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**Class III Cultural Resource Inventory  
Beaver Creek Archaeology, Inc.**

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# A Class III Cultural Resource Inventory of the Palermo to Enbridge Crude Oil Pipeline in Mountrail County, North Dakota

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*On behalf of:*  
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Cultural Resource Use Permit: N/A  
BCA Project No.: 2015-1029  
August 2015

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## MANUSCRIPT DATA RECORD FORM

1. Manuscript Number:
2. SHPO Reference #:
3. Author: **Brittany Brooks**
4. Title: **A Class III Cultural Resource Inventory of the Palermo to Enbridge Crude Oil Pipeline in Mountrail County, North Dakota.**
5. Report Date: **August 2015**
6. Number of Pages: **39**
7. Type – I = Inventory (Class 3 CRI), T – Test, E= Excavation, O = Other: **I**
8. List formally tested or excavated sites (not probes): **None**
9. Acres – Class 3 inventory only; project description specified only in report: **621**
10. Legal Location(s) (no quarter sections) with Historic Context Study Unit(s): Consult township tables in The North Dakota Comprehensive Plan for Historic Preservation: Archaeological Component, (SHSND 1990) for Study Unit Assignments. Study Units: LM, CB, KN, HE, SM, GA, JA, GR, NR, SR, SO, SH, YE

COUNTY	TWP	R	SEC	SU
Mountrail	156N	91W	25-27, 35, 36	GA
	156N	90W	15-17, 19, 20, 30, 31	GA

## Abstract

The purpose of this investigation was to survey for cultural resources within a proposed project corridor of the Palermo to Enbridge Crude Oil Pipeline project in Mountrail County, North Dakota. A total of 621 acres were surveyed to Class III standards. Due to reroutes, the final project corridor will consist of 293 acres (300-foot wide, 8-mile long). The additional 328 acres of survey will not be utilized for this project but are shown on the map for SHPO survey documentation. Of the proposed 293-acre corridor, 61 acres have been previously inventoried within the past 10 years. An additional 78 acres have been previously inventoried within the past 14 years. As the 78-acre segment is older than 10 years, BCA resurveyed this portion to comply with SHPO standards.

This project is proposed on private property. Due to the Public Service Commission's (PSC) involvement in the project, the applicant must consult with the North Dakota State Historic Preservation Office (ND SHPO). The National Historic Preservation Act (NHPA) requires the applicant to consider what effects the undertaking will have on Historic Properties within the survey area.

Keitu Engineers & Consultants, Inc. on behalf of Sacagawea Pipeline Company, LLC contracted Beaver Creek Archaeology, Inc. (BCA) to conduct this study to fulfill the Section 106 obligations for this project. On May 25, 26, June 13, July 2, and August 4, 2015 Lindsey Reiners (Field Director) Tara Friend, Dyan Youpee, and Michael Rohrer (Staff Archaeologists) conducted the Class III cultural resource inventory for the original route, as well as the reroutes and final route. Wade Burns is the Principal Investigator for this project.

During the inventory, BCA archaeologists identified five previously recorded sites (32MN460, 32MN461, 32MN572, 32MN1148, and 32MN585), and one newly recorded site (32MN1338) within the survey area. In addition to the sites, one isolated find (32MNx839) and two site leads (32MNx300 and 32MNx308) are potentially located within the survey area. All sites will be avoided by the proposed project. A plan of avoidance is proposed for sites 32MN461, 32MN1448, and 32MN1338. Avoidance measures include temporary fencing along a 100 ft site avoidance buffer in conjunction with archaeological site monitoring. As long as this is followed, Beaver Creek Archaeology, Inc. recommends a finding of *No Historic Properties Affected* for this project.

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## Introduction

Keitu Engineers & Consultants, Inc. on behalf of Sacagawea Pipeline Company, LLC contracted Beaver Creek Archaeology, Inc. (BCA) to perform a Class III Cultural Resource Inventory of the Palermo to Enbridge Crude Oil Pipeline project in Mountrail County, North Dakota. The survey area covers 621 acres (see map in Appendix B). The land status is private property.

The legal locations for the survey area are presented below in a tabular format as depicted on the USGS 7.5' Stanley SE and Palermo quadrangle maps:

**Table 1.** Project Location:

Township	Range	Sections	USGS Quad. Map
156N	91W	25, 26, 27, 35, 36	Stanley SE
156N	90W	15, 16, 17, 19, 20, 29, 30, 31	Stanley SE & Palermo

On May 15, 18, and June 10, 2015, Greg Erickson of Beaver Creek Archaeology, Inc. conducted the file search at the North Dakota State Historic Preservation Office (ND SHPO). On May 25, 26, June 13, July 2, and August 4, 2015 Lindsey Reiners (Field Director), Tara Friend, Dyan Youpee, and Michael Rohrer (Staff Archaeologists) performed the pedestrian survey of the original project route as well as the project reroutes and final route. Wade Burns is the Principal Investigator for this project. This report will detail the result of that inventory.

## Project Overview

The proposed project consists of the construction of a crude oil pipeline for Sacagawea Pipeline Company, LLC. The project will be contained within a 300-ft wide 8-mile long corridor approximately 293 acres in size. Of that, 61 acres has been previously inventoried within the past 10 years (see MS#s 10647, 10763, and 15689). During the course of the project, an additional 328 acres were surveyed which will not be utilized (Table 2). As a result of previous inventories and reroutes, 621 acres total have been inventoried to Class III standards (see map in Appendix B).

**Table 2.** Breakdown of the total acres surveyed.

	Acres
Project Corridor	293
Area surveyed but not in final layout	328
<b>Total Acreage Surveyed at Class III Standards</b>	<b>621</b>

\*Previously Inventoried within past 10 years 61 acres.

## Objective

There is no federal undertaking associated with the proposed project. The North Dakota Public Service Commission (PSC) will review the Sacagawea Pipeline Company, LLC application of a pipeline permit, as mandated by the North Dakota Administrative Code (NDAC), Article 69-06. Due to the PSC's participation in the project, the applicant must consult with ND SHPO. The National Historic Preservation Act (NHPA) requires the applicant to consider what effects the undertaking will have on historic properties within the survey area. The three central objectives of this study are to assist the proponent with their Section 106 compliance obligations, identify and assess project impacts to cultural resources located within the survey area, and to provide NRHP recommendations for historic properties encountered within the survey area. Cultural resources

consist of any historic and prehistoric district, site, building, structure, or object (usually) over 50 years of age.

## **Environmental Setting**

The project lies within the Garrison Study Unit (GSU), which is located in the northwestern part of North Dakota. The study unit is situated within the Glaciated Missouri Plateau Subsection, of the Great Plains Physiographic Province (State Historical Society of North Dakota [SHSND] 2008b:6.1). Knob-and-kettle glaciated terrain and other glacial features are common on the Coteau du Missouri. Named streams include the Big Muddy Creek, Painted Woods Creek, Douglas Creek, Shell Creek and Deepwater Creek. Named rivers include Little Muddy River, Little Knife River and White Earth River (SHSND 2008b:6.1-6.6).

Temperatures vary immensely by season with warm summers and cold winters. Precipitation averages around 16 inches annually, most of which falls as rain during the spring and summer months. Prevailing winds throughout the year average around 16 mph from the west-northwest (SHSND 2008b:6.6).

Landforms in this area consist of glaciated uplands, breaks terrain, valley wall side slopes and foot slopes, draws, alluvial terraces, and floodplains. This area of North Dakota is situated in the Northern Temperate Grasslands biome. The mixed grass prairie is dominated by western wheatgrass, blue grama, and needle-and-thread. This grassland provided good habitat for large game animals, such as bison and antelope. Gallery forests grew along the Missouri River and other tributaries and provided a suitable environment for white-tailed deer and small mammals such as muskrat and porcupine. Hardwood draws of bur oak, green ash, and juniper are part of transition zones between the grasslands and floodplain forests. Food plants in the area include chokecherry, buffaloberry, and gooseberry (SHSND 2008b:6.7).

In general, the faunal diversity in the area at contact time was as great as or greater than anywhere in the state (SHSND 2008b:6.8). Animals that could be hunted for meat, hides, feathers, teeth, bones, etc., included bison, elk, antelope, white-tailed deer, mule deer, bighorn sheep, mountain lion, coyote, foxes, eagles, hawks, owls, and a variety of waterfowl, fish, turtles, and mussels (SHSND 2008b:6.8).

Today the area contains an agricultural-based economy. Wheat, corn, sunflowers and grasslands comprise the project area. Tree cover is limited to wind blocks surrounding farmsteads and along riparian areas.

This biotic diversity along with the availability of water makes this setting favorable for human settlement, both during prehistoric and historic time-periods. One prominent natural resource in this area is Knife River Flint (KRF), which is abundant and has been quarried for centuries by native peoples. In addition, good quality Tongue River Silicified sediment, chalcedonies, and silicified wood attracted people to the area. These stones are capable of conchoidal fracturing and are ideal for stone tool production.

## **Native American Cultural Background**

The majority of archaeological sites found within the Garrison Study Unit are stone circle sites, followed by cultural material scatters and cairn sites. These types of sites are most often found on ridge and hill settings (SHSND 2008b:6.9). The project is located near Stanley, and the site distribution is moderate within a one-mile radius of the APE (where the file search was conducted). The archaeological horizons encountered in North Dakota are as follows:

### ***Paleo-Indian Period (9500-5500 B.C.)***

Due to the amount of sediment erosion and deposition that has taken place across the landscape since early Holocene times, it is difficult to locate intact Paleo components in the GSU. However, areas near tributaries on ridgetop and terrace settings have yielded plant and animal remains and shed light on Paleo-Indian subsistence patterns and lithic technologies. The Beacon Island site (32MN243A), for example, is an Agate Basin site that contains intact, unmixed, and datable remains of *Bison antiquus* and the Moe site (32MN101), which contains Folsom and later Paleo remnants, was found above today's reservoir water level. The most significant areas to discover Paleo-Indian remnants have been in the Knife River flint (KRF) principal source area and in or near the Missouri River valley. Knife River flint was the flint of choice to early groups producing lithics in this region (SHSND 2008b:6.63-6.65). "Two lithic technological procedures prominently represented at sites in the GSU are Folsom fluting and blade production" (SHSND 2008b:6.64). The Moe site yielded Folsom, Plainview (or Goshen), Agate Basin, Parallel-Oblique Flakes, and Scottsbluff points.

### ***Plains Archaic Period (5500-400 B.C.)***

Middle and Late Plains Archaic deposits are found in quickly deposited sedimentary context, which correlate with erosion in the uplands from subsequent drought. Plains Archaic remnants have frequently been discovered in upland settings as well as in terrace and riverbank locations. The Middle and Late Archaic components at the Mondrian Tree site (32MZ58) yielded bone remains of bison, antelope, elk, deer, beaver, and canids. This site also has evidence of summertime collecting and processing of plant foods, such as goosefoot, marsh elder, knotweed, dogbane, wild grape, hedge nettle, and mallow, with a sandstone grinding slab and quartzite mano (SHSND 2008b:6.66-6.67).

Early Plains Archaic components are indicated by finds of Simonsen points. Middle Plains Archaic components are represented by Oxbow, McKean, Duncan, and Hanna points. Late Plains Archaic components are indicated by finds of Yonkee and Sandy Creek points. Numerous Early, Middle, and Late Plains Archaic projectile point styles have proven to be reliable cultural/temporal indicators for relative dating in the GSU (SHSND 2008b:6.67-6.68).

### ***Plains Woodland Period (400 B.C.–A.D. 1200)***

Environmentally favorable conditions, the development of biomass, peaked twice during the Plains Woodland period, which coincide with the peak of the Besant/Sonota culture of the Middle Plains Woodland period and Late Plains Woodland period to early Plains Village period. Besant/Sonota components are rather common. Mortuary sites, such as the Boeckel-Renner site (32ME799), along with a large number of sites in the area indicate that people with the Middle Plains Woodland Besant/Sonota material culture had permanent occupation within the GSU. Site 32ME947 is a stratified, multi-component bison kill and processing site with a Middle and Late Plains Woodland components, which is associated with the Old Women's complex. Other Late Plains Woodland cultures in the GSU are represented by Avonlea and Mortlach (SHSND 2008b:6.69-6.70). "Subsistence remains from the Mortlach component at the Evans site (32MN301) include bison, swift fox, coyote, deer, duck, and charred plum seed. Bison scapula digging tools were found, but not any remains of garden crops" (SHSND 2008b:6.71).

Ceramic technologies in the area show up around the Middle Plains Woodland period at sites such as the Nightwalker's Butte (32ML39), the Evans site, and the Mondrian Tree site (32MZ58). Mortlach ceramics display substantial variability in decoration and vessel form. Lithic technologies also show stylistic variation in the Late Plains Woodland period with Prairie Side-Notched points, Avonlea points, and other variations of side- and corner-notched points.

Obsidian, from southeastern Idaho, of possible Besant/Sonota cultural affiliation was recovered from the Boeckel-Renner site (SHSND 2008b:6.71-6.73).

### ***Plains Village Period (A.D. 1200-1780)***

Prior to 1780, the GSU was mainly an area of hunting camps and temporary settlements. “Field camps were established in a sheltered tributary stream valley setting at the Mondrian Tree site (32MZ58)” and specialized activities went on in an adjacent open upland rim setting at the Edna Mae site (32MZ369) (SHSND 2008b:6.74-6.75). Sometime within the middle of the Plains Village period, there was a drought episode, during which time the subsistence base was diminished and conflict arose. As a result, settlements, such as the White Earth Creek site (32MN101), had fortification ditches and palisade walls with bastions to protect their people (SHSND 2008b:6.73-6.75).

Besides hunting, the Plains Villagers grew corn, melons, pumpkins, and beans. Several ceramic temporal trends occurred during the Plains Village period via vessel forms and types of decoration. These are associated with the Knife River phase and Scattered Village complex. Exotic nonlocal shell, such as dentalium and abalone shell, and other trade goods have been found at the Mondrian Tree site (SHSND 2008b:6.75-6.76).

### ***Equestrian/Fur Trade Period (A.D. 1780-1880)***

The advent of the Fur Trade and increased Euro-American contact in the 19<sup>th</sup> century brought about many changes in the traditional culture of groups such as the Mandan, Hidatsa, and Arikara. The Fort Berthold Reservation was established in 1870 for the Mandan, Hidatsa, and Arikara to protect them from hostile Equestrian Nomads (SHSND 2008b:6.76). Metal tools and implements obtained via trade replaced traditional items of stone, bone, wood, shell, and clay. The gun ascended to a place alongside the bow and arrow in basic weaponry. Temporary tipi camps were set up by hunting parties during different seasons of the year, and these settlements functioned as the field camps of pedestrian hunter-gatherers. Many of these locations, unless repeatedly reoccupied or marked by stone circles, probably contain little in the way of identifiable material traces in the archaeological record. The horse-mounted hunting and gathering peoples subsisted on bison; however, wild plant foods, other wild animal foods, and garden produce received in exchange with settled Village gardeners also were significant components of the diet (SHSND 2008b:6.76-6.78).

Intertribal trade that occurred during the Equestrian period has its beginning in prehistoric times. The Hidatsa traded with the Crow, Dakotas, Cheyenne, and others to the south and southwest (SHSND 2008b:6.78). Fur trade between Indians and non-Indians within the GSU, such as between the Assiniboine and Fort Kipp, began around 1826. Besides trading, there are a number of written and ethnographic accounts of horse-mounted Indian groups using this area, such as the Crow, Dakota, Cheyenne, Assiniboine, and Hidatsa. The Crows traveled through here going between their Big Horn Mountain territory and their Missouri River village homeland. There may have been territorial continuity between the Crow and the Hidatsa from the time the two split in the 1500s until the Hidatsa were drastically weakened by the plagues in the late 1700s (SHSND 2008b:6.77-6.79).

### ***Reservation Era (A.D. 1880-present)***

Between 1850 and 1870, the United States government created reservations to separate the Native Americans and the influx of settlers. Where they were once able to move freely, Native Americans were now restricted to a designated area. In 1887, the Dawes Act divided tribal land into individual land allotments as a means of assimilating Native Americans into Euro-American society. By using individual land allotments as a means of breaking tribal culture, the United

States government sought to cease their way of life and force conversion to Christianity, farming, and education of children at boarding schools. Children were taken from their family and placed in boarding schools (Indian schools), such as the Fort Stevenson Indian School, Bismarck Indian School, and the Carlisle Indian School in Pennsylvania, and were prohibited from using their language, practices, and culture and emphasized Euro-American culture. Today, the Dawes Act is considered the most destructive policy dealing with Native peoples (Mandan, Hidatsa, and Arikara Nation [MHA Nation] 2012a, 2012b; SHSND 2008c).

In 1934, in an effort to rectify some of the damage done, the Indian Reorganization Act was established that secured certain rights to Native Americans. This included the reversal of the Dawes Act and a return to local self-government on a tribal basis. However, in the late 1940s and early 1950s the Indian Reorganization Act was disassembled. The plan was to establish a policy that would eliminate tribal status all together. In 1975, the Indian Self-Determination and Education Assistance Act was enabled. This policy meant to allow tribal autonomy while still benefitting from government treaty obligations. American Indian Religious Freedom Act of 1978 was created to protect and preserve the traditional religious rights and cultural practices of Native Americans. In addition to Self-Determination, other laws were passed such as the Indian Civil Rights Act, the Indian Financing Act, and the Indian Child Welfare Act (SHSND 2008c).

Today, reservations have tribal government, which administers many governmental, economic, health, welfare, and educational programs. There are still problems on Indian Reservation, such as poverty, crime, and alcoholism; however, there is also economic growth because of small independent business, farming, and gaming (MHA Nation 2012c).

## **Euro-American Cultural Background**

The majority of historic sites within North Dakota are farmsteads/homesteads from the late 19<sup>th</sup> century and early 20<sup>th</sup> century.

### ***Dakota Territory (1858-1889)***

The Dakota Territory consisted of the northernmost part of the land acquired from France in the 1803 Louisiana Purchase and in 1818, the United States acquired the northeastern portion of the Dakota Territory in a treaty with Great Britain. The Dakota Territory included North Dakota, South Dakota and much of present-day Montana and Wyoming. After becoming an incorporated territory in 1861, the population was slow to increase due to Indian attacks. Eventually, the population increased during the “Dakota Boom,” from 1870 to 1880, because of the railroad growth and the Homestead Act of 1862. Many of the settlers came from Germany and the Scandinavian countries of Norway and Sweden. The economic base was organized around agriculture, mining, and cattle ranching (Federal Writers Project [FWP] 1938).

*Fur Trade* – Before and after the Lewis and Clark 1803 expedition, explorers such as Sieur de la Vérendrye, David Thompson, Charles Chaboillez, Alexander Henry, and Manuel Lisa ventured into the area either looking for trade routes or to establish fur trading posts. Consequently, “between 1806 and 1850 Spaniards from St. Louis, Frenchmen from Quebec, Scots and Britons from Hudson’s Bay and Montreal, and Americans working either as free traders or engages for a dozen fur companies” headed into the region (FWP 1938; Lamar 1996:27).

*Forts* – The majority of the forts in the region were constructed in the 19<sup>th</sup> century. Their purpose included trading outposts, primarily fur trade and military posts for the protection of supply routes, trails, trade, and settlers. These forts, prior to the introduction of the railroad were along rivers such as the Missouri, Yellowstone, Heart, and Red rivers. Some of the more notable forts include Fort Mandan, Fort Lisa, Fort Henry, Fort Clark, Fort Union, Fort Abercrombie, Fort

Berthold, Fort Buford, Fort Rice, Fort Totten, and Fort Abraham Lincoln (FWP 1938; SHSND 2008a).

*Trails* – Two major trails, the River Trail and the Ridge Trail, branches of the network of Red River Trails in the Red River Valley, originally were Native American trails that were later used by Euro-American fur traders. The Red River Trails connected fur trading posts, where they hauled furs and goods by ox cart. Later, the trails also connected military posts, where military supplies and men were sent. These military posts (e.g., Fort Abercrombie, Fort Totten, and Fort Ransom) also protected the trails as well as the people traveling up and down the trails. Eventually the trails and ox carts were replaced by the railroad (Gilman et al. 1979).

A notable trail in the western part of the region is the Bismarck-Deadwood Stage Trail (1887-1880). This trail was a stagecoach and supply line that ran between Bismarck, the western terminus of the Northern Pacific Railroad and the Black Hills gold town of Deadwood in Dakota Territory. There was transportation and economic booms associated with this trail and that boom ended when the railroad reached Pierre and an alternate line opened (SHSND 2008a).

*Riverboats* – The Missouri and Red rivers were important to the settlement and expansion of the Dakota Territory and were used the most for river transportation. Riverboats such as rafts, sailboats, rowboats, Mackinaws, keelboats, and steamboats brought explorers and fur traders into the Dakota Territory; however, the keelboat and steamboat were probably used more often due to their carrying capacity. “Keelboats were used primarily from 1800 to 1840, when they were replaced by steamboats” (Miller 2012). This type of boat floated high in the water allowing it to travel on shallow rivers and was able to carry 15 to 30 tons of cargo. River transportation becomes increasingly important for transporting goods to outposts and return furs downstream.

Steamboats eventually replaced the keelboats and were used for cargo and passenger transportation. The riverboat industry became a popular mode of transportation, as it was much easier to deliver goods to remote areas by boat than overland routes. In addition, “settlers and visitors could also travel much more safely by taking steamboats” (Burns 2004:14). The demise of riverboat transportation occurred for several reasons: (1) less shipping of passengers and cargo, (2) scarcity of wood yards, (3) inconvenient climate, (4) labor unrest, and (5) the railroad. Shipping on the Red River continued until 1912 and until the 1930s on the Missouri River (Burns 2004).

*Railroad* - Major development of the railroad in the Dakota Territory occurred in the 1870s and 1880s between the Northern Pacific Railroad and the Great Northern Railroad. The success of the railroad was primarily because of agriculture and increasing settlement. Federal land grants were given to the Northern Pacific Railroad, who in turn sold the land, while the Great Northern Railroad bought its lands from the federal government and promoted settlement along its lines (FWP 1938).

*Agriculture* – The Federal Homestead Act of 1862 offered free land to anyone over 21 years-old who would cultivate and improve his 160 acres of land and live on it for 5 years. An additional 160 acres could be obtained for a tree claim and a third track of land could be acquired before or after the land was surveyed. Crops planted and harvested included spring wheat, durum, flaxseed, barley, oats, sugar beets, corn, hay, red clover, alfalfa, sweet clover, and seed potato. Ranching of cattle and sheep, poultry raising, and bee keeping was also done on farms (FWP 1938).

Bonanza farms or large farms so-called because of their almost fabulous yields of wheat open to settlement in 1863. The main purpose of Bonanza farms was to demonstrate the potential wealth of the Red River Valley. Most of these farms were owned by companies in the east, with resident

managers, were run like factories with hundreds of men, and used advanced farming methods. Bonanza farms thrived in the Red River Valley during the last two decades of the 19<sup>th</sup> century; however, they were eventually subdivided into smaller farms (FWP 1938).

### ***North Dakota (1889-Present)***

North Dakota became the 39<sup>th</sup> state to enter the Union on November 2, 1889. After statehood, industrial development increased. The railroad industry expanded and peaked in 1905 through competition between the Great Northern Railway and the Soo Line. Large lignite mines opened and local brickworks and flourmills flourished in the state. Entrepreneurs built stores, shops, and offices along Main Street and town squares. While rural areas still relied on small local general stores, city consumers had more choice with locally owned department retail stores. In 1919, the Bank of North Dakota at Bismarck opened and has become a large and powerful economic force. “The State Mill and Elevator at Grand Forks, completed in 1922, provided a market for grain and a source of feed and seed [and] the state hail insurance program benefitted many farmers until its elimination in the 1960s” (SHSND 2012).

Farm homes in the eastern part of the state were small, close together with well-painted modernized buildings surrounded by neat lawns and tree groves. They had modern conveniences like electricity, telephones, radios, and cars. In the central part of the state, farms were not as modernized as eastern North Dakota but were well kept. In western North Dakota, the shacks erected to establish residence under the Federal Homestead Act were still in use in the early 20<sup>th</sup> century (FWP 1928).

For North Dakota, the 1920s and 1930s were an economic depression, starting with the 1920 collapse of wartime prices for grain. In 1921, more banks closed than in any other year, resulting in farm foreclosures. At the same time, farm size increased and many farmers mechanized their operations. A dramatic shift to motorized transportation put a greater emphasis on better roads and bridges (SHSND 2012).

The Great Depression of the 1930s slowed progress and spurred change. Rural population decreased while the city population grew. Because of the price decline of farm produce, cooperatives enjoyed a renewed popularity as farmers banded together to market their produce and reduce the cost of farming. Farmers Unions built local elevators and organized oil cooperatives that served the needs of the rural community. Despite economic problems, crop failures, dust storms, and extreme weather, North Dakota visibly modernized during the 1930s. Federal relief programs improved highways, state parks, and city services throughout the state. State departments undertook public health and safety problems, and a movement for consolidated law enforcement was started with the formation of a State Highway Patrol in 1935. “Rural schools consolidated at an increasing rate. Public utilities extended their reach through development of rural electric cooperatives; the first, Baker Electric of Cando, energized its lines in 1938” (SHSND 2012).

Immediately, after Franklin Roosevelt took the oath of office he began passing a series of laws aimed at putting people back to work, restore faith in the banking system, and shore up the economy (SHSND 2012). Among these laws included the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC). In North Dakota between 1935 and 1942, the WPA built 20,373 miles of highways and streets, 821 new bridges and viaducts, 166 miles of sidewalks, 15,012 culverts, 503 new public buildings, 61 building additions, 680 outdoor recreation facilities, 809 water wells, two irrigation projects, 39 sewage treatment plants, and nine water treatment plants, as well as other reconstructions and repairs (Robinson 1966:408). In June of 1933, some 235,000 men were enrolled in the CCC to work on federal and state public

improvement projects. They built national forest trails, campsites, and visitor centers in state and national parks as well as roads and dams (SHSND 2012).

In the 1940s, with more favorable weather and improved crop yields, farmers benefitted by the higher prices stimulated by America's entry into World War II. By the end of the war, farm debt had dropped noticeably. After the war, the industrial economy continued to prosper. "In 1946, the demand for Missouri River flood control and diversion of the river's waters for irrigation and industrial development were rewarded with initiation of construction on the Garrison Dam" (SHSND 2012). The development of natural resources expanded in 1951 when oil was discovered within the Bakken near Tioga. Communication and interstate transportation systems improved and expanded in the 1950s. By the 1960s, two large Air Force Bases, one in Minot and the other in Grand Forks, had been built as a modern continuation of an historic role in Federal military strategy that began in the 1860s. In the 1950s, as private auto transportation increased, the use of passenger rail service declined, railroads had increasingly become a means of hauling freight (SHSND 2012).

The 1960s signified the start of large-scale energy development because of high demand, which led to the development of power plants and coal strip mines. An oil boom occurred in 1978 as a result of high international crude oil prices, causing increase in the population of towns such as Dickinson, Williston, and Watford City. This oil boom and subsequent population increase did not last as worldwide oil prices declined in 1981 and oil workers moved away (SHSND 2012). Another oil boom started in 2008, is still ongoing, and resulted in enough oil and gas jobs to give North Dakota the lowest unemployment rate in the United States. In addition, the oil boom has supplied economic growth in other areas such as the service industry (Rocco 2013).

### **Class III Pedestrian Survey**

BCA cultural resource staff conducted the Class III cultural resource inventory within the survey areas on May 25, 26, June 13, July 2, and August 4, 2015. The location of the project area can be seen in the map located in Appendix B. The Palermo to Enbridge Crude Oil Pipeline is an 8-mile long, 300-foot wide (293-acre) pipeline corridor. Sixty-one acres of the corridor have been previously inventoried (see MS#s 10647, 10763, and 15689) within the past 10 years. An additional 78 acres of the corridor had been previously surveyed in 2001. However, since the survey is greater than 10 years old additional survey was conducted along that portion of the corridor. A total of 621 acres were inventoried during this project and additional projects within the past 10 years for the project corridor and reroutes.

#### ***File Search***

On May 15, 18, and June 10, 2015, Greg Erickson of Beaver Creek Archaeology, Inc. conducted the file search at the ND SHPO. The purpose of the file search is primarily to identify previously recorded archaeological and historical sites, and also to identify previous inventories in the area. The file search revealed 36 sites, 19 site leads, and two isolated finds in a one-mile radius of the survey area (see Appendix C for tables). There are 17 manuscripts on file for the sections in which the survey area is located (see Appendix C for table). Five previously recorded sites (32MN460, 32MN461, 32MN572, 32MN585, and 32MN1148) and one previously recorded isolated find (32MNx839) are located within or near the survey area. In addition, two previously recorded site leads (32MNx300 and 32MNx308) are potentially located within the survey area.

### ***Inventory Methodology***

The survey area was inventoried by the BCA archaeologists walking parallel linear pedestrian transects between 10-15 m apart based upon terrain probability for cultural resources. Shovel probes were implemented if the Ground Surface Visibility (GSV) dropped below 30%.

If a cultural resource is encountered, the location is marked with pin-flags and the surrounding area is intensely scrutinized to determine the nature and extent of the resource. The resource is then plotted on a USGS 7.5' Quadrangle map and a sketch-map utilizing a Trimble GPS unit is made. Cultural Resources consists of any historic or prehistoric district, site, structure, or object (usually) over 50 years of age.

### ***Site Evaluation Criteria***

To be eligible for inclusion on the National Register of Historic Places (NRHP), a site must usually be more than 50 years old, retain its integrity of location, design, setting, materials, workmanship, feeling, and association and it must meet one of the following criteria:

- (a) Associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) Associated with the lives of persons significant in our past; or
- (c) Embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinctions; or
- (d) Have yielded, or may be likely to yield, information important in prehistory or history.

Throughout the survey, field notes and overview pictures of the survey area were taken (see photos in Appendix A). Copies of maps, field notes, and photographs are located at the BCA main office in Bismarck, North Dakota.

### ***Project Personnel***

The Secretary of the Interior (SOI) qualified archaeologist Wade Burns is the Principal Investigator for this project and Lindsey Reiners (Field Director), Michael Rohrer, Dyan Youpee, and Tara Friend (Staff Archaeologists) performed the pedestrian survey. Mary Mortensen (GIS Coordinator) created the project map.

### ***Survey Conditions***

Weather conditions consisted of clear skies, and the temperature ranged from 70-85°F. The project area is located on the rolling plains within the Missouri River drainage system. The survey area is located within plowed fields, planted fields, hay fields, and rangeland. Vegetation in the area consists of planted (lentils or flaxseed), bearded wheatgrass, needle-and-thread, sweet clover, little bluestem, sagebrush, brome, slender wheatgrass, and other native and non-native grasses, plants, and forbs. The elevation of the survey area is approximately 2,100-2,277 feet. During the course of the inventory, the GSV was approximately 80% in plowed and planted fields, 40% in hayfields, and 30-50% in rangeland. As a result, no shovel probes were implemented, as the GSV never dropped below 30%. Areas of higher visibility, such as erosion features, areas of sparse vegetation and rodent burrows were also closely examined for cultural material.

### ***Field Notes***

Field observations were recorded as field notes in a bound notebook, portions of which were transcribed into sections of this report. Digital photographs were taken, are on file at Beaver Creek Archaeology, and are included in this report. This report is printed on acid-free paper.

### Cultural Resource Results

During the inventory, cultural resources were found within the survey area. The findings are listed below and described in Appendix D.

During the inventory, BCA archaeologists identified five previously recorded sites (32MN460, 32MN461, 32MN572, 32MN585, and 32MN1148) and one newly recorded site (32MN1338). Sites 32MN460, 32MN461, 32MN585, and 32MN1148 are Native American stone feature sites and sites 32MN572 and 32MN1338 are Historic/Architectural sites. The Native American stone feature site 32MN460 is located on Enbridge property. The site was excavated in 2013 by Metcalf and determine ineligible. As the site is *not eligible* for the NRHP, no avoidance is recommended necessary. Stone feature sites 32MN461, 32MN585 and 32MN1148 are recommended *unevaluated* for the NRHP. Only 32MN461 and 32MN1148 are within the final route corridor and are recommended to be avoided by a minimum of 100 ft. In addition, temporary site buffer fencing in conjunction with archaeological site monitoring are recommended during construction activities to ensure site avoidance. Site 32MN585 is not located within the final route and will not be impacted by the proposed project.

Architectural site 32MN572 has been recommended *not eligible* for the NRHP and was located within one of the project routes. The site is not located within the final route and will not be impacted by the proposed project. No avoidance is recommended necessary. Historic/Architectural site 32MN1338, recorded during the current inventory, is recommended *unevaluated* for the NRHP. As the site is *unevaluated*, BCA recommends that the site be avoided during construction activities. The proposed pipeline will avoid the site by 125 ft and no features associated with this site will be impacted by the proposed project. However, to ensure site avoidance during construction activities, BCA recommends temporary fencing along a 100 ft site buffer in conjunction with archaeological site monitoring.

Previously recorded isolated find 32MNx839 is located within the survey area; however, when revisiting the isolated find location, the isolated find could not be relocated. Isolated finds are *not eligible* for the NRHP. In addition, during the cultural resource inventory, no evidence of site leads 32MNx300 and 32MNx308 were observed within the survey area and no avoidance is recommended necessary.

**Table 3.** Cultural resources located within or near the survey area.

Site	Affiliation	Description	NRHP Status	Recommendation
32MN460	Period Unknown	4 Stone Circles (Tested)	Not Eligible	No Avoidance Necessary
32MN461	Period Unknown	~19 Stone Circles	Unevaluated	Avoidance by 100 ft w/ temporary fencing & monitoring
32MN572	Architectural	5 Outbuildings	Not Eligible	No avoidance Necessary
32MN585	Period Unknown	3 Stone Circles, 2 Cairns	Unevaluated	Avoidance (not in final route)
32MN1148	Period Unknown	Cairn	Unevaluated	Avoidance by 100ft w/ temporary fencing & monitoring
32MN1338	Historic/ Architectural	Abandoned Farmstead	Unevaluated	Avoidance by 100 ft w/ temporary fencing & monitoring
32MNx300	Period Unknown	Site Lead: CM Scatter	Unevaluated	No Avoidance Necessary
32MNx308	Period Unknown	Site Lead: CM Scatter	Unevaluated	No Avoidance Necessary
32MNx839	Period Unknown	Isolated Find: Flake	Not Eligible	No Avoidance Necessary

### ***Summary and Recommendations***

On May 25, 26, June 13, July 2, and August 4, 2015, BCA conducted a Class III cultural resource inventory of the proposed project area. The Class III inventory covered approximately 621 acres. The location of the survey area can be seen on the map located in Appendix B.

The file search revealed 36 sites, 19 site leads, and two isolated finds in a one-mile radius of the survey area.

During the inventory, BCA archaeologists identified five previously recorded sites (32MN460, 32MN461, 32MN572, 32MN585, and 32MN1148) and one newly recorded site (32MN1338). Sites 32MN460, 32MN461, 32MN585 and 32MN1148 are Native American stone feature sites and sites 32MN572 and 32MN1338 are Historic/Architectural sites. The Native American stone feature site 32MN460 is located on Enbridge property. The site was excavated in 2013 by Metcalf and determine ineligible. As the site is *not eligible* for the NRHP, no avoidance is recommended necessary. Stone feature site 32MN585 is recommended *unevaluated* for the NRHP and was located within one of the proposed project routes. However, the site is not located within the final route and will be avoid completely by the proposed project. Site 32MN1148 is recommended *unevaluated* for the NRHP and is located within the final route corridor. The site is recommended to be avoided by a minimum of 100 ft and have temporary site buffer fencing in conjunction with archaeological site monitoring to ensure site avoidance during construction activities. Site 32MN461 is recommended *unevaluated* for the NRHP and is partially located within the final route corridor. The site is recommended to be avoided by a minimum of 100 ft and have temporary site buffer fencing in conjunction with archaeological site monitoring to ensure site avoidance during construction activities

Architectural site 32MN572 has been recommended *not eligible* for the NRHP and was located within one of the project routes. The site is not located within the final route and will not be impacted by the proposed project. No avoidance is recommended necessary. Historic/Architectural site 32MN1338, recorded during the current inventory, is recommended *unevaluated* for the NRHP. As the site is *unevaluated*, BCA recommends that the site be avoided during construction activities. The proposed pipeline will avoid site 32MN1338 by 125 ft and no features associated with this site will be impacted by the proposed project. However, to ensure site avoidance during construction activities, BCA recommends temporary fencing along a 100 ft site buffer in conjunction with archaeological site monitoring.

Previously recorded isolated find 32MNx839 is located within the survey area; however, when revisiting the isolated find location, the isolated find could not be relocated. Isolated finds are *not eligible* for the NRHP. In addition, during the cultural resource inventory, no evidence of site leads 32MNx300 and 32MNx308 were observed within the survey area and no avoidance is recommended necessary.

Provided that the sites listed in Table 2 are avoided be the aforementioned avoidance recommendations of temporary fencing along a 100 ft site buffer in conjunction with archaeological site monitoring, Beaver Creek Archaeology, Inc. recommends that the project proceed under a *No Historic Properties Affected* as surveyed, mapped, and described herein.

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## **Appendix A: Survey Area Photographs**



**Figure 1.** Overview of the survey area. View to the east.



**Figure 2.** Overview of the survey area. View to the west.



**Figure 3.** Overview of survey area. View to the west.



**Figure 4.** Overview of survey area. View to the east.



**Figure 5.** Overview of survey area. View to the east.



**Figure 6.** Overview of survey area. View to the east.



**Figure 7.** Overview of survey area. View to the south.



**Figure 8.** Overview of the survey area that has some disturbance. View to the east.



**Figure 9.** Overview of the survey area. View to the west.



**Figure 10.** Well pad adjacent to the survey area.

## **Appendix B: Maps**

# Palermo to Enbridge Crude Oil Pipeline

For: Sacagawea Pipeline Company, LLC.

## Legend

----- Pipeline Route (8 miles)

Final Route Project Area (293 acres)

Reroute II Project Area (325 acres)

Reroute Project Area (96 acres)

Original Project Area (306 acres)

Not Surveyed No Permission (9 acres)

Previous Surveys (109 acres within past 10 years)

(169 acres within past 14 years)

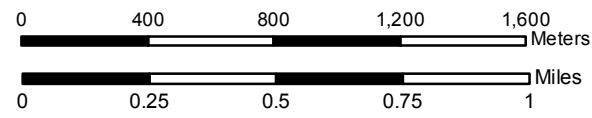
Legal Locations:  
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T156N R90W Sec. 15-17, 19, 20, 29, 30, 31

Stanley SE & Palermo Quad. Maps

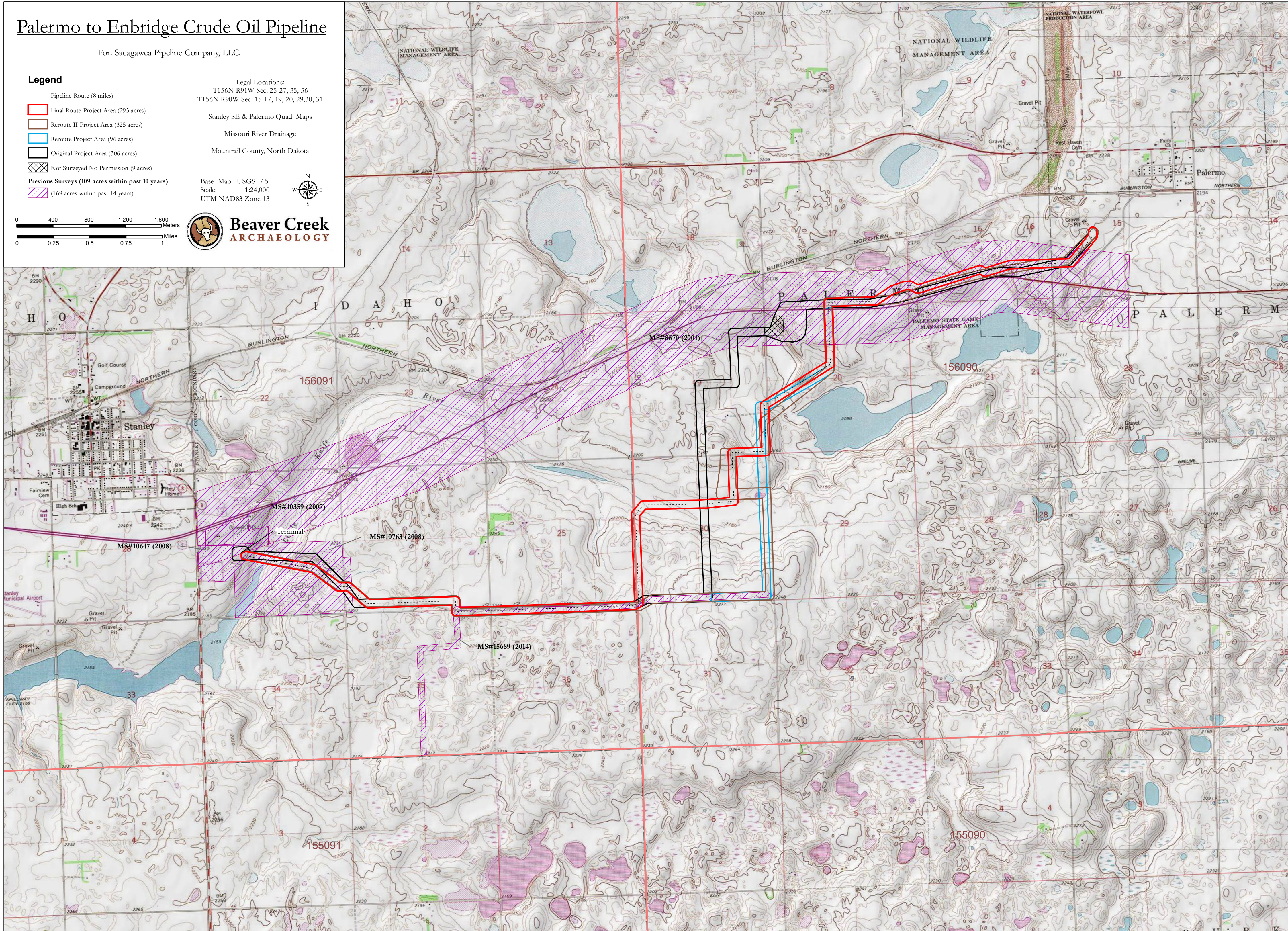
Missouri River Drainage

Mountrail County, North Dakota

Base Map: USGS 7.5'  
Scale: 1:24,000  
UTM NAD83 Zone 13



**Beaver Creek**  
**ARCHAEOLOGY**



## **Appendix C: Literature Search**

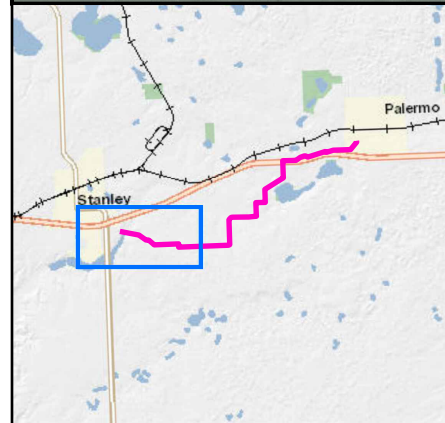
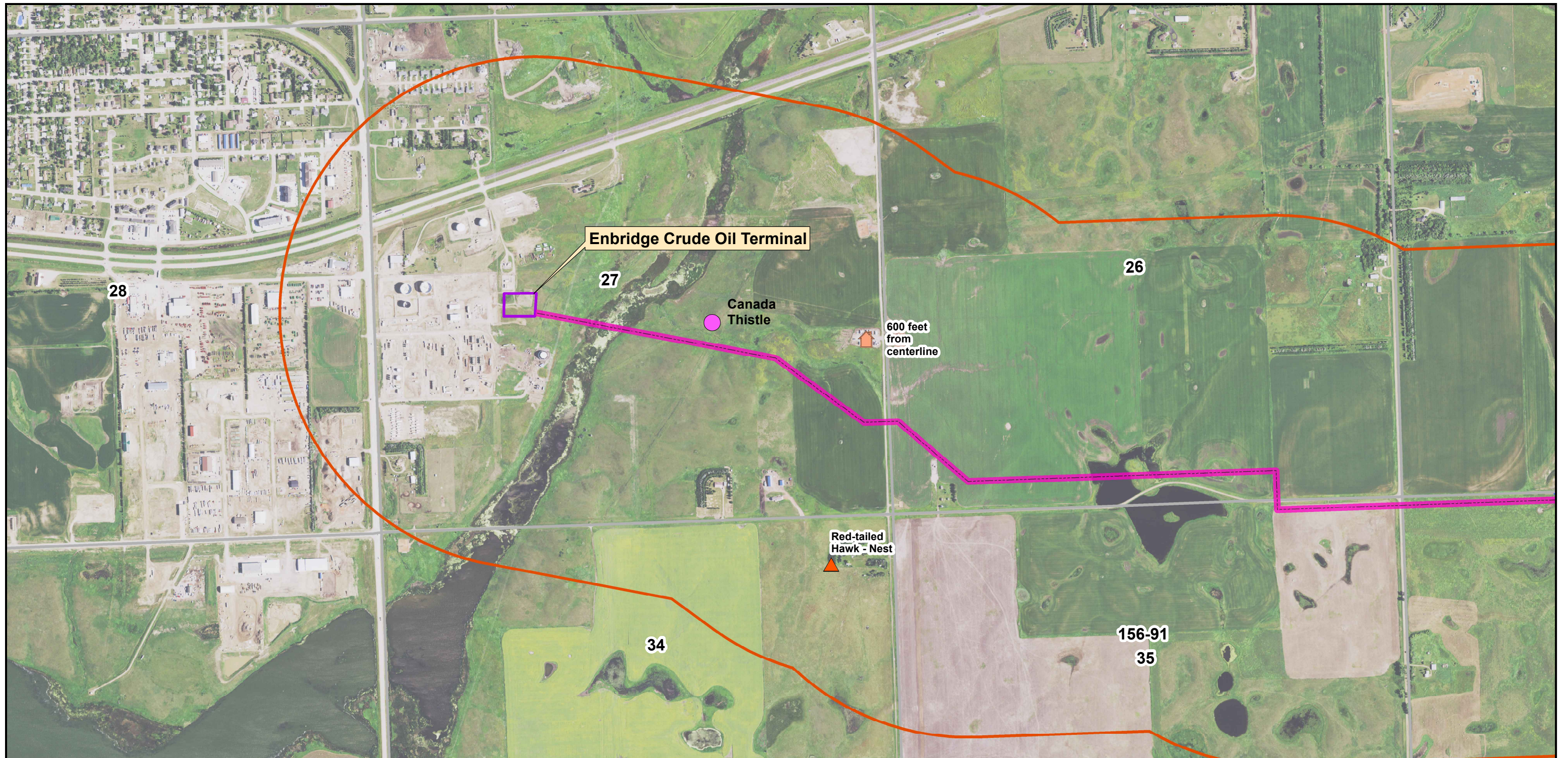
**Information Removed due to ND SHPO Regulations for Public Dispersal of Documents**

## **Appendix D: Site Descriptions**

**Information Removed due to ND SHPO Regulations for Public Dispersal of Documents**

## **APPENDIX 4.B**

### **Maps of Exclusion and Avoidance Areas**



**Legend**

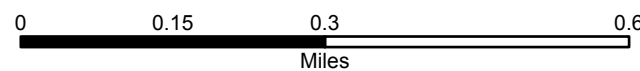
- Centerline
- Study Area
- Residence
- Enbridge Crude Oil Terminal
- Wetland - FWS Easement
- Township Border
- Section Border

**Sensitive/Noxious Study Data**

- Canada Thistle

**Raptor Nest**

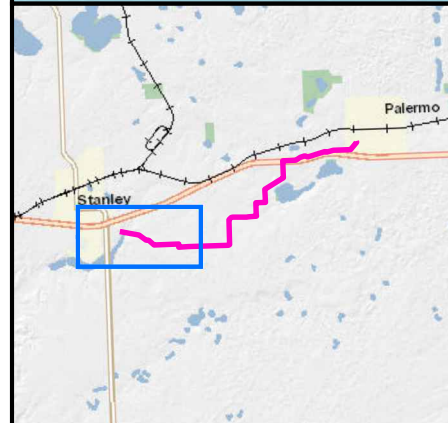
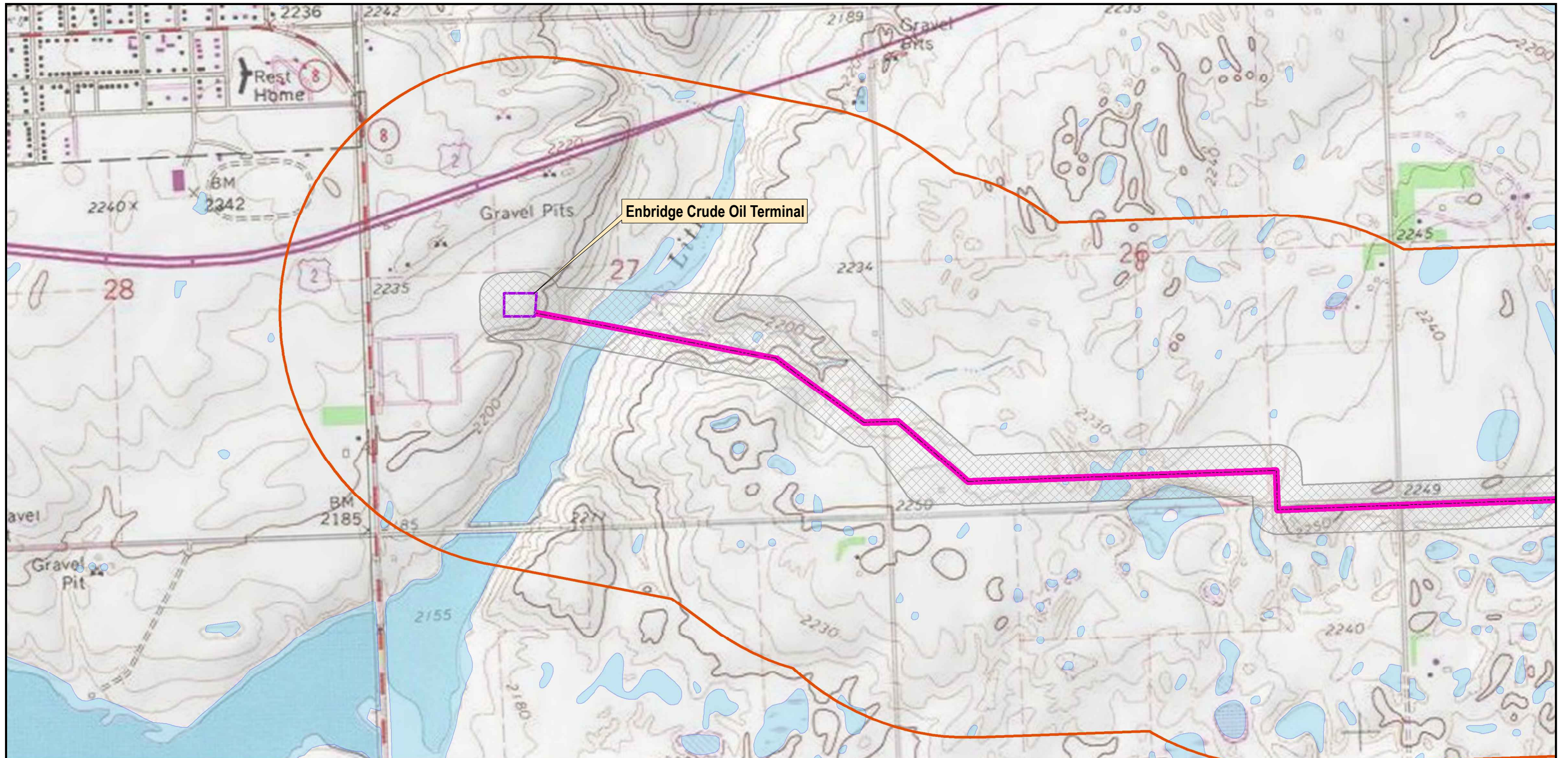
- Red-tailed Hawk - Nest








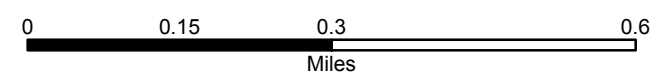
**SACAGAWEA**  
PIPELINE COMPANY, LLC

Palermo to Enbridge  
Crude Oil Pipeline  
Mountrail County, ND

**Figure 4.B.1a - Route Map**



- Legend**
-  Study Area
  -  Centerline
  -  500-foot-wide Survey Area
  -  Enbridge Crude Oil Terminal
  -  NWI Wetland

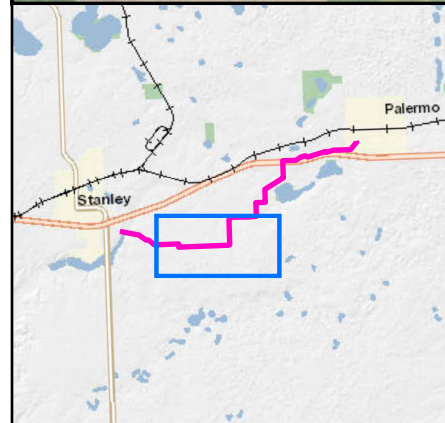
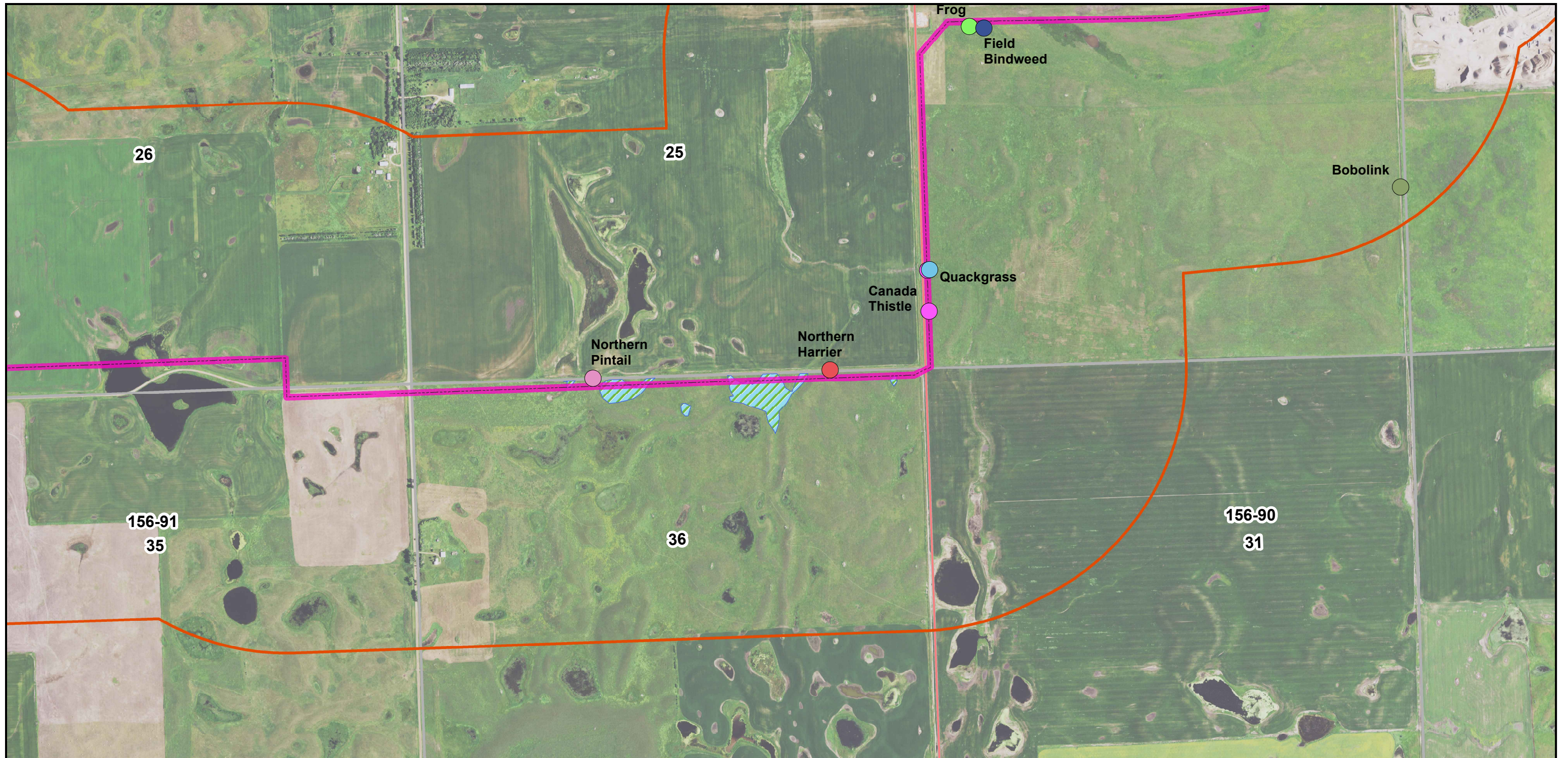


**SACAGAWEA**  
PIPELINE COMPANY, LLC

Palermo to Enbridge  
Crude Oil Pipeline

Mountrail County, ND

**Figure 4.B.1b - Route Map**



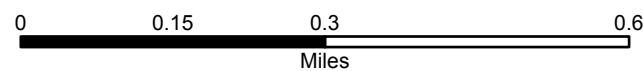
**Legend**

- Centerline
- Study Area
- Wetland - FWS Easement
- Township Border
- Section Border

**Sensitive/Noxious Study Data**

- Bobolink
- Canada Thistle
- Field Bindweed
- Northern Harrier
- Northern Leopard Frog
- Northern Pintail
- Quackgrass

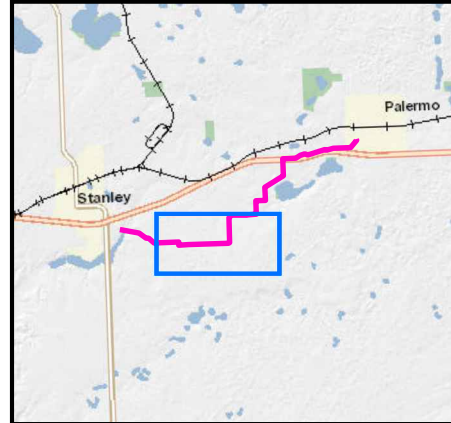
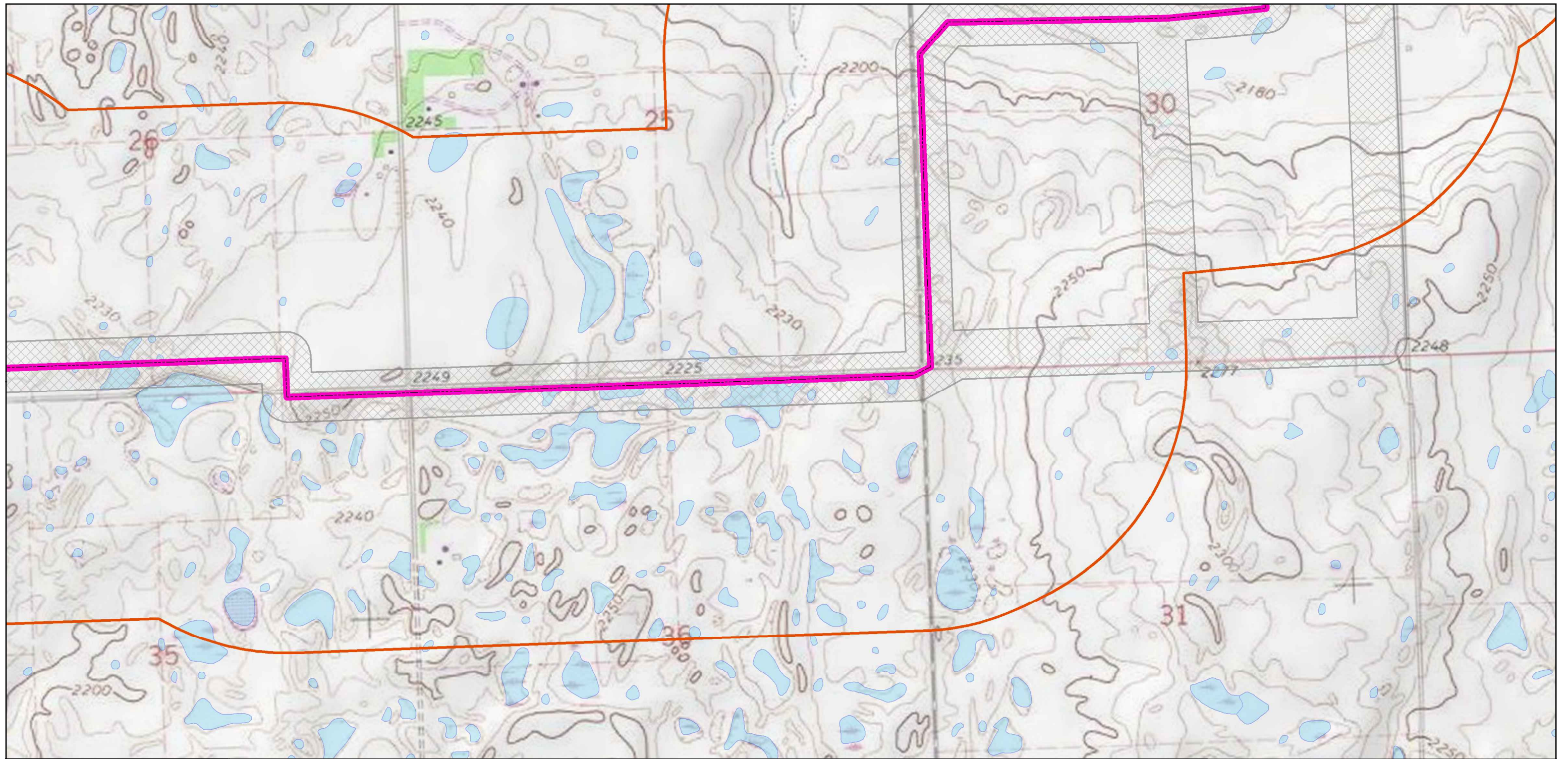
**Raptor Nest**







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PIPELINE COMPANY, LLC

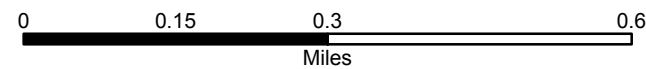
Palermo to Enbridge  
Crude Oil Pipeline  
Mountrail County, ND

**Figure 4.B.2a - Route Map**



**Legend**

-  Study Area
-  Centerline
-  500-foot-wide Survey Area
-  NWI Wetland

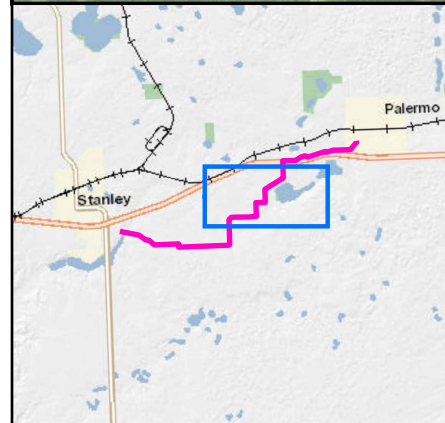
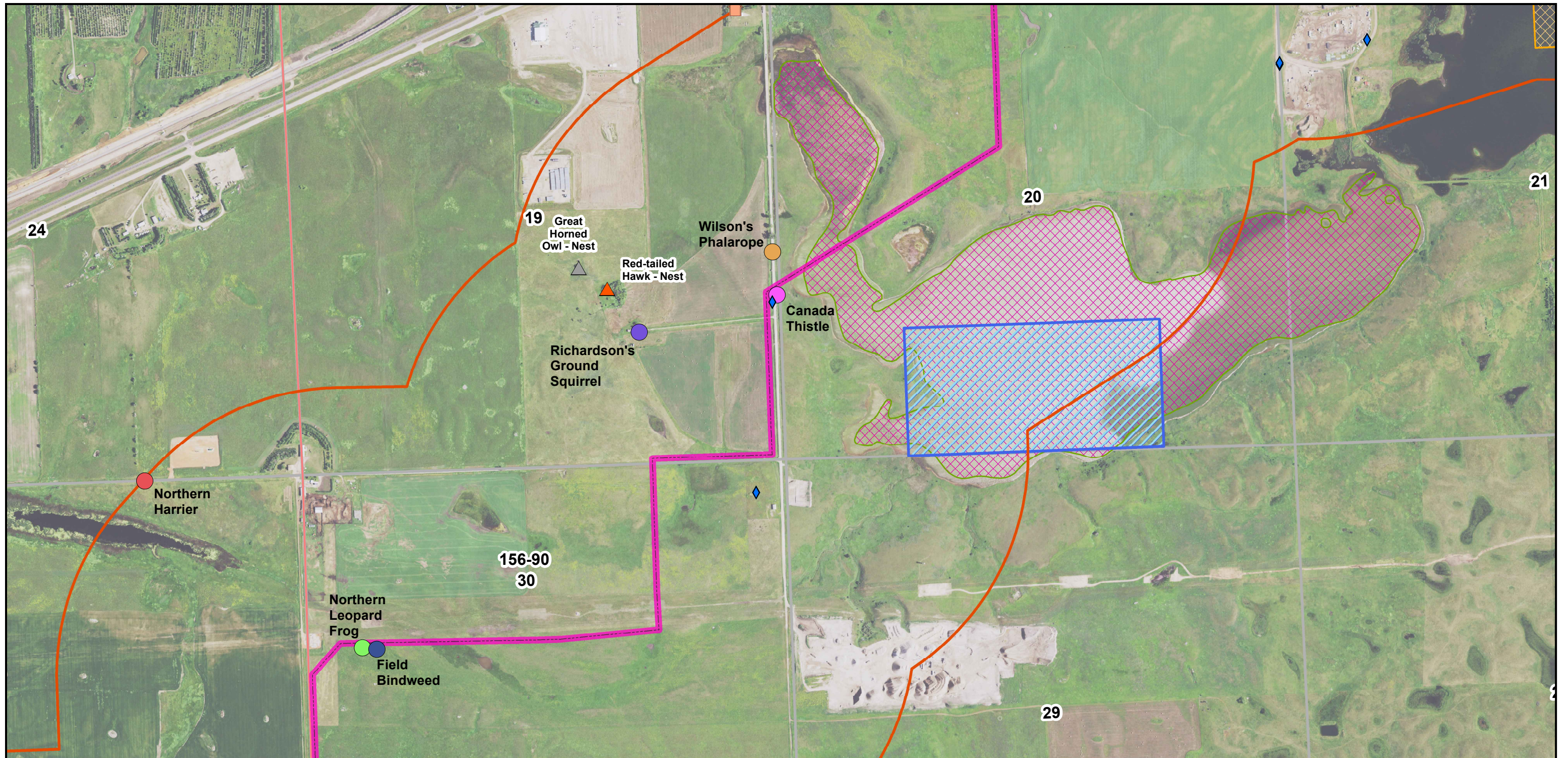


**SACAGAWEA**  
PIPELINE COMPANY, LLC

Palermo to Enbridge  
Crude Oil Pipeline

Mountrail County, ND

**Figure 4.B.2b - Route Map**

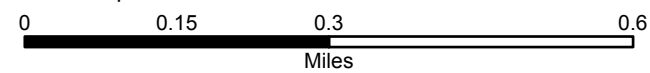


**Legend**

- Centerline
- Study Area
- Residence
- WPA - FWS Land
- NDSWC Wells
- Game & Fish Land
- Piping Plover Critical Habitat
- Township Border
- Section Border

**Sensitive/Noxious Study Data**

- Canada Thistle
- Field Bindweed
- Northern Harrier
- Northern Leopard Frog
- Richardson's Ground Squirrel
- Wilson's Phalarope



**Raptor Nest**

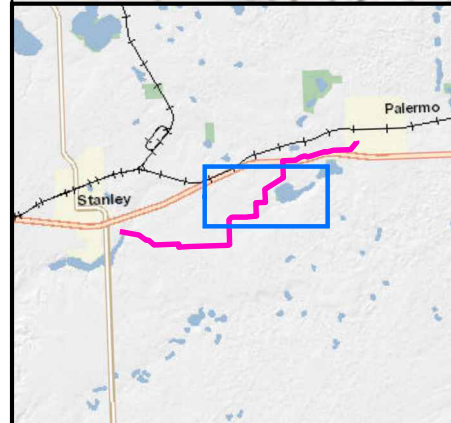
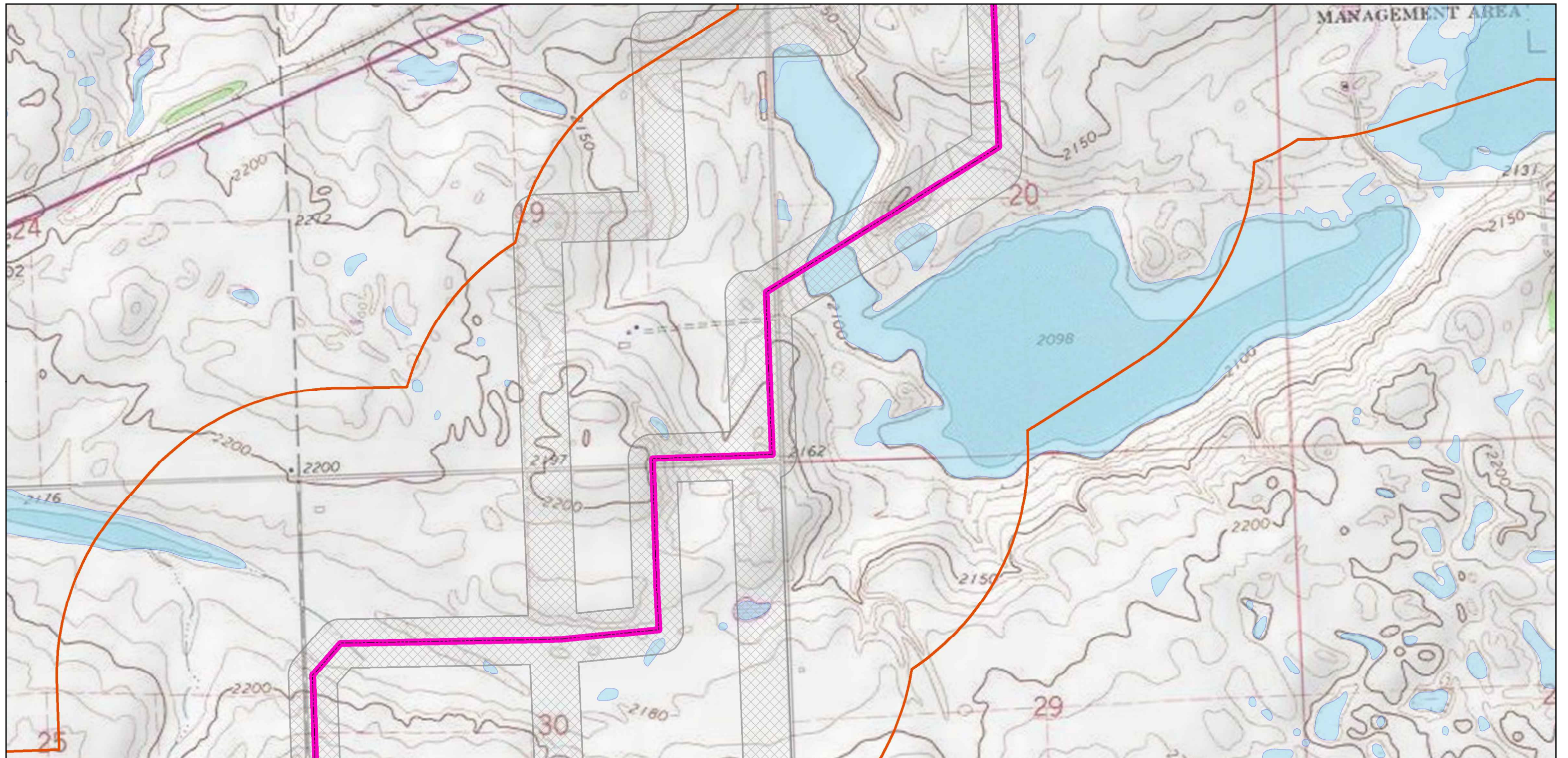
- Great Horned Owl - Nest
- Red-tailed Hawk - Nest







**SACAGAWEA**  
PIPELINE COMPANY, LLC

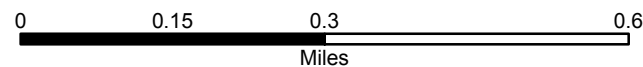
Palermo to Enbridge  
Crude Oil Pipeline  
Mountrail County, ND

**Figure 4.B.3a - Route Map**



**Legend**

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-  Centerline
-  500-foot-wide Survey Area
-  NWI Wetland

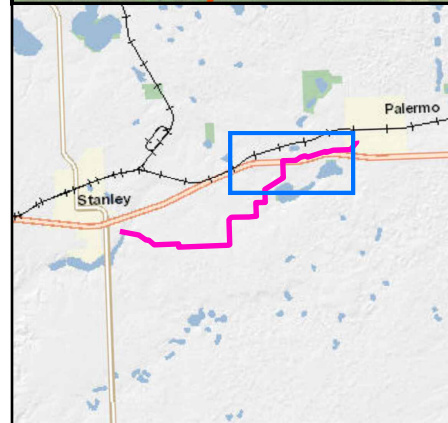
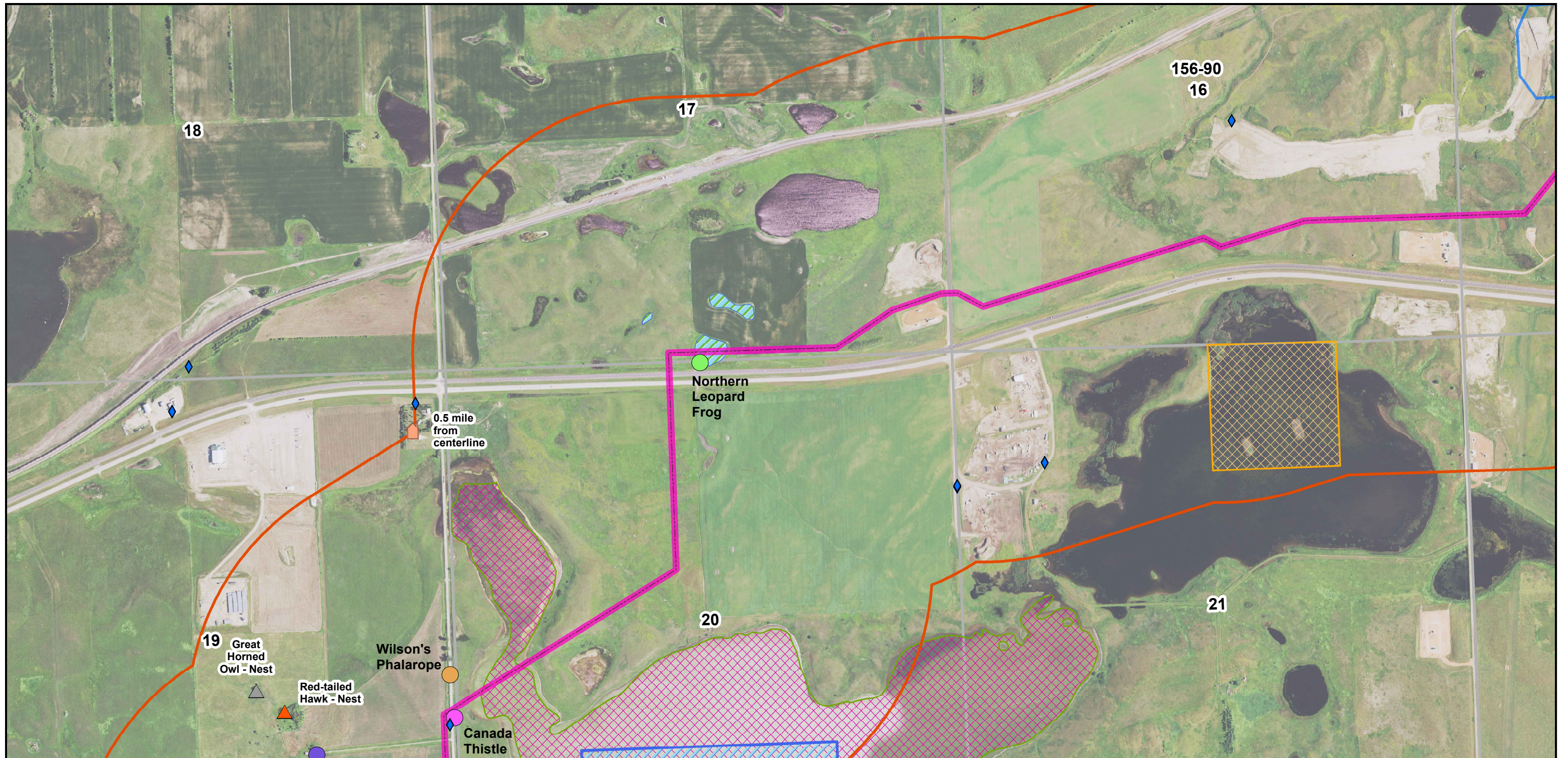


**SACAGAWEA**  
PIPELINE COMPANY, LLC

Palermo to Enbridge  
Crude Oil Pipeline

Mountrail County, ND

**Figure 4.B.3b - Route Map**

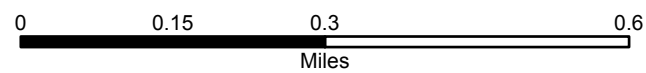


**Legend**

- Centerline
- Study Area
- Residence
- Palermo Rail Facility
- Wetland - FWS Easement
- WPA - FWS Land
- NDSWC Wells
- Game & Fish Land
- Piping Plover Critical Habitat
- Township Border
- Section Border

**Sensitive/Noxious Study Data**

- Canada Thistle
- Northern Leopard Frog
- Richardson's Ground Squirrel
- Wilson's Phalarope



**Raptor Nest**

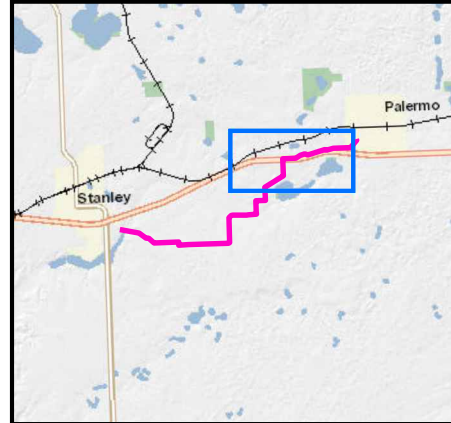
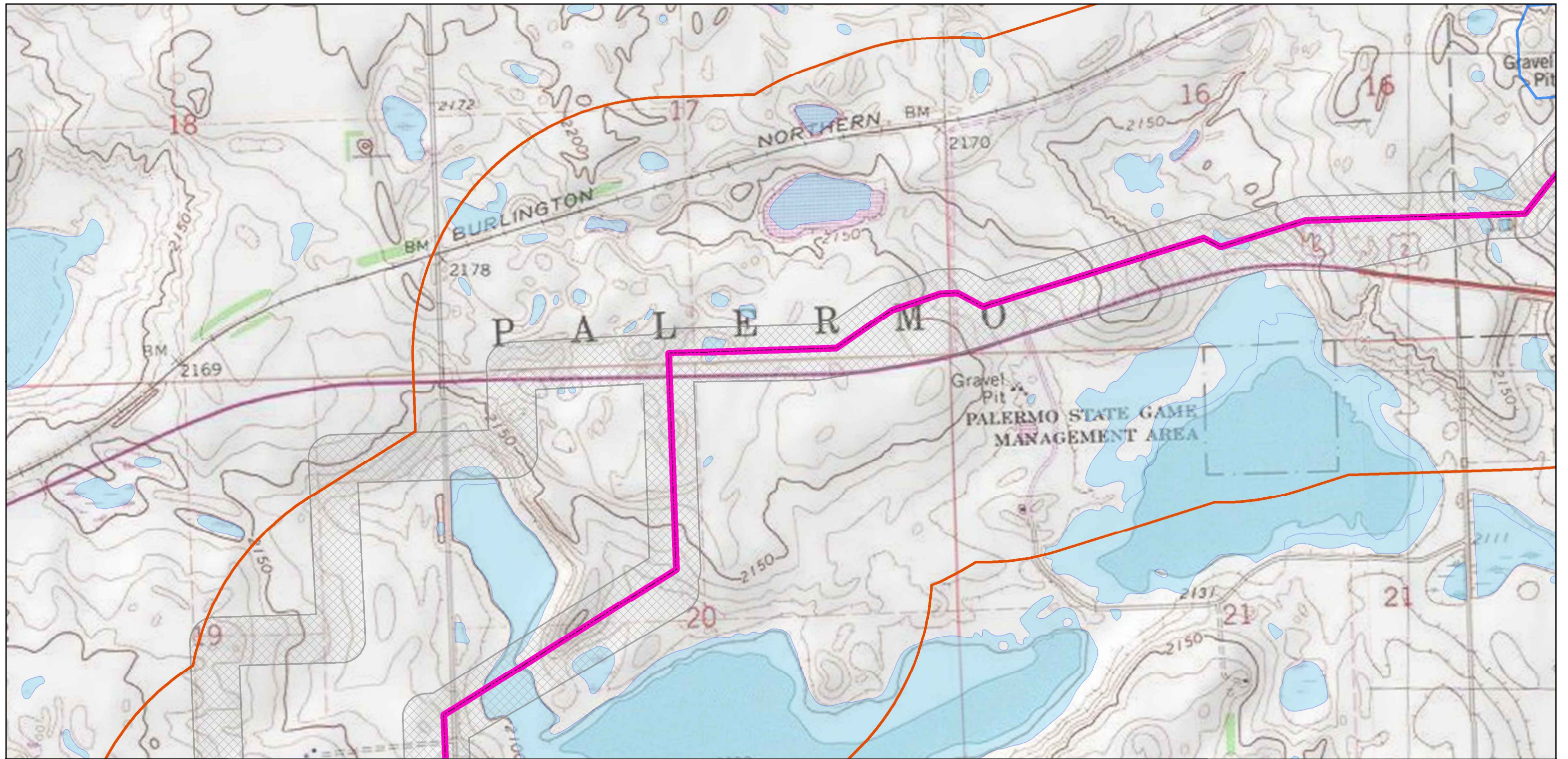
- Great Horned Owl - Nest
- Red-tailed Hawk - Nest








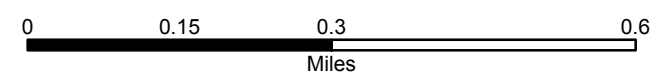
**SACAGAWEA**  
PIPELINE COMPANY, LLC

Palermo to Enbridge  
Crude Oil Pipeline  
Mountrail County, ND

**Figure 4.B.4a - Route Map**



- Legend**
-  Study Area
  -  Centerline
  -  500-foot-wide Survey Area
  -  Palermo Rail Facility
  -  NWI Wetland

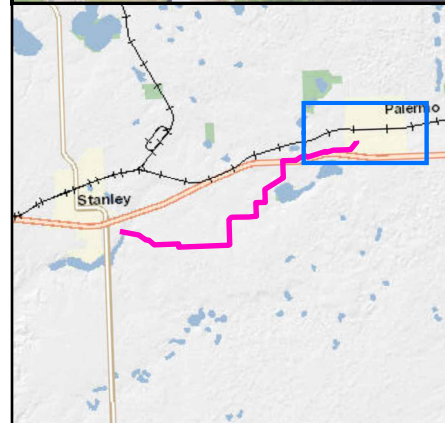
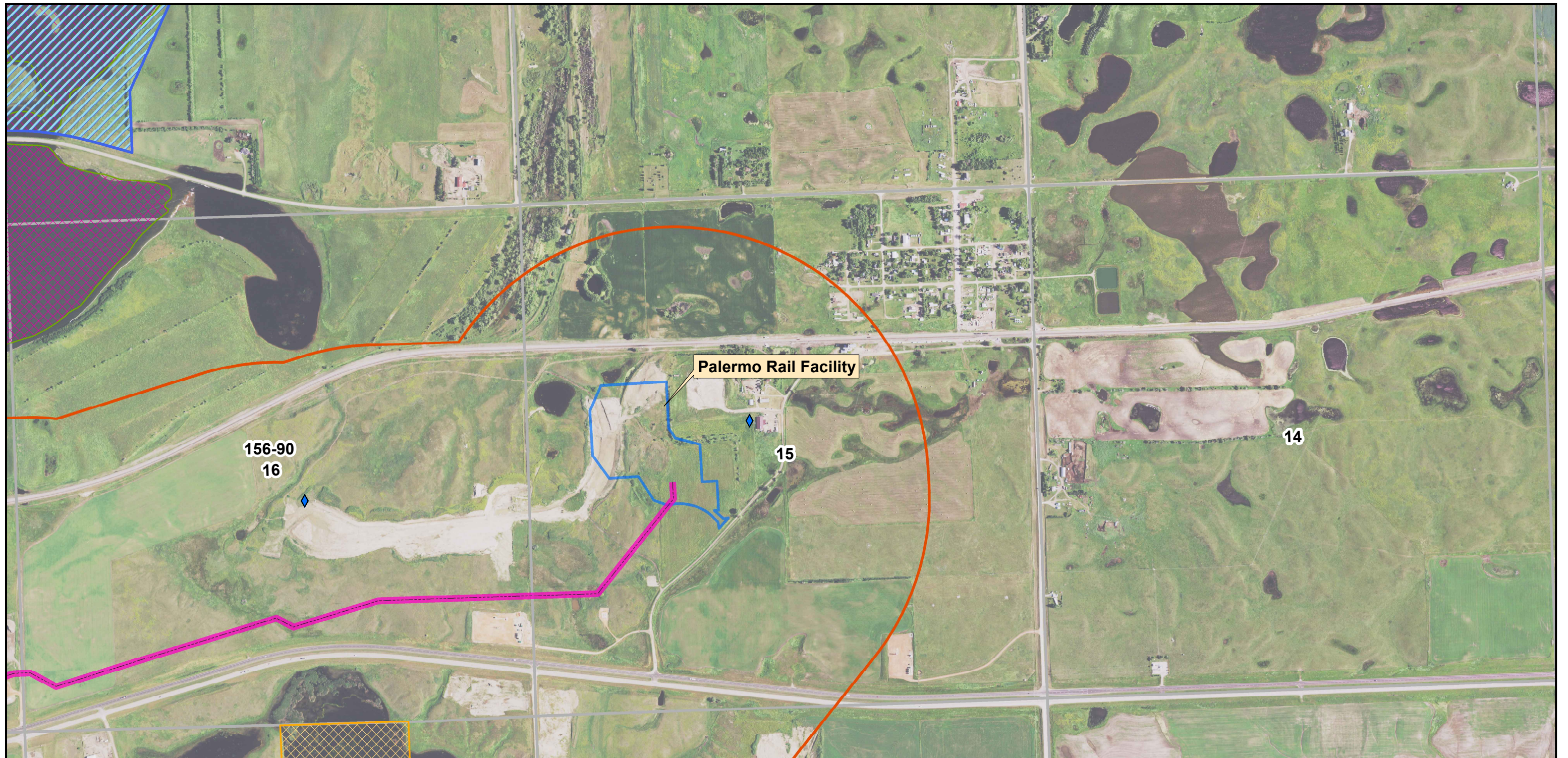


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Mountrail County, ND

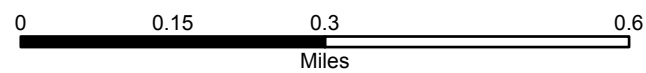
**Figure 4.B.4b - Route Map**



**Legend**

- Centerline
- Study Area
- Palermo Rail Facility
- WPA - FWS Land
- NDSWC Wells
- Game & Fish Land
- Piping Plover Critical Habitat
- Township Border
- Section Border

**Sensitive/Noxious Study Data**



**Raptor Nest**

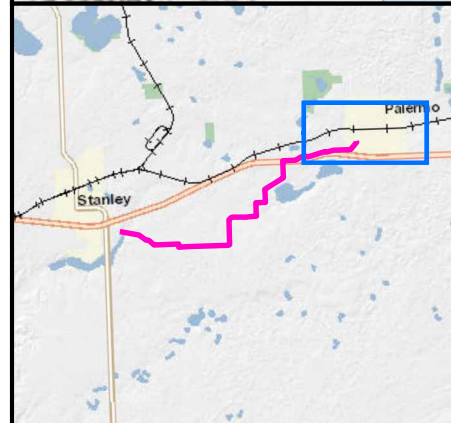
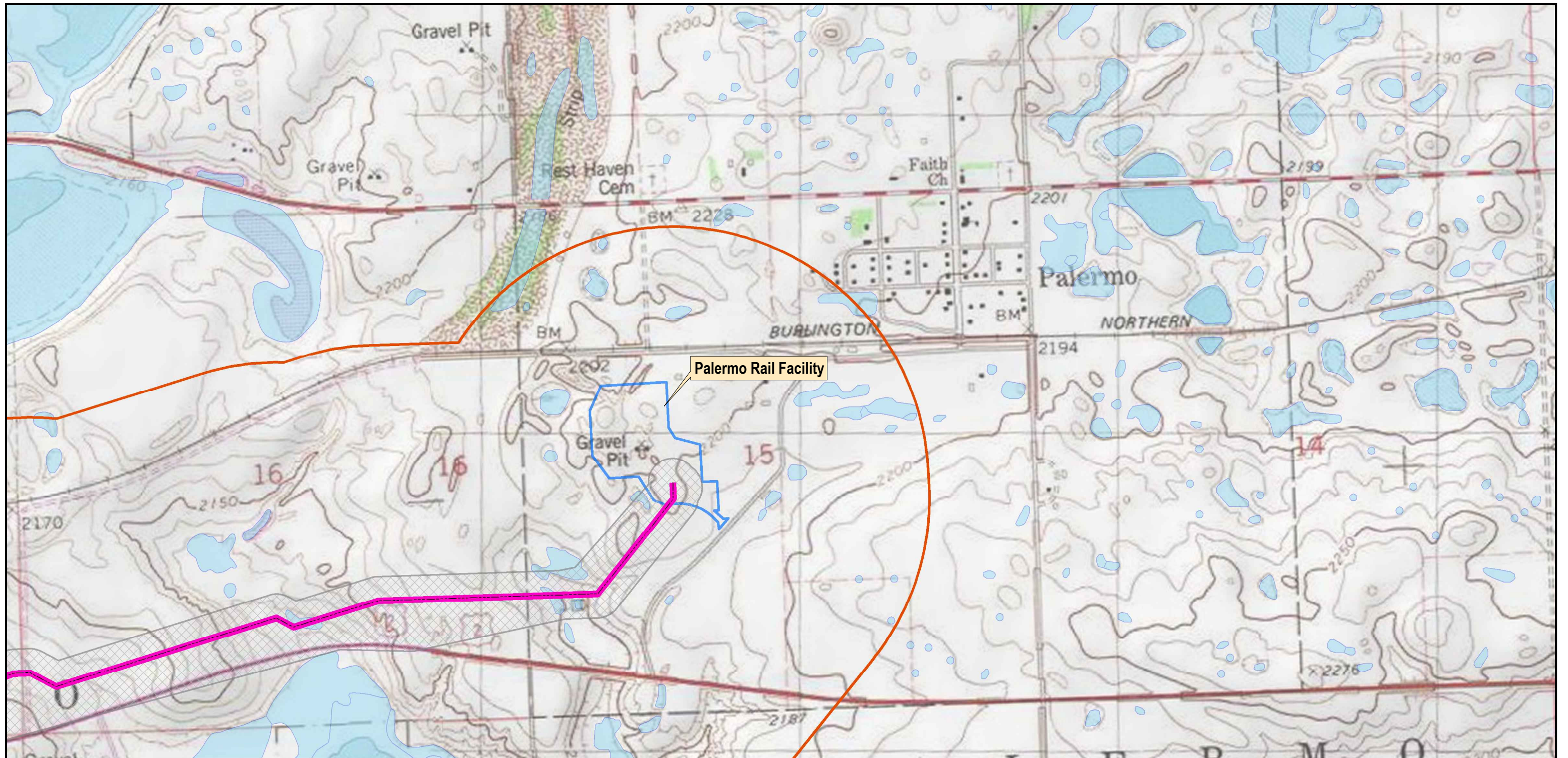


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
Palermo to Enbridge  
Crude Oil Pipeline

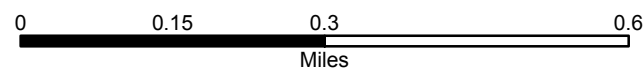
Mountrail County, ND

**Figure 4.B.5a - Route Map**



**Legend**

-  Study Area
-  Centerline
-  500-foot-wide Survey Area
-  Palermo Rail Facility
-  NWI Wetland



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Palermo to Enbridge  
Crude Oil Pipeline

Mountrail County, ND

**Figure 4.B.5b - Route Map**

## **APPENDIX 4.C**

### **State Sensitive Species and Rankings**

**APPENDIX 4.C.1**

**North Dakota Federal and State Plant Species of Concern**

**TABLE 4.C.1.A**  
**NORTH DAKOTA'S PLANT SPECIES OF CONCERN**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Acorus americanus</i>	Sweetflag	G5	S3			Peatlands, fens, seeps
<i>Agrostis exarata</i>	Spike Bentgrass	G5	S1		W	Moist habitats
<i>Allium canadense</i>	Meadow Onion	G5	S1			Prairies, open woods
<i>Allium tricoccum</i>	Wild Garlic	G5	SU			Rich undisturbed woods
<i>Apios americana</i>	American Groundnut	G5	SH			Moist woods, thickets banks
<i>Arabis canadensis</i>	Sicklepod	G5	S1			Mesic woodlands
<i>Arnica cordifolia</i>	Heart-leaved Arnica	G5	SU			Open woodlands
<i>Asclepias lanuginosa</i>	Woolly Milkweed	G4?	S1			Sandy or rocky calcareous prairie
<i>Asclepias sullivantii</i>	Sullivant's Milkweed	G5	SU			Mesic tallgrass prairies
<i>Astragalus australis</i>	Indian Milkvetch	G5	S2		W	Open wooded hillsides, bluffs, limestone
<i>Astragalus drummondii</i>	Drummond's Milkvetch	G5	S1		W	Prairies to open wooded/brushy hillsides/ravines, all soil
<i>Astragalus neglectus</i>	Cooper's Milkvetch	G4	S1			Sandy, gravelly shores, mesic gravelly prairie
<i>Astragalus vexilliflexus</i>	Bent-flowered Milkvetch	G4	S3		W	Rocky knolls and open wooded hillsides
<i>Athyrium filix-femina</i>	Northern Lady-fern	G5	S3			Moist woods, thickets, bogs, along streams
<i>Botrychium campestre</i>	Prarie Grapefern	G3G4	S1			Dry, gravelly or sandy prairies
<i>Botrychium matricariifolium</i>	Chamomile Grapefern	G5	S1			Moist woodlands
<i>Botrychium minganense</i>	Moonwort	G4G5	S1			Wooded, often north-facing slopes, meadows
<i>Botrychium multifidum</i>	Leathery Grapefern	G5	S1			Wet meadows, rich woodlands
<i>Botrychium simplex</i>	Least Grapefern	G5	SU			Meadows, barrens, woods, subacid soils
<i>Bromus carinatus</i>	Mountain Brome	G5	S1		W	Disturbed, moist woods, dry meadows, sagebrush
<i>Bromus kalmii</i>	Kalm's Brome	G5	SU			Open oak woods, sandy soils
<i>Calla palustris</i>	Water Arum	G5	S2			Northern marshes and swamps

<b>TABLE 4.C.1.A</b>						
<b>NORTH DAKOTA'S PLANT SPECIES OF CONCERN</b>						
<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Campanula aparinoides</i>	Marsh Bellflower	G5	S2			Wetland thickets, seepage, peatlands
<i>Cardamine bulbosa</i>	Spring Cress	G5	S1			Wet meadows, wood springs
<i>Carex alopecoidea</i>	Foxtail Sedge	G5	S2			Damp, rich, wooded areas
<i>Carex athrostachya</i>	Jointed-spike Sedge	G5	S3			Low prairie, marsh margins
<i>Carex backii</i>	Back's Sedge	G5	S2			Damp, wooded areas
<i>Carex brunnescens</i>	Brown Sedge	G5	S1			Fens, wet wooded areas
<i>Carex buxbaumii</i>	Buxbaum's Sedge	G5	S1			Wet meadows, fens
<i>Carex capillaris</i>	Hair-like Sedge	G5	S1			Wet meadows, fens
<i>Carex chordorrhiza</i>	Creeping Sedge	G5	S1			Sphagnum bogs, poor fens
<i>Carex convoluta</i>	Spiral Sedge	G5T3	S?			Rich, deciduous woodlands
<i>Carex diandra</i>	Lesser-panicled Sedge	G5	S2			Swamps, meadows, shores
<i>Carex echinata</i> <i>ssp. echinata</i>	Spiny Sedge	G5T5	S1			Sphagnum bogs
<i>Carex festucacea</i>	Fescue Sedge	G5	SU			Wooded areas
<i>Carex foenea</i> ( <i>Carex siccata</i> )	Dry-spiked Sedge	G5	S1		W	Dry open soil in wooded areas
<i>Carex formosa</i>	Handsome Sedge	G4	S1			Low, moist, eastern woodlands
<i>Carex garberi</i>	Elk Sedge	G5	S1			Fens, swamps, pond margins
<i>Carex gracillima</i>	Graceful Sedge	G5	S1			Moist swampy woods
<i>Carex gynocrates</i>	Pistillate Sedge	G5	S1			Peaty fens
<i>Carex haydenii</i>	Hayden's Sedge	G5	S1			Wet meadows, sloughs
<i>Carex lasiocarpa</i>	Wiregrass Sedge	G5	S3			Sphagnum bogs, seepage-fed peatlands, lake borders
<i>Carex leptalea</i>	Delicate Sedge	G5	S2			Shrubby peatland fens, swampy woods and thickets
<i>Carex limosa</i>	Mud Sedge	G5	S2			Sphagnum bogs, fens
<i>Carex nebrascensis</i>	Nebraska Sedge	G5	S2			Wet meadows, stream margins
<i>Carex pedunculata</i>	Peduncled Sedge	G5	S1			Moist oak or birch woodlands

**TABLE 4.C.1.A**  
**NORTH DAKOTA'S PLANT SPECIES OF CONCERN**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Carex richardsonii</i>	Richardson's Sedge	G5	S1			Low, usually sandy, prairie
<i>Carex scirpoidea</i>	Spikerush Sedge	G5	S1		W	Rocky slopes, wet meadows
<i>Carex scoparia</i>	Pointed Broom Sedge	G5	SH			Damp woods, low prairie, lakeshores
<i>Carex simulata</i>	Copycat Sedge	G5	S2			Calcareous fens, wet meadows
<i>Carex sterilis</i>	Sterile Sedge	G4	S1			Seepage peatland fens, wet meadows
<i>Caulophyllum thalictroides</i>	Blue Cohosh	G4G5	S1			Moist rich woods
<i>Chaenactis douglasii</i>	Douglas' Dusty-maiden	G5	S2			Scoria slopes and buttes
<i>Cheilanthes feei</i>	Slender Lip fern	G5	S1			Dry rocky slopes, sandstone, limestone
<i>Chenopodium subglabrum</i>	Smooth Goosefoot	G3G4	S1		S	Sandy river terraces, sand colluviums, sand blowouts, sand dunes
<i>Clematis columbiana</i> var. <i>tenuiloba</i>	Slender-lobed Clematis	G5? T4?	S1		W	Rocky slopes, limestone soils
<i>Collinsia parviflora</i>	Blue lips	G5	S2		S	Mesic slopes of buttes
<i>Crataegus mollis</i>	Downy Hawthorn	G5	S1			Open mesic woods
<i>Cryptantha torreyana</i>	Torrey's Cryptantha	G5	S1		S	Dry plains, pine slopes, on scoria
<i>Cyperus bipartitus</i>	Brook Flatsedge	G5	S1			Cool, spring-fed streams
<i>Cyperus diandrus</i>	Low Flatsedge	G5	S2			Sandy or muddy shores, stream margins
<i>Cypripedium candidum</i>	White Lady's Slipper	G4	S2			Low prairie, wet meadows
<i>Cypripedium parviflorum</i>	Small Yellow Lady's-slipper orchid	G5	S2			Damp woods, fens, streambanks
<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	Large Yellow Lady's-slipper	G5T5	S2			Boggy areas, wet prairies
<i>Cypripedium reginae</i>	Showy Lady's-slipper	G4	S2			Swampy woodlands, thickets, fens
<i>Dalea enneandra</i>	Nine-anthered Dalea	G5	S2			Sandy or gravelly slopes, dry mixed grass prairies
<i>Desmanthus illinoensis</i>	Prairie Mimosa	G5	S1			Prairies with rocky or sandy soils

**TABLE 4.C.1.A**  
**NORTH DAKOTA'S PLANT SPECIES OF CONCERN**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Dicentra cucullaria</i>	Dutchman's Breeches	G5	S1			Rich eastern woodlands
<i>Diervilla lonicera</i>	Dwarf Honeysuckle	G5	S3			Shady woodlands, usually aspen
<i>Dirca palustris</i>	Leatherwood	G4	S1			Shady, damp woodland slopes
<i>Drosera rotundifolia</i>	Round-leaved Sundew	G5	S1			Acid bogs, swamps
<i>Dryopteris carthusiana</i>	Spinulose Woodfern	G5	S3			Rich, moist woods, ravines, boggy areas, alder thickets
<i>Dryopteris cristata</i>	Crested Woodfern	G5	S3			Swampy woods and thickets, seeps
<i>Eleocharis parvula</i>	Dwarf Spikerush	G5	S2			Brackish, alkaline shores
<i>Eleocharis pauciflora</i>	Few-flowered Spikerush	G5	S3			Calcareous fens, seeps
<i>Eleocharis wolfii</i>	Wolf's Spikerush	G3?	SH			Shores, low, wet prairie
<i>Elymus glaucus</i>	Blue Wildrye	G5	S2			Open woods, prairie slopes
<i>Epilobium coloratum</i>	Purple-leaved Willowherb	G5	S3			Marshes, seeps, shores
<i>Epilobium pygmaeum</i> ( <i>Boisduvalia glabella</i> )	Smooth-spike Primrose	G5	S2		W	Small streams, vernal pools
<i>Equisetum palustre</i>	Marsh Horsetail	G5	S2			Willow/alder thickets, swampy woods, streambanks
<i>Equisetum pratense</i>	Meadow Horsetail	G5	S2			Moist woodlands, shady streambanks
<i>Equisetum sylvaticum</i>	Wood Horsetail	G5	S2			Moist aspen or lowland woods, seeps
<i>Equisetum variegatum</i>	Variiegated Horsetail	G5	S1			Marl pools of calcareous fens
<i>Erigeron divergens</i>	Spreading Fleabane	G5	S1		W	Dry, open, rocky, sandy, loose soils
<i>Erigeron radicans</i>	Cushion Fleabane	G3G4	S1		W	Exposed hills, slopes, ridges
<i>Eriogonum cernuum</i>	Nodding Buckwheat	G5	S1		S	Erosional breaks in sandy grasslands, sandstone colluvium
<i>Eriogonum visherii</i>	Dakota Buckwheat	G3	S2		S	Barren, erodible, rock outcrops in badland habitat
<i>Eriophorum chamissonis</i>	Chamisson's Cottongrass	G5	S2			Bogs, marshes, peaty fens

**TABLE 4.C.1.A**  
**NORTH DAKOTA'S PLANT SPECIES OF CONCERN**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Eriophorum gracile</i>	Slender Cottongrass	G5	S1			Seepage fens
<i>Eriophorum viridicarinatum</i>	Green Keeled Cottongrass	G5	S1			Sphagnum bogs, peaty fens
<i>Escobaria missouriensis</i>	Missouri Foxtail Cactus	G5	SU		S	Plains, hills, desert edge, grasslands, lower mountains
<i>Euonymus atropurpureus</i>	Wahoo	G5	S2			Rich deciduous woods, woodland edges, river banks
<i>Euphorbia robusta</i>	Rocky Mountain Spurge	G5	S3			Dry, sandy or gravelly prairie slopes
<i>Fraxinus nigra</i>	Black Ash	G5	S2			Swampy or wet lowlands
<i>Fritillaria pudica</i>	Yellow Fritillary	G5	SU			Ephemerally moist areas of buttes
<i>Galium labradoricum</i>	Bog Bedstraw	G5	S3			Wetland thickets, fens, swampy woods
<i>Gentianopsis crinita</i>	Fringed Gentian	G5	S1			Low wet prairies, stream banks
<i>Geranium maculatum</i>	Wild Geranium	G5	SH			Rich, eastern deciduous woods
<i>Geum rivale</i>	Water Avens	G5	SU			Marshes, wet meadows, riverbanks
<i>Gymnocarpium dryopteris</i>	Oakfern	G5	S1			North-facing or shady wooded slopes
<i>Halenia deflexa</i>	Spurred Gentian	G5	S2			Wetland thickets, damp shady woods
<i>Helianthemum bicknellii</i>	Bicknell's Sunrose	G5	S1			Open woods, prairies, usually dry sandy soil
<i>Hudsonia tomentosa</i>	Woolly Beach-heather	G5	S1			Sand prairies, dunes
<i>Iris missouriensis</i>	Rocky Mountain Iris	G5	S2			Mesic areas within mixed grass prairie
<i>Juncus brevicaudatus</i>	Short-tailed Rush	G5	S2			Wet meadows, fens, marshes
<i>Juncus vaseyi</i>	Vasey's Rush	G5?	SU			Wet meadows, shores
<i>Lappula cenchrusoides</i>	Stickseed	G4	S1			Dry soils in open areas
<i>Lechea stricta</i>	Upright Pinweed	G4?	S1			Dry, sandy woods and prairies
<i>Leersia virginica</i>	Whitegrass	G5	SU			Moist woods, stream banks
<i>Leucocrinum montanum</i>	Sand Lily	G5	S2		S	Grass/sagebrush prairies, open conifer woodlands, sandy soils
<i>Linnaea borealis</i>	Twinflower	G5	S4			Moist, wooded, north-facing slopes

<b>TABLE 4.C.1.A</b>						
<b>NORTH DAKOTA'S PLANT SPECIES OF CONCERN</b>						
<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Liparis loeselii</i>	Loesel's Twayblade	G5	S2			Damp woods, prairie swales, fens
<i>Lipocarpa micrantha</i>	Small-flowered Lipocarpa	G5	S1			Wet sandy areas, sandbars
<i>Mahonia repens</i>	Creeping Barberry	G5	S2			Coulees, slopes of high plains
<i>Mentzelia pumila</i>	Dwarf Mentzelia	G4	S1		S	Dry sandy or clayey soils
<i>Menyanthes trifoliata</i>	Buckbean	G5	S3			Sphagnum bogs, fen peat lands
<i>Mimulus guttatus</i>	Yellow Monkeyflower	G5	S1			Marshes, along streams and lake shores
<i>Minuartia dawsonensis</i>	Stiff Sandwort	G5	S1			Open rocky or gravelly areas on shale
<i>Mitella nuda</i>	Naked Mitrewort	G5	S3			Swampy lowland woods and thickets
<i>Monotropa uniflora</i>	Indianpipe	G5	S3			Rich shady woods
<i>Muhlenbergia filiformis</i>	Pull-up Muhly	G5	S1			Marl pools of calcareous fens
<i>Myosurus apetalus var. montanus</i>	Bristly Mousetail	G5T3 T5	SU		W	Moist areas, vernal pools, lowlands
<i>Myosurus aristatus</i>	Sedge Mousetail	G5	S2			Moist areas, vernal wetlands of mixed grass prairies
<i>Myriophyllum pinnatum</i>	Cutleaf Watermilfoil	G5	S2			Shallows of marshes and shores
<i>Najas guadalupensis</i>	Southern Naiad	G5	S1			Lakes or streams
<i>Najas marina</i>	Spiny Naiad	G5	S1			Alkaline lakes, ponds
<i>Oenothera laciniata</i>	Cutleaf Evening Primrose	G5	S?		W	Sandy prairie, disturbed pastures, roadsides, stream valleys
<i>Oenothera rhombipetala</i>	Rhombic Evening Primrose	G4G5	S?			Sandy prairies
<i>Onoclea sensibilis</i>	Sensitive Fern	G5	S2			Wetland thickets, fen peat lands, damp, shady woodlands
<i>Ophioglossum pusillum</i>	Adder's-Tongue Fern	G5	S2			Low prairie swales
<i>Orobanche ludoviciana, ssp. multiflora</i>	Manyflowered Broomrape	G5T5	S?		W	Dry sandy soils, dunes, gypsum ridges
<i>Orobanche uniflora</i>	One-flowered Broomrape	G5	S?			Damp woods, thickets

<b>TABLE 4.C.1.A</b>						
<b>NORTH DAKOTA'S PLANT SPECIES OF CONCERN</b>						
<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Oxytropis deflexa</i>	Drooping Locoweed	G5	S1			Sandy lake shores, low meadows, aspen woodland clearings
<i>Oxytropis sericea</i>	White Locoweed	G5T5	S?		W	Mixed grass prairie on slopes or buttes
<i>Parnassia palustris var. parviflora</i>	Small-flowered Grass-of-Parnassus	G5T4	SU			Calcareous fens, bogs
<i>Pellaea glabella</i>	Smooth Cliffbrake	G5	S4			Sandstone caprock of buttes and ledges
<i>Penstemon procerus</i>	Small-flowered Penstemon	G5	S1			Northern prairie slopes
<i>Petasites frigidus</i>	Sweet Coltsfoot	G5	S2			Damp meadows, woods
<i>Phlox alyssifolia</i>	Alyssum-leaved Phlox	G5	S1		S	Sandy/gravelly soil of open prairies, clay banks, limestone ridges
<i>Phlox pilosa</i>	Downy Phlox	G5	SU			Mesic prairies of open woodlands
<i>Pinus flexilis</i>	Limber Pine	G4	S1		S	Arid, exposed rocky ridges, foothills
<i>Piptatherum pungens</i>	Slender Mountain-Ricegrass	G5	S1			Xeric slopes, usually shale
<i>Platanthera clavellata</i>	Green Woodland Orchid	G5	SH			Swampy woods, bogs
<i>Platanthera praeclara</i>	Western Prairie Fringed Orchid	G3	S2	T		Moist prairie swales of sand hills
<i>Pogonia ophioglossoides</i>	Rose pogonia	G5	S1			Swampy woods, bogs
<i>Polygonum hydropiperoides</i>	Swamp Smartweed	G5	S1			Rooted in or near water
<i>Polygonum leptocarpum</i>	Thin-fruited Knotweed	G2G4Q	S1			Damp, dry soils on clay
<i>Polygonum punctatum</i>	Dotted Smartweed	G5	S2			Swampy thickets, wet meadows, riverbanks
<i>Polygonum sagittatum</i>	Arrow-leaved Tearthumb	G5	SH			Marshes, wet meadows
<i>Populus x acuminata</i>	Lanceleaf Cottonwood	GNA	S2		S	Floodplains, stream banks
<i>Populus x jackii</i>	Balm-of-Gilead	GNA	SU		W	Uplands and bottomlands
<i>Potamogeton diversifolius</i>	Water-thread Pondweed	G5	S2		W	Shallow ponds, marshes
<i>Potamogeton filiformis</i>	Slender Pondweed	G5	S2			Shallow lakes, ponds, streams

<b>TABLE 4.C.1.A</b>						
<b>NORTH DAKOTA'S PLANT SPECIES OF CONCERN</b>						
<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Potamogeton natans</i>	Floating Pondweed	G5	S2			Cold, shallow to deep lakes and streams
<i>Potamogeton praelongus</i>	White-stemmed Pondweed	G5	S1			Usually cool, deep water of lakes
<i>Potamogeton strictifolius</i>	Narrow-leaved Pondweed	G5	S1			Shallow lakes, streams
<i>Potamogeton vaginatus</i> ( <i>Stuckenia vaginata</i> )	Sheathed Pondweed	G5	S3			Usually deep cold lakes, ponds
<i>Potentilla diversifolia</i>	Mountain meadow cinquefoil (Varileaf Potentilla)	G5	S1		W	Drainages, meadows
<i>Potentilla palustris</i>	Purple Cinquefoil	G5	S2			Fens, wet meadows, bogs
<i>Potentilla tridentata</i> ( <i>Sibbaldiopsis tridentata</i> )	Three-toothed Cinquefoil (Shrubby Fivefingers)	G5	S1		W	Gravel shores, dry shale outcrops of prairie hillsides, scoria
<i>Primula incana</i>	American Primrose	G4G5	S1			Alkali wet meadows, fens
<i>Psoralea tenuiflora</i>	Slim-flowered Scurfpea	G5	SH			Dry prairie, high plains
<i>Ranunculus cardiophyllus</i>	Heart-leaved Buttercup	G4G5	S1		W	Mountain meadows along streams, seeps
<i>Ranunculus flammula</i>	Acrid Spearwort	G5	S1			Marshes, damp shores
<i>Ranunculus recurvatus</i>	Hooked crowfoot	G5	S1			Wooded ravines, swampy woods
<i>Rhynchospora capillacea</i>	Hair Beakrush	G4	S2			Moist calcareous fens, marsh meadows, seeps, limestone
<i>Ribes cynosbati</i>	Prickly Gooseberry	G5	S3			Moist rich woods
<i>Rorippa calycina</i>	Hayden's Yellowcress	G3	SH		W	Sandy shores of rivers and streams
<i>Salix maccalliana</i>	Swamp Willow	G5?	S1			Bogs, swamps
<i>Salix pedicellaris</i>	Bog Willow	G5	S3			Sphagnum bogs, fens
<i>Sanicula gregaria</i>	Cluster Sanicle	G4Q	SH			Rich, moist woodlands
<i>Scheuchzeria palustris</i>	Scheuchzeria	G5	S1			Sphagnum bogs,
<i>Scirpus cyperinus</i>	Cottongrass Bulrush	G5	S?			Wet meadows, fresh marshes, boggy areas, fen wetlands

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<b>TABLE 4.C.1.A</b>						
<b>NORTH DAKOTA'S PLANT SPECIES OF CONCERN</b>						
<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Selaginella rupestris</i>	Ledge Spike-moss	G5	S1			Sandy soils near oak woodlands
<i>Senecio eremophilus</i>	Northern Ragwort	G5	S2			Open sites in aspen woodlands
<i>Smilax ecirrhata</i>	Upright Greenbrier (Upright Carrionflower)	G5?	S1		W	Rich deciduous woods and thickets
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	G5	S1			Rich deciduous woodlands
<i>Solidago riddellii</i>	Riddell's Goldenrod	G5	SH			Low prairies, wet meadows
<i>Sphagnum recurvum</i>	Recurved Sphagnum	G5	S?			Bogs, fens, forests, near wetlands
<i>Sphagnum teres</i>	Round-leaved Sphagnum	G5	S?			Bogs, fens, forests, near wetlands
<i>Spiranthes cernua</i>	Nodding Ladies' Tresses	G5	S1			Fens, low prairies
<i>Spiranthes romanzoffiana</i>	Hooded Ladies' Tresses	G5	S1			Fens, wet meadows
<i>Sporobolus airoides</i>	Alkali Sacaton	G5	S2		S	Sandy/gravelly soil, clay outwash, saline conditions
<i>Stephanomeria minor (tenuifolia)</i>	Narrow-leaved Wirelettuce	G5	SU			Dry, clay outcrops
<i>Talinum parviflorum (Phemeranthus parviflorus)</i>	Prairie Flameflower	G5	S2		W	Sandy acidic soil, overlying bedrock
<i>Thelesperma subnudum var. marginatum</i>	Greenthread	G5T5	S2			Sandy prairie, open plains
<i>Thelypteris palustris</i>	Marsh Fern	G5	S3			Wetland thickets, shrubby fens
<i>Townsendia exscapa</i>	Easter Daisy	G5	SU		S	Dry barren plain, hillsides on gravelly exposures, weathered bedrock
<i>Townsendia hookeri</i>	Hooker's Townsendia	G5	S1		S	Butte summits
<i>Triantha glutinosa</i>	Sticky False-asphodel	G5	S1			Fens, wet meadows
<i>Triplasis purpurea</i>	Purple Sandgrass	G4G5	S1			Sandy prairies, blowouts
<i>Utricularia intermedia</i>	Flat-leaved Bladderwort	G5	S2			Calcareous fens, seepage peatlands

<b>TABLE 4.C.1.A</b>						
<b>NORTH DAKOTA'S PLANT SPECIES OF CONCERN</b>						
<u>Scientific Name</u>	<u>Common Name</u>	<u>Global</u>	<u>State</u>	<u>USFWS</u>	<u>USFS</u>	<u>Habitat</u>
<i>Utricularia minor</i>	Lesser Bladderwort	G5	S2			Calcareous fens, seeps
<i>Uvularia sessilifolia</i>	Sessile-leaved Bellwort	G5	S1			Rich deciduous woods
<i>Veronicastrum virginicum</i>	Culver's Root	G4	SH			Low prairie, rich woods
<i>Viola conspersa</i> ( <i>Viola labradorica</i> )	Bog Violet	G5	S2			Moist woods, streambanks
<i>Viola incognita</i> ( <i>Viola blanda</i> )	Large-leaved White Violet	G4G5T 4T5	SH			Moist woods
<i>Wolffia columbiana</i>	Southern Watermeal	G5	S2			Aquatic in quiet waters
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.						

<b>TABLE 4.C.1.B</b>	
<b>USDA FOREST SERVICE SENSITIVE PLANTS LITTLE MISSOURI NATIONAL GRASSLAND</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Smooth Goosefoot	<i>Chenopodium subglabrum</i>
Blue Lips	<i>Collinsia parviflora</i>
Torrey's Cryptantha	<i>Cryptantha torreyana</i>
Nodding Buckwheat	<i>Eriogonum cernuum</i>
Dakota Buckwheat	<i>Eriogonum visheri</i>
Missouri Foxtail Cactus	<i>Escobaria missouriensis</i>
Sand Lily	<i>Leucocrinum montanum</i>
dwarf mentzelia	<i>Mentzelia pumila</i>
alyssumleaf phlox	<i>Phlox alyssifolia</i>
limber pine	<i>Pinus flexilis</i>
lanceleaf cottonwood	<i>Populus x acuminata</i>
alkali sacaton	<i>Sporobolus airoides</i>
Easter Daisy	<i>Townsendia exscapa</i>
Hooker's Townsend daisy	<i>Townsendia hookeri</i>

<b>TABLE 4.C.1.C</b>	
<b>BLM SENSITIVE SPECIES – PLANTS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Cusick's horse-mint	<i>Agastache cusickii</i>
Western boneset	<i>Ageratina occidentalis = Eupatorium occidentale</i>
Tapertip onion	<i>Allium acuminatum</i>
Sitka columbine	<i>Aquilegia formosa</i>
Daggett rock cress	<i>Arabis demissa var. languida</i>
sapphire rockcress	<i>Arabis fecunda</i>
narrowleaf milkweed	<i>Asclepias stenophylla</i>
Sweetwater milkvetch	<i>Astragalus aretioides = Orophaca aretioides</i>
Barr's milkvetch	<i>Astragalus barrii</i>
painted milkvetch	<i>Astragalus ceramicus var. apus</i>
lesser rushy milkvetch	<i>Astragalus convallarius var. convallarius = A. junciformis</i>
Geyer's milkvetch	<i>Astragalus geyeri</i>
Gray's milkvetch	<i>Astragalus grayi</i>
Wind River milkvetch	<i>Astragalus oreganus</i>
Bitterroot milkvetch	<i>Astragalus scaphoides</i>
railhead milkvetch	<i>Astragalus terminalis</i>
large-leaved balsamroot	<i>Balsamorhiza macrophylla</i>
Peculiar moonwort	<i>Botrychium paradoxum</i>
low northern-rockcress	<i>Braya humilis</i>
Mohave brickellbush	<i>Brickellia oblongifolia</i>
Idaho sedge	<i>C. idahoa = C. parryana ssp. idahoa</i>
Small-winged sedge	<i>Carex stenoptila</i>
obscure evening-primrose	<i>Camissonia andina = Oenothera andina</i>
small camissonia	<i>Camissonia parvula = Oenothera parvula</i>
Crawe's sedge	<i>Carex crawei</i>

<b>TABLE 4.C.1.C</b>	
<b>BLM SENSITIVE SPECIES – PLANTS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
annual Indian paintbrush	<i>Castilleja exilis</i>
yellow bee plant	<i>Cleome lutea</i>
Fendler cat's-eye	<i>Cryptantha fendleri</i>
miner's candle	<i>Cryptantha scoparia</i>
Schweinitz' flatsedge	<i>Cyperus schweinitzii</i>
Scribner's panic grass	<i>Dichanthelium oligosanthes</i> <i>var.scribnerianum</i>
beavertip draba	<i>Draba globosa</i> = <i>D. apiculata</i>
Wind River draba	<i>Draba ventosa</i>
long sheath waterweed	<i>Elodea bifoliata</i> = <i>E.longivaginata</i>
beaked spikerush	<i>Eleocharis rostellata</i>
Idaho fleabane	<i>Erigeron asperugineus</i>
linearleaf fleabane	<i>Erigeron linearis</i>
buff fleabane	<i>Erigeron ochroleucus</i> <i>var.</i>
matted buckwheat	<i>Eriogonum caespitosum</i>
Railroad Canyon wild buckwheat	<i>Eriogonum soliceps</i>
Visher's buckwheat	<i>Eriogonum visheri</i>
hiker's gentian	<i>Gentianopsis simplex</i>
spiny hopsage	<i>Grayia spinosa</i>
Howell's gumweed	<i>Grindelia howellii</i>
showy goldeneye	<i>Heliomeris multiflora</i> <i>var.multiflora</i> = <i>Viguiera multiflora</i>
prostrate hutchensia	<i>Hutchinsia procumbens</i>
ballhead ipomopsis	<i>Ipomopsis congesta</i> <i>ssp.crebrifolia</i>
simple bog sedge	<i>Kobresia simpliciuscula</i>
green molly	<i>Kochia americana</i>
mat prickly phlox	<i>Leptodactylon caespitosum</i>

<b>TABLE 4.C.1.C</b>	
<b>BLM SENSITIVE SPECIES – PLANTS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Idaho bladderpod (same as keeled)	<i>Lesquerella carinata var. languida</i>
Pryor Mountain bladderpod	<i>Lesquerella lesicii</i>
beautiful bladderpod	<i>Lesquerella pulchella</i>
sand wildrye	<i>Leymus flavescens = Elymus flavescens</i>
Pale-spiked lobelia	<i>Lobelia spicata</i>
taper-tip desert-parsley	<i>Lomatium attenuatum</i>
Nuttall desert-parsley	<i>Lomatium nuttallii</i>
marsh felwort	<i>Lomatogonium rotatum</i>
Torrey's desert dandelion	<i>Malacothrix torreyi = M. sonchoides v. torreyi</i>
bractless mentzelia	<i>Mentzelia nuda</i>
dwarf mentzelia	<i>Mentzelia pumila</i>
dwarf purple monkeyflower	<i>Mimulus nanus</i>
primrose monkeyflower	<i>Mimulus primuloides</i>
square-stem monkeyflower	<i>Mimulus ringens</i>
leafy nama	<i>Nama densum</i>
Blue toadflax	<i>Nuttallanthus texanus</i>
meadow lousewort	<i>Pedicularis crenulata</i>
narrowleaf penstemon	<i>Penstemon angustifolius</i>
Lemhi beardtongue	<i>Penstemon lemhiensis</i>
Whipple's beardtongue	<i>Penstemon whippleanus</i>
hoary phacelia	<i>Phacelia incana</i>
Hot Spring phacelia	<i>Phacelia thermalis</i>
plains phlox	<i>Phlox andicola</i>
Missoula phlox	<i>Phlox missoulensis</i>
double bladderpod	<i>Physaria brassicoides</i>

<b>TABLE 4.C.1.C</b>	
<b>BLM SENSITIVE SPECIES – PLANTS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
common twinpod	<i>Physaria didymocarpa v. lanata</i>
slender-branched popcorn flower	<i>Plagiobothrys leptocladus</i>
short-leaved bluegrass	<i>Poa arnowiae = P. curta</i>
Austin's knotweed	<i>Polygonum douglasii sp. Austinae</i>
Platte cinquefoil	<i>Potentilla plattensis</i>
alkali primrose	<i>Primula alcalina</i>
mealy primrose	<i>Primula incana</i>
James stitchwort	<i>Pseudostellaria jamesiana = Stellaria jamesiana</i>
dwarf wooly-heads	<i>Psilocarphus brevissimus</i>
Indian breadroot	<i>Pediomelum hypogaeum</i>
Lemmon's alkaligrass	<i>Puccinellia lemmonii</i>
white-veined wintergreen	<i>Pyrola picta</i>
Beartooth large-flowered goldenweed	<i>Pyrrcoma carthamoides var. subsquarrosa = Haplopappus carthamoides v. subsquarrosus</i>
bur oak	<i>Quercus macrocarpa</i>
Northern buttercup	<i>Ranunculus pedatifidus</i>
persistent-sepal yellow-cress	<i>Rorippa calycina</i>
slender bulrush	<i>Schoenoplectus heterochaetus = Scirpus heterochaetus</i>
shoshonea	<i>Shoshonea pulvinata</i>
few-flowered goldenrod	<i>Solidago velutina = S. sparsifolia</i>
white-stemmed globe-mallow	<i>Sphaeralcea munroana</i>
silver chicken sage	<i>Sphaeromeria argentea</i>
smooth buckwheat	<i>Stenogonum salsuginosum = Eriogonum salsuginosum</i>
thorn skeletonweed	<i>Stephanomeria spinosa = Lygodesmia spinosa</i>

<b>TABLE 4.C.1.C</b>	
<b>BLM SENSITIVE SPECIES – PLANTS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Poison suckleya	<i>Suckleya suckleyana</i>
Rocky Mountain dandelion	<i>Taraxacum eriophorum</i>
alpinemeadowrue	<i>Thalictrum alpinum</i>
arrow thelypody	<i>Thelypodium sagittatum ssp.sagittatum</i>
meadow pennycress	<i>Thlaspi parviflorum</i>
showy townsendia	<i>Townsendia florifera</i>
Nannyberry	<i>Viburnum lentago</i>

## **APPENDIX 4.C.2**

### **North Dakota Federal and State Wildlife Species of Concern**

<b>TABLE 4.C.2.A</b>							
<b>NORTH DAKOTA'S BIRD SPECIES OF CONCERN</b>							
<b>Scientific Name</b>	<b>Common Name</b>	<b>Global</b>	<b>State</b>	<b>USFWS</b>	<b>USFS</b>	<b>CWCS</b>	<b>Habitat</b>
<i>Ammodramus bairdii</i>	Baird's Sparrow	G4	SU		S	I	Native prairies & grasslands
<i>Ammodramus leconteii</i>	Le Conte's Sparrow	G4	SU			II	Fens, wet meadows, marshes, sedges
<i>Ammodramus nelsoni</i>	Nelson's Sharp-tailed Sparrow	G5	SU			I	Fens, shallow marshes, lakes
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	G5	SU			I	Mixed-grass prairie, meadows, hayfields
<i>Anas acuta</i>	Northern Pintail	G5	SU			II	Aquatic/wetland habitat
<i>Anthus spragueii</i>	Sprague's Pipit	G4	S3		S	I	Grazed prairie
<i>Asio flammeus</i>	Short-eared Owl	G5	SU			II	Prairie, hayfields, stubble fields
<i>Athene cunicularia</i>	Burrowing Owl	G4	SU		S	II	Grasslands with abandoned burrows
<i>Aythya americana</i>	Redhead	G5	SU			II	Aquatic/wetland habitat
<i>Aythya valisineria</i>	Canvasback	G5	SU			II	Aquatic/wetland habitat
<i>Bartramia longicauda</i>	Upland Sandpiper	G5	SU			I	Dry, open mixed-grass prairie
<i>Botaurus lentiginosus</i>	American Bittern	G4	SU			I	Aquatic/wetland habitat
<i>Buteo regalis</i>	Ferruginous Hawk	G4	SU			I	Native prairie, trees, cliffs
<i>Buteo swainsoni</i>	Swainson's Hawk	G5	SU			I	Open plains and prairies
<i>Calamospiza melanocorys</i>	Lark Bunting	G5	SU			I	Sagebrush, sage prairie
<i>Calcarius mccownii</i>	McCown's Longspur	G4	S2			III	Arid, grazed, mix-grass prairie,
<i>Calcarius ornatus</i>	Chestnut-collared Longspur	G5	SU			I	Grazed/hayed mixed-grass prairie
<i>Catoptrophorus semipalmatus</i>	Willet	G5	SU			I	Aquatic/wetland habitat
<i>Centrocercus urophasianus</i>	Greater Sage Grouse	G4	SU		S	II	Sagebrush
<i>Charadrius montanus</i>	Mountain Plover	G3	SX	PT			Dry short grass prairie, sagebrush
<i>Chlidonias niger</i>	Black Tern	G4	SU			I	Aquatic/wetland habitat

<b>TABLE 4.C.2.A</b>							
<b>NORTH DAKOTA'S BIRD SPECIES OF CONCERN</b>							
<b>Scientific Name</b>	<b>Common Name</b>	<b>Global</b>	<b>State</b>	<b>USFWS</b>	<b>USFS</b>	<b>CWCS</b>	<b>Habitat</b>
<i>Circus cyaneus</i>	Northern Harrier	G5	SU			II	Upland grasses near water
<i>Cistothorus platensis</i>	Sedge Wren	G5	SU			II	Wet meadows, tall grasses & sedges
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	G5	SU			I	Woodlands, thickets, prairie shrub, shelterbelt
<i>Coturnicops noveboracensis</i>	Yellow Rail	G4	S2			I	Aquatic/wetland habitats
<i>Dolichonyx oryzivorus</i>	Bobolink	G5	SU			II	Tall-grass prairie, hayland, cropland
<i>Falco mexicanus</i>	Prairie Falcon	G5	S3			II	Badlands, cliffs, buttes in west ND
<i>Falco peregrinus</i>	Peregrine Falcon	G4	SU		S	III	Undisturbed areas with cliffs and prey
<i>Grus americana</i>	Whooping Crane	G1	SX	E, XN		III	Aquatic/wetland habitats
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S1			II	Forested areas near water
<i>Lanius ludovicianus</i>	Loggerhead Shrike	G4	SU		S	II	Open country, wooded coulees, shelterbelts
<i>Larus pipixcan</i>	Franklin's Gull	G4G5	S?B			I	Aquatic/wetland habitats
<i>Limosa fedoa</i>	Marbled Godwit	G5	SU			I	Aquatic/wetland habitat
<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker	G5	SU			II	Trees by rivers, shelterbelts, wooded areas
<i>Numenius americanus</i>	Long-billed Curlew	G5	S2		S	I	Aquatic/wetland habitats, extreme SW counties
<i>Numenius borealis</i>	Eskimo Curlew	GH	S?	E			Wetlands, grasslands, pastures
<i>Pelecanus erythrorhynchos</i>	American White Pelican	G4	SU			I	Aquatic/wetland habitat
<i>Phalaropus tricolor</i>	Wilson's Phalarope	G5	SU			I	Aquatic/wetland habitat
<i>Podiceps auritus</i>	Horned Grebe	G5	SU			I	Aquatic/wetland habitat
<i>Recurvirostra americana</i>	American Avocet	G5	SU			II	Aquatic/wetland habitat
<i>Spiza americana</i>	Dickcissel	G5	SU			II	Alfalfa, sweet clover, brushy grasslands

<b>TABLE 4.C.2.A</b>							
<b>NORTH DAKOTA'S BIRD SPECIES OF CONCERN</b>							
<b>Scientific Name</b>	<b>Common Name</b>	<b>Global</b>	<b>State</b>	<b>USFWS</b>	<b>USFS</b>	<b>CWCS</b>	<b>Habitat</b>
<i>Spizella breweri</i>	Brewer's Sparrow	G5	S3			III	Dense sagebrush, short-grass prairie
<i>Sterna antillarum</i>	Interior Least Tern	G4T2Q	SU	E		II	Sparsely vegetated sand bars
<i>Tympanuchus cupido pinnatus</i>	Greater Prairie Chicken	G4T4	S2		S	II	Native tall-grass prairie
<i>Tympanuchus phasianellus</i>	Sharp-tailed Grouse	G5	SU			II	Mixed-grass prairie, patches of woody vegetation
<i>Zonotrichia albicollis</i>	White-throated Sparrow	G5	S3				Mature quaking aspen, dense understory
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.							

<b>TABLE 4.C.2.B</b>							
<b>NORTH DAKOTA'S MAMMAL SPECIES OF CONCERN</b>							
<b>Scientific Name</b>	<b>Common Name</b>	<b>Global</b>	<b>State</b>	<b>USFWS</b>	<b>USFS</b>	<b>CWCS</b>	<b>Habitat</b>
<i>Canis lupus</i>	Gray Wolf	G4G5	SX	E		III	Forested areas
<i>Chaetodipus hispidus</i>	Hispid Pocket Mouse	G5	S4			III	Short and mixed-grass prairie
<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	SU		S	I	Short grass of grazed rangeland in SW North Dakota
<i>Lemmyscus curtatus</i>	Sagebrush Vole	G5	S4			III	Extreme western North Dakota
<i>Lutra canadensis</i>	Northern River Otter	G5	S1			II	Rivers, streams near wooded areas
<i>Mustela nigripes</i>	Black-footed Ferret	G1	S1	E		II	Short grass prairie where prairie dog towns occur.
<i>Myotis ciliolabrum</i>	Western Small-footed Myotis	G5	SU			III	Extreme western North Dakota
<i>Myotis evotis</i>	Long-eared Myotis	G5	SU			III	Western North Dakota
<i>Myotis volans</i>	Long-legged Myotis	G5	SU			III	Western North Dakota
<i>Ovis canadensis</i>	Bighorn Sheep	G4T4	S2		S		Rugged terrain, rocky slopes, badlands
<i>Perognathus flavescens</i>	Plains Pocket Mouse	G5	SU			III	Sandy areas covered with grass in SE North Dakota
<i>Sorex arcticus</i>	Arctic Shrew	G5	S?			III	Moist, grassy openings in forested areas
<i>Sorex hoyi</i>	American Pygmy Shrew	G5	SU			II	Forested areas in drift prairie & Red River Valley
<i>Spermophilus richardsonii</i>	Richardson's Ground Squirrel	G5	SU			II	Open grasslands, cultivated fields, pastures
<i>Spilogale putoris</i>	Eastern Spotted Skunk	G4	S1			III	Riparian woodlands, densely vegetated
<i>Vulpes velox</i>	Swift Fox	G3	S1			II	Short mixed-grass prairie tracts
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.							

<b>TABLE 4.C.2.C</b>							
<b>NORTH DAKOTA'S REPTILE SPECIES OF CONCERN</b>							
Scientific Name	Common Name	Global	State	USFWS	USFS	CWCS	Habitat
<i>Apalone mutica</i>	Smooth Softshell Turtle	G5	SU			III	Lower Missouri River System
<i>Chelydra serpentina</i>	Common Snapping Turtle	G5	S?			II	Warm water lakes/streams, muddy bottoms
<i>Eumeces septentrionalis</i>	Northern Prairie Skink	G5	S2S3			III	Sandy areas in grasslands
<i>Graptemys pseudogeographica</i>	False Map Turtle	G5	SU			III	Lower Missouri River System
<i>Heterodon nasicus</i>	Western Hognose Snake	G5	S?			I	Sand/gravel habitats near rivers
<i>Liochlorophis vernalis</i>	Smooth Green Snake	G5	SU			I	Grasslands, uplands of hills
<i>Phrynosoma hernandesi</i>	Short-Horned Lizard	G5	SU			II	Badlands
<i>Sceloporus graciosus</i>	Northern Sagebrush Lizard	G5T5	S4			III	Sagebrush, open flats, forested slopes near water
<i>Storeria occipitomaculata</i>	Redbelly Snake	G5	SU			II	Woodlands in drift prairie, Red River Valley
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.							

<b>TABLE 4.C.2.D</b>							
<b>NORTH DAKOTA'S AMPHIBIAN SPECIES OF CONCERN</b>							
Scientific Name	Common Name	Global	State	USFWS	USFS	CWCS	Habitat
<i>Bufo hemiophrys</i>	Canadian Toad	G4	SU			I	Aquatic/wetland habitat
<i>Rana pipiens</i>	Northern Leopard Frog	G5	SU				Aquatic/wetland habitat
<i>Spea bombifrons</i>	Plains Spadefoot Toad	G5	SU			I	Dry grasslands, loose soils, shallow pools
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.							

**TABLE 4.C.2.E**  
**NORTH DAKOTA'S FISH SPECIES OF CONCERN**

Scientific Name	Common Name	Global	State	USFWS	USFS	CWCS	Habitat
<i>Ameiurus natalis</i>	Yellow Bullhead	G5	SU			III	Backwater, slow-moving sections of rivers, soft bottoms
<i>Campostoma anomalum</i>	Central Stoneroller	G5	S3			III	Forest River in NE North Dakota
<i>Cycleptus elongatus</i>	Blue Sucker	G3G4	S3			I	Large rivers, strong current, high turbidity
<i>Ichthyomyzon castaneus</i>	Chestnut Lamprey	G4	SU			III	Red River
<i>Ichthyomyzon unicuspis</i>	Silver Lamprey	G5	SU			III	Red River
<i>Macrhybopsis gelida</i>	Sturgeon Chub	G3	S2		S2	I	Rocky rapids, high turbidity, swift currents
<i>Macrhybopsis meeki</i>	Sicklefin Chub	G3	S2			I	Deep rivers, swift current, muddy waters
<i>Macrhybopsis storeriana</i>	Silver Chub	G5	S?			II	Deeper pools, sandy backwater, large rivers
<i>Margariscus nachtriebi</i>	Northern Pearl Dace	G5	S3			I	Missouri & Red River systems
<i>Nocomis biguttatus</i>	Hornyhead Chub	G5	S3			III	Forest River in NE North Dakota
<i>Notropis anogenus</i>	Pugnose Shiner	G3	S1			III	Clear water with vegetation
<i>Notropis heterolepis</i>	Blacknose Shiner	G5	S3			III	Pools with vegetation
<i>Notropis rubellus</i>	Rosyface Shiner	G5	S3			III	Pools with current
<i>Percina caprodes</i>	Logperch	G5	S3			III	Red River
<i>Percina shumardi</i>	River Darter	G5	SU			III	Red River
<i>Percopsis omiscomaycus</i>	Trout-Perch	G5	S?			II	Deep pools, rivers, streams, sandy bottoms
<i>Phoxinus eos</i>	Northern Redbelly Dace	G5	S4		S2	II	Slower rivers with some vegetation
<i>Phoxinus neogaeus</i>	Finescale Dace	G5	SU			III	Pools, slow moving waters
<i>Platygobio gracilis</i>	Flathead Chub	G5	S?			II	Turbid waters, swift current, sand/gravel bottoms
<i>Polyodon spathula</i>	Paddlefish	G4	S?			II	Large free flowing rivers with zooplankton
<i>Pylodictis olivaris</i>	Flathead Catfish	G5	S4			III	Pools, lakes, slower waters,
<i>Scaphirhynchus albus</i>	Pallid Sturgeon	G2	S1	E		II	Large, turbid rivers with sand/gravel bottom

\* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.

<b>TABLE 4.C.2.F</b>							
<b>NORTH DAKOTA'S INSECT SPECIES OF CONCERN</b>							
Scientific Name	Common Name	Global	State	USFWS	USFS	CWCS	Habitat
<i>Atrytone arogos iowa</i>	Arogos Skipper	G3	SU		S		Native prairie with purple vetch, Canada thistle, purple coneflower
<i>Euphyes dion</i>	Dion Skipper	G4	S1		S		Sedge marshes, cattails, swamp milkweed
<i>Hesperia dacotae</i>	Dakota Skipper	G2	S2	C	S		Native tall grass prairie with white camass
<i>Hesperia ottoe</i>	Ottoe Skipper	G3G4	SU		S		Native prairie hilltops with coneflower
<i>Oarisma powesheik</i>	Powersheik Skipperling	G1	SU		S		Undisturbed, tall grass meadows
<i>Phyciodes batesii</i>	Tawny Crescent	G4	S3		S		Woodlands, native prairie with dogbane, leafy spurge
<i>Poanes massasoit</i>	Mulberry Wing	G4	S2		S		Sedge meadows with upright sedge, dogwood
<i>Poanes viator</i>	Broad-Winged Skipper	G5	S2		S		Tall marsh grass with hairy sedge, swamp milkweed
<i>Speyeria idalia</i>	Regal Fritillary	G3	S2		S		Tall grass areas, damp meadows with blazing star, milkweed, thistle
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.							

<b>TABLE 4.C.2.G</b>							
<b>NORTH DAKOTA'S BIVALVE AND GASTROPOD SPECIES OF CONCERN</b>							
Scientific Name	Common Name	Global	State	USFWS	USFS	CWCS	Habitat
<i>Amblema plicata</i>	Threeridge	G5	SU			II	Mud, sand, gravel bottoms
<i>Fusconaia flava</i>	Wabash Pigtoe	G5	S4			II	Mud, sand, gravel bottoms
<i>Lasmigona compressa</i>	Creek Heelsplitter	G5	SU			II	Sandy-bottomed headwaters
<i>Ligumia recta</i>	Black Sandshell	G4G5	S4			II	Swift current, gravel/sand bottoms
<i>Potamilus alatus</i>	Pink Heelsplitter	G5	S4			II	Mud, gravel bottoms
<i>Potamilus ohioensis</i>	Pink Papershell	G5	SU			III	Sandy bottom of Bois de Sioux River
<i>Quadrula quadrula</i>	Mapleleaf	G5	S3			II	Mud, sand, gravel bottoms
* Data provided by the USFWS, USFS, ND Game & Fish Dept., North Dakota Natural Heritage Program, and NatureServe.							

<b>TABLE 4.C.2.H</b>	
<b>BLM SENSITIVE SPECIES – MAMMALS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>
Fisher	<i>Martes pennanti</i>
Fringed myotis	<i>Myotis thysanodes</i>
Fringe-tailed myotis	<i>Myotis thysanodes pahasapensis</i>
Gray Wolf	<i>Canis lupus</i>
Great Basin pocket mouse	<i>Perognathus parvus</i>
Grizzly Bear	<i>Ursus arctos horribilis</i>
Long-eared myotis	<i>Myotis evotis</i>
Long-legged myotis	<i>Myotis volans</i>
Meadow jumping mouse	<i>Zapus hudsonius</i>
North American wolverine	<i>Gulo gulo luscus</i>
Northern myotis	<i>Myotis septentrionalis</i>
Pallid bat	<i>Antrozous pallidus</i>
Pygmy rabbit	<i>Brachylagus idahoensis</i>
Swift fox	<i>Vulpes velox</i>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>
White-tailed prairie dog	<i>Cynomys leucurus</i>

<b>TABLE 4.C.2.I</b>	
<b>BLM SENSITIVE SPECIES – BIRDS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Baird's sparrow	<i>Ammodramus bairdii</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Black tern	<i>Chilodonia niger</i>
Black-backed woodpecker	<i>Picoides arcticus</i>
Black-crowned night heron	<i>Nycticorax nycticorax</i>
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>
Bobolink	<i>Dolichonyx orysivorus</i>
Brewer's sparrow	<i>Spizella breweri</i>
Burrowing owl	<i>Athene cunicularia</i>
Chestnut-collared longspur	<i>Calcarius ornatus</i>
Common loon	<i>Gavia immer</i>
Dickcissel	<i>Spiza americana</i>
Ferruginous hawk	<i>Buteo regalis</i>
Flammulated owl	<i>Otus flammeolus</i>
Franklin's gull	<i>Larus pipixcan</i>
Golden eagle	<i>Aquila chrysaetos</i>
Great gray owl	<i>Strix nebulosa</i>
Greater sage-grouse	<i>Centrocercus urophasianus</i>
Harlequin duck	<i>Histrionicus histrionicus</i>
LeConte's sparrow	<i>Ammodramus leconteii</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Long-billed curlew	<i>Numenius americanus</i>
Marbled godwit	<i>Limosa fedoa</i>
McCown's longspur	<i>Calcarius mccownii</i>
Mountain plover	<i>Charadrius montanus</i>

<b>TABLE 4.C.2.I</b>	
<b>BLM SENSITIVE SPECIES – BIRDS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Nelson's sharp-tailed sparrow	<i>Ammodramus nelsoni</i>
Northern goshawk	<i>Accipiter gentiles</i>
Peregrine falcon	<i>Falco peregrinus</i>
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>
Sage sparrow	<i>Amphispiza belli</i>
Sage thrasher	<i>Oreoscoptes montanus</i>
Sedge wren	<i>Cistothorus platensis</i>
Sprague's pipit	<i>Anthus spragueii</i>
Swainson's hawk	<i>Buteo swainsoni</i>
Three-toed woodpecker	<i>Picoides tridactylus</i>
Trumpeter swan	<i>Cygnus buccinator</i>
White-faced ibis	<i>Plegadis chihi</i>
Yellow rail	<i>Coturnicops noveboracensis</i>
Yellow-billed cuckoo	<i>Coccyzus americanus</i>

<b>TABLE 4.C.2.J</b>	
<b>BLM SENSITIVE SPECIES – FISH</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Arctic grayling (fluvial population)	<i>Thymallus arcticus montanus</i>
Northern redbelly X Finescale dace	<i>Phoxinus eos x Phoxinus neogaeus</i>
Paddlefish	<i>Polyodon spathula</i>
Pearl dace	<i>Margariscus margarita</i>
Sauger	<i>Stizostedion canadense</i>
Sturgeon chub	<i>Macrhybopsis gelida</i>
Westslope cutthroat trout	<i>Oncorhynchus clarki lewisi</i>
Yellowstone cutthroat trout	<i>Oncorhynchus clarki bouvieri</i>

<b>TABLE 4.C.2.K</b>	
<b>BLM SENSITIVE SPECIES – REPTILES</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Greater short-horned lizard	<i>Phrynosoma hernandesi</i>
Milk snake	<i>Lampropeltis triangulum</i>
Snapping turtle	<i>Chelydra serpentina</i>
Spiny softshell	<i>Apalone spinifera</i>
Western hog-nosed snake	<i>Heterodon nasicus</i>

<b>TABLE 4.C.2.L</b>	
<b>BLM SENSITIVE SPECIES – AMPHIBIANS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Coeur d'Alene salamander	<i>Plethodon idahoensis</i>
Great Plains toad	<i>Bufo cognatus</i>
Northern leopard frog	<i>Rana pipiens</i>
Plains spadefoot	<i>Spea bombifrons</i>
Western toad	<i>Bufo boreas</i>

<b>TABLE 4.C.2.M</b>	
<b>BLM SENSITIVE SPECIES – INSECTS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Dakota skipper	<i>Hesperia dacotae</i>

**APPENDIX 4.C.3**

**North Dakota Federal and State Threatened and Endangered  
Botany and Wildlife Species Rank Definitions**

<b>TABLE 4.C.3.A</b>	
<b>NATURAL HERITAGE RANK DEFINITIONS</b>	
<b>G1</b>	<b>Critically Imperiled</b> – Critically imperiled globally because of extreme rarity or because of some factor of its biology making it especially vulnerable to extinction. Typically 5 or fewer occurrences or very few remaining individuals (<1,000) or acres (<2,000) or stream miles (<10). [Critically endangered throughout its range.]
<b>G2</b>	<b>Imperiled</b> - Imperiled globally because of rarity or because of other factors demonstrably making it very vulnerable to extinction or elimination throughout its range. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or stream miles (10 to 50). [Endangered throughout its range.]
<b>G3</b>	<b>Vulnerable</b> – Vulnerable globally either because very rare and local throughout its range, found only in a restricted range (even if abundant at some locations) or because of other factors making it vulnerable to extinction or elimination throughout its range. Typically of 21 to 100 occurrences or between 3,000 and 10,000 individuals. [Threatened throughout its range.]
<b>G4</b>	<b>Apparently Secure</b> – Uncommon but not rare (although it may be quite rare in parts of its range, especially at the periphery), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.
<b>G5</b>	<b>Secure</b> – Common, widespread, and abundant (although it may be quite rare in parts of its range, especially on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
<b>GX</b>	<b>Presumed Extinct</b> (species elements) - Believed to be extinct throughout its range (e.g., passenger pigeon), virtually no likelihood that it will be rediscovered.
<b>GH</b>	<b>Possibly Extinct</b> (species elements) - Of historical occurrence throughout its range, i.e., formerly part of the established biota, with the expectation that it may be rediscovered (e.g. Ivory-billed woodpecker).
<b>G#G#</b>	<b>Range Rank</b> - A numeric range rank (e.g., G2G3) is used to indicate uncertainty about the exact status of a taxon. Ranges cannot skip more than one rank (e.g., GU should be used rather than G1G4).
<b>GU</b>	<b>Unrankable</b> - Currently unrankable due to lack of information or due to substantially conflicting information about status or trends
<b>G?</b>	<b>Unranked</b> - Global rank not yet assessed.
<b>HYB</b>	<b>Hybrid</b> - Element not ranked because it represents and interspecific hybrid and not a species.
<b>?</b>	<b>Inexact Numeric Rank</b> - Denotes inexact numeric rank.
<b>Q</b>	<b>Questionable Taxonomy</b> - Taxonomic status is questionable; numeric rank may change with taxonomy.
<b>C</b>	<b>Captive or Cultivated Only</b> - Taxon at present is extant only in captivity or cultivation, or as a reintroduced population not yet established
<b>T</b>	<b>Intraspecific Taxon</b> (trinomial) – The status of intraspecific taxa (subspecies or varieties) are indicated by a “T-rank” following the species’ basic global rank. A T subrank cannot imply the subspecies or variety is more abundant than the species’ basic global rank (i.e., a G1T2 subrank should not occur).
<b>S1</b>	<b>Critically Imperiled</b> – Critically imperiled in the state because of extreme rarity or because of some factor of its biology making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000). [Critically endangered in state.]
<b>S2</b>	<b>Imperiled</b> – Imperiled in the state because of rarity or because of other factors making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000). [Endangered in the state.]
<b>S3</b>	<b>Vulnerable</b> – Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 to 10,000 individuals. [Threatened in the state.]
<b>S4</b>	<b>Apparently Secure</b> – Uncommon but not rare, and usually widespread in the state. Possible cause of long-term concern. Usually more than 100 occurrences and more than 10,000 individuals

<b>TABLE 4.C.3.A</b>	
<b>NATURAL HERITAGE RANK DEFINITIONS</b>	
<b>S5</b>	<b>Secure</b> – Common, widespread, and abundant in the state. Essentially ineradicable under present conditions. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
<b>SX</b>	<b>Presumed Extirpated</b> – Element is believed to be extirpated from the state. Virtually no likelihood that it will be rediscovered.
<b>SH</b>	<b>Possibly Extirpated (Historical)</b> – Elements occurred historically in the state, and there is some expectation that it may be rediscovered. Its presence may not have been verified in the past 20 years.
<b>S#S#</b>	<b>Range Rank</b> – A numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the element. Ranges cannot skip more than one rank (e.g., SU should be used rather than S1S4).
<b>SU</b>	<b>Unrankable</b> – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
<b>S?</b>	<b>Unranked</b> - State rank not yet assessed.
<b>HYB</b>	<b>Hybrid</b> - Element not ranked because it represents and interspecific hybrid and not a species.
<b>SE</b>	<b>Exotic</b> - An exotic species established in the state; may be native in nearby regions.
<b>SE#</b>	<b>Exotic Numeric</b> – An exotic established in the state that has been assigned a numeric rank to indicate its status, as defined for S1 through S5.
<b>SZ</b>	<b>Zero Occurrences</b> – Present but lacking practical conservation concern in the state because there are no definable occurrences, although the taxon is native and appears regularly in the state. An SZ rank will generally be used for long distance migrants whose occurrences during their migrations have little or no conservation value for the migrant, as they are typically too irregular (in terms of repeated visitation to the same locations), transitory, and dispersed to be reliably identified, mapped, and protected.
<b>SP</b>	<b>Potential</b> – Potential that element occurs in the state but no extant or historic occurrences are accepted.
<b>SR</b>	<b>Reported</b> – Element reported in the state but without a basis for either accepting or rejecting the report, or the report not yet reviewed. Some of these are very recent discoveries for which the program hasn't yet received first-hand information; others are old, obscure reports.
<b>SRF</b>	<b>Reported Falsely</b> – Element erroneously reported in the state and the error has persisted in the literature.
<b>SSYN</b>	<b>Synonym</b> – Element reported as occurring in the state, but state does not recognize the taxon; therefore the Element is not ranked by the state.
<b>*</b>	S rank has been assigned and is under review. Contact the individual state Natural Heritage Program for assigned rank.
<b>B</b>	<b>Breeding</b> – Basic rank refers to the breeding population of the Element in the state.
<b>N</b>	<b>Non-breeding</b> – Basic rank refers to the non-breeding population of the Element in the state.
<b>?</b>	<b>Inexact Numeric Rank</b> – Denotes inexact numeric rank.
<b>C</b>	<b>Captive or Cultivated</b> - Native element presently extant in the state only in captivity or cultivation or as a reintroduced population not yet established

<b>TABLE 4.C.3.B</b>	
<b>FEDERAL STATUS DESIGNATIONS</b>	
<b>U.S. Fish and Wildlife Service (USFWS)</b>	
*This value indicates status under the federal Endangered Species Act of 1973 based on categories defined by the U.S. Fish and Wildlife Service(16 U.S.C.S §1531-1543 (Supp.1996)).	
<b>E</b>	Endangered
<b>T</b>	Threatened
<b>PE</b>	Proposed Endangered
<b>PT</b>	Proposed Threatened
<b>PC</b>	Proposed Candidate
<b>XE</b>	Essential Experimental Population – An experimental population whose loss would be likely to appreciably reduce the likelihood of the survival of the species in the wild.
<b>XN</b>	Experimental Nonessential Population – An experimental population of a listed species reintroduced into a specific area that receives more flexible management under the Act.
<b>C</b>	Candidate (species for which the U.S. Fish and Wildlife Service has sufficient information on biological status and threats to propose listing as threatened or endangered).
<b>CH</b>	Critical Habitat – The specific areas within the geographic area occupied by a species, at the time it is listed, on which are found those physical or biological features essential to conserve the species and that may require special management considerations or protection; and specific areas outside the geographic area occupied by the species at the time it is listed upon determination that such area essential to conserve the species.
<b>PDL</b>	Proposed of delisting – Any species for which a final rule has been published in the Federal Register to delist the species.
<b>DM</b>	Recovered, delisted, and being monitored – Any previously listed species that is now recovered, has been delisted, and is being monitored.
<b>S1</b>	Critically imperiled: at high risk because of extreme rarity (often 5 or fewer occurrences), rapidly declining numbers, or other factors that make it particularly vulnerable to rangewide extinction or extirpation.
<b>S2</b>	Imperiled: at risk because of restricted range, few populations (often 20 or fewer), rapidly declining numbers, or other factors that make it vulnerable to rangewide extinction or extirpation.
<b>S3</b>	Vulnerable: at moderate risk because of restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors that make it vulnerable to rangewide extinction or extirpation.
<b>S</b>	Sensitive: animal and plant species identified by the Regional Forester for which population viability is a concern as evidenced by significant downward trend in population or a significant downward trend in habitat capacity.
<b>W</b>	Watch Plants:
<b>Level I</b>	Species having a high level of conservation priority because of declining status either in North Dakota or across their range; or a high rate of occurrence in North Dakota constituting the core of the species' breeding range, but are at-risk range wide, and non-State Wildlife Grants (SWG) funding is not readily available to them.
<b>Level II</b>	Species having a moderate level of conservation priority; or a high level of conservation priority, but a substantial amount of non-State Wildlife Grant funding is available to them.
<b>Level III</b>	North Dakota's species having a moderate level of conservation priority, but are believed to be peripheral or do not breed in North Dakota.