thinly bedded carbonaceous shales occurring adjacent to and within the lignites. Several silicified stumps were discovered and documented during the survey. More detailed information is available in the field survey reports (Lukens and Shaw, 2024; Shaw et al., 2024).

In 2024, an additional 28 localities were documented with 10 localities representing vertebrates, seven localities representing invertebrates, 10 localities representing plants, and one locality representing a trace fossil (Shaw et al., 2024).

## 7.0 MONITORING PLAN

All paleontological work during construction will be overseen by a Paleontological Principal Investigator (PI or paleontologist). The PI will be contracted to implement and direct paleontological monitoring activities described by this Plan. A qualified PI is an individual with a graduate degree in paleontology or geology and is proficient and experienced in recognizing, identifying, documenting, and collecting fossils in the field (BLM, 2008; SVP, 2010). Construction monitoring will be performed by the PI and/or Paleontological Resource Monitors who also are qualified to operate under the PI's Paleontological Resource Use Permit. Full-time inspection, or monitoring, is defined as having a paleontologist on-site during any ground disturbing activities to monitor for potential paleontological resources and collect scientifically significant fossils during construction.

## 7.1 GENERAL GUIDELINES FOR MONITORING

The results of the Project's paleontological assessments and field surveys define standard paleontological resource recommendations that include clearance, avoidance, fossil recovery, sampling, and monitoring. Definitions of these recommendations are provided in detail in Table 7.1-1.

TABLE 7.1-1

**Standard Paleontological Mitigation Categories.**

| Category | Mitigation Recommendation |
|---|---|
| Clearance | Based on the desktop review and/or field survey or monitoring results, if adverse impacts on paleontological resources are anticipated to be non-existent or below the level of significance for a given surface-disturbing action in a given area, and no further consideration of paleontological resources is deemed necessary, immediate paleontological clearance is recommended. A clearance recommendation can be made for an entire project area or any portion thereof (including surface and/or subsurface), depending on paleontological potential. |
| Avoidance | If the cost of fossil recovery or other mitigation options is determined to be too high, or permanent damage to the resource caused by surface disturbance is considered to be unavoidable, it may be necessary to "avoid" or "reroute" the portion of the project that intersects the fossil locality in order to prevent adverse impacts on the resource. Avoidance should also be considered if a known fossil locality appears to contain critical scientific information that should be left undisturbed for subsequent scientific evaluation. Avoidance for later scientific research is the typical mitigation recommendation made for scientifically significant extensive paleontological discoveries. |
| Fossil Recovery | If isolated small, medium- or large-sized fossils are discovered within a project area during field surveys or construction monitoring, and they are determined to be scientifically significant, they should be recovered. Fossil recovery may involve simply collecting a fully exposed fossil from the ground surface, or may involve a systematic excavation, depending upon the size and complexity of the fossil discovery. Fossil excavations should be designed in such a way as to minimize construction delays while properly collecting the fossil and associated data according to professional paleontological standards. |
| Sampling | Scientifically significant microfossils (vertebrate, invertebrate, plant, or trace fossils) may be identified in rock matrix during surveys or monitoring, or, if they are known to occur elsewhere in the same geologic unit or type of deposit in the general area, a determination of their presence or absence may require the use of test sampling of rock matrix for screen-washing in a paleontological laboratory. In some cases, depending upon the rock unit involved, test sampling may be appropriate even if microfossils are not visible in the field. The fossils found, if any, will then be inspected and evaluated to determine their significance and whether additional mitigation recommendations are necessary. Mitigation may include collection of additional matrix for screen-washing. The decision to sample may not be made until monitoring is occurring, because it is usually triggered by conditions in the field. |
| Monitoring | If significant (well-preserved, uncommon, and/or identifiable) paleontological resources are known to be present in an area, or if there is a high likelihood that subsurface fossils are present in geologic formations or members thereof within a given project area based on prior field surveys, museum records, or scientific or technical literature, paleontological monitoring of construction excavations would be recommended. Monitoring involves systematic inspections of graded cut slopes, trench sidewalls, spoils piles, and other types of construction excavations for the presence of fossils, and the fossil recovery and documentation of these fossils before they are destroyed by further ground-disturbing actions. |

| TABLE 7.1-1<br><br>**Standard Paleontological Mitigation Categories.** | |
|---|---|
| Category | Mitigation Recommendation |
| | Standard monitoring is typically used in the most paleontologically sensitive geographic areas/geologic units (PFYC 4 and 5); while spot- check monitoring is typically used in geographic areas/geologic units of moderate or unknown paleontological sensitivity (PFYC 3 or PFYC U). The goal of monitoring is to identify scientifically significant subsurface fossils as soon as they are unearthed in order to minimize damage to them and remove them and associated contextual data from the area of ground disturbance, thereby resulting in subsurface paleontological clearance. Microfossil sampling, macrofossil recovery, and avoidance of fossils may all occur during any monitoring program. |

## 7.2 CONSTRUCTION TRAINING

Prior to earthmoving activities, all construction personnel will be briefed about the types of fossils that they could encounter and the steps to take if fossils are uncovered during construction within the Project area. The instruction will include a notification protocol for all personnel to follow if fossils are discovered and a paleontologist is not present. Instruction will stress the non-renewable nature of paleontological resources; the restrictions of fossil collection on federal, state, and private lands; the consequences of illegal collecting; and why fossils are significant to science and humanity. This training will be accomplished at the pre-construction kick-off meeting and conducted by the paleontologist.

## 7.3 MONITORING LOCATIONS

The Project is located primarily in areas of high and very high fossil potential (White River Group [PFYC 5], Golden Valley [PFYC 4], Fort Union [PFYC 4], Hell Creek [PFYC 5], Fox Hills [PFYC 4], and Pierre [PFYC 4] Formations) with numerous exposed bedrock outcrops. The paleontological resources within these geologic units tend to occur mainly in localized deposits. For this reason, it is difficult to determine where fossils will occur prior to construction except in locations where previous or new fossil localities are known. Pre-construction, pedestrian paleontological resource surveys document and define the significance of the fossil resources found within the survey area. These surveys, as mentioned in Section 5.1, can provide recommendations for surface activities. Multiple fossils were discovered and documented during field surveys. These localities indicate the possible encounter of subsurface fossils at those locations. However, geological formations identified with high and very high potential, with no surficial finds, can still contain significant fossils within the subsurface.

All areas with exposed and subsurface PFYC 4 or 5 geologic units (White River Group, Golden Valley, Fort Union, Hell Creek, Fox Hills, and Pierre Formations) located on federal- and state-managed lands will be monitored by the paleontologist during ground disturbing construction activities. Fossils on private lands are not subject to federal survey or monitoring recommendations; however, North Plains will encourage construction personnel to monitor and report fossils and will implement applicable fossil monitoring and discovery procedures at the request of individual landowners.

Only geologic units with PFYC 4 or 5 on federal- and state-managed lands are required to be monitored by a paleontologist during ground disturbing activities. Federal and state agencies in consultation with the paleontologist will determine the extent and intensity of monitoring needed across their managed lands.

It was previously determined by the USDA ARS that full-time monitoring will be required within the USDA ARS-managed tracts listed in Table 7.3-1 due to the high number of significant botanical and vertebrate localities identified during the 2023 field survey (Lukens and Shaw, 2024).

TABLE 7.3-1

**PLSS List of Tracts Managed by the USDA ARS Requiring Full-Time Monitoring**

| Section | Township | Range |
|---|---|---|
| 23 | 6N | 46E |
| 24 | 6N | 46E |
| 13 | 6N | 46E |
| 19 | 6N | 47E |
| 18 | 6N | 47E |
| 20 | 6N | 47E |
| 17 | 6N | 47E |

Areas with PFYC 2 or U geologic units (Quaternary deposits) will be spot-checked at the discretion of the paleontologist. Should fossils be encountered in PFYC 2 or U geologic units, the Unanticipated Discovery Plan (see Appendix C) will be implemented first. The paleontologist then will determine if further monitoring is necessary.

Following all Project safety requirements, monitoring will include visual inspections of foundation excavations and excavation sidewalls, graded surfaces, and spoil piles for evidence of fossils exposed during excavation. Inspecting/evaluating fossil discoveries should occur when conditions are safe. Prior to beginning monitoring work, the paleontologist, North Plains, and machinery operators should agree on procedures for brief work stoppages to allow for examination and collection of fossils. Along with the appropriate safety equipment, the paleontologist should also be equipped with flagging, survey stakes, and paleontology tools and supplies for fossil exploration and salvage.

Changes to monitoring efforts (increase, decrease, or cessation) will be based on observations made by the paleontologist and consultation and approval by North Plains, and relevant federal and state land managing agencies.

## 7.4 FOSSIL DISCOVERY AND SALVAGE

When fossils are discovered, the paleontologist will quickly explore and recover the fossil material and its scientific data to minimize construction delays. Paleontologists are expected and encouraged to signal and stop equipment operators to check suspected fossil discoveries. If a fossil is discovered by the paleontologist during monitoring, the Contractor will stop construction activities and immediately notify the Environmental Inspector (EI). The paleontologist will establish a protective buffer or flagging to demarcate the location and protect the fossils. An initial buffer of 100 feet surrounding the fossils should be allowed to adequately protect the fossils and paleontologists while construction activities resume outside the buffer. This buffer may be reduced following fossil evaluation and significance determination. The paleontologist and/or EI will notify North Plains in order to coordinate with the applicable land-managing agency to assist in evaluating and determining the significance of the discovery. Fossil salvage may require several minutes for small, isolated fossils; several hours for larger fossils; or possibly several days for extensive, complex localities.

Determination of significance and time needed to collect the discovered fossils may require consultation with North Plains, the relevant applicable land-managing agency, and the PI. Consultation could be required, for example, if the significant locality's surficial extent exceeds the Paleontological Resource Use Permit's limit of 1-square meter for collection.

Should the fossil locality become an extensive site on BLM land, the BLM will be notified immediately upon the discovery. A Locality-Specific Paleontological Mitigation Plan will be developed and submitted by the PI no more than 72 hours after the discovery and approved by the BLM within a reasonable review period. This plan will provide an explanation of the scientific significance of the paleontological resources, the methods to be used, and provisions for conservation, preparation, and curation. The draft Locality-Specific Paleontological Mitigation Plan will be submitted to consulting parties for a five-day working review, after which the comments and recommendations will be addressed by the PI, and a Final Locality-Specific Paleontological Mitigation Plan will be submitted. The mitigation plan for the extensive paleontological discovery will then be implemented by the Project.

Fossils should be collected when the determination of a fossil's significance is uncertain due to only a small portion of the fossil being visible. Significance may not be fully determined until additional preparation of the fossil is completed.

An unanticipated fossil discovery is defined as a discovery of paleontological resources in unexpected areas by construction personnel without the presence of a paleontologist. Upon discovery of fossil material by construction personnel, work will be temporarily halted within a 100-foot buffer and the Contractor will notify the EI to coordinate with the paleontologist to mobilize to the site for evaluation. The EI will establish a protective buffer or flagging to demarcate the location and protect the fossils until the arrival of the paleontologist. The procedures for the unanticipated discovery of fossils are described in the Unanticipated Discovery Plan (see Appendix C).

## 7.5 MICROFOSSILS

Microfossils (small to microscopic in size) consisting of vertebrates, invertebrates, plants, or trace fossils may be discovered during monitoring. Should significant microfossils be found, the paleontologist (with concurrence from North Plains and landowner or land-managing agency) will collect test samples for screening. If micro-vertebrate fossils are encountered during the screen testing, bulk matrix samples will be taken for offsite processing. In practice, the amount of matrix sampled will be dependent on the abundance or lack of fossil-rich matrix found.

## 7.6 LABORATORY WORK

All fossils collected from the Project will be removed to a secure paleontological laboratory for preparation, fossil identification, and pre-curation. Preparation will include 1) the removal of the surrounding matrix (rock) from the fossil material with hand tools, air scribes, and simple chemical methods and 2) the stabilization of the fossils by adhesives, consolidants, and supporting plaster jackets. Collected matrix will be screen-washed and dried for subsequent picking out of the remaining matrix under a microscope. Following preparation, fossils will be inventoried, identified to lowest taxon and element, locality forms created, and all relevant scientific data prepared for curation and then transported to a federal or state repository.

## 7.7 REPORTING

Following completion of the lab work and curation, a draft paleontological monitoring report will be submitted to North Plains and applicable federal and state land-management agencies for review. Report contents will follow professional, federal, and state standards. The final report will include a complete geographic information system data package and confidential locality data. Data from relevant BLM-administered lands will be uploaded to the BLM database.

## 8.0 PLAN REVISIONS

Table 8.0-1

**Plan Revisions**

| Revision Number | Revision Type(s) | Revision Date |
|---|---|---|
| Rev 0 | Initial Plan draft. | February 2025 |
| Rev 1 | Updated language for consistency across all project plans. | August 2025 |
| | | |
| | | |
| | | |
| | | |

## 9.0 REFERENCES

Bureau of Land Management (BLM). 2008. Assessment and Mitigation of Potential Impacts to Paleontological Resources Instruction Memorandum No. 2009-011.

BLM. 2015. Official Bureau of Land Management Potential Fossil Yield Classification for the geologic formations of Montana, North Dakota, and South Dakota, (version 9/15/2015). Bureau of Land Management, Billings, Montana, 97 pp.

BLM. 2016. Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands. Instruction Memorandum No. 2016-124.

BLM. 2022. Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands. Permanent Instruction Memorandum No. 2022-009.

Carlson, C.G. 1982. Geology of Grant and Sioux Counties, North Dakota: part I, North Dakota Geological Survey, Bulletin 67, 1:126,720.

Carlson, C.G. 1983. Geology of Billings, Golden Valley, and Slope counties, North Dakota. North Dakota Geological Survey Bulletin, 76(1), 1-40.

Clayton, L., Moran, S.R., Bluemle, J.P., and Carlson, C.G. (1980). Geologic map of North Dakota, U.S. Geological Survey, series unknown, 1:500,000.

Lukens, M.W. and Shaw, A.R. 2024. Paleontological Survey Report for the North Plains Connector Transmission Line in Montana and North Dakota. KLJ, Billings MT. 52 pp.

Hudson Institute of Mineralogy. 2024. Slope County, North Dakota, USA (mindat.org), Grant County, North Dakota, USA (mindat.org), Morton County, North Dakota, USA (mindat.org), Golden Valley County, North Dakota, USA (mindat.org), Hettinger County,

North Dakota, USA (mindat.org), Custer County, Montana, USA (mindat.org), Rosebud County, Montana, USA (mindat.org). Available online at https://www.mindat.org/. Accessed January 2024

Murphey, P.C., and Daitch, D. 2007. Paleontological overview of oil shale and tar sands areas in Colorado, Utah and Wyoming. U.S. Department of Energy, Argonne National Laboratory Report Prepared for the U.S. Department of Interior Bureau of Land Management, 468 pp. and 6 maps (scale 1:500,000)

Murphey, P.C., Knauss, G.E., Fisk, L.H., Deméré, T.A., and Reynolds, R.E. 2019. Best practices in mitigation paleontology. Proceedings of the San Diego Society of Natural History, 47, 1–43.

Shaw, A.R., Lukens, M.W., and Seaux, G. 2024. North Plains Connector Transmission Line iProject in Montana and North Dakota: 2024 Paleontological Resources Field Survey Report. KLJ, Billings MT. 39 pp.

State of North Dakota. 1990. Geological Survey Paleontological Resource Protection, North Dakota Administrative Code § Article 43-04 et seq. Available online at: https://ndlegis.gov/information/acdata/html/43-04.html. Accessed: July 2024.

State of North Dakota. 2016. Paleontological Resource Protection, North Dakota Century Code § 54-17.3 et seq. Available online at: https://statecodesfiles.justia.com/north-dakota/2016/title-54/chapter-54-17.3/chapter-54-17.3.pdf. Accessed: July 2024.

Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources. Available online at: https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed July 2024.

University of California Museum of Paleontology Online Database. 2024. Available online at: https://ucmpdb.berkeley.edu/loc.html. Accessed January 2024

Vuke, S.M., Bergantino, R.N., Colton, R.B., Wilde, E.M., and Heffern, E.L. 2001a. Geologic map of the Forsyth 30' x 60' quadrangle, eastern Montana: Montana Bureau of Mines and Geology Open-File Report 425, 11 p., 1 sheet, scale 1:100,000.

Vuke, S.M., Heffern, E.L., Bergantino, R.N., and Colton, R.B. 2001b. Geologic map of the Powderville 30' x 60' quadrangle, eastern Montana: Montana Bureau of Mines and Geology Open-File Report 429, 8 p., 1 sheet, scale 1:100,000.

Vuke, S.M., Luft, S.J., Colton, R.B., and Heffern, E.L. 2001c. Geologic map of the Miles City 30' x 60' quadrangle, eastern Montana: Montana Bureau of Mines and Geology Open-File Report 426, 11 p., 1 sheet, scale 1:100,000.

Vuke, S.M., Wilde, E.M., Colton, R.B., and Stickney, M.C. 2001d. Geologic map of the Baker 30' x 60' quadrangle, eastern Montana and adjacent North Dakota: Montana Bureau of Mines and Geology Open-File Report 427, 9 p., 1 sheet, scale 1:100,000.

Vuke, S.M., and Colton, R.B. 2003. Geologic map of the Terry 30' x 60' quadrangle, eastern Montana: Montana Bureau of Mines and Geology Open-File Report 477, 9 p., 1 sheet, scale 1:100,000.

Vuke, S.M., Wilde, E.M., Colton, R.B., and Stickney, M.C. 2003. Geologic map of the Wibaux 30' x 60' quadrangle, eastern Montana and adjacent North Dakota: Montana Bureau of Mines and Geology Open-File Report 465, 11 p., 1 sheet, scale 1:100,000.

Yale Peabody Museum Online Database. 2024. Advanced Search. Available online at: https://peabody.yale.edu/. Accessed January 10, 2024.

# APPENDIX A

# PROJECT-LANDOWNER OVERVIEW MAPS

T3N R41E

T3N R42E

T3N R43E

T2N R41E

T2N R42E

T2N R43E

Rosebud Co.

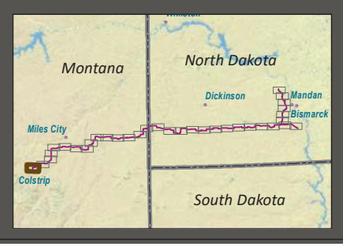
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Preferred Structure
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 1 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

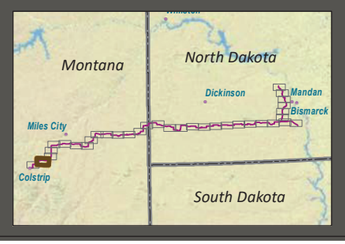
Colstrip, MT to Bismarck, ND

T3N R42E
T3N R43E
T3N R44E
T2N R42E
T2N R43E
T2N R44E
Rosebud Co.

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 2 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

Rosebud Co.

Custer Co.

T4N R44E

T4N R45E

T4N R46E

T3N R44E

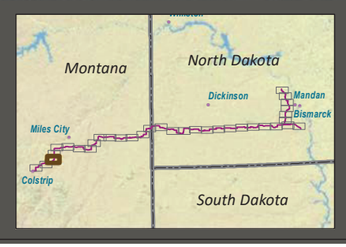
T3N R45E

T3N R46E

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 3 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T5N R43E

T5N R44E

T5N R45E

Rosebud Co.

Custer Co.

T4N R44E

T4N R45E

T4N R46E

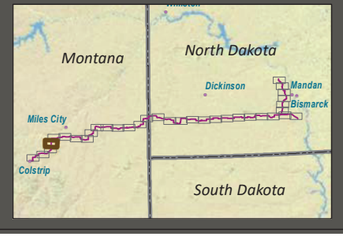
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 4 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

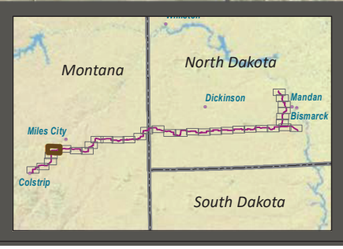
Colstrip, MT to Bismarck, ND

T6N R44E
T6N R45E
T6N R46E
T5N R44E
T5N R45E
T5N R46E
Rosebud Co.
Custer Co.

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS



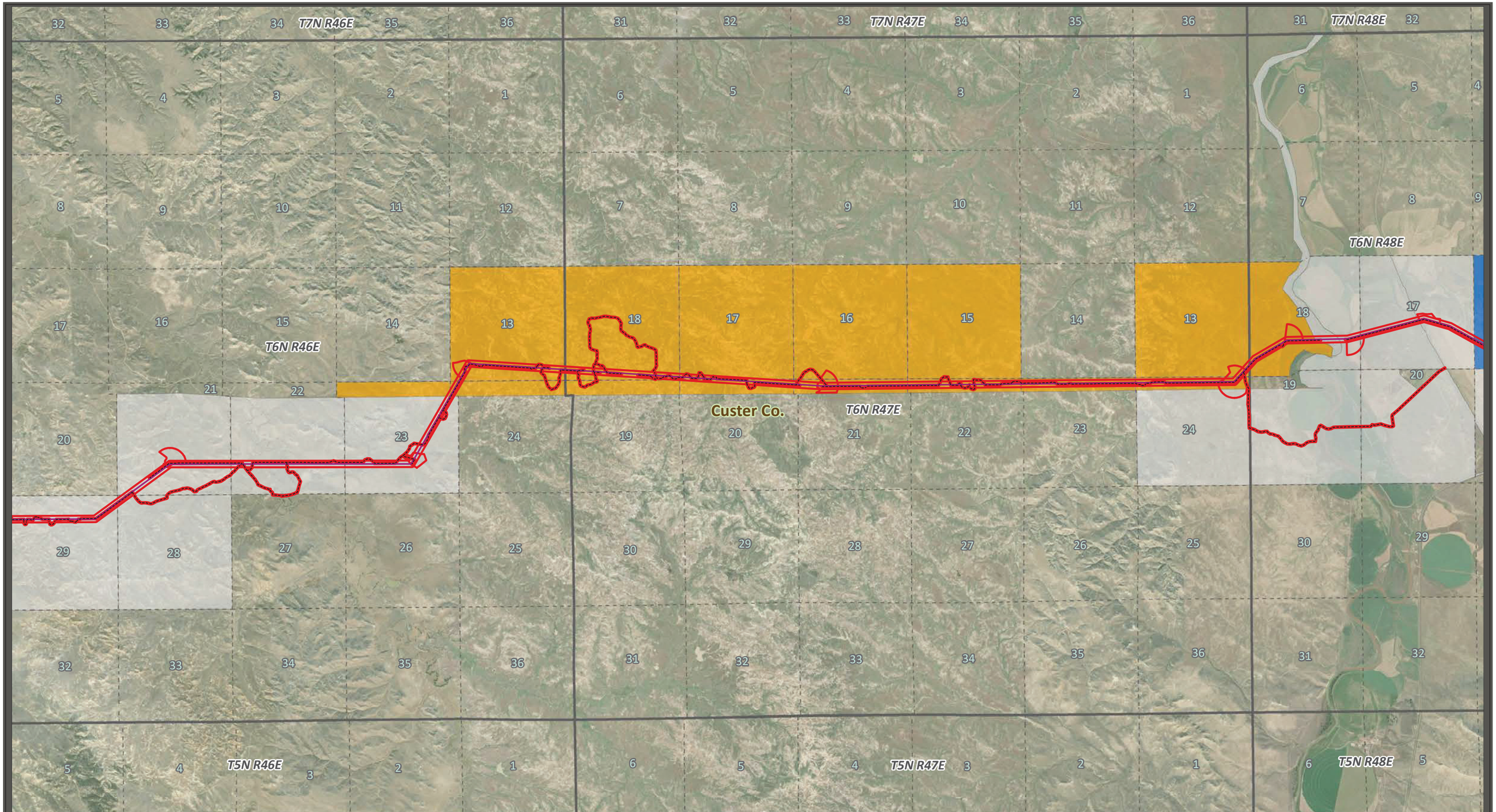

## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 5 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ



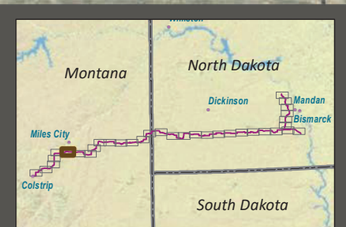

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 6 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

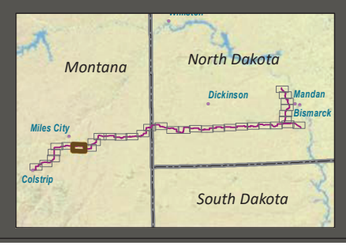
Colstrip, MT to Bismarck, ND

T6N R48E
T6N R49E
T6N R50E
T5N R48E
T5N R49E
T5N R50E
Custer Co.

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 7 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

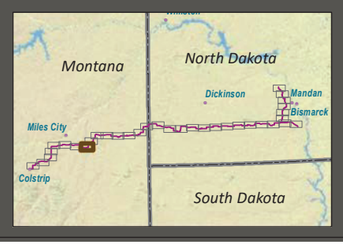
Colstrip, MT to Bismarck, ND

T6N R50E
T6N R51E
T6N R52E
T5N R50E
T5N R51E
T5N R52E
Custer Co.

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 8 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T7N R50E

T7N R51E

T7N R52E

Custer Co.

T6N R50E

T6N R51E

T6N R52E

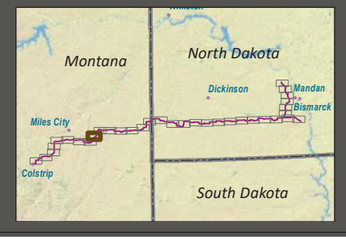
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 9 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T8N R51E

T8N R52E

T8N R53E

Custer Co.

T7N R51E

T7N R52E

T7N R53E

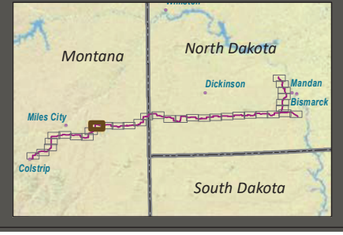
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS



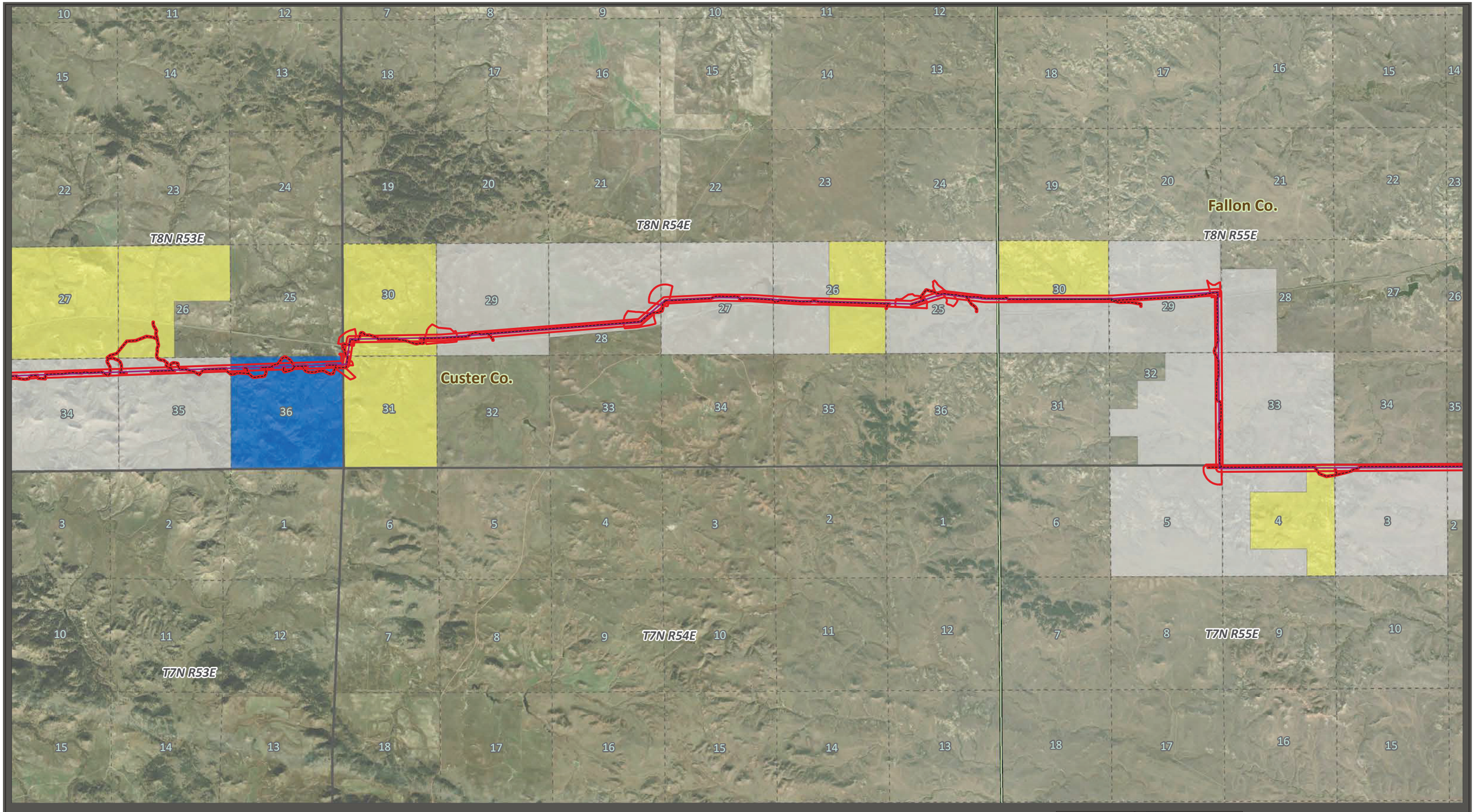

## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 10 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ



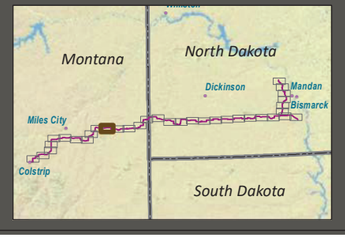

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 11 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T8N R55E

T8N R56E

T8N R57E

Fallon Co.

T7N R55E

T7N R56E

T7N R57E

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS


## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 12 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T8N R57E

T8N R58E

T8N R59E

Fallon Co.

T7N R57E

T7N R58E

T7N R59E

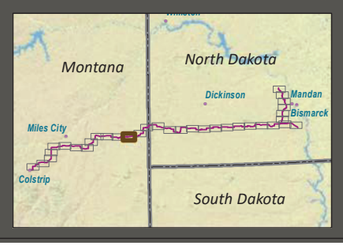
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 13 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T9N R58E
T9N R59E
T9N R60E
T8N R59E
T8N R60E
T8N R61E
Fallon Co.

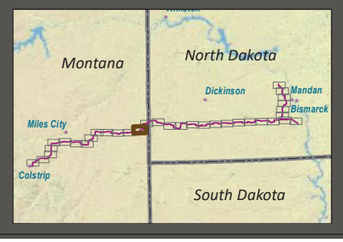
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 14 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T10N R60E

T10N R61E

T136N R106W

Golden Valley Co.

T9N R60E

Fallon Co.

T9N R61E

MONTANA

NORTH DAKOTA

T135N R106W

Slope Co.

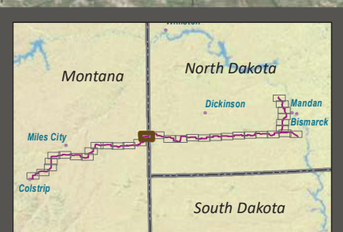
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- State Border
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 15 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

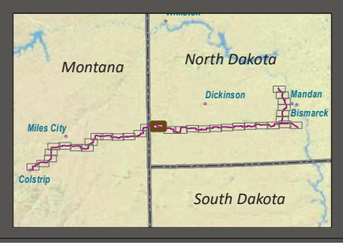
Colstrip, MT to Bismarck, ND

T136N R106W
T136N R105W
T136N R104W
T135N R106W
T135N R105W
T135N R104W
Golden Valley Co.
Slope Co.

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 16 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R103W
T136N R104W
T136N R102W
T135N R104W
T135N R103W
T135N R102W
T134N R104W
T134N R103W
T134N R102W
Slope Co.

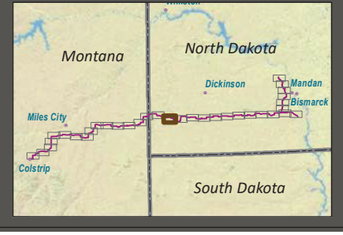
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 17 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R102W
T136N R101W
T136N R100W
T135N R102W
T135N R101W
T135N R100W
T134N R102W
T134N R101W
T134N R100W
Slope Co.

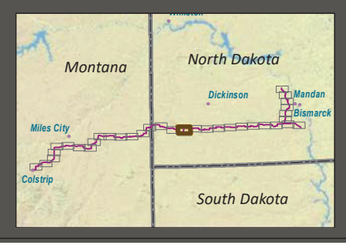
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 18 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R100W

T136N R99W

T136N R98W

T135N R100W

T135N R99W

T135N R98W

Slope Co.

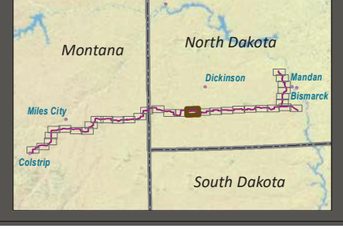
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 19 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R98W
T136N R97W
T136N R96W
Slope Co.
T135N R98W
T135N R97W
Hettinger Co.
T135N R96W
T134N R98W
T134N R97W
T134N R96W

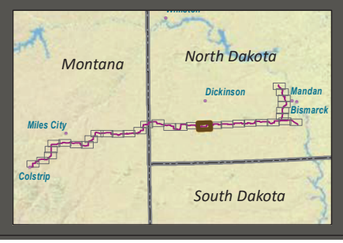
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 20 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R96W

T136N R95W

T136N R94W

Hettinger Co.

T135N R96W

T135N R95W

T135N R94W

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS


## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 21 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R94W

T136N R93W

T136N R92W

Hettinger Co.

T135N R94W

T135N R93W

T135N R92W

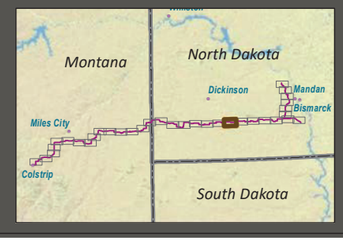
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 22 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R92W
T136N R91W
T136N R90W
T135N R92W
T135N R91W
T135N R90W
Hettinger Co.
Grant Co.

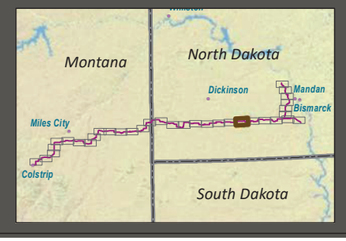
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 23 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R90W
T136N R89W
T136N R88W
T135N R90W
T135N R89W
T135N R88W
Grant Co.

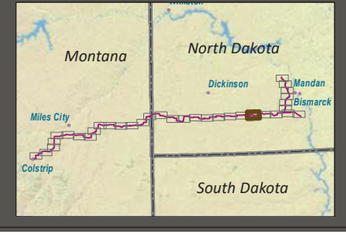
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 24 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R88W

T136N R87W

T136N R86W

Grant Co.

T135N R88W

T135N R87W

T135N R86W

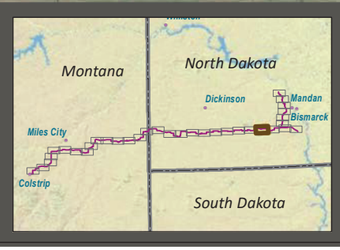
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 25 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R86W

T136N R85W

T136N R84W

Grant Co.

Morton Co.

T135N R85W

T135N R86W

T135N R84W

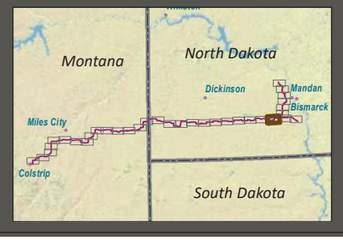
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Preferred Structure
- Laydown Yard
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 26 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R84W

T136N R83W

T136N R82W

Morton Co.

T135N R84W

T135N R83W

T135N R82W

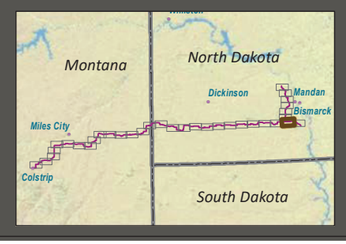
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 27 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer

Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T136N R82W
T136N R81W
T136N R80W
T135N R81W
T135N R82W
T135N R80W
T134N R82W
T134N R81W
T134N R80W
Morton Co.

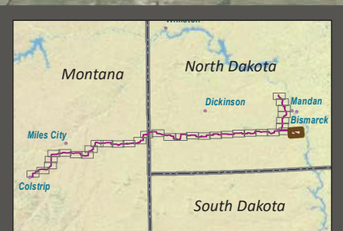
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Preferred Structure
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 28 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T137N R84W

T137N R83W

T137N R82W

Morton Co.

T136N R84W

T136N R83W

T136N R82W

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS


## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 29 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T138N R84W

T138N R83W

T138N R82W

T137N R84W

T137N R83W

T137N R82W

Morton Co.

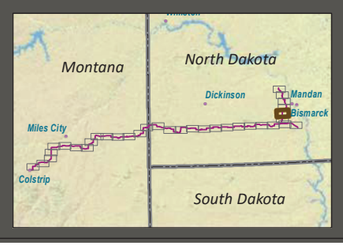
# NPC Paleontological Resources Monitoring and Mitigation Plan

**Colstrip, MT to Bismarck, ND**

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 30 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T139N R83W

T139N R82W

T139N R81W

T138N R83W

T138N R82W

T138N R81W

Morton Co.

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS


## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 31 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T140N R83W

T140N R82W

T140N R81W

T139N R83W

T139N R82W

T139N R81W

Morton Co.

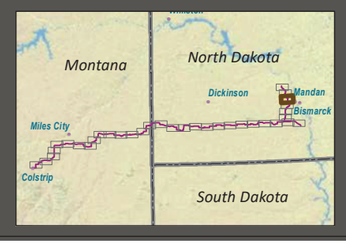
# NPC Paleontological Resources Monitoring and Mitigation Plan

**Colstrip, MT to Bismarck, ND**

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 32 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T141N R83W

T141N R82W

T141N R81W

Oliver Co.

T140N R83W

T140N R82W

Morton Co.

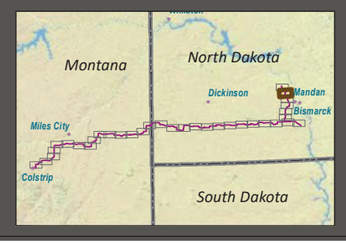
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- County Line
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 33 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

T142N R84W

T142N R83W

T142N R82W

T141N R84W

T141N R83W

T141N R82W

Oliver Co.

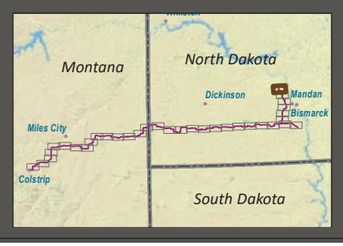
# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships
- Private
- BLM
- State
- USDA ARS Ft. Keogh
- USFS




## Project-Landowner Overview

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 34 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, Montana State Library, ND GIS, MDT, & NDDOT

1:50,000

KLJ

# ATTACHMENT B

# GEOLOGY CLOSE-UP MAPS

Tftr
Tfle
Qal
Tft
T3N R41E
T3N R42E
T3N R43E
T2N R41E
T2N R42E
T2N R43E
Rosebud Co.

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

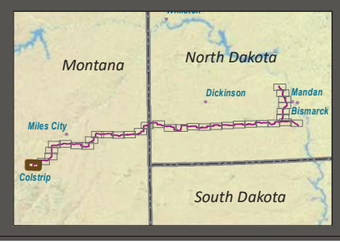
N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Preferred Structure
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)




## Geology Close-up

| Drawn By: JDP | Date: 8/8/2024 | Project #: 2309-00309 | Page 1 of 34 |
|---|---|---|---|

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

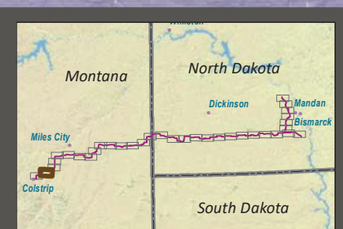
N

0 0.5 1 Miles

Paleo Survey Area
Preferred Route
Preferred Access
Laydown Yard
PLSS Sections
PLSS Townships

**Surface Geology (MT)**

Alluvial terrace deposit (Qat)
Alluvium (Qal)
Lebo Mbr, Fort Union Fm (Tfle)
Tongue River Mbr, Fort Union Fm (Tftr)
Tullock Mbr, Fort Union Fm (Tft)



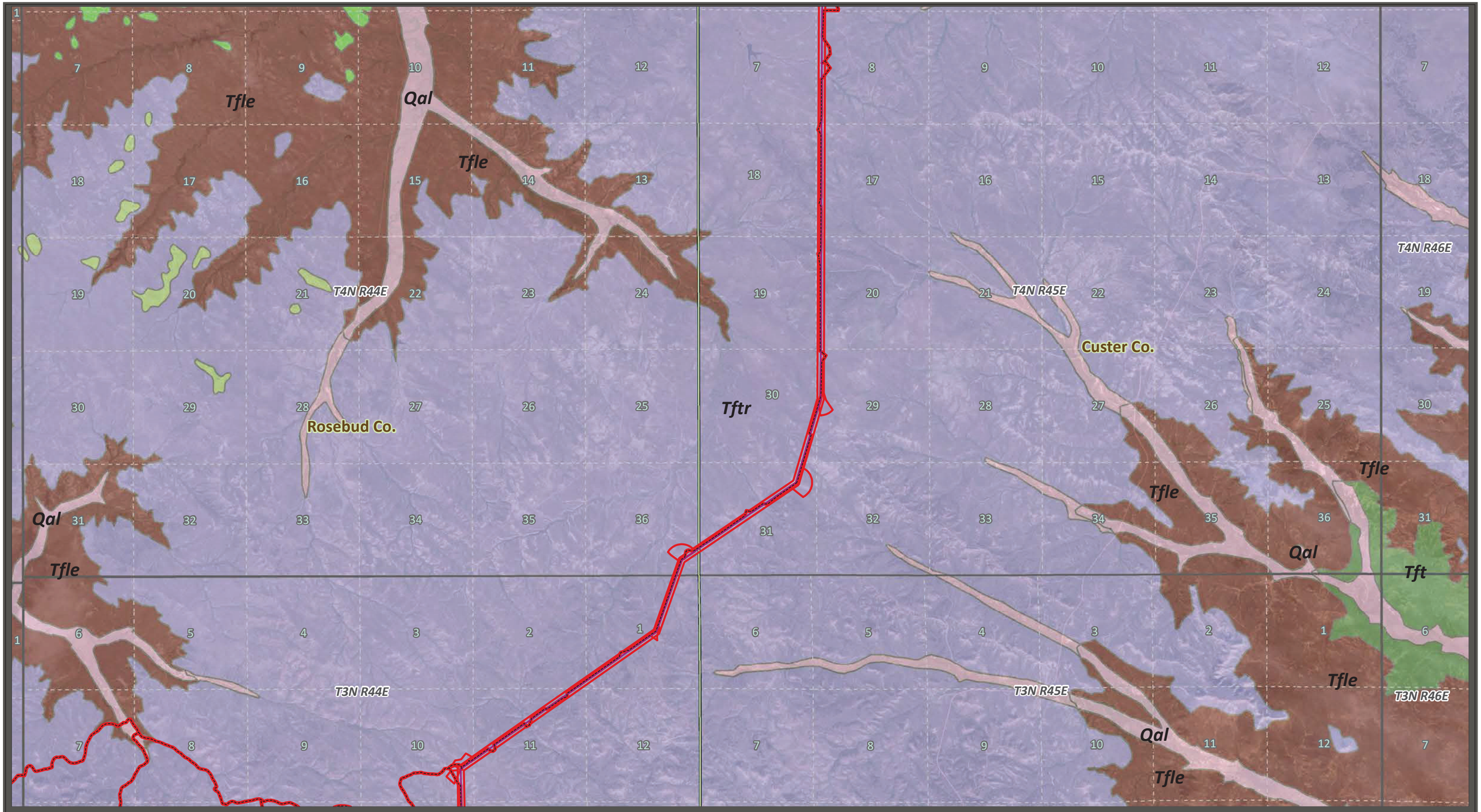

## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 2 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ




# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium of alluvial terrace deposit (QTat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)

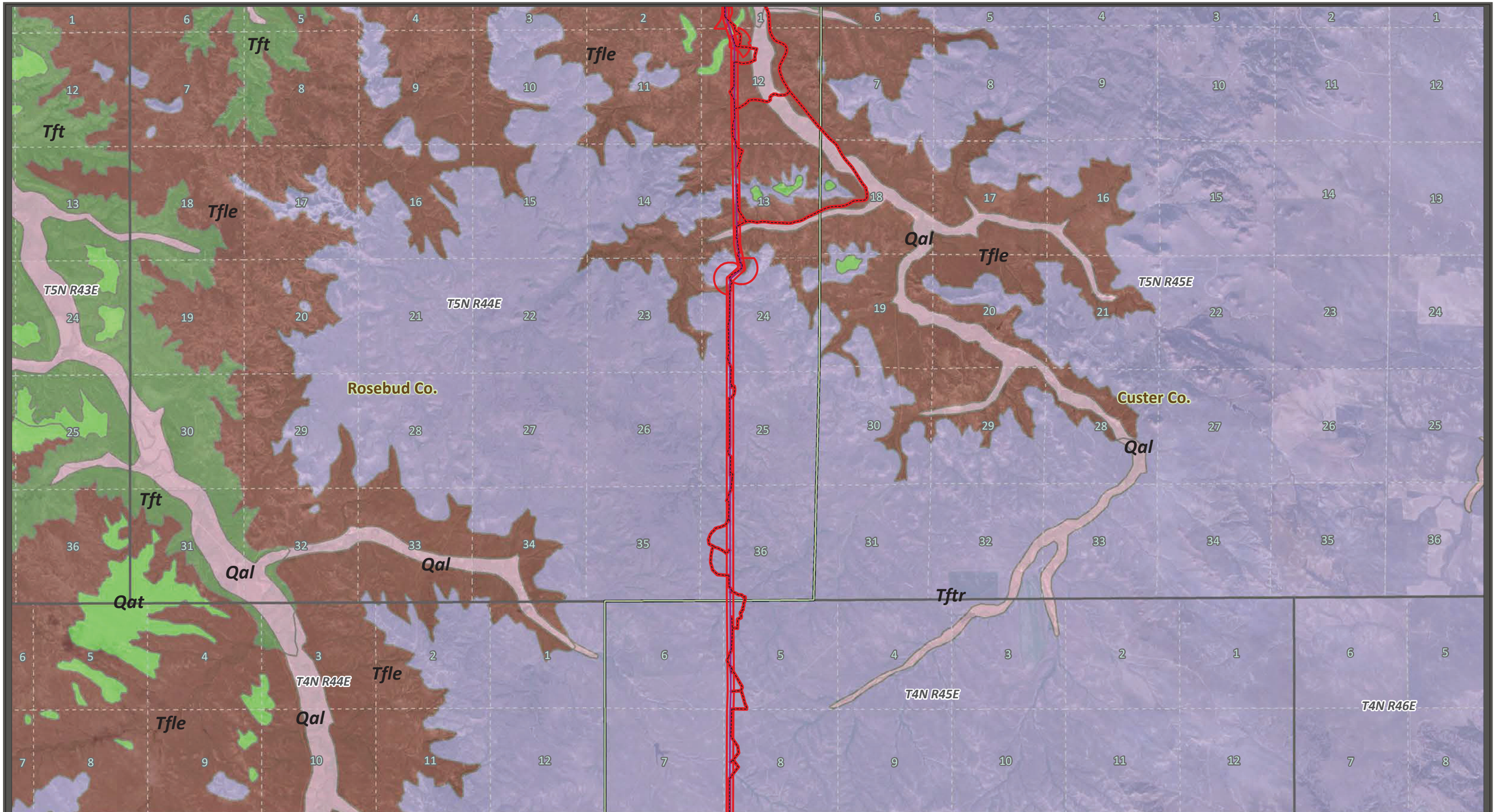

## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 3 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ




# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium of alluvial terrace deposit (QTat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)


## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 4 of 34 |

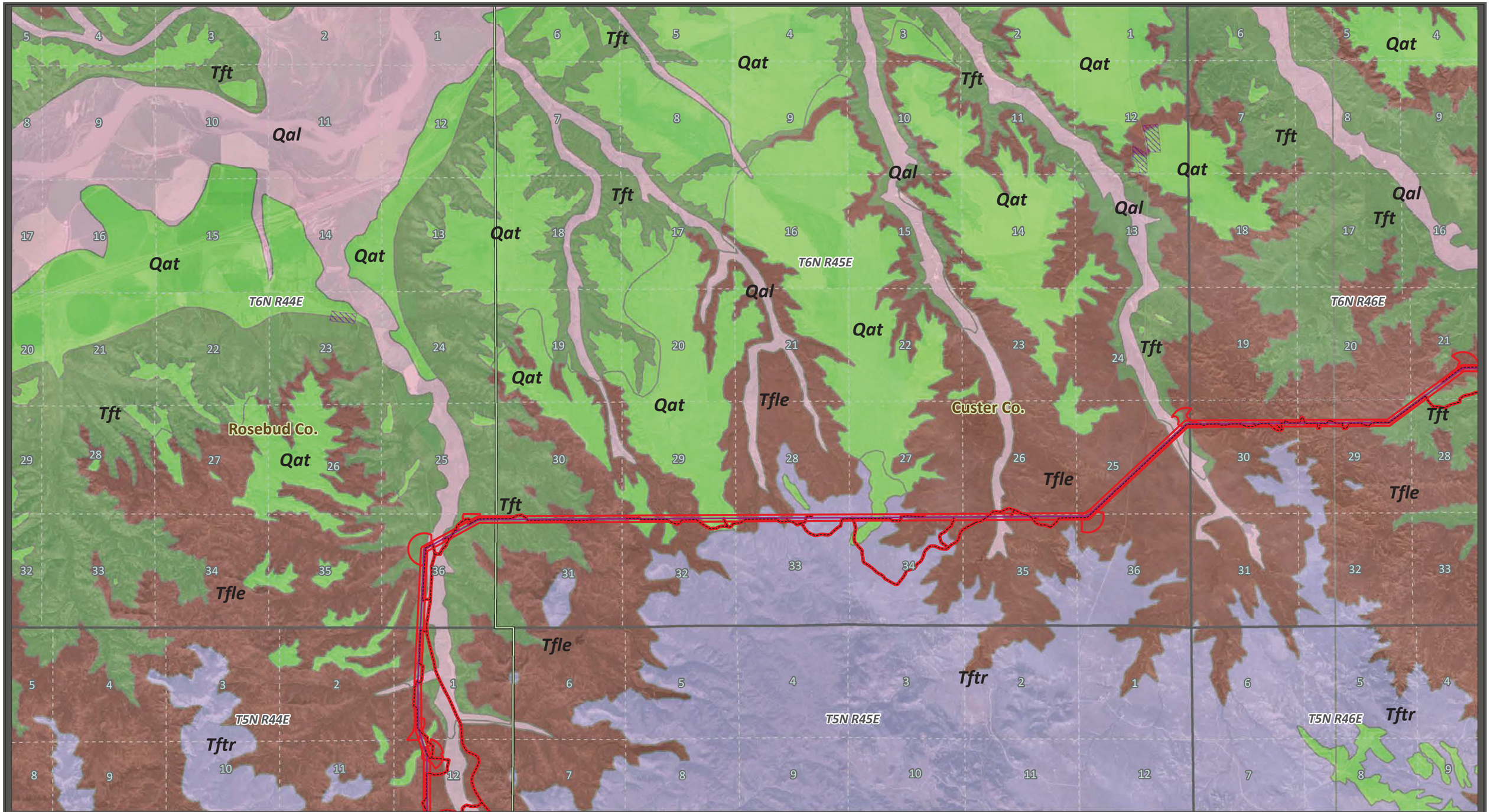
Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND



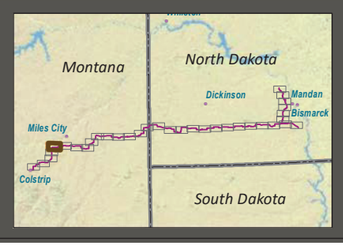

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- County Line
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 5 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

T7N R46E | T7N R47E | T7N R48E

T6N R46E | T6N R47E | T6N R48E

T5N R46E | T5N R47E | T5N R48E

Custer Co.

Tfle | Tft | Tftr | Qat | Qal

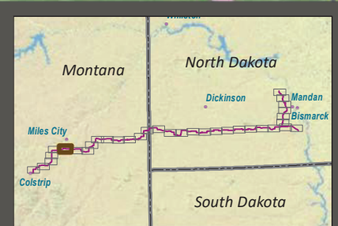
N

0 0.5 1 Miles

Paleo Survey Area
Preferred Route
Preferred Access
PLSS Sections
PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)



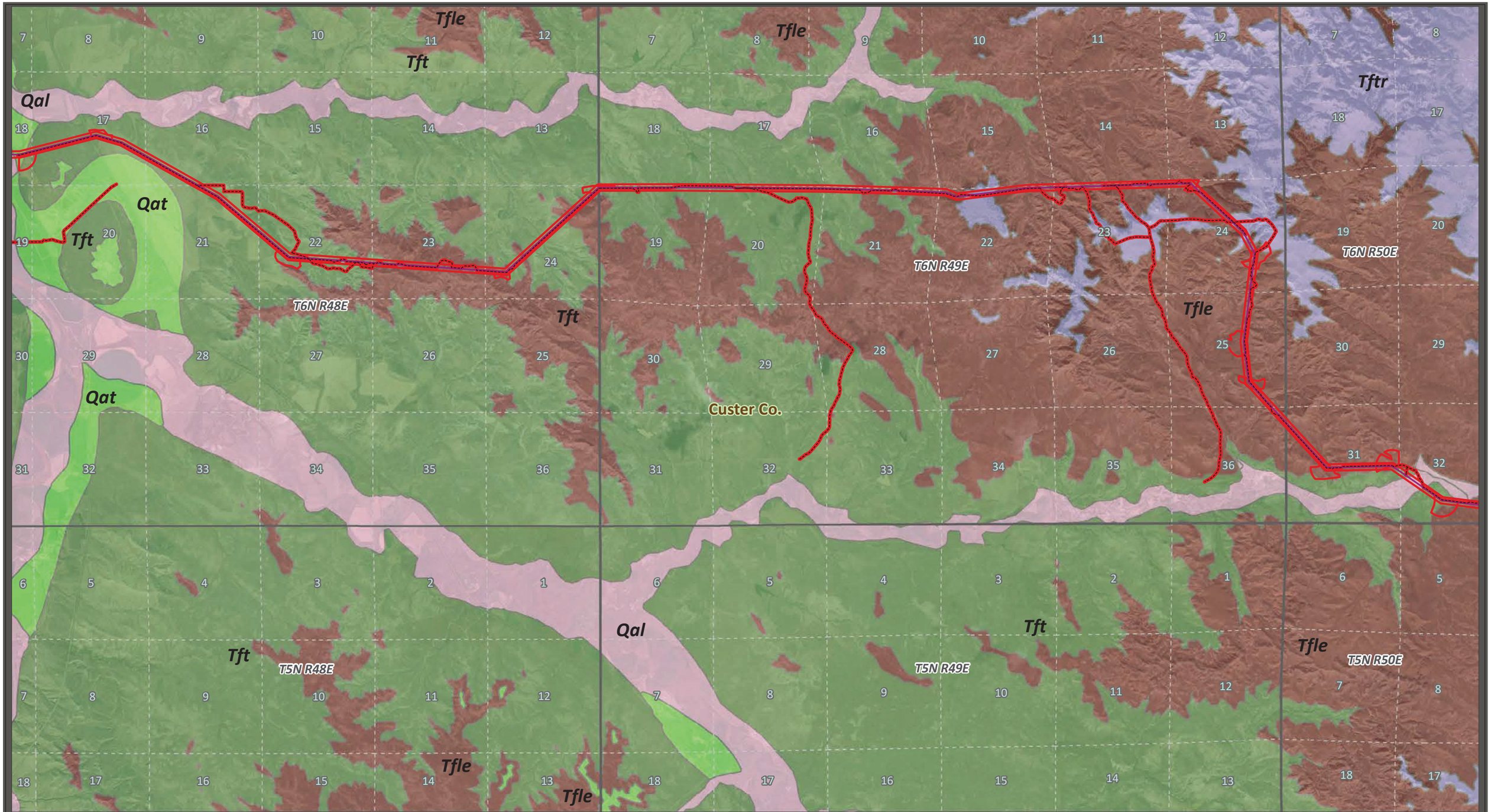

## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 6 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ




# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

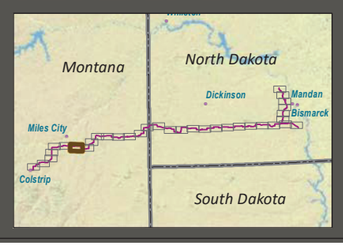
N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 7 of 34 |

Orthophoto Source: ESRI World Imagery Layer

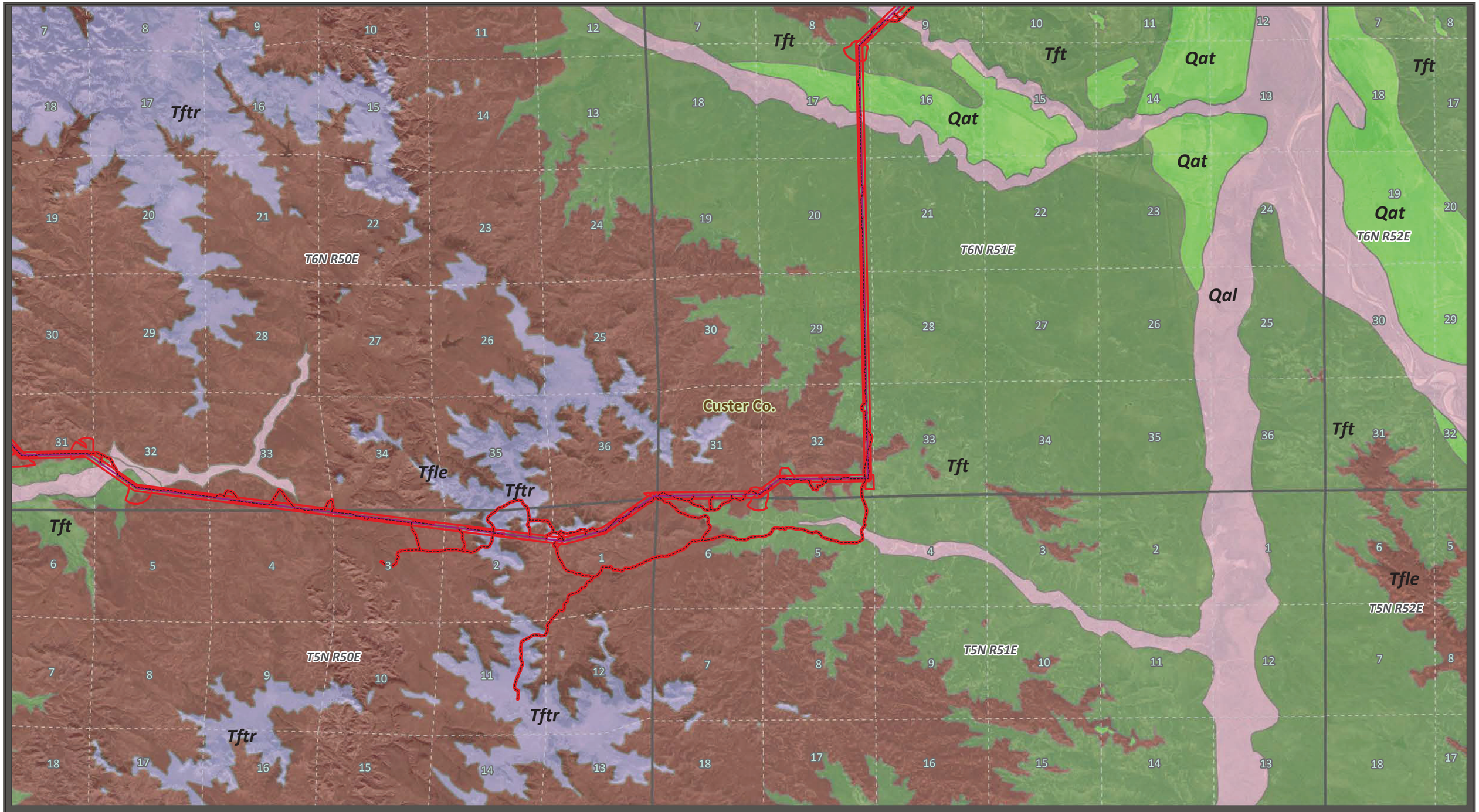
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND



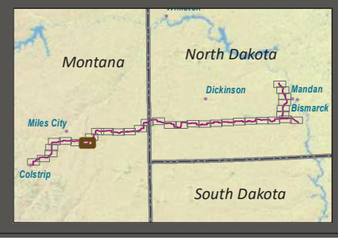

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 8 of 34 |

Orthophoto Source: ESRI World Imagery Layer

Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

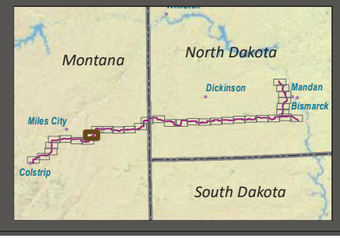
N

0 0.5 1 Miles

Paleo Survey Area
Preferred Route
Preferred Access
PLSS Sections
PLSS Townships

**Surface Geology (MT)**

Alluvial terrace deposit (Qat)
Alluvium (Qal)
Lebo Mbr, Fort Union Fm (Tfle)
Tongue River Mbr, Fort Union Fm (Tftr)
Tullock Mbr, Fort Union Fm (Tft)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 9 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

T8N R51E
T8N R52E
T8N R53E
T7N R51E
T7N R52E
T7N R53E
Custer Co.

Qal
Qat
Tft
Tfle
Tftr
Tfld

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Ludlow Mbr, Fort Union Fm (Tfld)
- Tongue River Mbr, Fort Union Fm (Tftr)
- Tullock Mbr, Fort Union Fm (Tft)

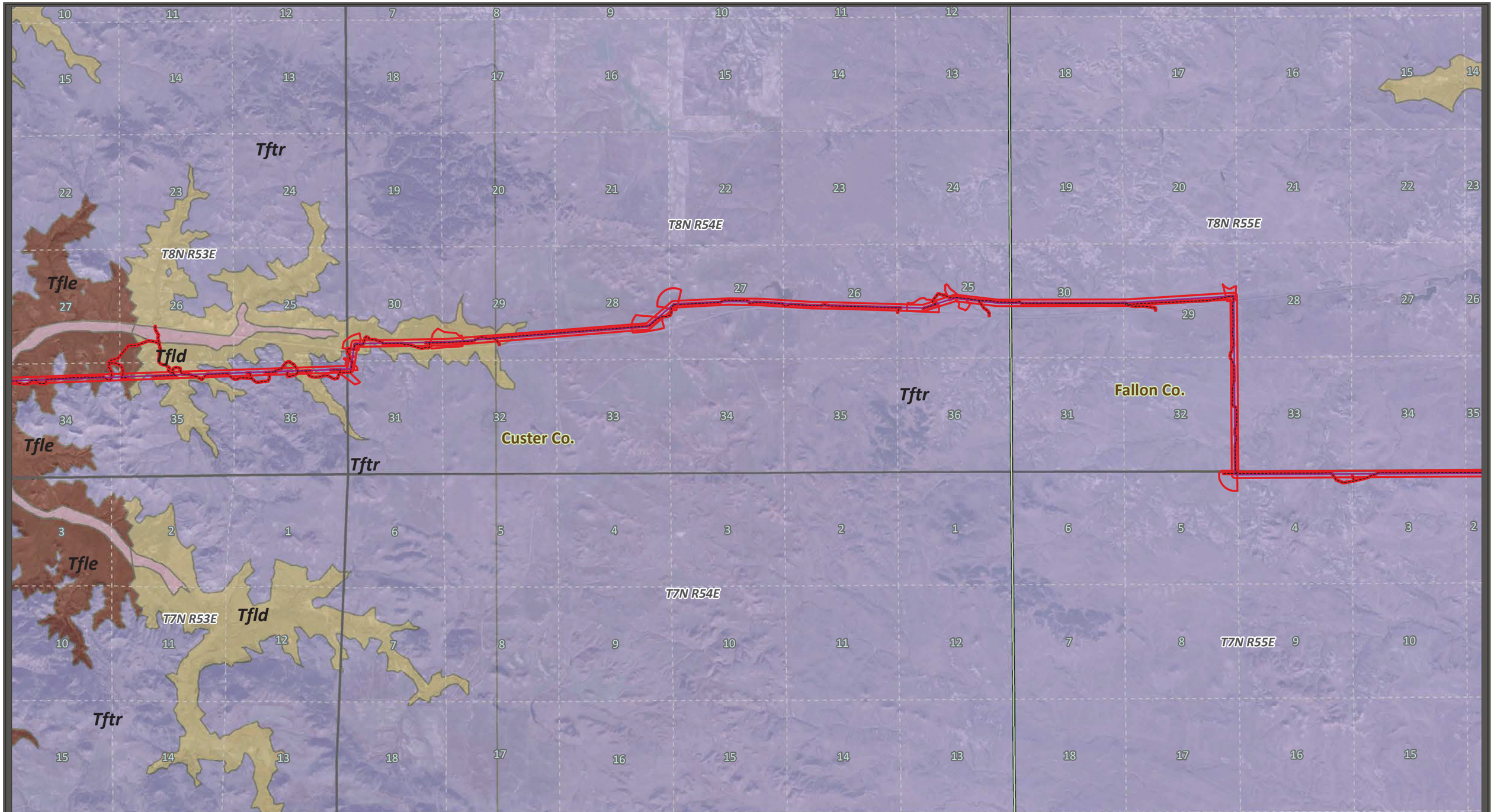

## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 10 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ




# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- County Line
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvium (Qal)
- Lebo Mbr, Fort Union Fm (Tfle)
- Ludlow Mbr, Fort Union Fm (Tfld)
- Tongue River Mbr, Fort Union Fm (Tftr)


## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 11 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

Tfld
Tfld
Tfld
Qat
Qat
Qal
T8N R55E
T8N R56E
T8N R57E
Qat
Fallon Co.
Tftr
Qal
Tftr
Tftr
Tfld
Tfld
T7N R55E
T7N R56E
T7N R57E
Qat
Tfld
Tftr
Qal
Tftr

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

N

0 0.5 1 Miles

| | |
|---|---|
| Paleo Survey Area | **Surface Geology (MT)** |
| Preferred Route | Alluvial terrace deposit (Qat) |
| Preferred Access | Alluvium (Qal) |
| PLSS Sections | Ludlow Mbr, Fort Union Fm (Tfld) |
| PLSS Townships | Tongue River Mbr, Fort Union Fm (Tftr) |


## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 12 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

T8N R57E
T8N R58E
T8N R59E
T7N R57E
T7N R58E
T7N R59E
Tftr
Tfld
Qal
Khc
Fallon Co.

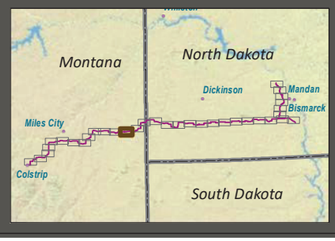
N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvial terrace deposit (Qat)
- Alluvium (Qal)
- Hell Creek Formation (Khc)
- Ludlow Mbr, Fort Union Fm (Tfld)
- Pierre Shale (Kp)
- Timber Lake & Trail City Mbrs, Fox Hills Fm (Kftt)
- Tongue River Mbr, Fort Union Fm (Tftr)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 13 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

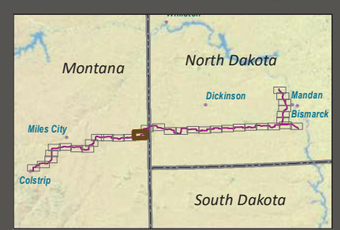
N

0 0.5 1 Miles

- Paleo Survey Area
- Preferred Route
- Preferred Access
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvium (Qal)
- Colgate Mbr, Fox Hills Fm (Kfc)
- Hell Creek Formation (Khc)
- Ludlow Mbr, Fort Union Fm (Tfld)
- Pierre Shale (Kp)
- Timber Lake & Trail City Mbrs, Fox Hills Fm (Kfft)
- Tongue River Mbr, Fort Union Fm (Tftr)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 14 of 34 |

Orthophoto Source: ESRI World Imagery Layer

Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ

# NPC Paleontological Resources Monitoring and Mitigation Plan

Colstrip, MT to Bismarck, ND

T10N R60E

T10N R61E

T9N R60E

T9N R61E

T136N R106W

T135N R106W

Fallon Co.

Golden Valley Co.

Slope Co.

MONTANA

NORTH DAKOTA

Tftr

Tfld

Khc

Tl

Tp

N

0 0.5 1 Miles

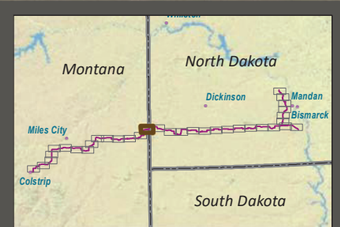
- Paleo Survey Area
- Preferred Route
- Preferred Access
- Laydown Yard
- State Border
- County Line
- PLSS Sections
- PLSS Townships

**Surface Geology (MT)**

- Alluvium (Qal)
- Hell Creek Formation (Khc)
- Ludlow Mbr, Fort Union Fm (Tfld)
- Tongue River Mbr, Fort Union Fm (Tftr)

**Surface Geology (ND)**

- Ludlow Fm, Fort Union Gp (Tl)
- Sentinel Butte Fm, Fort Union Gp (Ts)




## Geology Close-up

| Drawn By: | Date: | Project #: | Page |
|---|---|---|---|
| JDP | 8/8/2024 | 2309-00309 | 15 of 34 |

Orthophoto Source: ESRI World Imagery Layer
Data Sources: KLJ, MT State Library, ND GIS, MDT, NDDOT, & MBMG

1:50,000

KLJ