Thunder Butte Pipeline, LLC

WEED MANAGEMENT PLAN

Thunder Butte Pipeline Project

October 2024

WEED MANAGEMENT PLAN

Thunder Butte Pipeline Project

October 2024

Prepared By:
Arcadis U.S., Inc.
630 Plaza Drive, Suite 200
Highlands Ranch
Colorado 80129
Phone: 720 344 3500
Fax: 720 344 3535

Prepared For:
Thunder Butte Pipeline, LLC
37685 24th Avenue SW
Plaza,
North Dakota 58771

Our Ref:
30192665 || 8

Kathryn Cloutier

Kathryn Cloutier
Project Manager

Contents

Figures

Acronyms and Abbreviations

EMP	Environmental Mitigation Plan
EI	Environmental Inspector
FBIR	Fort Berthold Indian Reservation
Gap	Gap Midstream LLC.
GPS	Global Positioning System
Project	Thunder Butte Pipeline Project
MHA Nation	Mandan, Hidatsa, and Arikara Nation
NDCC	North Dakota Century Code
NDDA	North Dakota Department of Agriculture
Plan	Weed Management Plan
ROW	right-of-way
TAT	Three Affiliated Tribes
TBPL	Thunder Butte Pipeline LLC.
TBPS	Thunder Butte Petroleum Services, Inc.

1. Introduction

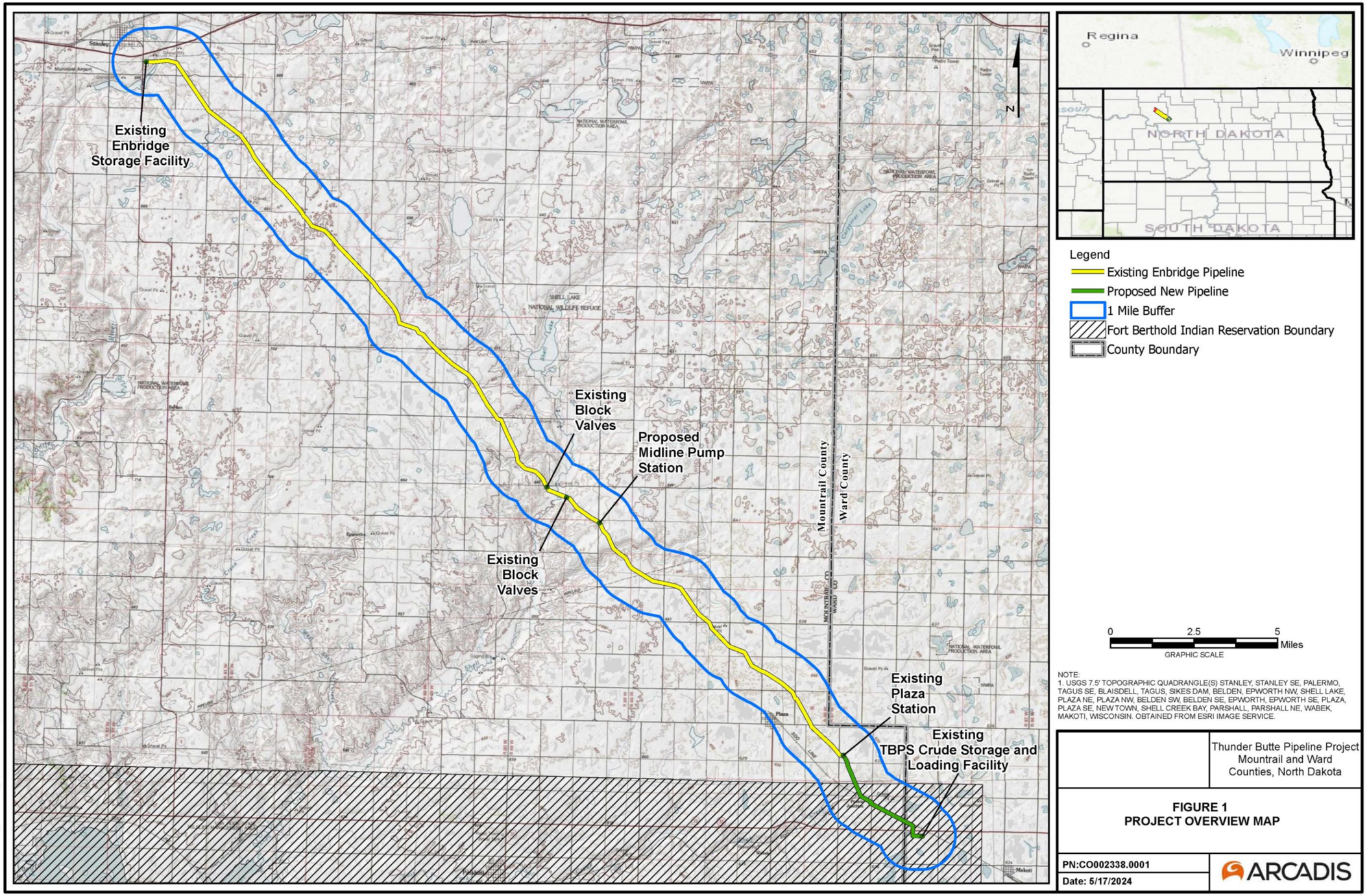
Thunder Butte Pipeline, LLC (TBPL) proposes the Thunder Butte Pipeline Project (the Project) to transport crude oil from the existing Thunder Butte Petroleum Services, Inc. (TBPS) Crude Storage and Loading Facility (TBPS Facility) within the Fort Berthold Indian Reservation (FBIR), approximately 2.6 miles northwest of Makoti, North Dakota, to the existing Enbridge Stanley Pump Station and Terminal (Enbridge Storage Facility) in Stanley, North Dakota (**Figure 1**). The Project is a joint venture between Gap Midstream, LLC (Gap) and the Mandan, Hidatsa, and Arikara Nation (MHA Nation) /Three Affiliated Tribes (TAT) doing business as TBPS. The MHA Nation/TAT owns the TBPS Facility, and Enbridge Pipelines North Dakota owns the Enbridge Storage Facility.

The Project will consist of three primary components:

- Construction of a new 3.84-mile-long underground pipeline,
- Conversion of an existing 30.8-mile-long collector (gathering) pipeline to a transmission pipeline, and
- Construction of a midline pump station on a 2-acre site with one permanent access road adjacent to the existing pipeline.

The new pipeline will commence at the existing TBPS Facility in Ward County and terminate at the interconnection with the existing pipeline in Section 2, T152N, R88W in Mountrail County. The existing pipeline was previously owned by EPND (Line 82-111). From the interconnection point with the existing pipeline approximately 2.1 miles southeast of Plaza, North Dakota, the existing pipeline will transport crude oil to the Enbridge Storage Facility. All but the southern 3.84 miles of the Project is an existing pipeline. Construction and operation of the proposed new and existing pipeline and associated facilities will be under North Dakota Public Service Commission jurisdiction.

This Weed Management Plan (Plan) has been developed to identify weed control practices that will be implemented for the Project to prevent the spread of invasive and noxious weeds and to minimize the risk of importing or transporting any weed species. TBPL will retain one or more third-party inspector (“Environmental Inspector”) who will oversee implementation of this Plan.



Date: 5/17/2024 User Name: MNugent
Document Path: T:_EPP\Makoti_pipeline\pro\Makoti_Pipeline\Makoti_Pipeline_Rev.aprx

2. Goals and Objectives

This Plan outlines weed control practices to prevent and/or control the spread of noxious weeds during and following construction of the Project. Noxious weed management requirements and commitments are also summarized in the Project's Environmental Mitigation Plan (EMP).

All contractors will be responsible for implementing the practices described in this Plan. Monitoring during the construction and post-construction phases will ensure that weed management objectives are achieved.

The objectives of noxious weed control on the Project include the following:

- Acquire information on the occurrence, distribution, and abundance of noxious weeds in the Project area prior to construction.
- Prevent the establishment of new populations of noxious weeds in the Project areas not previously infested and limit the spread of existing infestations to the extent feasible.
- Minimize possible negative effects to flora or fauna within the Project area by control activities.
- Coordinate and consult with Ward and Mountrail County weed personnel regarding noxious weed control activities conducted by the TBPL to ensure compatibility with existing weed control protocols.
- Respond to landowner and/or land-managing agency reports of weeds during the post-construction period.

3. North Dakota Weed Laws and Regulations

The North Dakota Noxious Weed Control Law (North Dakota Century Code (NDCC) Title 4.1, Section 4.1-47) imposes stewardship obligations upon local governing bodies (county and city weed boards) as well as public and private landowners throughout the state to control noxious weeds on land they own or control. Local county and city weed boards have responsibility for the implementation and enforcement of weed management in North Dakota. Under section 4.1-47-29 of the NDCC, the agriculture commissioner may quarantine the state or portions of the state if deemed necessary to prevent the spread of noxious weeds. There are weed boards in all counties of North Dakota. Each board operates under the supervision of the North Dakota Department of Agriculture (NDDA). The NDAA Commissioner coordinates the efforts of County Weed Boards and state and federal land managers to implement integrated weed management programs. County Weed Board controls noxious weeds in road rights-of-way and public lands throughout the county to control and prevent the spread of noxious weeds in accordance with NDCC §4.1-47-02. Under the Noxious Weed Control Law, 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.

Noxious weeds are defined as plants propagated by either seed or vegetative parts and determined to be injurious to public health, crops, livestock, land, or other property (NDDA 2021). The NDDA Commissioner is responsible for maintaining the state noxious weed list, while the County Weed Boards may designate as noxious certain weeds that are not on the state noxious weed list. Thirteen weeds have been declared noxious in North Dakota (NDCC §4.1-47-03). Counties and cities do have the option to add additional weeds onto a list for enforcement only in their jurisdiction. The 13 state listed noxious weeds that are enforced by all cities and counties in North Dakota. Two additional species are listed as invasive in either Mountrail or Ward counties. The

table below provides a list of noxious and/or invasive species state listed and listed in Ward and Mountrail Counties (NDDA 2023).

North Dakota State and Mountrail and Ward Counties Noxious and Invasive Weeds[1]

North Dakota State Listed Noxious Weeds	
Common Name	**Scientific Name**
Absinth Wormwood	*Aremisia absinthium*
Canada Thistle	*Cirsium arvense*
Dalmatian Toadflax	*Linaria genistifolia*
Diffuse Knapweed	*Centaurea diffusa*
Houndstongue	*Cynoglossum officinale*
Leafy Spurge	*Euphorbia esula*
Musk Thistle	*Carduus nutans*
Palmer Amaranth	*Amaranthus palmeri*
Purple Loosestrife	*Lythrum salicaria*
Russian Knapweed	*Acroptilon repens*
Saltcedar	*Tamarix chinensis*
Spotted Knapweed	*Centaurea maculosa*
Yellow Toadflax	*Linaria vulgaris*
Ward County Listed Noxious Weeds	
Common Name	**Scientific Name**
False Chamomile	*Anthems arvensis*
Mountrail County Listed Noxious Weeds	
Common Name	**Scientific Name**
Common Tansy	*Tanacetum vulgare*

Notes:
1 Data is from the NDDA (2023).

4. Identification of Problem Areas

Cultivated crops and noxious weeds currently growing within the construction right-of-way (ROW) will be removed prior to the start of construction activities. Known locations of weed infestations within the Project Corridors, along with trees and shrubs anticipated to be cleared have been inventoried, including those that are considered invasive species or noxious weeds (Arcadis US. Inc. 2024).

In addition, areas containing noxious species may be identified prior to construction by the Environmental Inspectors (EI), which will be demarcated using color-coded flagging or signage on the construction ROW. Noxious weeds that occur adjacent to the ROW will be similarly noted. Identification of existing noxious weed locations will alert EI and construction personnel to implement weed control measures during construction.

5. Noxious Weed Management

Weeds are spread by a variety of means that may include construction equipment, construction and reclamation materials, livestock, wildlife, vehicles, people, and wind. The risk of establishing weeds typically increases with ground disturbing activities. This Plan emphasizes: 1) preventing the establishment of new populations of noxious weeds in lands that are currently weed-free; and 2) limiting the spread of existing populations of noxious weeds as feasible. The following section presents strategies to manage noxious weeds during the preconstruction, construction, and post-construction phases of the Project.

5.1 Preventive Measures

The following measures will be implemented to prevent the spread of invasive and noxious weeds and to minimize the risk of importing or transporting any weed species.

- TBPL will implement weed treatment prior to construction on a species and/or site-specific basis. Preconstruction treatments may include mechanical means (e.g., mowing, clearing) or herbicides, depending on the species present and size of the population.
- In areas where noxious weeds have been identified, the Contractor will stockpile cleared vegetation and salvaged topsoil adjacent to the area from which they were stripped. Stockpiles containing noxious weed seed or plant parts will be separated from abutting, uninfested stockpiles. During reclamation, the Contractor will return topsoil and vegetative material from infested sites to the areas from which they were originally stripped.
- For areas in which noxious weeds have been identified within the construction ROW, additional measures will be taken during construction in these areas to prevent the spread of seeds including cleaning all equipment before leaving the site and treating all disturbed soils with herbicides as approved by the landowner(s) of the participating properties.
- All Contractor vehicles and equipment will arrive at the work site clean and free of noxious weed seeds or parts. Equipment will be cleaned using high-pressure washing devices if necessary (air or water). An EI will inspect and verify that vehicles and equipment are free of soil and debris capable of transporting noxious weed seeds or parts prior to being allowed access to the ROW.
- For equipment known to have passed through a weed-infested area, the undercarriage will be cleaned of any plant debris with high-pressure washing equipment prior to ingress and egress from the Project area.
- The Contractor will implement revegetation activities as promptly as possible following construction and during the optimal seeding and planting window. An adequate vegetative cover greatly reduces the opportunity for invasion by noxious weeds.
- Disturbed areas will be restored in accordance with the landowner agreements. For those areas to be revegetated, a native weed-free seed mix will be used as specified by the landowner(s) or the Natural Resources Conservation Service (NRCS). Certificates of seed analysis are required for all seed mixes to restrict the introduction of noxious weeds. Seed will be used within 12 months of testing.
- The Contractor will use hay or straw bales that are free of noxious weeds. Only certified weed free vegetative components (e.g., mulch, straw/hay bales, seed mixes) will be used on the Project. The

Contractor must identify the source of straw/hay bales and mulch used for erosion control to verify that it is noxious weed-free.

- Immediately after seeding, the Contractor will apply certified weed free mulch on all areas with high erosion potential and on slopes greater than 5 percent. The Contractor will spread mulch uniformly over the area to cover at least 75 percent of the ground surface at an approximate rate of 2 tons per acre of hay or straw or their equivalent. The Contractor will not apply mulch in cultivated areas unless requested by the landowner.
- The Contractor will only apply fertilizer to reclaimed areas as directed by the land management agency, EI, or if requested by the landowner. Fertilizer is known to enhance the growth of noxious weeds.
- Imported gravel and fill material will be source-identified by the Contractor and approved by TBPL to ensure that the originating site is noxious weed-free.

5.2 Treatment Methods

Noxious weed treatment will be in accordance with the NDDA, county regulations, or jurisdictional land management agency. Post-construction control measures may include one or more of the methods listed below.

- Mechanical methods will include hand-pulling, mowing, or disking weeds. If these methods are used, subsequent seeding may be conducted to re-establish a desirable vegetative cover that will stabilize soils and slow the potential re-invasion of noxious weeds.
- County and State-approved herbicides will be utilized to control noxious weed populations at select sites. Applications will typically be controlled to minimize impacts on surrounding vegetation (specific species and locations will be targeted). In areas of dense infestation, a broader application will be used and a follow-up seeding program implemented if needed. The timing of subsequent revegetation efforts will be based on the life of the selected herbicide and appropriate seeding windows. Herbicide application is discussed in greater detail in Section 6.
- In the event an area is not seeded until the spring following construction because of weather or scheduling constraints, all annual weed species and undesirable vegetation that have become established will be mechanically removed (e.g., disking, harrowing, mowing) as part of the seedbed preparation.
- TBPL will respond to landowner reports of post-construction noxious weeds on or adjacent to the ROW or aboveground facilities. Where it is determined that new populations have become established, or weed density or extent exceeds that which occurred in pre-construction circumstances, TBPL will either treat directly, treat via county or private contractor, or reimburse the landowner for reasonable costs associated with the treatment of documented weeds. Mechanical/cultural control methods or herbicide treatments will be considered.
- Under certain circumstances it may be necessary or desirable to clear herbaceous and woody vegetation well in advance of grading operations (i.e., pre-clearing). Depending on site conditions, preclearing could have the potential to contribute to noxious weed dispersal due to soil disturbance and/or the spreading of plant parts. TBPL will implement the following measures to avoid or minimize the spread of weeds during pre- clearing:

- All pre-clearing equipment will arrive on site clean and free of noxious weed seeds or parts; – Vegetation will be cut as close to the ground as possible without disturbing the soil surface;
- Pre-clearing operations will be reassessed if soil conditions become too saturated to avoid soil degradation (via thawing or rain). TBPL may temporarily suspend pre-clearing until conditions improve or use methods that reduce soil disturbance.
- Depending on site conditions, relevant practices outlined elsewhere in this Plan will be implemented per TBPL direction.

Treatment methods will be based on species-specific and site-specific conditions (e.g., plant phenology, proximity to water or riparian areas, agricultural activities, time of year) and will be coordinated with landowners and local regulatory agencies.

5.3 Education

TBPL and the Contractor will provide information to their employees regarding noxious weed identification, reporting, and impacts on agriculture, livestock, and wildlife. The critical importance of preventing the spread of noxious weeds in un-infested areas and controlling the proliferation of weeds already present will be explained.

The importance of adhering to measures to prevent the spread of noxious weeds will be stressed.

6. Herbicide Application, Handling, Spills, and Cleanup

Herbicides will be utilized on a limited basis during the pre-construction phase and as the primary control method during the post-construction phase. Herbicides used on the Project in North Dakota will first be approved by the County Weed Supervisor in the county in which they would be used. All persons applying herbicides will have appropriate and current North Dakota licensing.

6.1 Herbicide Application and Handling

Prior to herbicide application, TBPL or an TBPL Contractor will obtain any required permits from the Project area counties in North Dakota. All TBPL contractors conducting this scope of work will be licensed in herbicide application and will handle, store, and complete herbicide application in accordance with all applicable laws and regulations.

U.S. Environmental Protection Agency herbicide label instructions will be strictly followed. Application of herbicides will be suspended when any of the following conditions exist:

- Wind velocity exceeds six miles per hour for application of liquids or 15 miles per hour for application of granular herbicides.
- Snow or ice covers the foliage of noxious weeds.
- Precipitation is occurring or imminent.

Vehicle-mounted sprayers (e.g., handgun, boom, injector) will be used primarily in open areas that are readily accessible by vehicle. Hand application methods (e.g., backpack spraying) that target individual plants will be used to treat small, scattered weed populations in rough terrain. Calibration checks of equipment will be conducted at the beginning of spraying and periodically to ensure that proper application rates are being achieved.

All herbicide equipment and containers will be inspected daily for leaks.

6.2 Herbicide Spills and Cleanup

All reasonable precautions will be taken to avoid spilling herbicides. In the event of an unintentional herbicide release, immediate action will be taken to clean up the site. A spill kit is required in contractor vehicles used for herbicide application and in herbicide storage areas.

6.3 Worker Safety and Spill Reporting

All herbicide contractors will obtain and have readily available copies of the appropriate Safety Data Sheets for the herbicides being used. Herbicide spills will be reported in accordance with all applicable laws and requirements.

7. Post-Construction Monitoring and Treatment

The focus of TBPL's weed management program is to protect weed-free perennial vegetation by monitoring and treating new or expanded post-construction weed populations within the Project work area.

Monitoring and management of pre-existing noxious weeds in agricultural areas will be conducted on a case-by-case basis in response to landowner reports.

The distribution and density of noxious weeds will be monitored following construction and reclamation of the site in North Dakota. In cultivated field and non-native pastures, monitoring surveys would occur in response to landowner reports. Surveys will be conducted as early in the year as feasible to identify and control noxious weeds before they produce seed. Noxious weeds, if present, will be documented on aerial photo-based maps. Estimates will be made for the entire problem area, comparing disturbed and adjacent areas, and may include a range of species cover and density values. The boundaries of new noxious weed populations within the Project will be drawn on maps and located with a GPS unit.

Weed monitoring will be conducted in conjunction with overall revegetation monitoring after the first growing season following revegetation consistent with the EMP. Treatment of noxious weeds will occur if one or more of the following three criteria are met:

- A new noxious weed population is confined to the construction ROW.
- A noxious weed population is expanding via the construction ROW.
- A noxious weed population is impeding revegetation establishment in the ROW.

Weed treatment will be discontinued if weeds are not present for two consecutive years or if adjacent populations are so extensive that continued treatment and monitoring of the ROW would be ineffective.

8. References

Arcadis US, Inc. 2024. Project Biological Habitat Assessment Report, Thunder Butte Pipeline Project, Ward and Mountrail Counties, North Dakota.

North Dakota Department of Agriculture (NDDA). 2021. North Dakota Noxious Weed Law and Regulations. North Dakota Department of Agriculture, Plant Industries Division, updated May 2021. Available at https://www.ndda.nd.gov/sites/www/files/documents/files/2021%20Noxious%20Weeds%20Book.pdf. Accessed: September 6, 2022.

NDDA 2023. North Dakota Noxious Weeds. https://www.ndda.nd.gov/divisions/plant-industries/noxious-weeds#northdakotanoxiousweeds. Accessed: September 26, 2023.

Arcadis U.S., Inc.
630 Plaza Drive, Suite 200
Highlands Ranch
Colorado 80129
Phone: 720 344 3500
Fax: 720 344 3535
www.arcadis.com