



Enbridge Pipelines (North Dakota) L.L.C.

Phase 6 Expansion Project - Stations

Wetland Determination Report

Prepared by:

**merjent**

October 2007

Enbridge Pipelines (North Dakota) L.L.C.

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Wetland Determination Report

PROJECT DESCRIPTION

Enbridge Pipelines (North Dakota) L.L.C. (Enbridge) is presently evaluating a project to upgrade and/or expand portions of 14 existing pumping stations. The proposed station modifications would involve constructing new pumps and motors, equipment platforms, control buildings, and a new storage tank (Beaver Lodge Tank Farm Facility). All modifications will be located on land already owned by Enbridge except for the new land which Enbridge will acquire in fee for its new storage tank at Beaver Lodge.

Merjent, Inc., on behalf of Enbridge, conducted an on-site routine wetland determination at 6 of the 14 stations to identify and classify wetlands located near each station. Seven stations were surveyed for wetlands during 2006 as part of a separate upgrade project (see table 1) (Turnbow and Wolf 2006a; Turnbow and Wolf 2006b). No wetlands were identified at the seven stations surveyed during 2006. The Clearbrook Station was not surveyed since all project activities will be confined within the existing fenced, graveled property. The location and extent of modifications for Enbridge's 14 stations are described in table 1. The location and survey extents for the six stations surveyed during this year's efforts are provided in Appendix A. The routine wetland determination was conducted on October 17 - 18, 2007. A summary of the wetland determination is provided below.

Table 1 - Station and Modification Locations

| Station | State | County | Legal Description | Extent of Station Modifications |
|---------------|--------------|-------------|---|--|
| Alexander | North Dakota | McKenzie | T152N, R101W, Section 18, SW¼ | Survey in 2006 (Turnbow and Wolf 2006a). Modification located on land owned by Enbridge. |
| Trenton | North Dakota | Williams | T154N, R102W, Section 34, SE¼ | Survey in 2006 (Turnbow and Wolf 2006a). Modification located on land owned by Enbridge. |
| Beaver Lodge | North Dakota | Williams | T156N, R95W, Section 32, S½ T155N, R95W, Section 5, N½ | Surveyed this year. Survey extent provided in Appendix A. |
| Stanley | North Dakota | Mountrail | T156N, R91W, Section 27, SW¼ | Survey in 2006 (Turnbow and Wolf 2006a). Modification located on land owned by Enbridge. |
| Blaisdell | North Dakota | Mountrail | T156N, R88W, Section 21, NE¼ | Survey in 2006 (Turnbow and Wolf 2006b). Modification located on land owned by Enbridge. |
| Minot | North Dakota | Ward | T155N, R82W, Section 18, SE¼ | Surveyed this year. Survey extent provided in Appendix A. |
| Denbigh | North Dakota | McHenry | T156N, R77W, Section 21, SW¼ | Survey in 2006 (Turnbow and Wolf 2006b). Modification located on land owned by Enbridge. |
| Pleasant Lake | North Dakota | Benson | T156N, R71W, Section 5, S½ | Surveyed this year. Survey extent provided in Appendix A. |
| Penn | North Dakota | Ramsey | T155N, R66W, Section 25, NW¼ | Survey in 2006 (Turnbow and Wolf 2006b). Modification located on land owned by Enbridge. |
| Bartlett | North Dakota | Ramsey | T153N, R61W, Section 25, NE¼ | Surveyed this year. Survey extent provided in Appendix A. |
| Larimore | North Dakota | Grand Forks | T152N, R55W, Section 25, SW¼ | Survey in 2006 (Turnbow and Wolf 2006b). Modification located on land owned by Enbridge. |

METHODOLOGY

A routine onsite wetland determination was performed to identify wetlands within the survey area. This method of wetland identification is outlined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE 1987). According to the 1987 Manual, routine wetland determinations are based on the presence of hydrophytic vegetation, wetland hydrology and hydric soils, referred to as the "three parameter approach". Wetlands present were classified according to methodologies identified in *Wetlands and Deepwater Habitats of the United States* (Cowardin 1979).

Hydrophytic Vegetation

Plant species nomenclature and indicator status were assigned according to the *National List of Plant Species that Occur in Wetlands: North Plains (Region 4)* (FWS 1988). The hydrophytic plant criterion (FAC-neutral test) was met when 50 percent or more of the dominant species within the vegetative strata were assigned an obligate (OBL), facultative wet (FACW) and/or facultative (FAC) wetland status. Where vegetation may be absent or unidentifiable (*i.e.*, agricultural land or heavily grazed pasture), atypical methodology was used to make a wetland determination.

Wetland Hydrology

Sufficient hydrology indicators must be present in order to satisfy the "three parameter approach" methodology. At least one or more primary indicators or two or more secondary indicators must be observed in order to satisfy the hydrology criteria. The presence of current wetland hydrology was determined through direct observation of surrounding environment and if necessary, direct observation of free water, saturated soil conditions, and soil redoximorphic features in excavated soil pits.

Hydric Soils

Hydric soils were assumed present if all dominant vegetative species have an obligate indicator status or all dominant species have an obligate or facultative wet indicator status and the wetland boundary is abrupt. Where necessary, random soil pits were excavated to determine the presence of hydric soils. Soil color, texture, and presence or absence of redoximorphic indicators (*e.g.*, mottles, gley, oxidized rhizospheres, *etc.*) were then evaluated at each soil pit.

RESULTS

Two wetlands were identified and delineated at the Pleasant Lake Station. No wetlands were identified at the remaining stations. Wetland boundaries were recorded using a GPS unit rated for one-meter accuracy. The locations of the delineated wetlands and SSURGO soil data are presented on the attached 1:4,000 scale aerial-photograph based maps (see Appendix B and Appendix C, respectively). Information for each wetland is recorded in the attached Data Sheets (see Appendix D).

The information contained herein represents my findings during the wetland determination activities conducted on October 17 and 18, 2007, at the aforementioned project sites.

Merjent, Inc.

Jeff Mackenthun
Professional Wetland Scientist No. 001414
MN Certified Wetland Delineator No. 1086

Date

Appendices

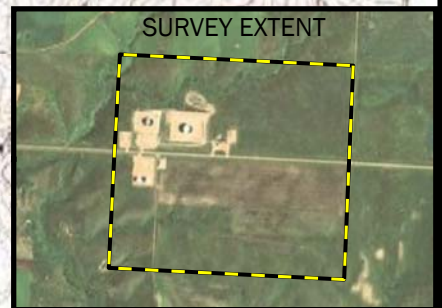
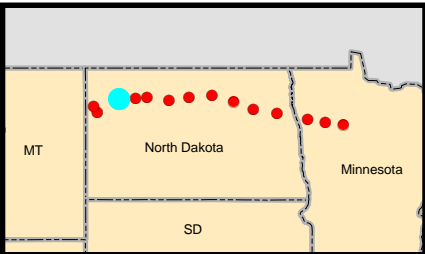
- Appendix A Project Location Maps
- Appendix B Wetland Location Map
- Appendix C SSURGO Soils Data Maps
- Appendix D Routine Determination Data Sheets

References

- Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBL-79/31. U.S. Fish and Wildlife Service, Washington, D.C.
- U.S. Fish and Wildlife Service (FWS). 1988. National List of Plant Species that Occur in Wetlands: North Plains (Region 4). Biological Report 88(26.4).
- U.S. Army Corps of Engineers - Environmental Laboratory (USACE). 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineers Waterways Experiment Station. Vicksburg, Mississippi.
- Turnbow, Jennifer and Wolf, Grady. 2006a. Enbridge Pipelines North Dakota LLC Alexander, Trenton, Beaver Lodge, and Stanley Station Upgrades, Environmental Review in McKenzie, Mountrail, and Williams Counties. Kadrmas, Lee & Jackson, Inc.
- Turnbow, Jennifer and Wolf, Grady. 2006b. Enbridge Pipelines (North Dakota) LLC Application for New Pumping Stations at Blaisdell, Denbigh, Penn and Larimore for a Waiver or Reduction of Procedures and Time Schedules and for a Certificate of Site Compatibility. Kadrmas, Lee & Jackson, Inc.

Appendix A

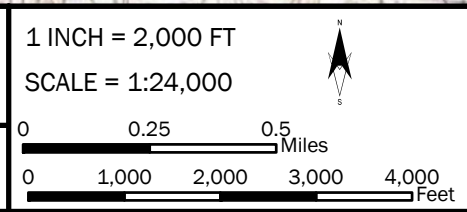
Project Location Maps
(1:24,000 7.5 Minute USGS Topographic Maps)



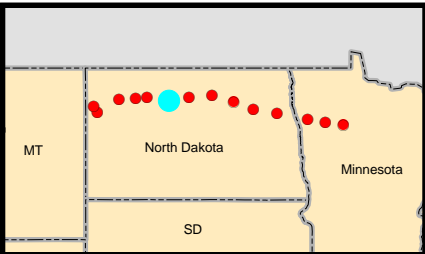
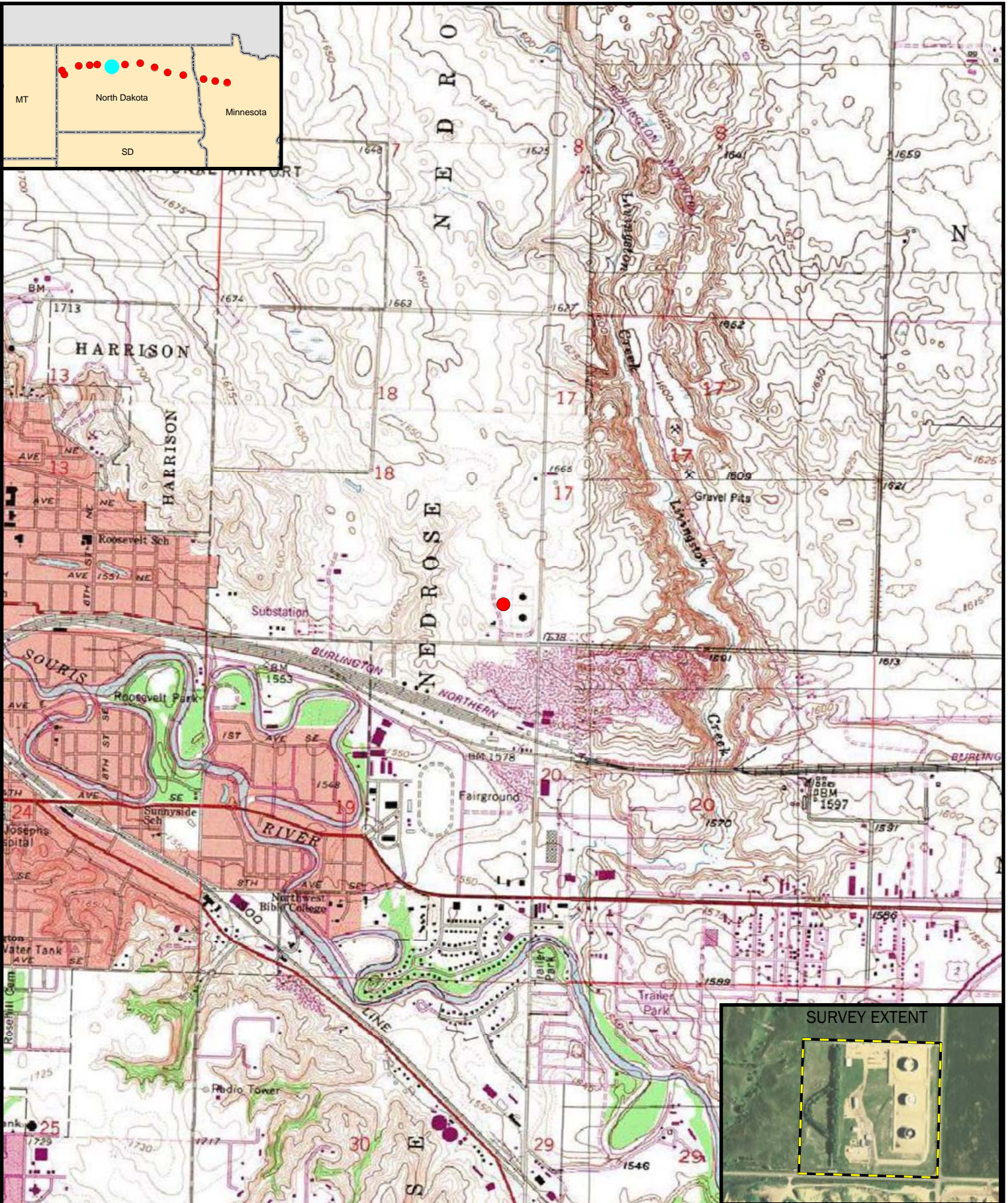
LEGEND

● STATION LOCATION

USGS Quadrangle Sheet:
Tioga SW



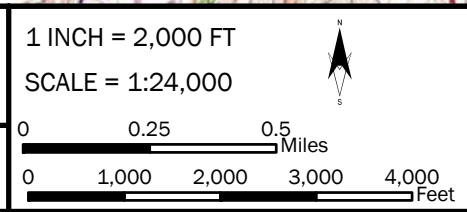
ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
NORTH DAKOTA PHASE 6 EXPANSION PROJECT
 Beaver Lodge Station
 T156N, R95W, Section 32 and T155N, R95W, Section 5
 Williams County, North Dakota



LEGEND

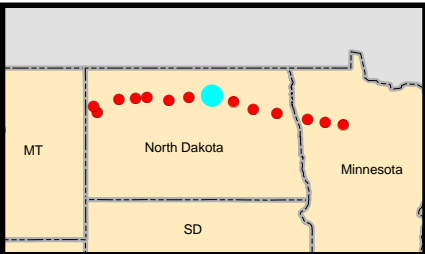
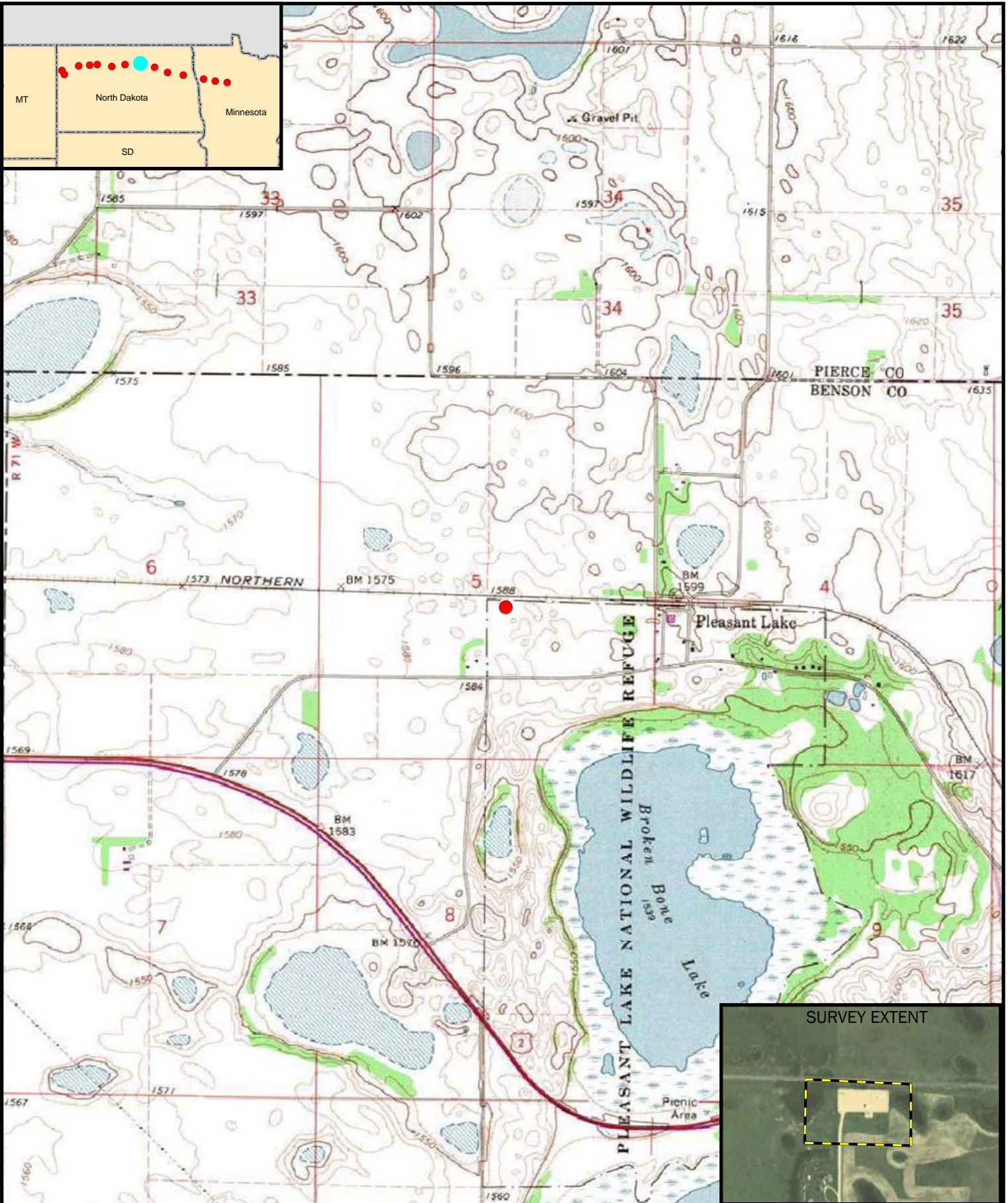
● STATION LOCATION

USGS Quadrangle Sheet:
Minot



ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
NORTH DAKOTA PHASE 6 EXPANSION PROJECT
 Minot Station
 T155N, R82W, Section 18, Ward County, North Dakota





LEGEND

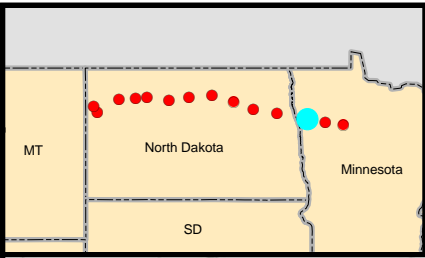
● STATION LOCATION

USGS Quadrangle Sheet:
Pleasant Lake

1 INCH = 2,000 FT
SCALE = 1:24,000

0 0.25 0.5 Miles
0 1,000 2,000 3,000 4,000 Feet

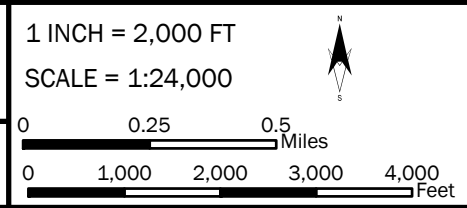
ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
NORTH DAKOTA PHASE 6 EXPANSION PROJECT
 Pleasant Lake Station
 T156N, R71W, Section 5, Benson County, North Dakota



LEGEND

● STATION LOCATION

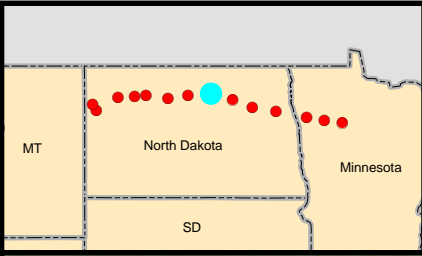
USGS Quadrangle Sheet:
Crookston



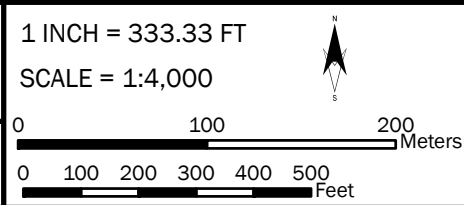
ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
NORTH DAKOTA PHASE 6 EXPANSION PROJECT
 Crookston Station
 T150N, R46W, Section 7, Polk County, Minnesota

Appendix B

Wetland Location Map
(1:4,000 2003 Aerial Photography)



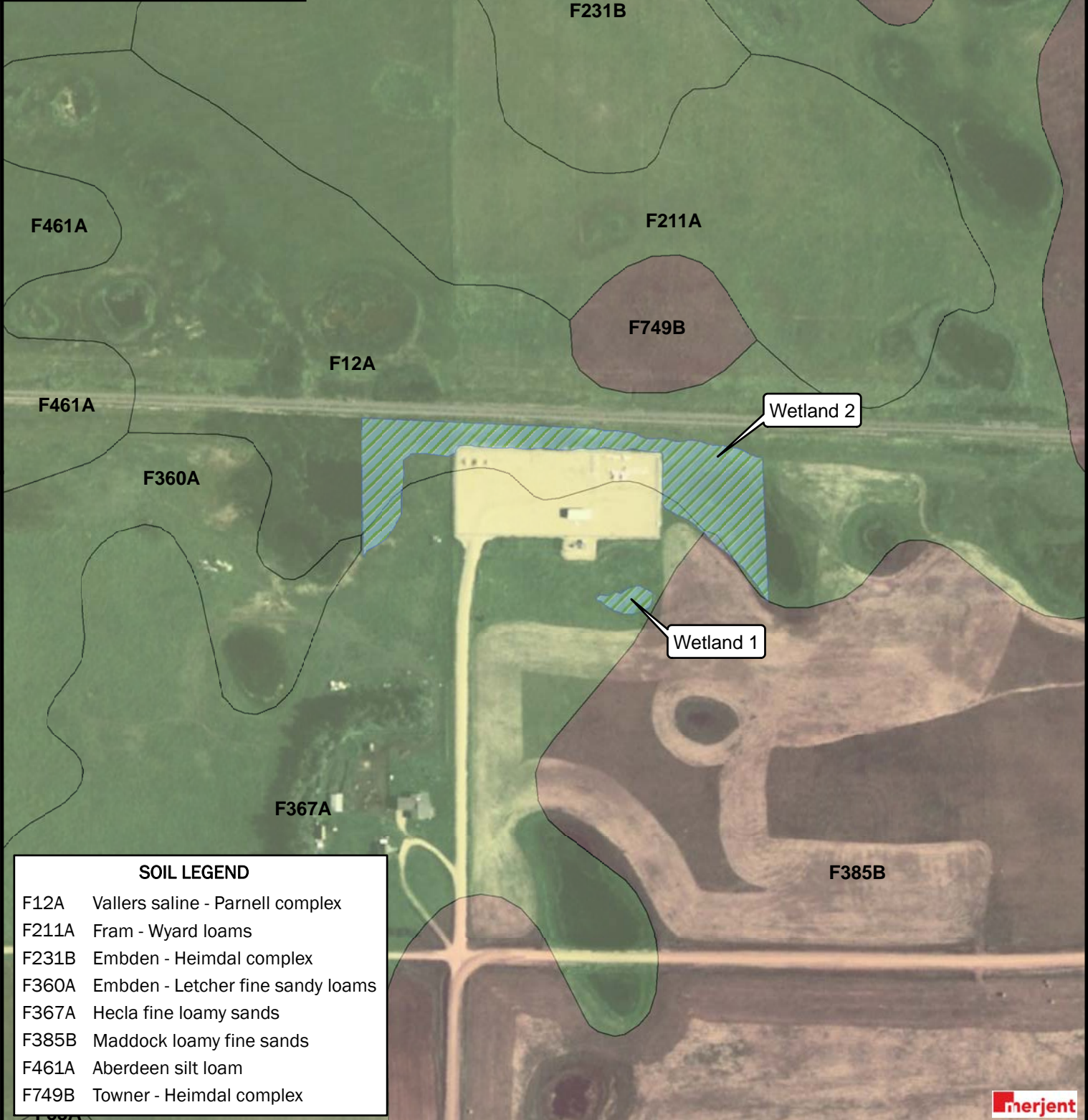
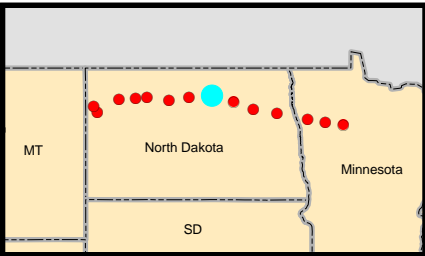
LEGEND
 WETLAND LOCATION
 USGS Quadrangle Sheet:
 Pleasant Lake



ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
NORTH DAKOTA PHASE 6 EXPANSION PROJECT
 Pleasant Lake Station
 T156N, R71W, Section 5, Benson County, North Dakota

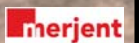
Appendix C

SURRGO County Soil Survey Data (Benson County)
(1:4,000 2003 Aerial Photography)



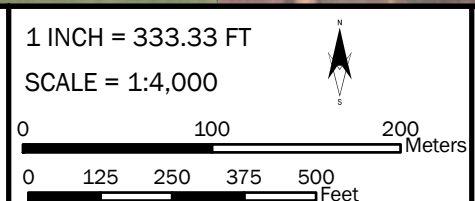
SOIL LEGEND

| | |
|-------|-----------------------------------|
| F12A | Vallers saline - Parnell complex |
| F211A | Fram - Wyard loams |
| F231B | Embden - Heimdal complex |
| F360A | Embden - Letcher fine sandy loams |
| F367A | Hecla fine loamy sands |
| F385B | Maddock loamy fine sands |
| F461A | Aberdeen silt loam |
| F749B | Towner - Heimdal complex |



LEGEND

| | |
|--|------------------|
| | WETLAND LOCATION |
| | HYDRIC SOIL |
| | NON-HYDRIC SOIL |



ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
NORTH DAKOTA PHASE 6 EXPANSION PROJECT
 Pleasant Lake Station
 T156N, R71W, Section 5, Benson County, North Dakota

Appendix D

Routine Determination Data Sheets

ROUTINE WETLAND DETERMINATION DATA FORM

| | |
|---|--|
| Project/Site: Enbridge Pipelines (North Dakota) L.L.C. Company/Project: Phase 6 Expansion Project Investigator(s): Jeff Mackenthun | Date: October 17, 2007 County: Benson Co. State: North Dakota |
| Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? No Is the area a potential problem area? No | Wetland: 1 Transect/Community: 1A |

VEGETATION

| Dominant Plant Species | | Stratum | Percent Coverage | Indicator Status |
|--|-----------------------------|---------|------------------|------------------|
| Common Name | Scientific Name | | | |
| Sedge | <i>Carex sp.</i> | H | 65 | NA |
| Narrow-leaf cattail | <i>Typha angustifolia</i> | H | 10 | OBL |
| Common reed | <i>Phragmites australis</i> | H | 25 | FACW |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100* | | | | |
| Remarks: Sedge was not identified to its species level. It is assumed this dominant sedge has an indicator status of OBL, FACW, or FAC (excluding FAC-). There was a relatively distinct break between sedge and brome grass. | | | | |

HYDROLOGY

| | |
|--|--|
| Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available Field Observations: Depth of Surface Water: - Depth of Free Water in Pit: 24" Depth to Saturated Soil: 16" | Wetland Hydrology Indicators Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Roots Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in remarks) |
| Remarks: Small isolated recharge depression on the southwest side of the station. | |

SOILS

| Map Unit Name: F367A – Hecla fine loamy sands Drainage Class: Moderately well drained | | | | | |
|---|---------|--|---------------|---|---------------------------------|
| Subgroup: | | | | | |
| Profile Description: | | | | | |
| Depth | Horizon | Matrix Color | Mottle Colors | Mottle Abundance/Contrast | Texture, Concretions, Structure |
| 0-6 | A | 10YR 2/1 | None | | Fine sandy loam |
| 6-26 | B | 10YR 3/2 | 10YR 4/2 | Faint, Few, Large | Loamy fine sand |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Hydric Soil Indicators: | | | | | |
| _____ Histols | | _____ Concretions | | _____ High organic Content in Surface Layer | |
| _____ Histic Epipedon | | _____ Organic Streaking in Sandy Soils | | _____ Listed on Local Hydric Soils List | |
| _____ Sulfidic Odor | | _____ Listed on National Hydric Soils | | _____ Other (Explain in Remarks) | |
| _____ Aquic Moisture Regime | | _____ Reducing Conditions | | | |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | | | | | |
| Remarks: | | | | | |
| | | | | | |

WETLAND DETERMINATION

| | | | | |
|--|---------------|------------|---------------|-----------|
| Hydrophytic Vegetation Present? | <u> X* </u> | Yes | <u> </u> | No |
| Wetland Hydrology Present? | <u> X </u> | Yes | <u> </u> | No |
| Hydric Soils Present? | <u> X </u> | Yes | <u> </u> | No |
| Is the sampling point within a wetland? | <u> X </u> | Yes | <u> </u> | No |
| Remarks: Classified as a PEMA; Type 1 wetland. As stated in the vegetation section on Page 1, it is assumed the dominant sedge has an indicator status of OBL, FACW, or FAC (excluding FAC-). | | | | |
| | | | | |

ROUTINE WETLAND DETERMINATION
DATA FORM

| | |
|---|--|
| Project/Site: Enbridge Pipelines (North Dakota) L.L.C. Company/Project: Phase 6 Expansion Project Investigator(s): Jeff Mackenthun | Date: October 17, 2007 County: Benson Co. State: North Dakota |
| Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? No Is the area a potential problem area? No | Wetland: 1 Transect/Community: 1B |

VEGETATION

| Dominant Plant Species | | Stratum | Percent Coverage | Indicator Status |
|---|----------------------------|---------|------------------|------------------|
| Common Name | Scientific Name | | | |
| Smooth brome | <i>Bromus inermis</i> | H | 85 | NI |
| Leafy spurge | <i>Euphorbia esula</i> | H | 10 | NI |
| Big bluestem | <i>Andropogon gerardii</i> | H | 5 | FACU |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0 | | | | |
| Remarks: There was a distinct break between upland and wetland vegetation. Topography only changed slightly (<1 foot). | | | | |

HYDROLOGY

| | |
|--|---|
| Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available Field Observations: Depth of Surface Water: - Depth of Free Water in Pit: >24" Depth to Saturated Soil: >24" | Wetland Hydrology Indicators Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Roots Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in remarks) |
| Remarks: | |

SOILS

| Map Unit Name: F367A – Hecla fine loamy sands Drainage Class: Moderately well drained | | | | | |
|---|---------|--------------|---------------|---------------------------|---------------------------------|
| Subgroup: | | | | | |
| Profile Description: | | | | | |
| Depth | Horizon | Matrix Color | Mottle Colors | Mottle Abundance/Contrast | Texture, Concretions, Structure |
| 0-12 | A | 10YR 3/2 | | | Fine sand |
| 12-18 | B | 10YR 4/2 | | | Fine sand |
| | | | | | |
| | | | | | |
| | | | | | |

Hydric Soil Indicators:

| | |
|--|--|
| <input type="checkbox"/> Histols | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High organic Content in Surface Layer |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks) |

Remarks:

WETLAND DETERMINATION

| | | |
|---|---------|-----------------|
| Hydrophytic Vegetation Present? | ___ Yes | ___ X No |
| Wetland Hydrology Present? | ___ Yes | ___ X No |
| Hydric Soils Present? | ___ Yes | ___ X No |
| Is the sampling point within a wetland? | ___ Yes | ___ X No |

Remarks:

ROUTINE WETLAND DETERMINATION
DATA FORM

| | |
|---|--|
| Project/Site: Enbridge Pipelines (North Dakota) L.L.C. Company/Project: Phase 6 Expansion Project Investigator(s): Jeff Mackenthun | Date: October 17, 2007 County: Benson Co. State: North Dakota |
| Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? No Is the area a potential problem area? No | Wetland: 2 Transect/Community: 2A |

VEGETATION

| Dominant Plant Species | | Stratum | Percent Coverage | Indicator Status |
|--|---------------------------|---------|------------------|------------------|
| Common Name | Scientific Name | | | |
| Narrow-leaf cattail | <i>Typha angustifolia</i> | H | 40 | OBL |
| Broad-leaf cattail | <i>Typha latifolia</i> | H | 15 | OBL |
| Prairie cordgrass | <i>Spartina pectinata</i> | H | 15 | FACW |
| Uptight sedge | <i>Carex stricta</i> | H | 10 | OBL |
| Torrey's rush | <i>Juncus torreyi</i> | H | 5 | FACW |
| | | | | |
| | | | | |
| | | | | |
| Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100 | | | | |
| Remarks: This transect is representative of the entire wetland with the exception of the open water, excavated area to the east of the station. | | | | |

HYDROLOGY

| | |
|--|--|
| Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available Field Observations: Depth of Surface Water: - Depth of Free Water in Pit: <u>22"</u> Depth to Saturated Soil: <u>10"</u> | Wetland Hydrology Indicators Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Roots Channels in Upper 12" <input checked="" type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in remarks) |
| Remarks: Isolated recharge wetland along the northern and eastern side of the station. | |

SOILS

| Map Unit Name: F12A – Vallers saline – Parnell complex | | | | | |
|---|---------|--|---------------|---------------------------|---------------------------------|
| Drainage Class: Poorly to very poorly drained | | | | Subgroup: | |
| Profile Description: | | | | | |
| Depth | Horizon | Matrix Color | Mottle Colors | Mottle Abundance/Contrast | Texture, Concretions, Structure |
| 0-10 | A | 2.5Y 4/1 | None | | Fine sandy clay |
| 10-28 | B | 2.5Y 4/2 | None | Distinct, Common, Large | Silty clay |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Hydric Soil Indicators: | | | | | |
| <input type="checkbox"/> Histols | | <input type="checkbox"/> Concretions | | | |
| <input type="checkbox"/> Histic Epipedon | | <input type="checkbox"/> High organic Content in Surface Layer | | | |
| <input type="checkbox"/> Sulfidic Odor | | <input type="checkbox"/> Organic Streaking in Sandy Soils | | | |
| <input type="checkbox"/> Aquic Moisture Regime | | <input type="checkbox"/> Listed on Local Hydric Soils List | | | |
| <input type="checkbox"/> Reducing Conditions | | <input type="checkbox"/> Listed on National Hydric Soils | | | |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors | | <input type="checkbox"/> Other (Explain in Remarks) | | | |
| Remarks: | | | | | |
| | | | | | |

WETLAND DETERMINATION

| | | | | |
|---|-------------------------------------|------------|--------------------------|-----------|
| Hydrophytic Vegetation Present? | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Wetland Hydrology Present? | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Hydric Soils Present? | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Is the sampling point within a wetland? | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Remarks: Classified as a PEMA and PUBGx; Type 1 wetland. A portion of this wetland was filled by the original station construction. The portion of the wetland east of the station is grazed. Railroad tracks bound the wetland to the north. There were no culverts observed underneath the railroad grade. | | | | |
| | | | | |

ROUTINE WETLAND DETERMINATION DATA FORM

| | |
|---|--|
| Project/Site: Enbridge Pipelines (North Dakota) L.L.C. Company/Project: Phase 6 Expansion Project Investigator(s): Jeff Mackenthun | Date: October 17, 2007 County: Benson Co. State: North Dakota |
| Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? No Is the area a potential problem area? No | Wetland: 2 Transect/Community: 2B |

VEGETATION

| Dominant Plant Species | | Stratum | Percent Coverage | Indicator Status |
|---|------------------------|---------|------------------|------------------|
| Common Name | Scientific Name | | | |
| Smooth brome | <i>Bromus inermis</i> | H | 85 | NI |
| Creeping thistle | <i>Cirsium arvense</i> | H | 5 | FACU |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0 | | | | |
| Remarks: There was a distinct break between upland and wetland vegetation. | | | | |

HYDROLOGY

| | |
|--|---|
| Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available Field Observations: Depth of Surface Water: - Depth of Free Water in Pit: >24" Depth to Saturated Soil: >24" | Wetland Hydrology Indicators Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Roots Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in remarks) |
| Remarks: | |

SOILS

| Map Unit Name: F12A – Vallery saline – Parnell complex | | | | | |
|---|---------|--|---------------|---|---------------------------------|
| Drainage Class: Poorly to very poorly drained | | | | Subgroup: | |
| Profile Description: | | | | | |
| Depth | Horizon | Matrix Color | Mottle Colors | Mottle Abundance/Contrast | Texture, Concretions, Structure |
| 0-8 | A | 10YR 3/2 | | | Fine sand |
| 8-18 | B | 10YR 4/2 | | | Fine sand |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Hydric Soil Indicators: | | | | | |
| _____ Histols | | _____ Concretions | | _____ High organic Content in Surface Layer | |
| _____ Histic Epipedon | | _____ Organic Streaking in Sandy Soils | | _____ Listed on Local Hydric Soils List | |
| _____ Sulfidic Odor | | _____ Listed on National Hydric Soils | | _____ Other (Explain in Remarks) | |
| _____ Aquic Moisture Regime | | | | | |
| _____ Reducing Conditions | | | | | |
| _____ Gleyed or Low-Chroma Colors | | | | | |
| Remarks: | | | | | |

WETLAND DETERMINATION

| | | |
|--|-----------|-----------------|
| Hydrophytic Vegetation Present? | _____ Yes | <u> X </u> No |
| Wetland Hydrology Present? | _____ Yes | <u> X </u> No |
| Hydric Soils Present? | _____ Yes | <u> X </u> No |
| Is the sampling point within a wetland? | _____ Yes | <u> X </u> No |
| Remarks: | | |

Appendix E

Station Photographs



Brooks Station. View of agricultural field to the north of the station.



Brooks Station. Current activities at the station.



Brooks Station. View of southern fenced facility. Planted aspen occur south of facility. No wetlands present.

Brooks Station



Crookston Station. View along the southern edge of the facility.



Crookston Station. View of northern edge of facility and location of the proposed control building.



Bartlett Station. View of the eastern edge of the station.



Bartlett Station. View of the western edge of the station. The small swale did not exhibit wetland characteristics.

Crookston and Bartlett Stations



Pleasant Lake Station. View of the southern edge of the station and location of the proposed Phase 6 substation.



Pleasant Lake Station. View of the southwestern edge of the station.



Pleasant Lake Station. View of Wetland 1 from the southeast corner of the existing substation.

Pleasant Lake Station



Pleasant Lake Station. View of the northern edge of the station and Wetland 2.



Pleasant Lake Station. View of Wetland 2 from the northeast corner of the station.

Pleasant Lake Station



Minot Station. View along the northern edge of the facility.



Minot Station. View of southern edge of facility and existing storage tank.



Beaver Lodge Station. View of intermittent waterbody 1,000 feet south of existing station. No wetland vegetation present.

Minot and Beaver Lodge Stations



Beaver Lodge Station. View of the intermittent waterbody north of the existing station.



Beaver Lodge Station. View of landscape north of the existing station looking east along the fenceline to north (right foreground).

Beaver Lodge Station