

Berthold Station Upgrades Construction Inspection Report

Enbridge Pipelines (North Dakota), LLC.

Prepared for:

NORTH DAKOTA PUBLIC SERVICE COMMISSION

600 E. Boulevard Avenue

Bismarck, ND 58505-0480

Prepared by:



Bartlett & West, Inc.

3456 E. Century Ave

Bismarck, ND 58504

(701) 258-1110

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Executive Summary

The North Dakota Public Service Commission (PSC) retained Bartlett & West Inc. to complete a construction inspection of the Berthold Station Upgrades, constructed in Ward County, ND by Enbridge Pipelines North Dakota LLC in 2010 and 2011. The purpose of the construction inspection was to ensure the project was constructed in compliance with the siting laws and rules and the applicable PSC Order for the Project. Prior to the construction inspection, Bartlett & West reviewed all Project documents to identify those which required site verification.

The Site was visually inspected on November 29, 2012 by Bartlett & West, Inc, accompanied by an Enbridge representative. Inspection of this project was difficult and complicated due to the fact that another project (PU-10-564) was constructed at the same time as this project as well as the fact that there was other major contracts being constructed at the time of the site inspection. Overall site conditions have changed drastically since the completion of the initial Berthold Station Upgrades. All above ground work that could be inspected is completed and is in accordance with “Description of Proposed Facility” submitted to the PSC with the exception of one change of pump configuration that is detailed in Section 3.2 *As-built Drawings and GIS Files* later in this report.

The document review on the PSC website indicates that Enbridge may have failed to submit some of the supporting documents and permits associated with this specific contract. After contacting Enbridge and one of their subconsultants, (Merjent) we were able to retrieve these omitted permits. These are attached to this report in the Appendix. The PSC should determine if they would like Enbridge to submit actual copies to the PSC to fulfill their project order obligations.

1.0 Background

1.1 INTRODUCTION

The existing Berthold Station is located on 26.11 acres of land owned by Enbridge in the Northeast quarter of section 20 – Township 156 North, Range 86 West, Ward County, North Dakota. The Project is operated by Enbridge Pipelines North Dakota, LLC (EPND). The station upgrades include installation of approximately 700 feet of 4-inch station piping, approximately 600 feet of 6-inch station piping, and approximately 2,000 feet of 10-inch station piping; installation of two refurbished injection pumping units (each with two 125 HP motors); installation of a new booster pump with 50 HP motor; installation of two 200 HP variable frequency drives (VFD's); installation of a new injection pump header; installation of a new metering facility (including all necessary valves and appurtenances); installation of other necessary interconnecting station piping; SCADA upgrades; civil work including foundations; secondary containment as necessary; site grading; electrical upgrades (including one new 12.47 KV/480 V Transformer); and repair and paint the existing Tank 9800 along with soil work, including foundation grading, increasing spill containment capacity, and repairing the tank dike area clay liner. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-10-130 on August 4, 2010, granting Certificate of Corridor Compatibility No. 114 and Route Permit No. 124, for the Project.

1.2 PURPOSE AND SCOPE OF INSPECTION

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of the citizens of North Dakota. Post-construction inspections will attempt to ensure that the project is constructed in compliance with the siting laws and rules and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order).

The North Dakota PSC retained Bartlett & West, Inc. to complete a post construction inspection of the Berthold Station Project. The inspection process included a review of the Siting Plan, Order, and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance including photographs; and a report summarizing findings. This report includes, but is not limited to, documentation of site visit observations, documentation of compliance deficiencies, and a summary of issues that should be addressed for the Project to be considered complete and in full compliance.

2.0 Document Review

2.1 METHODS

Bartlett & West, Inc. reviewed North Dakota siting laws and rules, the Applications for the Certificate of Corridor Compatibility and Route Permit (Application), and the Order for the Project to identify what Project-specific documentation was required for compliance. Bartlett & West, Inc. then reviewed Project documents in the PSC Online Case Search (PU-10-130) to identify those siting laws and rules and Application and Order assertions that already had written verification, those which still required documentation, and those which required physical site verification.

2.2 FINDINGS

The following table includes a list of components of the Project that were asserted in the Application and Order which could be documented post-construction to verify compliance with siting laws and rules and the Order for the Project (**Table 1**), via either written documentation or physical site verification. If Bartlett & West, Inc. found written documentation in the online PSC files for a particular Project component, this is marked in the second column of the table. If physical site verification was possible, this was marked in the third column and that particular component was verified during the site inspection (Section 3.0).

Several components of the Project were asserted in the Application or proposed construction but have no written documentation showing that they were indeed implemented or constructed as planned, and physical site verification is not applicable. *This includes all items listed in Table 1 which have shaded boxes in the second column*, indicating written verification is possible and appropriate, but it is lacking from current files. The PSC should request written verification from Enbridge for these items, to show the Project is in full compliance, or verify that they were submitted under a separate contract involving the Berthold Station Upgrades.

Table 1. Berthold Station Upgrade Project Document Review Summary

Description of Project Component/Assertion	Written Verification in PSC Files*	Site Verification
Cultural resources avoided (verify tree row & railroad undisturbed)	X	X
SHPO concurrence letter dated April 12, 2010, "No Historic Properties Affected"	X	
SHPO concurrence letter dated May 21, 2010, "No Historic Properties Affected"	X	
No national or state historic sites, landmarks, wilderness, parks, preserves, refuges, management areas, or habitat were adversely impacted, per Application for Corridor Certificate	X	X
Wetland delineation and rare plant survey conducted by Barr Engineering	X	X
Wetland delineation and rare plant survey conducted by Merjent, Inc. (Added in Appendix)		X
Corps of Engineers Permit Received July 12, 2010	X	X
North Dakota Game & Fish Dept. Permit Received February 9, 2010	X	
U.S. Fish and Wildlife Service permit Received July 15, 2010	X	
Intent to start and commencement of construction notices		
Weekly construction reports-appears some may be missing	X	
Pre-Construction conference record <i>(Combined and uploaded under a different contract number)</i>		
Consultation with federal, state, and local agencies	X	
No endangered, threatened, or sensitive plans identified	X	
Tank Field Pressure Tested as required by federal pipeline safety regulations and industry codes		
City of Berthold Zoning Permit received for 80 acre plat (Added in Appendix)		
Use of environmental inspector during construction		
Post-construction monitoring reports		
Compliance with "Tree and Shrub Mitigation Specifications"		
Safety measures recommended by the North Dakota Department of Transportation implemented around Berthold Station: Installation of a combined right-turn and placarded-truck pullout lane for eastbound traffic at the BNSF Railroad Crossing and 296 th Street, installation of a combined acceleration and placarded-truck pullout lane for westbound traffic at the Railroad crossing and 296 th Street, and reduction of the speed limit on U.S. Highway 2 from 70 mph to 55 mph.	X	X
Cathodic protection system installed		X
Construction according to Application and safety requirements		X
Pipeline buried to 48in (72in undeveloped section lines)		X
Pipeline bored under graded roads, unless permitted to open cut		X
Topsoil removed, segregated, and replaces at 12in depth or depth of cultivation, according to landowners; and PSC's requirements		X
Reclamation and clean-up continuous with construction		X
Restoration of pre-existing roads, lanes, temporary roads		X
Reclamation/reseeding according to NRCS or landowner		X
As-built drawings and GIS (hard copy and electronic)	X	
Construction Stormwater Permit from the ND Dept. of Health (Added in Appendix)		
Stormwater Pollution Prevention Plan	X	
Temporary Dewatering/Hydrostatic Discharge Permit from ND DOH (Added in Appendix)		
Water Appropriation Permit from ND State Water Commission (Added in Appendix)		
Drain Permit from ND State Water Commission (Added in Appendix)		
Environmental Mitigation Plan	X	
Spill Prevention, Containment, and Control Plan (SPCCP)	X	
(EMP)Spill Prevention, Containment, and Counter Measure Plan Update from EPA Exhibit I	X	

*Note: Shaded boxes indicate documentation is lacking and site verification is not applicable.

3.0 Site Inspection

3.1 METHODS

Colin Nygaard, P.E. of Bartlett & West, Inc. visited the Project area on November 29, 2012. Paul Giron, engineer with Rooney Engineering, Inc., accompanied Bartlett & West, Inc. staff during the site visit and assisted with navigation, and answered questions.

3.2 OBSERVATIONS & FINDINGS

3.2.1 Engineering/Construction/Design & Soils

The following aspects pertaining to engineering, construction, or design of Project infrastructure were inspected at the site.

- *Safety Measures recommended by the North Dakota Department of Transportation shall be implemented.* Photos in Appendix A verify compliance.
Suggested and recommended traffic safety measures include:
 - a.) Installing a combined right turn and placarded-truck pullout lane for eastbound traffic at the BNSF Railroad Crossing (RR Crossing) and 296th Street.
 - b.) Installing a combined acceleration and placarded-truck pullout lane for westbound traffic at the RR Crossing and 296th Street.
 - c.) Reducing the speed limit on U.S. Highway 2 once Enbridge’s facility expansion is operational.

- *Pipeline Buried to 48in (72in Undeveloped Section Lines).* Since Bartlett & West, Inc. had not been retained at the time of construction, Paul Giron verified that piping was installed below the minimum bury depths. The pipeline shall be buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in rangeland, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.

- *All crossings of graded roads shall be bored unless the responsible governing agency specifically permits Enbridge to open cut the road.* The Berthold Upgrade Project does cross one graded road (296th Street). It is unclear whether the road crossing was open cut or horizontally directionally drilled. Project documents in the PSC Online Case Search (PU-10-130) do not include a permit for open cutting the road. Regardless, Enbridge performed upgrades to the road by widening and paving it to accommodate the truck traffic.

- *Width of clear cuts through any wooded areas and shelterbelts shall be kept at a maximum of 50 feet where possible.* The Berthold Upgrade Project does not require any clear cuts, the project area is located within Enbridge's existing property and the adjacent property purchased is an open field.

- *Topsoil Removed, Segregated, Replaced at 12in Depth or Depth of Cultivation, According to PSC's Requirements.* The PSC requirement is at least 12in or to the depth of cultivation, whichever is greater. All affected areas of this project are located on the site owned by Enbridge and are comprised of gravel or rock surfaces.

- *Reclamation and clean up along the right-of-way must be continuous and coordinated with construction.* The Berthold Project Upgrades within the Enbridge site did not include any work within the road right of way, but upgrades required for Highway 2 as discussed above under '*Safety Measures recommended by the North Dakota Department of Transportation*' did cause a disturbance to the road right-of-way. It appears that any disturbed areas have been reseeded.

- *Tree and Shrub Mitigation.* It is not clear whether any tree mitigation was required by Enbridge. If that is the case, documentation identifying the actual number, variety, type, location and date of the replacement planting must be filed with the Commission as stated in number 15 of the 'Tree and Shrub Mitigation Specifications'.

- *As-built Drawings and GIS Files.* Correspondence indicates Enbridge provided as-built drawings and GIS files to the PSC on June 12, 2012. The as-built map is very difficult to read with a lot of the features grey scaled. The pipeline and contours do not correspond with the legend, and labels for the differing pipeline sizes would be helpful. During our onsite conversations with Paul Giron, he stated that there were changes to the project after as-builts had been submitted to the PSC. There had been two refurbished injection pumping units of 125HP each originally installed on the project. Following approximately four to five months of operations, problems arose with this configuration. In order to remedy these problems, the two 125 HP pumps were replaced with one 350 HP centrifugal pump. PSC may want to request these upgrades be indicated on a new updated set of as-builts and resubmitted.

3.2.2 Natural Resources (Wildlife, Wetlands, Vegetation)

The following requirements pertaining to natural resources, including wildlife, wetlands, and vegetation, were inspected at the Project site.

- *Wetland Delineation.* A Wetland Delineation Report was conducted by Barr Engineering and a copy can be found in the application for Certificate of Corridor Compatibility, Exhibit D. This report covers 14 acres of the existing station, tank facility and associated buildings and service roads. The survey was conducted in September 2009 and identified three wetlands. Barr's report indicates all the wetlands identified are isolated pothole depressions, surrounded by uplands, with no apparent surface water or wetland connection to other wetlands or Waters of the United States. Therefore, all three wetlands should be considered outside the jurisdiction of Section 404 of the Clean Water Act and the US Army Corps of Engineers (COE).

A second Wetland Delineation Report was conducted by Merjent, Inc. on the 80-acre parcel of land. This survey took place on May 1, 2010 and identified six (6) wetlands. It was determined by the COE that 0.32 acres of these wetlands found within the project area, on the 80-acre parcel, are jurisdictional Waters of the United States. Due to the jurisdictional determination, Merjent prepared a Wetland Mitigation Plan and submitted it to the COE. Through email correspondence with Angela Ronayne of Merjent, Bartlett & West was informed that another project on the Enbridge site was also potentially

impacting jurisdictional waters (Bakken Pipeline Project US). At the request of the COE, Merjent prepared a mitigation plan for both of these projects and submitted it to the COE on March 23, 2012. Ms. Ronayne also indicated the mitigation plan was completed in July/August 2012 and that Enbridge is required to provide a complete set of as-builts and design specifications within one year of the project completion and submit annual monitoring reports for five years or until it is determined the project is successful. If completed, then the COE will provide written verification that the mitigation project was successfully completed.

- *U.S. Army Corps of Engineers.* The Corps Permit dated July 12, 2010, stipulates the following: Permittee shall create not less than 0.32 acres of wetlands on-site per the plan submitted by the applicant and conduct monitoring on the mitigation area; a survey of adjacent wetland grades and soil profiles in the proposed wetland enhancement area will be conducted to determine seasonal high waters of the area, the proper grades for the wetland enhancement area and corresponding core and transitional wetland zones. The survey information helps to determine mitigation excavation depths and final grades in the proposed mitigation area. Topsoil shall be stripped to a minimum depth of eight to ten inches on the impacted wetland and spread on the proposed mitigation area allowing the new wetland area to passively re-vegetate. The outer slopes of the new wetland shall be no more than 4:1 grade. Monitoring reports shall be submitted to the ND Regulatory Office not later than November 30 following each growing season, for a period of 5 years or until the Corps of Engineers determines that the mitigation is acceptable. Following the mitigation construction, the creation area shall be documented with as-built engineered drawings provided as part of the construction completion report (Permit Compliance Certification) to the Corps of Engineers, within one year of construction.

PSC project files do not include the mitigation plan submitted to the COE by Merjent Inc. Merjent was contacted for the Mitigation plans and they were received on October 30, 2012. The Nationwide Permit indicates it is the applicants (Enbridge) responsibility to complete the required compensatory mitigation as set forth in Special Condition 6 and it will not be considered fulfilled until they have demonstrated compensatory mitigation project success and have received written verification of that success from the U.S. Army Corps of Engineers. The mitigation work was completed in July/August 2012. Verification by the COE will not be available until Enbridge fulfills the requirements as stated above.

- *No Endangered, Threatened, or Sensitive Plants Identified.* The Project Application indicates “no species of concern or threatened and endangered plant species known to occur in Ward County were observed during the survey”. Exhibit D of Enbridge’s Application for Certificate of Corridor Compatibility includes a Wetland Delineation and Rare Plant Survey Report by Barr Engineering, stating that the survey covered the 14-acre Berthold Station site only. Bartlett & West was unable to find any reference to a botany or plant survey conducted for the remaining site acreage.
- *Reclamation/Reseeding According to NRCS or Landowner, if applicable.* The Environmental Mitigation Plan indicates within the wetland mitigation expansion area of the South Fork of Arnold Coulee, the cattails and sedge species will vegetate and their seed will disperse in to the mitigation wetland during periods of high flow. The report also indicates a native seed mixture modified from the CP25 Rare and Declining Habitat Guidelines shall be placed on the upland buffer.

3.2.3 Cultural Resources

The following aspects pertaining to cultural resources were inspected at the Project site.

- *Cultural Resources Avoided.* A Class I search of the site and manuscript files was completed December 22, 2009, by Metcalf Archaeological Consultants (MAC), of the Area of Potential Effect (APE) and the surrounding one mile corridor. No archaeological sites or architectural properties had been recorded within the project area. A Class III cultural resource pedestrian survey was then conducted April 6, 2010 by MAC on the 80-acre site (NW ¼ Section 21 – T156N – R86W) and the 31.5 acre site (NE ¼ Section 20 – T156N – R86W). MAC indicated in their letter to Merjent, dated April 12, 2010, Exhibit C.1. to Enbridge’s Application for Certificate of Corridor Compatibility, that as long as the BNSF railroad line located in the extreme southwest corner of the 80-acre APE is not disturbed and the tree row separating the Wildrose Cemetery, also located in the Southwestern corner, is not disturbed, then they are recommending a finding of “No Historic Properties Affected”. The State Historical Society of North Dakota concurred with MAC’s findings on April 12, 2010. Bartlett & West’s site survey verified that the tree row and railroad were not disturbed during the Berthold Station Upgrade.

4.0 Issues to Resolve and Recommendations

4.1 WETLAND DELINEATION

As stated above in Section 3.2.2, the wetland delineation report was not included in the PSC project files but Bartlett and West has obtained a copy from Merjent and has included it in the Appendix of this report. Enbridge is required to provide the Corps of Engineers with monitoring reports each year for the next five years or until the Corps of Engineers determines the wetland mitigation is acceptable. Enbridge will also need to provide a complete set of as-builts and design specifications to the Corps of Engineers within one year of the project completion (July/August 2013).

4.2 ZONING PERMIT

Project Documents indicate that the 80-acre parcel purchased by Enbridge for the LACT Unit area was zoned Agricultural by the City of Berthold. Enbridge was in the process of submitting an application to the City of Berthold requesting a zoning change for the parcel to be zoned Industrial. PSC documents do not include the executed zoning permit. Bartlett & West obtained a copy of the permit from Rooney Engineering, Inc. and has included the signed copy in the Appendix of this report.

4.3 TREE & SHRUB REPLACEMENT

The Tree and Shrub Mitigation Specifications were included as a part of the Siting Application submitted by Enbridge and can be found in PSC file documents for Case No. PU-10-130, but it is unclear whether any trees were removed. If trees and shrubs were removed then it is recommended Enbridge provide the PSC with documentation identifying the actual number, variety, type, location and date the trees/shrubs were planted. Enbridge shall also submit annual inspection reports for three years to report the survival rate and comply with the Tree and Shrub Mitigation Specifications.

4.4 PIPELINE DEPTH

Bartlett & West was unable to verify the depth of the buried pipeline during the site visit, but Paul Giron of Rooney Engineering, Inc. confirmed the required depth of 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines, was implemented. The PSC could request Enbridge to provide written verification of the as-built depth of the pipeline if needed for their records.

4.5 AS-BUILTS

As-built drawings were submitted by Enbridge as required by the Order, but Bartlett & West recommends that the PSC requests a more up-to-date set of as-builts be submitted by Enbridge, and that the final as-builts have a more accurate depiction and differentiation of the piping, for their records.

4.6 PERMITS

Bartlett & West was unable to find several of the permits Enbridge listed as being required for the Berthold Upgrade Project on page 20 of the Route Permit dated May 2010 and Late Filed Exhibit #2-Permit List. Of the permits listed as being required, Bartlett & West was unable to locate the following on the PSC website North Dakota Department of Health - Construction Storm Water Permit, State Water Commission Hydrostatic Test Water Appropriation Permit, State Water Commission – Drain Permit, and Department of Health – Hydrostatic Water Discharge Permit. Bartlett & West contacted Merjent representative Angela Ronayne and received scans of these permits. Please reference Appendix D for copies of these omitted permits.

5.0 Conclusion

Bartlett & West's document review and site inspection confirms that the Berthold Station Upgrades were completed as stated in Enbridge's Application and in compliance with the PSC guidelines. It appears the project has caused minimal adverse effects on the environment and on the welfare of the citizens of North Dakota. It does appear though that Enbridge has failed to submit all the supporting documents. It is suggested that the PSC request supporting documentation shown to be missing in Table 1 be submitted to them for their records. It is also recommended that the PSC request updated and more accurate As-Builts that are more legible with the appropriate legend showing pipeline sizes installed.

6.0 References

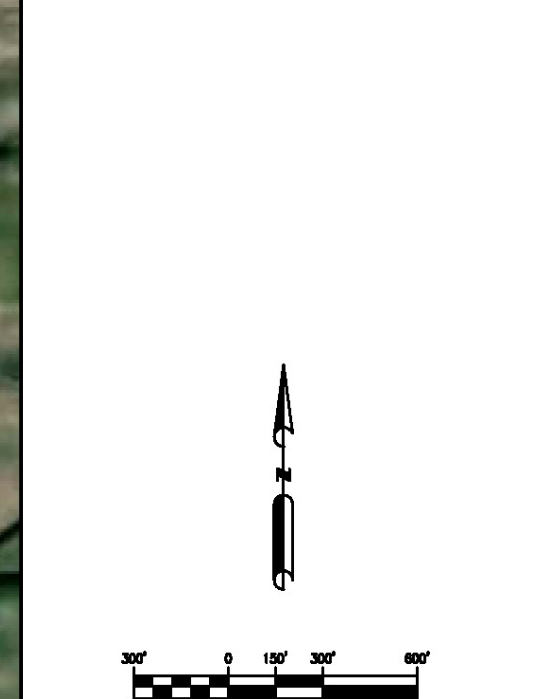
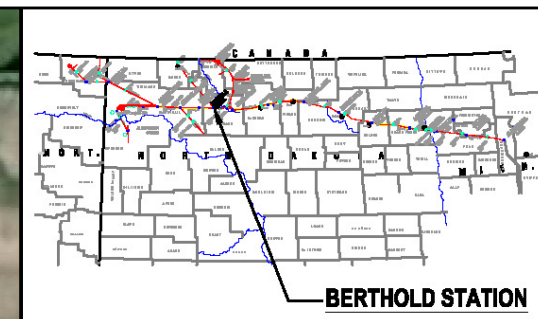
Giron, Paul. 2012. Rooney Engineering, Inc., Centennial, CO. Personal Communication: discussion during site visit.

Ronayne, Angela 2012. Merjent, Minneapolis, MN. Email correspondence: Wetland Delineation Report.

North Dakota Public Service Commission (ND PSC). 2012. Online Case Search. Available from: http://www.psc.nd.gov/database/company_case_list.php. Accessed October-December 2012.

Figures

W:\Enbridge Pipelines\02675 - Berthold Truck Unload Business Development - Enbridge (ND)\CAD\Pipings\02675-PSC-003.dwg, 1/8/2010 1:54:02 PM, jbrfry



A	ISSUED FOR PERMITTING	1/8/10	MJ	JRH
NO	REVISION	DATE	APPR	BY

ENBRIDGE PIPELINES (NORTH DAKOTA) LLC

BERTHOLD (ND) STATION
 PROPOSED TRUCK UNLOADING FACILITY
 OVERVIEW MAP
 T156N, R86W, SECTION 20 & 21, WARD COUNTY
 PROJECT: 02675


Rooney Engineering, Inc.
 12201 E. Arapahoe Rd.
 Centennial, CO 80112
 (303) 792-5911

SCALE: AS NOTED	DATE: 1/7/10	DRAWN: JRH
CHECK:	APPR:	DATE:
DWG. NO. 675-PSC-003		

Appendix A



Photo 1. Direction: West. Arrow showing the deceleration and right hand turning lane for eastbound traffic entering the site at the intersection of 296th St. and Highway 2. Photo also shows road ditches have been graded and reseeded.



Photo 2. Direction: West. Arrow showing the acceleration lane for westbound traffic leaving the site at the intersection of 296th St. and Highway 2. Photo also shows road ditches have been graded and reseeded.



Photo 3. Direction: West. Photo shows the new speed limit on highway 2 in the vicinity of the intersection to enter the Enbridge site. New 55 mph speed limit signs were placed for both eastbound and westbound traffic.



Photo 4. Direction: West. Arrows pointing to the “SLOW VEHICLE TURN OUT ½ MILE” signs on both sides of the westbound lane. These signs were also in place for the eastbound traffic to the west of the intersection turning into the Enbridge site.



Photo 5. Direction: North. Photo taking on 296th St. on the south side of the site, arrow showing the start of pavement that runs north to highway 2. There was no disturbed areas south of this area.



Photo 6. Direction: Northeast. Photo showing the new electrical transformer that was installed on this project. The building in the immediate background contains the controls and variable frequency drives.



Photo 7. Direction: Southwest. This building contains the controls and variable frequency drives, the wire trays and wires are shown entering the building. The tower on the left side of the building for SCADA telemetry.



Photo 8. Direction: North/Northwest. Arrow on the far right shows the 50 Hp booster pump. The three arrows on the left show the locations where three positive displacement (PD) pumps had been installed, two of those PD pumps were part of this project and the third PD pump was part of the PU-10-564 project. The two PD pumps for this project were replaced by the centrifugal pump shown by the second arrow from the right.



Photo 9. Direction: Southwest. Arrow on the left is pointing to the 50 Hp booster pump and arrow on the right is pointing towards the centrifugal pump that replaced the two positive displacement pumps.



Photo 10. Direction: South. The piping and valves painted white are part of the PU-10-130 project, all other piping and disturbances are part of a different project that is currently under construction.



Photo 11. Direction: Southwest. View of the white tank that was rehabilitated as part of this project, the secondary containment berm can be seen around the tank. Additional tanks shown on the right side of the white tank are being added as part of ongoing construction projects.



Photo 12. Direction: Northwest. Arrow showing the 10 inch line that serves as the inlet and outlet of the rehabilitated tank.



Photo 13. Direction: East. The arrows are showing the location that the 4 inch Enbridge lines terminate and other companies can connect their LACT units, close up can be seen in Photo 16. The red line shows the approximate location of the 10 inch line that the 4 inch lines feed into.



Photo 14. Direction: East. The white pipe and valve was installed as part of the PU-10-130 project, the additional pipes, valves, and building are installed by other companies to connect to the Enbridge system.



Photo 15. Direction: East. Arrow showing tree row running North-South that was planted to block the view of the Enbridge site to the City of Berthold. The red outlined area shows the wetland areas that were avoided during construction.



Photo 16. Direction: South. Arrow showing tree row running East-West that was planted to block the view of the Enbridge site to the City of Berthold. Undisturbed wetland is also shown in the foreground of the photo.



Photo 17. Direction: Northeast. Arrows showing large wetland on the east side of the 80 acre site. Based on the Merjant report this wetland was enlarged to mitigate other areas of the project site. The onsite inspection was unable to confirm the expansion of this wetland due to the work being done the previous year and the farming in the area.

Appendix B



**Berthold Station Truck Unloading
Project**

Wetland Delineation Report

Prepared by:



June 2010

Berthold Station Truck Unloading Project

Wetland Delineation Report

PROJECT DESCRIPTION

Enbridge Pipeline (North Dakota) LLC “EPND” is proposing to expand and upgrade its existing Berthold Station through the construction of approximately 600 feet of 4-inch diameter station piping and approximately 1,800 feet of new 10-inch diameter station piping, and the installation of two refurbished pumping units, metering facilities and other related appurtenances. EPND also plans to reactivate an existing 80,000 barrel tank. In addition, EPND plans to improve 296th Street and acquire approximately 80 acres of land located directly east of its existing station site to accommodate a new truck unloading facility. This project will enable EPND to receive new supply volumes from a new shipper owned and operated truck unloading facility that will be located on land leased from EPND.

Merjent, Inc. (Merjent), on behalf of EPND, conducted an on-site routine wetland delineation to identify and classify wetlands located within the survey area. The routine wetland delineation was completed May 1, 2010. Delineated wetland boundaries are illustrated on the attached figures and are further described in this report.

METHODOLOGY

Prior to delineating wetland boundaries, Merjent reviewed 7.5 minute U.S. Geological Survey (USGS) quadrangle maps, the National Wetland Inventory, and the local soil survey to identify areas where wetlands are likely to be present.

Wetlands are delineated using routine determination methods set forth in the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual (Environmental Laboratory, Waterways Experiment Station, 1987), in which a sampling transect is established in representative transition zones of the identified wetland. Transects typically consist of one sampling point in the upland and one sampling point in the wetland; however, more sampling points may be needed to determine the wetland boundary location. 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”. Soils, vegetation, and hydrology information are recorded at each sampling point on a field data form. Species dominance for vegetation measurements is based on the percent aerial or basal coverage visually estimated up to a 20-foot radius from the sampling point. Wetland boundaries are recorded during delineation activities using a sub-meter accuracy global positioning system (GPS) unit.

Hydrophytic Vegetation

Plant species nomenclature and indicator status are assigned according to the National List of Plant Species that Occur in Wetlands: North Plains (Region 4) (U.S. Fish and Wildlife Service (FWS), Reed, 1988). The hydrophytic plant criterion is 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.

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 is generally determined through direct observation of standing water and if necessary, direct observation of free water, saturated soil conditions, and soil redoximorphic features in excavated soil pits. Wetlands are classified according to Wetlands of Deepwater Habitats of the United States (FWS/OBS Publication 79/31; Cowardin et. al. 1979).

Hydric Soils

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.) are then evaluated at each soil pit.

RESULTS

Wetlands

Six wetlands were identified and delineated within the survey area on May 1, 2010. One additional wetland area was identified outside the project area. Data was collected for this wetland, but is not provided in this report. This wetland is located south of Wetland #6 on the west side of the gravel road and north of the railroad tracks.

A project location map, wetland location map, and soils map are depicted on the attached figures in Appendix A. Information about each wetland and the various vegetative communities within each wetland is provided in the attached Routine Determination Data Sheets in Appendix B. Photographs of the delineated wetlands and a photograph location point map are provided in Appendix C.

The information contained herein represents my findings during the wetland delineation activities conducted on May 1, 2010, at the aforementioned project site.

Merjent, Inc.

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

Date

Attachments

Appendix A Project Maps
Appendix B Routine Determination Data Sheets
Appendix C Wetland Photographs

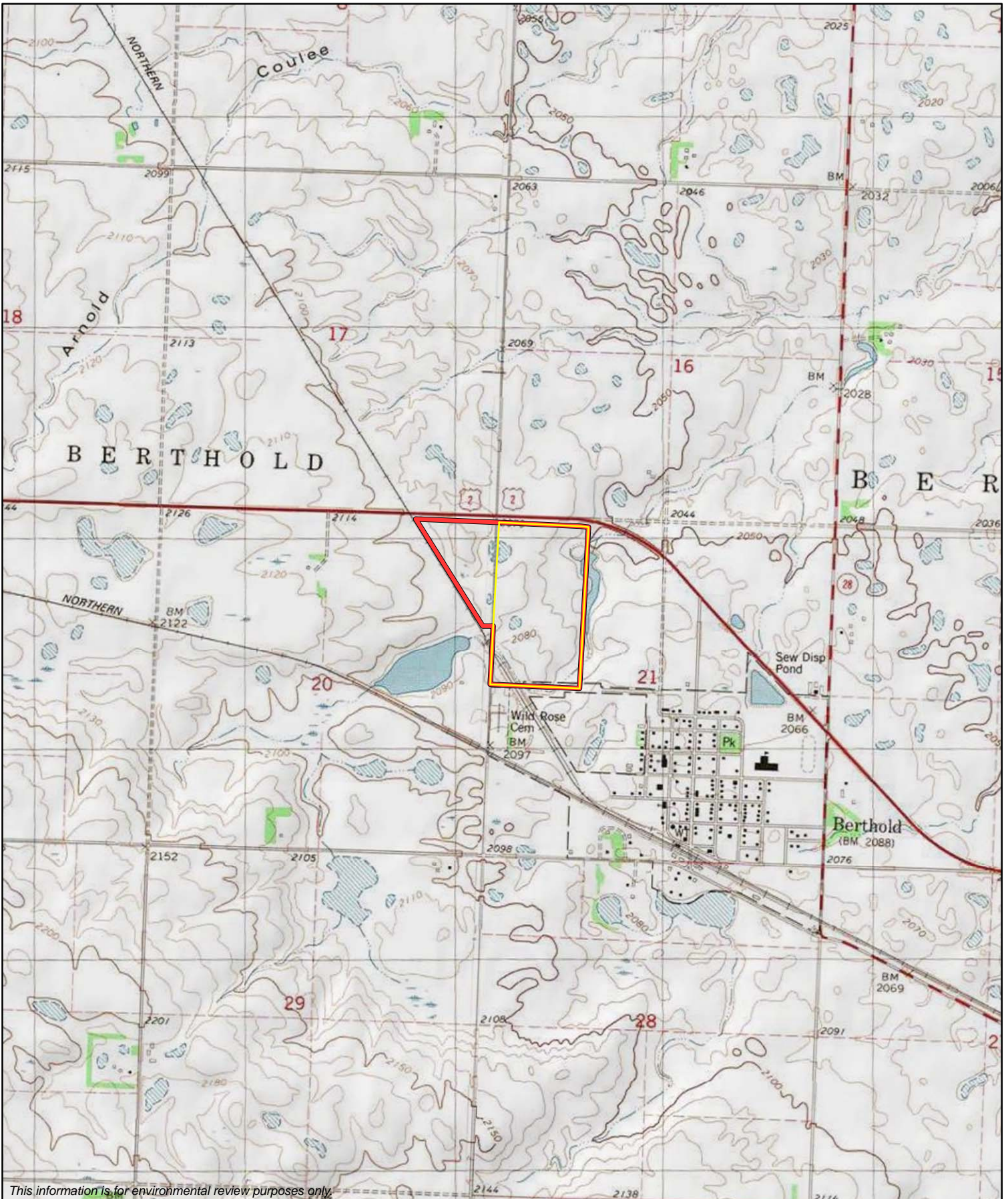


Appendix A



Project Maps

- **FIGURE 1 - Project Location Map**
- **FIGURE 2 - Wetland Location Map**
- **FIGURE 3 - Ward County SSURGO Soils Map**

Map Document: C:\200-GIS\GIS\Clients\Enbridge\Berthold Station\Berthold Station - Site Location.mxd
2/4/2010 - 2:43:33 PM




This information is for environmental review purposes only.

	Berthold Station
	Proposed Expansion Area

1:24,000

0 1,000 2,000 Feet



Berthold Station Truck Unloading Project

Figure 1 - Site Location Map

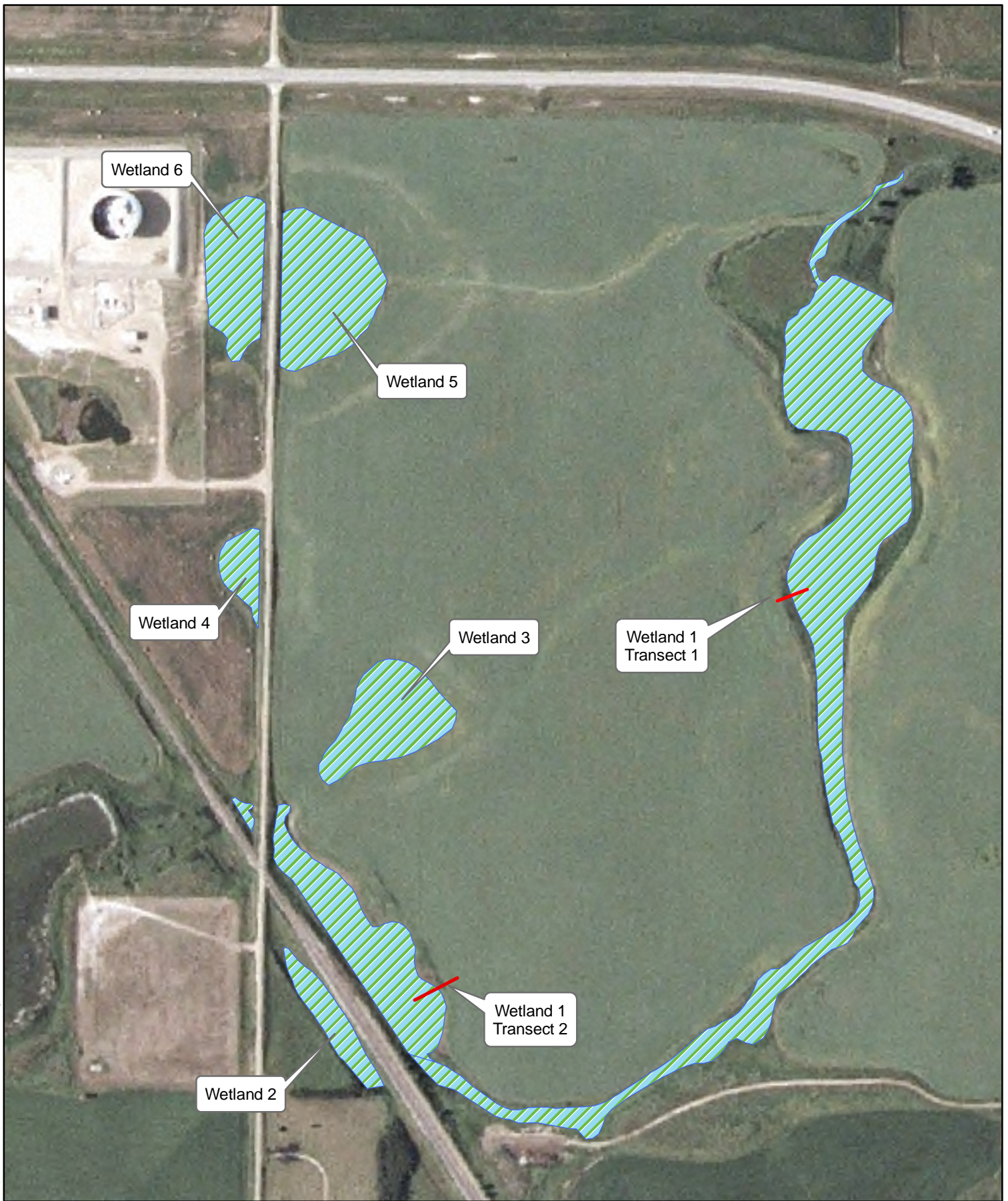
Ward County, North Dakota

Township 156N, Range 86W, Sections 20 & 21



Revised: 02/04/2010 

Map Document: (O:\200-GIS\GIS\Clients\Enbridge\Berthold Station\Berthold Station - NWI.mxd)



 Delineated Wetland Boundaries

1:4,000

0 300
Feet


Berthold Station Truck Unloading Project

Wetland Location Map

Ward County, North Dakota

Township 156N, Range 86W, Sections 20 & 21




Revised: 06/29/2010 

Map Document: C:\200-GIS\Clients\Enbridge\Berthold Station\Berthold Station - Soils.mxd
 2/4/2010 -- 2:44:23 PM



Symbol	Soil Name
Ad	Alluvial Land
Br	Bowbells-Tonka complex
Pa	Parnell silty clay loam
W	Water
WIA	Williams loam, level
WIB	Williams loam, gently undulating
WIC	Williams loam, undulating
WoA	Williams-Bowbells-Tonka loams, level

This information is for environmental review purposes only.

 SSURGO Data

1:6,000


0 250 500 Feet


3

Berthold Station Truck Unloading Project

Soils Map

Ward County, North Dakota
 Township 156N, Range 86W, Sections 20 & 21



Revised: 02/04/2010 



Appendix B

Routine Determination Data Sheets

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward State: North Dakota
Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? Yes (Reservoir) Is the area a potential problem area? No	Wetland: 1 Transect: 1 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Narrow-leaf Cattail	<i>Typha angustifolia</i>	H	70	OBL
Lakebank sedge	<i>Carex lacustris</i>	H	15	OBL
Wheat	<i>Triticum spp.</i>	H	10	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100%				
Remarks: Cattail dominated interior portion of wetland. Sedge on the western portion of wetland that was farmed. Open water covered approximately 25% of the wetlands.				

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: <u>Variable 0-36"</u> Depth of Free Water in Pit: <u>>15" (farmed area)</u> Depth to Saturated Soil: <u>10"</u>	Wetland Hydrology Indicators Primary Indicators: <input checked="" 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 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: The drainage through the property is the southern fork of Arnold Coulee, which drains into the Des Lacs River. This transect represents the dammed reservoir portion of the wetland/drainage.	

SOILS

Map Unit Name: Ad – Alluvial Land		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
6-15	Bt	2.5Y 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy clay loam
Hydric Soil Indicators:					
_____ Histols		_____ Concretions			
_____ Histic Epipedon		_____ High organic Content in Surface Layer			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		_____ 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: This sample point is classified as a PEMAf/PEM1K. A portion of this wetland is farmed; however, the majority is situated within defined banks from the excavated reservoir. The sedge within the farmed portion of the wetland was burned.				
This wetland is associated with an intermittent waterbody that flows into the Des Lacs River. This wetland likely falls under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 1 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Wheat	<i>Triticum spp.</i>	H	100	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Upland to the west of the wetland is wheat field. The wheat density and growth looks good along the fringe of the wetland.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-10	A	10YR 2/1	None		Fine sandy loam
10-18	B	10YR 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy loam
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:					
Redox features were encountered 8 inches further in depth than the wetland profile.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks:			

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 2 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Narrow-leaf Cattail	<i>Typha angustifolia</i>	H	30	OBL
Uptight sedge	<i>Carex stricta</i>	H	25	OBL
Fowl Bluegrass	<i>Poa palustris</i>	H	25	FACW
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100%				
Remarks: There is an area of common reed (<i>Phragmites australis</i>) near this transect.				

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: <u>Variable 0-2"</u> Depth of Free Water in Pit: <u>>10" (farmed area)</u> Depth to Saturated Soil: <u>0"</u>	Wetland Hydrology Indicators Primary Indicators: <input checked="" 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 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: The drainage through the property is the southern fork of Arnold Coulee, which drains into the Des Lacs River. This transect represents the natural flowage of the wetland/drainage.	

SOILS

Map Unit Name: Ad – Alluvial Land		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
6-15	Bt	2.5Y 4/2	2.5Y 4/4	Medium/Common/Faint	Fine sandy clay loam
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:					
Similar profile to Transect 1. There was more redox features in this profile.					

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: This sample point is classified as a PEMAf/PEM1A. A portion of this wetland is farmed; however, the majority of this wetland area appears to wet to attempt farming.				
This wetland is associated with an intermittent waterbody that flows into the Des Lacs River. This wetland likely falls under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 2 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Wheat	<i>Triticum spp.</i>	H	100	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Upland to the north of the wetland is wheat field.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-10	A	10YR 2/1	None		Fine sandy loam
10-18	B	10YR 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy loam
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:					
Redox features were encountered 8 inches further in depth than the wetland profile.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Remarks:			

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward State: North Dakota
Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? Yes Is the area a potential problem area? No	Wetland: 2 Transect: 1 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Narrow-leaf Cattail	<i>Typha angustifolia</i>	H	70	OBL
Fowl Bluegrass	<i>Poa palustris</i>	H	25	FACW
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100%				
Remarks: Open water / drownout in portions of the wetland.				

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: <u>Variable 0-20"</u> Depth of Free Water in Pit: <u>0"</u> Depth to Saturated Soil: <u>0"</u>	Wetland Hydrology Indicators Primary Indicators: <input checked="" 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 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: An excavated wetland area likely created during the construction of the railroad tracks. Steep banks on all sides of the wetland.	

SOILS

Map Unit Name: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
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:					
Soil data was not collected.					

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 type="checkbox"/>	Yes	<input type="checkbox"/>	No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Remarks: This wetland is classified as a PEMC. This site is significantly disturbed due to the road and railroad construction.				
This wetland is isolated and would likely not fall under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward State: North Dakota
Do normal circumstances exist on the site? Yes Is the site significantly disturbed (atypical situation)? Yes Is the area a potential problem area? No	Wetland: 2 Transect: 1 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Brome	<i>Bromus spp.</i>	H	100	
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Upland dominated by brome.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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)
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Remarks: Steep banks delineated wetland/upland interface.
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SOILS

Map Unit Name: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
Hydric Soil Indicators:					
_____ Histols		_____ Concretions			
_____ Histic Epipedon		_____ High organic Content in Surface Layer			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks: Soil data was not collected.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	_____ Yes	<u> X </u> No
Wetland Hydrology Present?	_____ Yes	<u> X </u> No
Hydric Soils Present?	_____ Yes	_____ No
Is the sampling point within a wetland?	_____ Yes	<u> X </u> No
Remarks: This site is significantly disturbed due to the road and railroad construction.		

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 3 Transect: 1 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Curly dock	<i>Rumex crispus</i>	H	5	OBL
Fowl Bluegrass	<i>Poa palustris</i>	H	5	FACW
Wheat	<i>Triticum spp.</i>	H	90	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: An inundated farmed wetland. Sprigs of dock and poa throughout.				

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: <u>Variable 0-4"</u> Depth of Free Water in Pit: <u>8"</u> Depth to Saturated Soil: <u>0"</u>	Wetland Hydrology Indicators Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input checked="" 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: During high waters, this farmed wetland drains to the southwest into the drainage that flows along the southern property boundary (South Fork Arnold Coulee).	

SOILS

Map Unit Name: WIB – Williams loam, gently undulating Drainage Class: 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
6-15	Bt	2.5Y 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histols <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High organic Content in Surface Layer <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils <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: This wetland is classified as a PEMA.				
This wetland is hydrologically connected to the South Fork Arnold Coulee drainage during high inundation periods; however, the majority of the year the wetland is isolated. Merjent feels this wetland would likely fall under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 3 Transect: 1 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Wheat	<i>Triticum spp.</i>	H	100	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Upland is wheat field.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-10	A	10YR 2/1	None		Fine sandy loam
10-18	Bt	10YR 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy clay loam
Hydric Soil Indicators:					
_____ Histols		_____ Concretions			
_____ Histic Epipedon		_____ High organic Content in Surface Layer			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	_____ Yes	<input checked="" type="checkbox"/> No
Wetland Hydrology Present?	_____ Yes	<input checked="" type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	_____ No
Is the sampling point within a wetland?	_____ Yes	<input checked="" type="checkbox"/> No
Remarks:		

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 4 Transect: 1 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Narrow-leaf Cattail	<i>Typha angustifolia</i>	H	25	OBL
Pennsylvania smartweed	<i>Polygonum pennsylvanicum</i>	H	30	FACW
Reed canary grass	<i>Phalaris arundinacea</i>	H	15	FACW+
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100%				
Remarks:				

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: <u>Variable 0-3"</u> Depth of Free Water in Pit: <u>4"</u> Depth to Saturated Soil: <u>0"</u>	Wetland Hydrology Indicators Primary Indicators: <input checked="" 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 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: A small depressional wetland on the edge of an alfalfa pasture. During high water levels, the road ditch on the south side of the wetland would drain water from the wetland into the South Fork Arnold Coulee. The topography around the wetland drops 18 inches, and delineates the wetland boundary.	

SOILS

Map Unit Name: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-7	A	10YR 2/1	None		Sandy loam
7-14	Bt	10YR 4/2	2.5Y 4/4	Fine/Many/Faint	Fine sandy clay loam
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: This wetland is classified as a PEM1A.				
This wetland is hydrologically connected to the South Fork Arnold Coulee drainage during high inundation periods. This wetland would likely fall under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 4 Transect: 1 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Brome	<i>Bromus spp.</i>	H	70	
Clover	<i>Trifolium spp.</i>	H	5	FACU
Alfalfa	<i>Medicago sativa</i>	H	15	FACU
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Hayed pasture.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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)
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Remarks:

SOILS

Map Unit Name: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-10	A	10YR 2/1	None		Fine sandy loam
10-18	B	10YR 2/1 and 4/2	None	None	Fine sandy loam

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:
The B horizon was a mix of 2/1 and 4/2 chroma fine sandy loam.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

Remarks:

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 5 Transect: 1 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Curly dock	<i>Rumex crispus</i>	H	5	OBL
Wheat	<i>Triticum spp.</i>	H	90	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: An inundated farmed wetland. Sprigs of dock throughout.				

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: <u>Variable 0-2"</u> Depth of Free Water in Pit: <u>6"</u> Depth to Saturated Soil: <u>0"</u>	Wetland Hydrology Indicators Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input checked="" 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: During high waters, this farmed wetland drains to the east via a shallow swale that enters the drainage that flows along the eastern property boundary (South Fork Arnold Coulee). Water also enters this wetland from a culvert under the gravel road connecting this wetland to Wetland 6.	

SOILS

Map Unit Name: Pa – Parnell silty clay loam Drainage Class: Very poorly drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-14	A	10YR 2/1	None		Fine sandy loam
14-18	Bt	2.5Y 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histols <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High organic Content in Surface Layer <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils <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: This wetland is classified as a PEMAf.				
This wetland is hydrologically connected to the South Fork Arnold Coulee drainage during high inundation periods; however, the majority of the year the wetland is isolated. Merjent feels this wetland would likely fall under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION
DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 5 Transect: 1 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Wheat	<i>Triticum spp.</i>	H	100	NI
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Upland is wheat field.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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)
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Remarks:

SOILS

Map Unit Name: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-14	A	10YR 2/1	None		Fine sandy loam
14-18	B	10YR 4/2	2.5Y 4/4	Fine/Common/Faint	Fine sandy loam
Hydric Soil Indicators:					
_____ Histols		_____ Concretions			
_____ Histic Epipedon		_____ High organic Content in Surface Layer			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	_____ Yes	<input checked="" type="checkbox"/> No
Wetland Hydrology Present?	_____ Yes	<input checked="" type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	_____ No
Is the sampling point within a wetland?	_____ Yes	<input checked="" type="checkbox"/> No
Remarks:		

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 6 Transect: 1 Sample Point: 1-Wet

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Fowl Bluegrass	<i>Poa palustris</i>	H	80	FACW
Pennsylvania smartweed	<i>Polygonum pennsylvanicum</i>	H	10	FACW
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 100%				
Remarks: This transect represents the fringe of the wetland. The wetter central portion of the wetland is dominated by cattail. There are two small areas of common reed (<i>Phragmites australis</i>) near the fence line along the western portion of the wetland.				

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: <u>None</u> Depth of Free Water in Pit: <u>4"</u> Depth to Saturated Soil: <u>0"</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 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: Water flows from this wetland into Wetland 5 and into ultimately to the South Fork Arnold Coulee. Water also enters the wetland from two sources. A culvert drains into the wetland from a wetland located within the Berthold Station. A culvert also enters the wetland which drains the containment dikes constructed within the Berthold Station.	

SOILS

Map Unit Name: Pa – Parnell silty clay loam Drainage Class: Very poorly drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-18	A1	10YR 3/2	None		Fine sandy loam
18-21	A2	10YR 2/1	2.5Y 4/4	Fine/Many/Faint	Silt loam
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:					
The soil was saturated or perched above the A2 horizon.					

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: This wetland is classified as a PEM1A/C.				
This wetland is hydrologically connected to the South Fork Arnold Coulee drainage during high inundation periods. This wetland would likely fall under the regulatory jurisdiction of the COE.				

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: Enbridge's Berthold Station Company/Project: Enbridge Investigator(s): Jeff Mackenthun	Date: May 1, 2010 County: Ward 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: 6 Transect: 1 Sample Point: 2-Upland

VEGETATION

Dominant Plant Species		Stratum	Percent Coverage	Indicator Status
Common Name	Scientific Name			
Brome	<i>Bromus spp.</i>	H	80	
Clover	<i>Trifolium spp.</i>	H	5	FACU
Alfalfa	<i>Medicago sativa</i>	H	10	FACU
Percent of Dominant Plant Species that are OBL, FACW, or FAC (excluding FAC-): 0%				
Remarks: Hayed pasture.				

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: <u>None</u> Depth of Free Water in Pit: <u>None</u> Depth to Saturated Soil: <u>None</u>	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: WIB – Williams loam, gently undulating Drainage Class: Well drained					
Subgroup:					
Profile Description:					
Depth	Horizon	Matrix Color	Mottle Colors	Mottle Abundance/Contrast	Texture, Concretions, Structure
0-20	A	10YR 2/2	None		Fine sandy loam
20-24	B	5Y 5/1	2.5Y 4/4	Medium/Few/Prominent	Fine sandy loam
Hydric Soil Indicators:					
_____ Histols		_____ Concretions			
_____ Histic Epipedon		_____ High organic Content in Surface Layer			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	_____ Yes	<input checked="" type="checkbox"/> No
Wetland Hydrology Present?	_____ Yes	<input checked="" type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	_____ No
Is the sampling point within a wetland?	_____ Yes	<input checked="" type="checkbox"/> No
Remarks:		




Appendix C


Wetland Photographs and Photograph Location Point Map

Map Document: (O:\200-GIS\GIS\Clients\Enbridge\Berthold Station\Berthold Station - NW1.mxd)



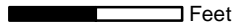
This information is for environmental review purposes only.

 Delineated Wetland Boundaries

 Photograph Location Point

1:4,000

0 300 Feet



Berthold Station Truck Unloading Project

Photograph Location Points

Ward County, North Dakota

Township 156N, Range 86W, Sections 20 & 21



Revised: 06/29/2010 



Photo 1 – Drianage from resevoir.



Photo 2 – Farmed fringe of Wetland 1 Transect 1 along the western wetland boundary.



Photo 3 – Cattail dominance of wetland 1 near transect 1.



Photo 4 – Wetland 1/drainage characteristics between transect 1 and transect 2..



Photo 5 – Drainage and the fill that has occurred in Wetland 1.



Photo 6 – Pocket of Phragmites in Wetland 1.



Photo 7 – View of Wetland 1 from gravel road.



Photo 8 – View of Wetland 2 from gravel road.



Photo 9 – Wetland 3 and low swale that drains the wetland into the drainage/Wetland 1.



Photo 10 –Wetland 4.



Photo 11 –Wetland 5.



Photo 12 –Wetland 6.



Photo 13 –Culvert and the water drainage that enters Wetland 6 from the wetland within the Berthold Station.



March 23, 2012

Ms. Patsy Crooke
Project Manager
U.S. Army Corps of Engineers
1513 S 12th Street
Bismarck, ND 58504

RE: Enbridge Pipelines (North Dakota) LLC
Permit NWO-2009-2882-BIS
Mitigation Revision

Dear Ms. Crooke,

As you are aware, as part of its Bakken Pipeline Project US (BPP US) and Berthold Truck Unloading Project (BTUL), Enbridge Pipelines (North Dakota) LLC (Enbridge) expanded its existing 106-acre Berthold Station and Terminal located about 1 mile northwest of Berthold in the NE $\frac{1}{4}$ of Section 20, and the NW $\frac{1}{4}$ of Section 21, Township 156N, Range 86W, Ward County, North Dakota.

Enbridge received permit authorization under NWO-2009-2882-BIS (enclosed) from the U.S. Army Corps of Engineers (COE) to place permanent fill in wetlands associated with BTUL and BPP US on July 12, 2010 and June 2, 2011, respectively. Approximately 0.32 acres of COE jurisdictional wetlands were permanently impacted as part of BTUL and approximately 1.46 acres of COE jurisdictional wetlands were permanently impacted as part of BPP US.

Since permit NWO-2009-2882-BIS was issued, Enbridge acquired the property located between the Berthold Station facility and the South Fork of Arnold Creek. Figure 1 (enclosed) presents the location of the new mitigation site. This land area has been reserved for wetland creation and a buffer zone between an adjacent residence and the town of Berthold. Placing the mitigation area in this location takes advantage of the natural flow regime of the South Fork of Arnold Coulee and a stormwater outlet placed during construction of the expanded facilities, which will provide additional hydrology for successful wetland creation.

A revised mitigation plan is enclosed that depicts changes to the location of the proposed mitigation area and addresses compensatory mitigation requirements

Ms. Patsy Crooke
March 23, 2012

associated with both BTUL and BPP US at the Berthold Station and Terminal. In total, approximately 1.8 acres of impacted wetlands will require compensatory mitigation.

Once approved, compensatory mitigation at the revised location would be constructed in 2012. On behalf of Enbridge, Merjent respectfully submits this amended mitigation plan to complete compensatory mitigation on the property located between the Berthold Station facility and the South Fork of Arnold Creek. If you have questions regarding this material or require additional information, please contact me at 612.746.3669.

Sincerely,
Merjent, Inc.

A handwritten signature in black ink, appearing to read "Angela Ronayne". The signature is fluid and cursive, with a large initial "A" and "R".

Angela Ronayne, P.E.
Senior Analyst

Enclosures: Permit NWO-2009-2882-BIS
Figure 1 – Location of New Mitigation Area
Berthold Station Wetland Mitigation Plan – Amendment

cc: Paul Meneghini, Enbridge
Paul Lehman, Enbridge

Permit NWO-2009-2882-BIS



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
1513 SOUTH 12TH STREET
BISMARCK ND 58504-6640

June 2, 2011

North Dakota Regulatory Office

[NWO-2009-2882-BIS]

Mr. Paul Meneghini
Enbridge Pipelines (Bakken) LP
1409 Hammond Ave., 2nd Floor
Superior, Wisconsin 54880

Dear Mr. Meneghini:

Enclosed is proposed Department of the Army Permit No. NWO-2009-2882-BIS for the placement of fill material in wetlands associated with the Enbridge Berthold Station and Terminal Expansion and pipeline re-route project.

A processing fee of \$100.00 is required. Please make your check payable to the FAO USAED-Omaha and return to the North Dakota Regulatory Office at the address above.

General Condition No. 1. of the permit will establish the time limit for completing the work. In this particular case, it will reflect a construction period of three years from the date of issuance of the permit.

The Omaha District, Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at <http://per2.nwp.usace.army.mil/survey.html>. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax.

If you have any questions, feel free to contact Patsy Crooke, Project Manager, or myself, at (701) 255-0015.

Sincerely,

Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee **Enbridge Pipelines (Bakken) LP**

Permit No. **NWO-2009-2882-BIS**

Issuing Office **NORTH DAKOTA REGULATORY OFFICE**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: As part of the Bakken Pipeline Project US (BPP US) Enbridge is proposing to upgrade its existing Berthold Station and Terminal (Berthold Station Expansion). Station upgrades include installation of two control buildings, a new station operations building, electrical infrastructure, interconnecting pipes and valves, metering facilities, and other related appurtenances.

In addition, Enbridge is also proposing to replace approximately 11 miles of existing 12-inch diameter pipeline (Line 26) and install two new pumping stations near the towns of Kenaston, Ward County, North Dakota and Lignite, Burke County, North Dakota.

Mitigation for permanent impacts to 1.78 acres of jurisdictional wetlands will take place according to the plan prepared by the Enbridge and approved by the North Dakota Regulatory Office. The mitigation plan is attached by reference and is based on expansion of wetlands that will take advantage of the hydrology in the South Fork of Arnold Coulee. The expanded wetland will be located in Section 21 Township 156 North, Range 86 West, Ward County, North Dakota.

Project Location: The location of this project is Section 20 and 21 Township 156 North, Range 86 West, Ward County, North Dakota.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on May 17, 2014. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

(General Conditions are continued on page 4)

Special Conditions: (SEE PAGES 5-8 and Attachments A, B, C, D, E, F, G, H, AND I)

After a detailed and careful review of all of the conditions contained in this permit, the permittee acknowledges that, although said conditions were required by the Corps of Engineers, nonetheless the permittee agreed to those conditions voluntarily to facilitate issuance of the permit and the permittee will comply fully with all the terms of the permit conditions.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

() Section 10 of the River and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.


b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



Paul Meneghini
Enbridge Pipelines (Bakken) Lp
1409 Hammond Ave., 2nd Floor
Superior, Wisconsin 54880
(PERMITTEE)

5/31/11

(DATE)

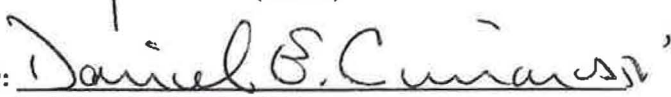
This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Robert J. Ruch

COLONEL, CORPS OF ENGINEERS
District Commander

1 June 2011

(DATE)

By: 

DANIEL E. CIMAROSTI
REGULATORY PROGRAM MANAGER
North Dakota
Regulatory Branch, Operations Division

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

(DATE)

*U.S. GPO: 1988-520-324

DEPARTMENT OF THE ARMY PERMIT CONDITIONS

• SPECIAL CONDITIONS.

General Environmental Conditions

[a] That EPND shall be fully responsible for obtaining all other permits and/or authorizations in accordance with local, state and Federal regulations and shall be fully responsible for compliance with the terms and conditions of those permits and/or authorizations. That EPND shall provide NDRO copies of all permits and/or authorizations obtained, including conditions, within fifteen (15) days of receipt by EPND. Any permits and/or authorizations received by EPND prior to issuance of this Department of the Army permit shall be provided to NDRO within fifteen (15) days of permit issuance.

[b] That EPND agrees to make every reasonable effort to prosecute the construction or work authorized herein in a manner so as to minimize any adverse impact of the construction or work on fish, wildlife, and natural environmental values.

[c] That EPND agrees that it will prosecute the construction of work authorized herein in a manner so as to minimize any degradation of water quality.

[d] That all work in the waterway is performed in such a manner so as to minimize increases in suspended solids and turbidity which may degrade water quality and damage aquatic life outside the immediate area of operation.

[e] That EPND shall comply with North Dakota Department of Health's conditioned water quality certification provided by email dated **March 17, 2011** which includes the following conditions: **1)** Implementation of the Department's construction and environmental disturbance requirements.

- This certification has been attached to and made a part of this permit. [Reference Attachment B].

[f] That only clean rock material from a non-streambed source will be utilized for riprap in order to avoid the percolation of fines which would result in excessive local turbidity.

[g] That all construction debris will be disposed of on land in such a manner that it cannot enter the waterway or a wetland.

[h] That EPND shall establish and carry out a program for immediate removal of debris during construction in order to prevent the accumulation of unsightly, deleterious and/or potentially polluted materials.

[i] That equipment for handling and conveying materials during construction shall be operated to prevent

dumping or spilling the materials into the waterway, except as approved herein.

[j] That measures will be employed to prevent or control spilled petroleum products, chemicals, or other deleterious materials from entering a waterway or wetland and, the permittee will formulate a contingency plan to be effective in the event of a spill.

[k] That steps will be taken to prevent materials spilled or stored on shore from washing into the water as a result of cleanup activities, natural runoff, or flooding, and that, during construction, any materials which are accidentally spilled into the water will be retrieved.

[l] That the use of machinery in the waterway or wetland will be kept to a minimum.

[m] That when the District Engineer has been notified that a filling activity is adversely affecting fish or wildlife resources or the harvest thereof and the District Engineer subsequently directs remedial measures, EPND will comply with such directions as may be received to suspend or modify the activity to the extent necessary to mitigate or eliminate the adverse effect as required.

[n] That fuel storage tanks above ground shall be diked or curbed or other suitable means provided to prevent the spread of liquids in case of leakage in the tanks or piping.

[o] All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage by the Contractor's construction operations and equipment. EPND will comply with mitigation requirements for vegetation set forth by the North Dakota Regulatory Office.

[p] That all areas disturbed or newly created by the construction activity, which will not be ripped, will be seeded with vegetation indigenous to the area for protection against subsequent erosion.

[q] That the clearing of vegetation will be limited to that which is absolutely necessary for construction of the project.

[r] That owners of water supply intakes, or other activities that may be affected by suspended solids and turbidity increases caused by construction activity in the watercourse, shall be given sufficient notice to allow preparation for any changes in water quality.

[s] That all dredged or excavated materials, with the exception of that authorized herein, will be placed on an upland site above the ordinary high water line in a confined area, not classified as a wetland, to prevent the return of such materials to the waterway.

[t] That deposition of excavated materials on shore and all earthwork operations on shore will be carried out in

such a way that sediment runoff and soil erosion to the water are controlled.

Cultural Resource Conditions

[u] That EPND and his contractor, or any of the employees, subcontractors or other persons working in the performance of the contract and/or contracts shall immediately cease work and report the discovery of subsurface features to the North Dakota State Historic Preservation Office [ND SHPO] and NDRO. Work shall not resume until notified by the NDRO.

[v] That EPND and his contractor, or any of the employees, subcontractors or other persons working in the performance of the contract and/or contracts shall immediately report the discovery of possible scientific, prehistorical, historical, or archaeological data, giving the location and nature of the findings to the ND SHPO and/or NDRO. Written confirmation shall be forwarded to NDRO within two (2) calendar days.

[w] That EPND shall cease construction or operation at the site of any cultural resource discovery and notify the NDRO and the ND SHPO by telephone within 24 hours of the discovery and, in writing, within 48 hours. Work shall not resume until notified by the NDRO.

Engineering Conditions

[x] That EPND shall notify the District Engineer at what time the activity authorized herein will be commenced, as far in advance of the time of commencement as the District Engineer may specify, and of any suspension of work, if for a period of more than one week, resumption of work and its completion.

[y] That EPND is responsible for ensuring all contractors or others executing the project authorized by this permit have knowledge of the terms and conditions of the permit; and that a copy of the permit is physically located at the project site during construction operations.

[z] That the NDRO shall be notified, in writing, and through verbal communication of any changes in the project design. No changes in design which impacts the waterway shall be undertaken without Corps authorization.

[aa] *EPND shall provide NDRO a complete set of as-built plans and design specifications for this project within one (1) year of project completion. These plans shall be attached to and made a part of the permit for compliance purposes.*

[bb] That EPND shall maintain the work authorized herein in good condition and in accordance with the plans and drawings attached hereto and those provided in accordance with Special Condition [aa] above.

Mitigation Conditions

[cc] *It is EPND's responsibility to complete the required compensatory mitigation, as set forth in Special Conditions [dd-gg]. It will not be considered fulfilled until EPND has demonstrated compensatory mitigation project success and have received written verification of that success from the U.S. Army Corps of Engineers. Reference Attachment C: Monitoring Plan.*

[dd] The Mitigation Plan, reference **Attachment C**, shall be implemented prior to, or concurrent with project construction. The EPND shall restore no less than 1.78 acres of wetlands at the location indicated on the plans.

[ee] The DA will consider the Mitigation Plan successful, if within 5 years (growing seasons), the wetlands have met the conditions outlined in the 1987 Wetland Delineation Manual: Great Plains Regional Supplement, and its updates.

[[ff] That the EPND shall submit yearly Monitoring Reports (MR). The first report is due on November 1st after the first growing season following completion of the Plan. Subsequent reports shall be submitted from September 1st to November 1st for a period of 4 additional years, or until the DA determines the project is successful. The written report shall provide detailed information on any failings or problems encountered within the mitigation area. Photographs are required as part of the report. The format for the MR/Plan is attached to this permit instrument as **[Attachment D]**.

[gg] To protect the integrity of the mitigation area and avoid unanticipated future impacts, no roads, utility lines, trails, benches, equipment or fuel storage, grading, firebreaks, mowing/haying, grazing, planting, disking, pesticide use, burning, or other structures or activities shall be constructed or occur within the mitigation area without specific, advance written approval from the North Dakota Regulatory Office.

Figure 1 – Location of New Mitigation Area



Legend

- Delineated Wetlands
- Berthold Station Mitigation Site

1:6,000
 1 inch = 500 feet
 0 125 250 500 Feet

Basemap: 2009 NAIP Aerial Photograph, Ward County, ND



Carlson McCain

2718 Gateway Avenue
 Suite 101
 Bismarck, ND 58503
 P 701-255-1475
 F 701-255-1477

Date: Dec 2010

Rev: 01

Figure 1
DELINEATED WETLANDS
Berthold Station and Terminal

Berthold Station Wetland Mitigation Plan – Amendment

BERTHOLD STATION WETLAND MITIGATION PLAN – AMENDMENT

Prepared for:



Enbridge Pipelines (North Dakota) □ □

February 23, 2012



2718 Gateway Avenue , Suite 101
Bismarck, ND 58503
Tel 701-255-1475
Fax 701-255-1477
www.carlsonmccain.com

ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

Executive Summary

As part of its Bakken Pipeline Project US (BPP US) and Berthold Truck Unloading (BTUL), Enbridge Pipelines (North Dakota) LLC (Enbridge) proposed upgrades to its existing Berthold Station and Terminal.

Enbridge received permit authorization (NWO-2009-2882-BIS) from the U.S. Army Corps of Engineers (COE) to place permanent fill in wetlands associated with BTUL and BPP US on July 12, 2010 and June 2, 2011, respectively. Approximately 0.32 acres of COE jurisdictional wetlands were permanently impacted as part of BTUL and approximately 1.46 acres of COE jurisdictional wetlands were permanently impacted as part of BPP US.

This revised mitigation plan depicts changes to the location of the proposed mitigation area and addresses compensatory mitigation requirements associated with both BTUL and BPP US at the Berthold Station and Terminal. In total, approximately 1.8 acres of impacted wetlands will require compensatory mitigation.

Project wetland areas and compensatory mitigation areas are summarized in Table 1.

Table 1. Summary of project wetland impacts and compensatory mitigation.

Project Location	Ward County	Section 20 & 21, T156N, R86W
Project Wetland	PEMA, PEMB, PEMC	
Permanent Wetland Impact	1.8 acres	
Mitigation Location	Ward County	Section 21, T156N, R86W
Area of Mitigation Site	80 acres	
Area & Type of Mitigation	1.6 acres of wetland creation and 1.1 acres of upland buffer	
Total Area of Mitigation	Approximately 1.8 mitigation wetland acres	

Mitigation of the impacted wetlands will be accomplished by the expansion of the South Fork of Arnold Coulee and the planting of an upland buffer area in the on property recently acquired by Enbridge located to the East of the Project Area. Enbridge will oversee construction and maintenance of the Project Area and will be responsible for the monitoring and maintenance of the mitigation wetlands.

Berthold Station Wetland Mitigation Plan Enbridge Pipelines (North Dakota) LP

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APPENDICES

Appendix A Revised Grading Plan

1.0 Introduction

As part of its Bakken Pipeline Project US (BPP US) and Berthold Truck Unloading Project (BTUL), Enbridge Pipelines (North Dakota) LLC (Enbridge) proposed upgrades to its existing Berthold Station and Terminal. The Berthold Station and Terminal (Berthold Station) is located near Berthold, North Dakota, in Sections 20 and 21, T156N, R86W. Station upgrades include installation of two control buildings, a new station operations building, electrical infrastructure, interconnecting pipes and valves, metering facilities, and other related appurtenances.

In a permit dated July 12, 2010 (NWO-2009-2882-BIS) from the U.S. Army Corps of Engineers (COE), Enbridge received authorization from the COE to place permanent fill in wetlands associated with the BTUL Project. Approximately 0.32 acres of COE jurisdictional wetlands were permanently impacted as part of that project. On June 2, 2011 the COE issued a revised permit (NWO-2009-2882-BIS) to also place permanent fill in wetlands at Berthold Station associated with the BPP US Project. Approximately 1.46 acres of COE jurisdictional wetlands were permanently impacted as part of BPP US

Carlson McCain (formerly McCain and Associates) prepared a wetland mitigation plan, dated February 3, 2011, which was the basis for the permit(s) issued by the COE. This revised mitigation plan presents changes to the proposed mitigation area and addresses compensatory mitigation requirements associated with both BTUL and BPP US at the Berthold Station and Terminal. In total, approximately 1.8 acres of impacted wetlands will require compensatory mitigation.

The project area is located in the Missouri Coteau region that is characterized by a hummocky landscape with rolling topography. Numerous isolated wetland depressions are found in the region. Agriculture is the primary land use in the area. Small grains, canola, and peas are prominent agriculture crops grown in the region.

Enbridge proposes to mitigate the affected wetlands by enlarging a wetland associated with the South Fork of Arnold Coulee, located immediately adjacent (east) to the expansion area(s). The mitigation wetland will provide similar habitat and society functions due to the location adjacent to the impacted wetlands. At the local level, it will provide nesting, feeding, and brood-rearing habitat for avian species, amphibians, and aquatic invertebrates.

2.0 Wetland Impact Assessment

The impacted wetland(s) are located within the Project Area (Figure 1). The wetland areas were delineated in the fall of 2009 by Barr Engineering (Barr 2009) and the spring of 2010 by Merjent, Inc. (Merjent 2010). Nine wetlands were delineated (Figures 2 and 3) and identified in these reports. Further details of the delineated wetlands are found in “Berthold Station Wetland Delineation and Rare Plant Survey” composed by Barr Engineering, Inc. (Barr 2009) and “Berthold Station Truck Unloading Project Wetland Delineation Report” created by Merjent, Inc. (Merjent 2010), previously submitted under separate cover. Additional wetland impacts are not anticipated at this time.

The impact assessment remains unchanged from the February 3, 2011 mitigation plan. Impacted wetlands include Wetland 3, Wetland 7, Wetland 8, and Wetland 9 (Figure 4). Figures 1, 2, 3, and 4 were previously submitted under separate cover.

Wetland 3 is a shallow depression located at the edge of an alfalfa field. Narrow-leaf cattails (*Typha angustifolia*), Pennsylvania smartweed (*Polygonum pennsylvanicum*) and reed canary grass (*Phalaris arundinacea*) are present in the wetland. The wetland is hydrologically connected to the South Fork of Arnold Coulee during period of high water levels by a road ditch. The wetland has a NWI designation of PEMC.

Wetland 7 is a small wetland depression with cattails (*Typha* spp.) and common reed (*Phragmites australis*) in its interior. This wetland is connected to Wetland 6 by a culvert that passes under the exterior fence. The wetland is hydrologically connected with Wetland 4 by a road ditch. The wetland has a NWI designation of PEMC.

Wetland 8 is a shallow marsh isolated depression wetland with a seasonal water regime. The wetland has a saturated wet meadow zone. Cattails and water smartweed (*Polygonum amphibium*) are prevalent in the interior. Reed canary grass and water smartweed are found in the wet meadow zone. This wetland has an NWI designation of PEMC.

Wetland 9 is located along the western edge of the Berthold Station and consists of a shallow closed depression. The wetland has a temporarily flooded hydrology regime and reed canary grass in its interior. The NWI designation PEMA was assigned to the wetland during the field delineation.

Table 2 summarizes the characteristics of the impacted wetlands.

Table 2. Impacted Wetland Classification and Acreage

Feature	Wetland Class	Approximate Size	Prevalent Wetland Vegetation
Wetland 3 – Shallow farmed depression	PEMA	0.34 acres	Curly dock and fowl bluegrass (planted wheat)
Wetland 7 – Shallow depression	PEMC	0.014 acres	Cattails
Wetland 9 – Shallow marsh depression	PEMC/PEMB	1.42 acres	Cattails and reed canary grass
Wetland 8 – Temporarily flooded depression	PEMA	0.024 acres	Reed canary grass
Total:		1.798 acres	

2.1 Minimizing Impacts

The analysis provided in the February 3, 2011 mitigation plan remains unchanged. The impacts associated with construction of the projects remains unchanged. The Berthold Expansion project is located in the NE ¼ of Section 20 and the NW ¼ of Section 21, T156N, R86W. The project area is bounded on the north side by U.S. Highway 2 and along the west side by the BNSF railway. 296th Street bisects the project area, following the section line between Sections 20 and 21. The South Fork of Arnold Coulee forms the southern and eastern boundaries of the site and flows north to the Des Lacs River.

The Berthold Station is part of the Enbridge transmission pipeline system in North Dakota. Due to increased demand for crude oil transmission capacity, Enbridge is expanding this system and, therefore, additional pumping, tank, and support facilities are needed. Any expansion of support facilities must be located immediately adjacent to the existing pipelines. Expanding the existing facility takes advantage of existing infrastructure (roads, utilities) that would need to be constructed at a new location.

The proposed expansion impacted wetlands that have already been impacted and fragmented by previous construction. Also, constructing a new facility at a different location may have impacted additional wetland acres than what is present at the current site.

Enbridge acquired the 80 acre site in the NW ¼ of Section 21 in 2010. Additional support facilities are planned for this property, to be constructed at a future date. Enbridge acquired the property located between the Berthold Station facility and the South Fork of Arnold Creek. This land area has been reserved for wetland creation and a buffer zone between an adjacent residence and the town of Berthold. Placing the mitigation area in this location takes advantage of the natural flow regime of the South Fork of Arnold Coulee and a stormwater outlet placed during construction of the expanded facilities, which will provide additional hydrology for successful wetland creation.

2.2 Mitigation Strategy

An area located along the South Fork of Arnold Coulee has been selected for mitigation. Upland areas will be excavated to create a shallow depression with similar contours as the adjacent wetland/creek. The excavated mitigation wetland will be hydrologically connected to the South Fork of Arnold Coulee. Additional runoff will be provided by a stormwater outlet constructed as part of the expanded facilities. The proposed grading plan is designed so that water from the South Fork of Arnold Coulee and the stormwater outlet will flood the proposed excavation.

2.3 Mitigation Credit Ratios

Mitigation credit ratios describe the ratio of compensation credits given to certain actions of mitigation for impacted acres. For example, a 1:1 ratio means that one mitigation acre is required to compensate for one impacted acre. Wetlands will be mitigated for this project at a 1:1 ratio. The mitigation credit ratio for an upland buffer is 5:1 (Ellsworth 2008). Project wetland areas and compensatory mitigation areas are as summarized in the following table.

Project Location	Ward County	Section 20 & 21, T156N, R86W
Project Wetland	PEMA, PEMB, PEMC	
Permanent Wetland Impact	1.8 acres	
Mitigation Location	Ward County	Section 21, T156N, R86W
Area of Mitigation Site	80 acres	
Area & Type of Mitigation	1.6 acres of wetland creation and 1.1 acres of upland buffer	
Total Area of Mitigation	Approximately 1.8 mitigation wetland acres	

3.0 Mitigation Strategy and Site

3.1 Site Location and Land Use

The mitigation area currently consists of an agricultural field that was planted to wheat in 2010. Topography generally slopes to the east and northeast towards the South Fork of Arnold Coulee. The mitigation wetland will be created in this area. Further details of the mitigation area can be found in “Berthold Station Truck Unloading Project Wetland Delineation Report” created by Merjent, Inc. (Merjent 2010).

3.2 Hydrology of Mitigation Wetland

Future hydrology of the created mitigation wetland will be provided the flows of the South Fork of Arnold Coulee, a stormwater outlet, surface run-off from adjacent land, and from groundwater flow.

3.3 Wildlife Habitat and Use

Limited wildlife habitat is currently found in the selected mitigation area as the area consists of an agricultural field. Wildlife habitat is presently restricted to the wetland area of the South Fork of Arnold Coulee. Creation of the mitigation wetland will create one, continuous wetland; replacing small, fragmented wetlands located between and immediately adjacent to industrial development.

Creation of the upland buffer around the mitigation wetland will create additional habitat for ground nesting birds. The proposed upland buffer incorporates a tree row of evergreen trees, planted by Enbridge to provide visual screening from nearby residences.

4.0 Mitigation Site Design

4.1 Wetland Delineation Reports

Two wetland delineations and reports were conducted by others on the project area as outlined in previous sections. Methodologies and summaries of these delineations are summarized in those reports.

4.2 Mitigation Plan

The mitigation design will create approximately 1.6 wetland acres by excavating a depression that will expand existing wetland areas located along the South Fork of Arnold Coulee (refer to the revised Grading Plan). Upland soils will be removed from the area to create a wetland area that will be periodically inundated with water from the South Fork of Arnold Coulee. A 50-foot-wide grassland buffer will be planted along the edge of the mitigation wetland area. The approximate 1.1 acres of grassland buffer will create an additional 0.2 mitigation acres to bring the total to 1.8 wetland mitigation acres.

4.2.1 Construction Procedures

Wetland mitigation areas are identified on the revised Grading Plan in Appendix A. Topsoil will be stripped from the wetlands impacted by construction and also from across the mitigation area prior to excavation. The excavated topsoil will be stockpiled and spread over the mitigation wetland once final contours are achieved. This will help the topsoil retain its characteristics and will aid in the establishment of hydrophytic vegetation.

4.2.2 Mitigation Wetland Seeding/Planting Plan

The mitigation site will consist of an expansion of the South Fork of Arnold Coulee. Cattails and sedge species are prevalent in the drainage and will vegetate the mitigation wetland area. Seed from these species and others found in the drainage will disperse into the mitigation wetland area during periods of high flow.

Prairie cordgrass (*Spartina pectinata*) plugs may be planted and native wetland hay may be spread within the mitigation wetland area if natural re-vegetation does not occur during the initial year after construction.

4.2.3 Upland Buffer and Adjacent Uplands

The upland buffer area currently consists of a sloping agricultural field. All topsoil will be stripped prior to construction and replaced after the final contours have been established. A native seed mixture will be planted in the upland buffer.

The upland buffer will be planted with a native seed mixture that is modified from the CP25 Rare and Declining Habitat guidelines (NRCS 2007). The mixture contains three robust warm season grasses, two medium height cool season grasses, and three wildflowers.

Table 3. Upland buffer seed mixture and seeding rates.

Native Vegetation Species	Percent mixture (%)	#PLS/acre	Total lbs./acre
Big bluestem	20	6.0	1.2
Indiangrass	20	5.5	1.1
Switchgrass	20	3.5	0.7
Green needlegrass	10	6.0	0.6
Western wheatgrass	10	8.0	0.8
Maximilian sunflower	5	1.0	0.05
Purple prairie clover	10	8.0	0.8
Black-eyed susan	5	0.8	0.04

* Recommendations and input of seed mixture provided by Dave Dewald, State Biologist of NRCS in North Dakota (Dewald 2011).

The native seed mixture will provide wildlife habitat with diverse vegetative structure. The grasses will provide nesting and feeding areas for avian, amphibian, mammal, and reptile species. The three forbs will provide essential habitat for butterflies and other invertebrate species.

4.2.4 Noxious Weed Species Management

Chemical and/or mechanical controls will be used to manage noxious weed species if they become prevalent within the mitigation wetlands and the adjacent uplands. The mitigation wetland site will be monitored by Enbridge and appropriate steps will be taken to control noxious weeds.

5.0 Mitigation Ecological Benefits

5.1 Wetland Functions

The mitigation wetland will provide multiple functional attributes. Overall, wildlife habitat will be enhanced and additional areas and types of habitat will be created. Improved hydrologic conditions will develop:

- Avian nesting, feeding, and brood habitat;
- Aquatic invertebrate habitat;
- Amphibian habitat;
- Improved water quality;
- Sediment retention; and
- Permanent cover.

5.2 Upland Functions

The upland buffer located along the west side of the mitigation wetland area will provide multiple functions. It will reduce soil erosion into the wetland basin and South Fork of Arnold Coulee thus improving air and water quality. It will also provide nesting and feeding habitat for avian, amphibian, invertebrate, and reptile species and foraging areas for mammal species.

6.0 Mitigation Site Monitoring

A wetland used for mitigation purposes require subsequent monitoring of hydrology, hydrophytic vegetation, and the development of hydric soil indicators to illustrate that they are functioning correctly. The mitigation wetland will be evaluated with wetland criteria as identified in the Great Plains Regional Supplement to the 1987 Manual (US Army Corps of Engineers 2010).

Monitoring will be conducted for at least five years or until the mitigation wetland has met its performance standards for two consecutive years and receives the consent of the USACE to end monitoring.

6.1 Monitoring Methods

Monitoring of the mitigation wetland area will consist of an annual field visit, a monitoring report, and follow-up to any questions or suggestions from regulatory personnel. A field visit to the mitigation wetland area will be performed annually in late-July or early-August of each year that monitoring is required. The mitigation wetland area will be evaluated by the presence of indicators of wetland criteria, i.e. hydrology, hydrophytic vegetation, and the development of hydric soils at representative observation points. The spatial location of the observation points will be collected during the initial monitoring effort with GPS. The same observation point locations will be evaluated during the subsequent monitoring visits.

6.2 Field Photographs

Field photographs of the mitigation wetland area will be taken during each monitoring visit. The photographs will be taken from the same location and in the same orientation of the mitigation wetland area. This will provide a visual of the development of the wetland mitigation area.

6.3 Wetland and Buffer Vegetation

Wetland vegetation composition will be evaluated at each observation point following the guidelines set forth by the Great Plains Regional Supplement to the 1987 Manual (US Army Corps of Engineers 2010). A vegetation species list will be also be collected while traversing between observation points.

Buffer vegetation composition will be surveyed to identify planted species and/or any invasive/noxious weeds.

6.4 Hydrology Indicators

Wetland hydrology indicators will be evaluated at each observation point following the guidelines set forth by the Great Plains Regional Supplement to the 1987 Manual (US Army Corps of Engineers 1010). Hydrology indicators will also be identified while traversing between observation points.

6.5 Hydric Soil Indicators

Soil pits will be evaluated at each observation point to identify the development of hydric soils. Hydric soil indicators will develop slowly over time and may not be visible during the monitoring effort.

6.6 Problem Areas

Problem areas will be identified and documented during the monitoring visits. Photographs and notes detailing each problem area will be collected during the field monitoring.

6.7 Monitoring Report

Monitoring reports will be completed and submitted annually to the U.S. Corps of Engineers North Dakota Regulatory Office, located in Bismarck, North Dakota. Each report will follow the guidelines set forth by the Mitigation Monitoring Plan (USACE 2010), and contain:

- USACE Permit Number.
- Name and contact information of permittee, point of contact, and field observer(s).
- Name of person conducting monitoring reports and dates of monitoring visits.
- Directions to and map of mitigation area.
- Summary paragraph describing the project's purpose, impacted area's acreage and type, and mitigation wetland area's acreage and type.
- Timeline of mitigation area's construction activities and final date of mitigation wetland area's completion.
- Photographs and a narrative summary of the mitigation wetland area's progress and development into meeting wetland criteria.
- Photographs and descriptions of any problem areas.
- Recommendations for corrective or remedial actions (if necessary).
- Description and dates of implemented corrective actions (if applicable).

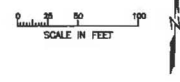
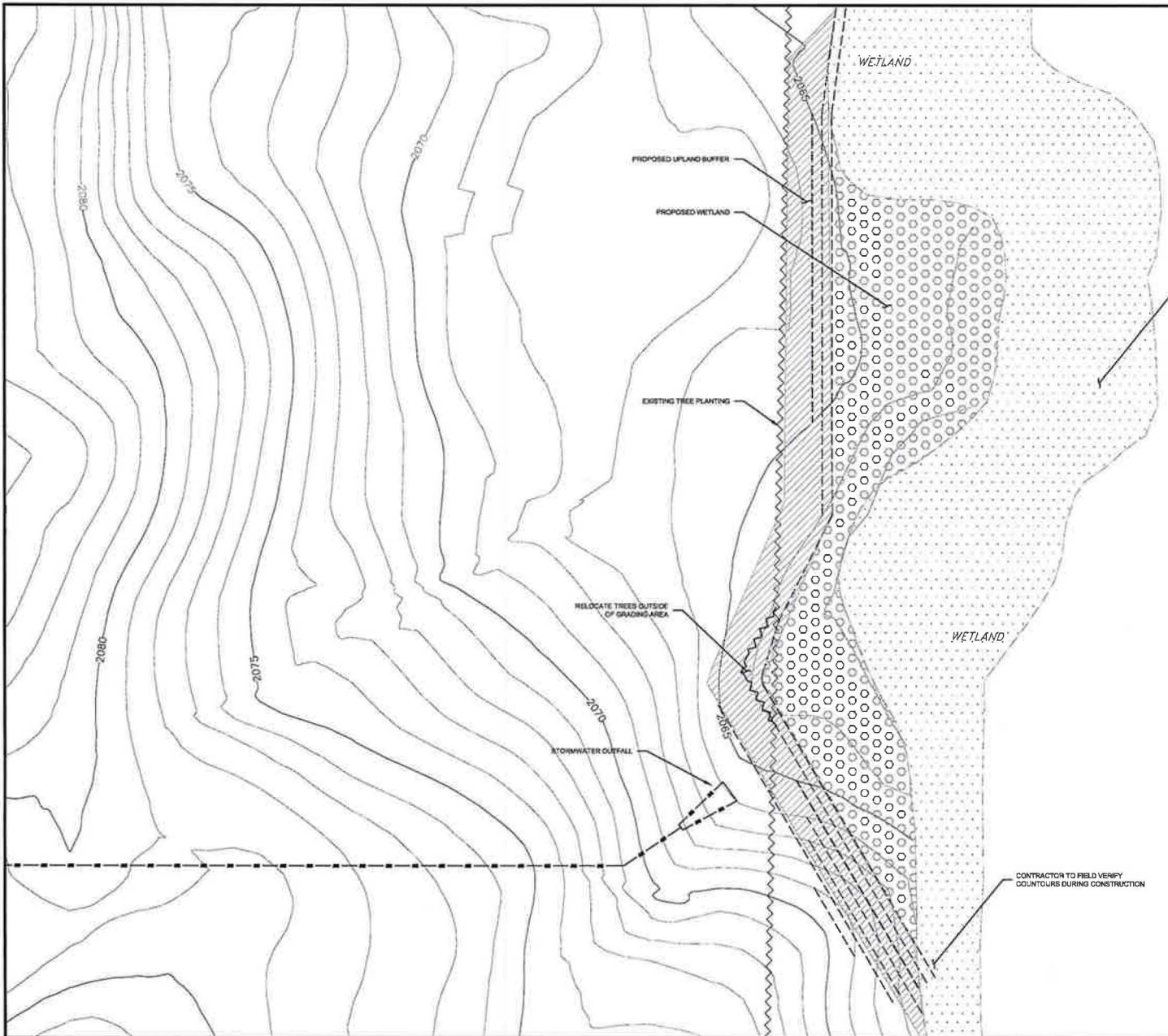
7.0 References

- Barr Engineering, Inc. 2009. *Berthold Station Wetland Delineation and Rare Plant Survey Report*. Duluth, MN 58 pages.
- Dewald, D., 2011. Communication between Dave Dewald (U.S.D.A. Natural Resources Conservation Service) with Greg Meyer (McCain and Associates, Inc.) concerning planting mixtures for upland areas. Dated January 2011.
- Ellsworth, T. 2008. Communication between Terry Ellsworth (U.S. Fish and Wildlife Service) and Greg Meyer (McCain and Associates, Inc.) concerning wetland mitigation in North Dakota. Dated January 2008.
- Environmental Laboratory. 1987. *U.S. Army Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- McCain and Associates, Inc. February 3, 2011. *Wetland Mitigation Plan, Berthold Station and Terminal*
- Merjent, Inc. 2010. *Berthold Station Truck Unloading Project Wetland Delineation Report*. 42 pages.
- U.S. Department of Agriculture. Natural Resources Conservation Service. 2007. CP25 Rare and Declining Habitat – Entire State: NRCS Standard 643 – Restoration and Management of Declining Habitat.
http://www.nd.nrcs.usda.gov/programs/CRP/crp_index.html Accessed December 2011.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U. S. Army Corps of Engineers. 2010. *Mitigation Monitoring Plan*. North Dakota Regulatory Office. Bismarck, ND.

Appendix A

Grading Plan

REV	DATE	BY	DESCRIPTION
1	05/08/13	TAH	PROJECT APPROVAL
2	05/08/13	TAH	PROJECT APPROVAL
3	05/08/13	TAH	PROJECT APPROVAL



LEGEND

- PROPOSED CONTOUR (INDEX)
- PROPOSED CONTOUR (INT)
- EXISTING CONTOUR (INDEX)
- EXISTING CONTOUR (INT)
- ~ TREE ROW (EXISTING)
- [Dotted pattern] EXISTING WETLAND
- [Circle pattern] PROPOSED WETLAND
- [Hatched pattern] PROPOSED UPLAND BUFFER

<small> I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NORTH DAKOTA. </small>	
SIGNATURE	DATE
DATE	SCALE
DATE	SCALE
PROJECT NO.	3771
DRAWING NO.	3771-01 (2) OF 2



**FIGURE 1
GRADING PLAN
BERTHOLD STATION WETLAND MITIGATION PLAN**

Appendix C

SETTLEMENT AGREEMENT

RECITALS:

- A. Enbridge Pipelines (North Dakota), LLC (Enbridge) is the owner of an option to purchase the following real property located in Ward County, North Dakota (the Property):

Township 156 North, Range 86 West:
Section 21: West half (W½) of the Northwest quarter (NW¼)

- B. Enbridge is the owner of the following real property located in Ward County, North Dakota (the Berthold Station):

Outlot No. 1 of the E½NE¼ of Section 20, Township 156 North, Range 86 West of the Fifth Principal Meridian; situated in Ward County, North Dakota

- C. The City of Berthold, North Dakota (the City) is a municipal corporation under North Dakota law. Pursuant to N.D.C.C. § 40-47-01.1 the City elected to extend application of its zoning ordinances beyond the exterior boundaries of the city limits.
- D. The Property and the Berthold Station are located outside the city limits of the City of Berthold North Dakota (the City) but within the boundaries of the City's extra-territorial zoning jurisdiction. According to the official zoning map of the City, the Property and the Berthold Station are zoned for "Agricultural" uses.
- E. Enbridge, in order to expand and upgrade the Berthold Station to accommodate increased demand for mainline receiving and storage of crude oil produced from the Williston Basin of North Dakota, wishes to construct a truck unloading facility on the Property. The proposed truck unloading facility will enable Enbridge to receive increased supply volumes at the Berthold Station and increase its injection capacity to deliver additional crude petroleum into Enbridge's Mainline System. A map of the Property, indicating the

proposed location of facilities and the boundaries of the Property is attached as Exhibit A and incorporated by reference.

- F. On July 13, 2010, Enbridge submitted, under protest, a Zoning Request Application (the Application) to the City requesting that the City's zoning map be amended to designate the Property as zoned for Industrial (IN) use. Enbridge's application specifically reserved the right to challenge the validity of the City's zoning jurisdiction and/or its zoning process.
- G. On August 9, 2010, the City denied Enbridge's Application.
- H. On September 7, 2010, Enbridge filed a Notice of Appeal in the office of the Clerk of District Court, Ward County, North Dakota pursuant to N.D.C.C. § 28-34-01. Enbridge also filed a motion with the North Dakota Public Service Commission (Case No. PU-10-130) under N.D.C.C. § 49-22-16(2), requesting that the North Dakota Public Service Commission "supersede and preempt the application of any zoning ordinance and/or regulation of the City of Berthold, North Dakota" to the Property. The City opposes Enbridge's appeal as well as its motion filed with the North Dakota Public Service Commission.

The City and Enbridge have reached an agreement to amicably resolve their differences and wish to reduce the terms of that understanding to writing. Accordingly, it is STIPULATED and AGREED as follows:

- 1. In consideration of the promises and covenants of Enbridge as described herein:
 - 1.1. The City agrees to amend its zoning map as requested by Enbridge's application.
 - 1.2. The City agrees to amend its zoning map to designate the Berthold Station as property zoned for Industrial (IN) uses as defined by the City's zoning ordinance.

- 1.3. Following annexation of the Property and the Berthold Station as provided herein, the City agrees to designate the area immediately west of and adjacent to the Berthold Station for Industrial (IN) uses as defined by the City's zoning ordinance.
 - 1.4. The City agrees to cooperate with Enbridge in order to achieve an equitable taxation of the Property and the Berthold Station as described more fully in Section 2.1.1.
2. In consideration of the promises and covenants of the City as described herein:
- 2.1. Enbridge agrees to petition the City for annexation of the Berthold Station as well as the Property within sixty (60) days after closing of Enbridge's purchase of the Property and to undertake other action(s) as may be necessary to effect such annexation. Enbridge further agrees to reimburse any attorney's fees incurred by the City in connection with annexation proceedings contemplated by this Agreement.
 - 2.1.1. Enbridge does not anticipate the need for City services and/or utilities such as (but not limited to) water service, sewer service, etc. (City Services) to be provided to the Property and/or the Enbridge Station following annexation. To the extent that neither the Property nor the Berthold Station receive or utilize City Services, the City and Enbridge shall cooperate in order to determine an assessed valuation as is reasonable and just to render taxation of the Property and the Berthold Station uniform to the extent permitted by law. In the event that Enbridge desires or requires City Services to be provided to the Property and/or the

Enbridge Station following annexation and such requested City Services are not then located adjacent to the Property or the Berthold Station, as the case may be, Enbridge agrees that it shall be solely responsible for the cost and expense of providing any requested or required City Services to the Property and/or the Berthold Station. Enbridge further acknowledges and agrees that, in the event City Services are provided to the Property and/or the Berthold Station following annexation and equitable taxation of the Property and/or the Berthold Station, respectively, a change in taxation may be necessary to render taxation uniform.

2.1.2. In the event Enbridge wishes to obtain, for the benefit of the Property and/or the Berthold Station, access to City Services which are then located adjacent to the Property and/or the Berthold Station, Enbridge shall be permitted to access such City Services according to the same conditions otherwise applicable to any person desiring to obtain access to such City Services.

2.2. Enbridge agrees, at its expense, to install in the Spring of 2011 and thereafter maintain on the Property, tree rows running north-south along the eastern boundary of the Property and east-west along the southern boundary of the Property (or such other less southerly boundary within the Property that Enbridge may determine to be appropriate for its use of the site), subject, however, to existing easements, rights-of-way and restrictions of record or imposed by law. In order that the tree rows screen and obstruct sightlines of the Property from the south and/or east at all times, at least one of the tree rows running east-west along

the southern boundary of the Property and at least one of the tree rows running north-south along the eastern boundary of the Property shall consist of evergreen trees six (6) to seven (7) feet in height. Except as otherwise provided herein, the location of the tree rows in relation to the boundaries of the Property, the spacing of trees among the tree rows and the type and variety of trees comprising the tree rows (other than the rows consisting of evergreen trees) shall be determined in cooperation with and according to recommendations of the Ward County Extension service.

- 2.3. Enbridge agrees that it will not expand its facilities to the east or the south of their current location beyond the tree rows required by Section 2.2. Enbridge acknowledges that the City's consent to amendment of its zoning map in this instance does not operate as express or implied consent to further expansion to the East.
- 2.4. Enbridge agrees to implement, at no expense to the City, traffic safety measures recommended by the North Dakota Department of Transportation (NDDOT), as outlined in a July 30, 2010 letter from the NDDOT to the North Dakota Public Service Commission, including those set forth below. The parties anticipate that such improvements will be implemented as soon as possible, however, the parties recognize that the schedule for implementation of these measures will ultimately be determined by the NDDOT.
 - (a) Installation of a combined right-turn and placarded truck pullout lane for eastbound traffic at the Burlington Northern Sante Fe Railroad Crossing (RR Crossing) and 296th Street;

- (b) Installation of a combined acceleration and placarded truck pullout lane for westbound traffic at the RR Crossing and 296th Street; and
- (c) Reduction of the speed limit on U.S. Highway 2 once Enbridge's facility expansion is operational.

Enbridge acknowledges that the City's preferred modification for the westbound lanes of U.S. Highway 2 is installation of a combined acceleration and placarded truck pullout lane for westbound traffic that is located in the median between east-bound and west-bound lanes of the highway. The City, however, acknowledges that a combined acceleration and placarded truck pullout lane for westbound traffic located in the median between east-bound and west-bound lanes of U.S. Highway 2 will require the consent of NDDOT. Therefore, Enbridge agrees to, with the cooperation of the City, request NDDOT consent to installation of combined acceleration and placarded truck pullout lane for westbound traffic to be located in the median between east-bound and west-bound lanes of U.S. Highway 2. If NDDOT consent cannot be obtained, Enbridge agrees to complete the modifications as previously recommended by NDDOT.

- 2.5. Enbridge agrees to undertake all best efforts to prohibit tanker trucks and other similar oversized vehicles from entering or exiting the Property and/or the Berthold Station to or from the south on 296th Street. The City acknowledges that 296th Street is within the jurisdiction of Berthold Township, is not controlled by Enbridge, that Berthold Township has ultimate authority and control over use of the roadway, and passenger-sized vehicles (such as passenger cars and pick-up trucks) are permitted to travel north and south on 296th Street.

- 2.6. Enbridge agrees to cooperate and coordinate with local fire, ambulance and emergency services.
- 2.7. Enbridge agrees to operate its facilities in compliance with applicable environmental laws and regulatory requirements.
- 2.8. Enbridge agrees to pay the City the sum of Two Hundred Seventy-five Thousand Dollars (\$275,000.00) to be utilized by the City to meet infrastructure and other municipal needs or for other public purposes. A “public purpose” is one that promotes the public health, safety, morals, general welfare, security, prosperity and contentment of the residents of the City and the surrounding area. This payment will be made by Enbridge within seven (7) days of final approval of this Agreement by the City.
- 2.9. Enbridge agrees to pay to the City the additional sum of Fifteen Thousand Dollars (\$15,000.00) to reimburse all attorney’s fees incurred and to be incurred by the City in connection with Enbridge Energy’s application to amend the City’s zoning map, its appeal of the City’s denial of that application, the Public Service Commission proceedings and any proceedings to annex Enbridge Energy property into the City as provided above. These fees will be reimbursed by Enbridge as they are incurred.
3. This Agreement is a compromise of doubtful and disputed claims. It is not an admission by either party that the claims or factual or legal arguments of the other are meritorious.
4. Each party affirms and represents to the other that it shall duly execute and deliver all further instruments and cause to be done all further acts that may be necessary to carry out the provisions and purposes of this Agreement.

5. This Agreement shall be binding upon and inure to the benefit of the parties, their respective parents, subsidiaries, affiliates, successors and assigns.
6. This Agreement shall be deemed to have been prepared jointly by the parties, and any uncertainty or ambiguity existing herein shall not be interpreted against any party by reason of its drafting of this Agreement, but shall be interpreted according to the application of the general rules of interpretation for arm's length agreements.
7. The validity, construction, and performance of this Agreement shall be governed by the laws of the state of North Dakota. Each party hereby consents to the jurisdiction of the courts of the state of North Dakota waiving any and all inconvenient form and similar defenses.
8. This Agreement does not constitute either party as the legal representative of the other for any purpose whatsoever. Neither party has authority to assume or create any obligation whatsoever, express or implied, on behalf or in the name of the other party, nor to bind the other party in any manner whatsoever.
9. Any provision or part of this Agreement held to be void or unenforceable shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the parties, who agree that this Agreement shall be reformed to replace any such stricken provision(s) or part(s) with a valid and enforceable provision that comes as close as possible to expressing the intention of the provision or part stricken.
10. This Agreement may be executed in counterparts, each of which will be deemed an original document, but all of which, when taken together, will constitute a single document. This Agreement will not be binding on or constitute evidence of a contract

between the parties until such time as each party has duly executed a counterpart and a copy thereof delivered to each other party to this Agreement.

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Dated October 8, 2010.

CITY OF BERTHOLD, NORTH DAKOTA

By: Allen Lee
Allen Lee
Its: Mayor


Attest

Penni Miller
Penni Miller
City Clerk

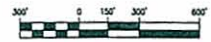
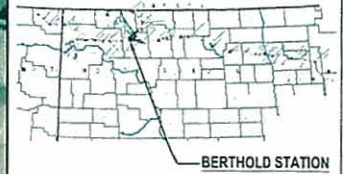
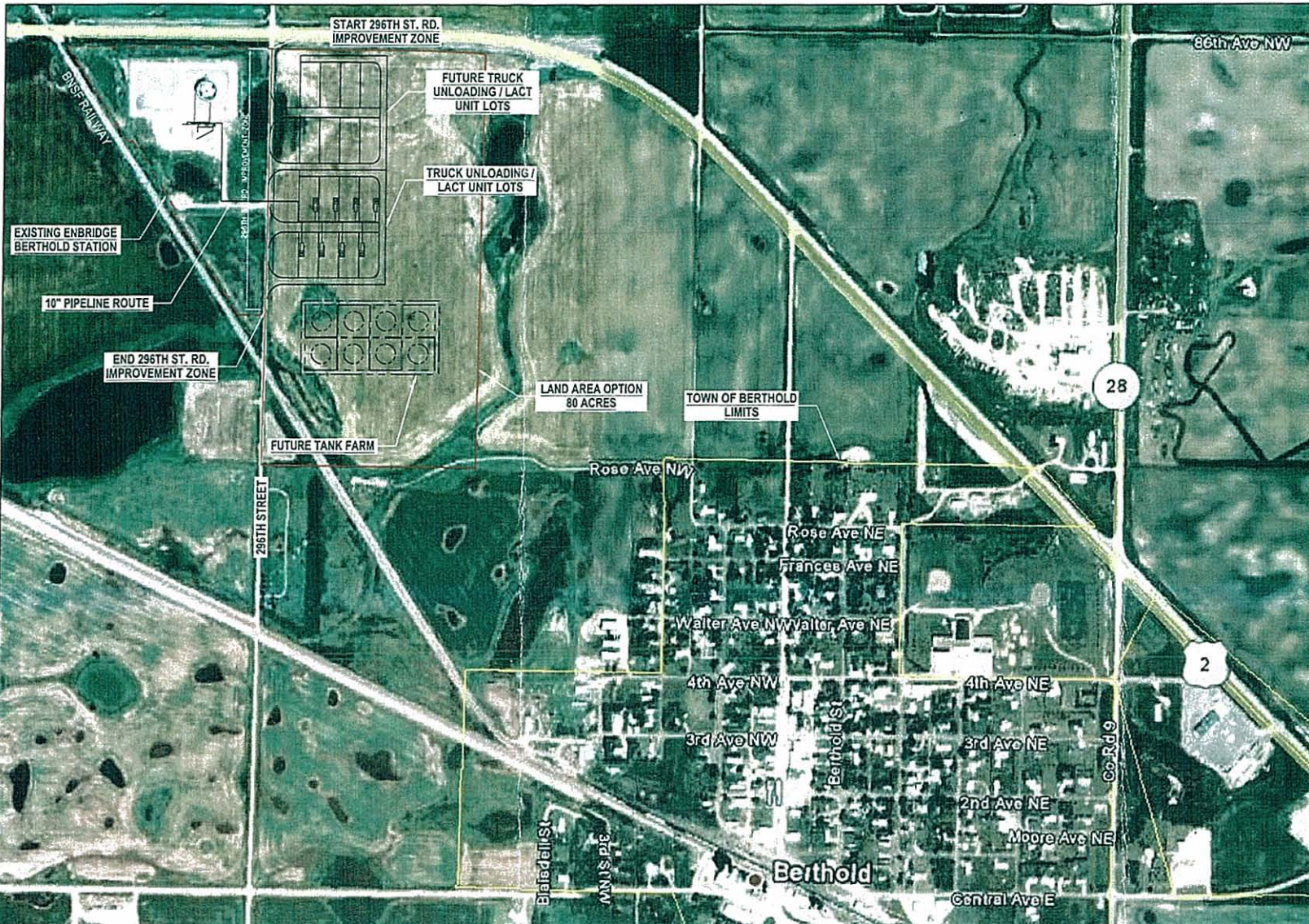
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Dated October 8, 2010.

ENBRIDGE PIPELINES (NORTH DAKOTA), LLC

By: 
Its: SR. DIRECTOR / ASSET MANAGER

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EXHIBIT

A

NO	REVISION	DATE	APPR	BY
A	ISSUED FOR PERMITTING	1/8/10	MJ	JRH

ENBRIDGE PIPELINES (NORTH DAKOTA) LLC
BERTHOLD (ND) STATION
 PROPOSED TRUCK UNLOADING FACILITY
 OVERVIEW MAP
 T156N, R86W, SECTION 20 & 21, WARD COUNTY
 PROJECT: 02675
 SCALE: AS NOTED DATE: 1/7/10 DRAWN: JRH
 CHECK: APPR: DATE:
 DWG. NO. 675-PSC-003


Rooney Engineering, Inc.
 12201 E. Arapahoe Rd.
 Centennial, CO 80112
 (303) 792-5911

W:\02675\02675-003 - Berthold Truck Unload Station Development - 17610.dwg 1/8/2010 1:54:02 PM, Jerry

Appendix D



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



June 8, 2012

Paul Meneghini
Enbridge Pipelines (North Dakota) LLC
1409 Hammond Ave
Superior, WI 54880

Notice of Termination of Coverage under NDPDES Storm Water Permit NDR100000

NDPDES Project ID No: NDR103450
Project Name: Berthold Truck Unloading Project

NDPDES General Permit: NDR100000

The North Dakota Department of Health has received your request to terminate coverage under General Permit No. NDR100000. This letter shall serve as notice that coverage for the above-referenced site/project has been terminated.

With this termination, you are no longer required to submit reports or conduct other activities as outlined in the 2009 reissued general permit. You must retain all records and information from the individual project for at least three (3) years. Please be sure all temporary best management practices (e.g., silt fence) have been removed from the site.

Should you have any questions, please contact me 701.328.5244 or the Division of Water Quality-NDPDES Permits Program at 701.328.5210.

Sincerely,

Amanda Cross
Permits Program
Division of Water Quality

www.ndhealth.gov/WQ/Storm/Construction/ConstructionHome.htm

Environmental Health
Section Chief's Office
701-328-5150

Division of
Air Quality
701-328-5188

Division of
Municipal Facilities
701-328-5211

Division of
Waste Management
701-328-5166

Division of
Water Quality
701-328-5210



APPLICATION TO DRAIN
OFFICE OF THE STATE ENGINEER
 Water Development Division
 SFN 2830 (8/06)

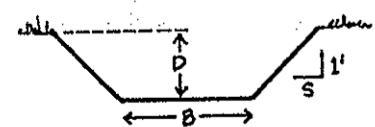


I, the undersigned, am applying for a permit under NDCC Section 61-32-03, to drain a pond, slough, lake, or sheetwater, or any series thereof, which has a watershed area comprising 80 acres or more.

No. 3563
 (OSE USE ONLY)

This application must be accompanied by FSA aerial photos or equivalent showing the location of the proposed drain(s).

(1) WATER RESOURCE DISTRICT IN WHICH PROJECT IS LOCATED: <u>Ward County</u>									
(2) LEGAL DESCRIPTION OF DRAIN CENTERLINE: (use separate sheet(s) if necessary)	<u>NE</u>	<u>1/4</u>	SEC	<u>20</u>	TWP	<u>156N</u>	<u>86W</u>	LAT (Opt.)	LONG (Opt.)
	<u>NW</u>	<u>1/4</u>	SEC	<u>21</u>	TWP	<u>156N</u>	<u>86W</u>	LAT (Opt.)	LONG (Opt.)
		<u>1/4</u>	SEC		TWP			LAT (Opt.)	LONG (Opt.)
		<u>1/4</u>	SEC		TWP			LAT (Opt.)	LONG (Opt.)
(3) LEGAL DESCRIPTION of the drain outlet:								LAT (Opt.)	LONG (Opt.)
<u>NE</u>	<u>1/4</u>	<u>NE</u>	SEC	<u>20</u>	TWP	<u>156N</u>	<u>86W</u>		
(4) PURPOSE: <u>See Exhibit A, Enbridge Pipelines (NO) LLC is proposing to fill 0.214 acres of</u>									
(5) DESCRIPTION OF EACH AREA TO BE DRAINED: <u>wetland as part of proposed road/berm improvements.</u>									
TOTAL Drainage Area	Acres	Water Area	Acres	Average Depth of Water		Feet			
<u>80+</u>		<u>< 0.214</u>		<u>up to 2-ft.</u>					
Project Drainage Area	Acres								
<u>26</u>									
(6) DESCRIPTION OF DRAIN: <u>Not Applicable. Fill Only.</u>									
TOTAL Length of Drain	Feet	Bottom Width (B)	Feet						
<u>See exhibit A, fill only</u>		<u>exhibit A, fill only</u>							
Length of Drain Project	Feet	Side Slopes (S)	:1 Foot		Maximum Cut (D)	Feet			
<u>exhibit A, fill only</u>		<u>exhibit A, fill only</u>			<u>See Exhibit A, fill only</u>				
(7) Construction will be completed on or before: <u>September 1, 2010</u>					(8) Is the proposed drain(s) an assessment drain? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
(9) Do you own the land to be drained in fee? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					If NO, give the name and address of the legal landowner(s):				



The filing of this application and its approval does not relieve the applicant and/or landowner(s) from any responsibility or liability for damages resulting from the construction, operation or failure of this drain.

APPLICANT'S CERTIFICATION

I understand that I must undertake and agree to pay the expense incurred in making an investigation. If the investigation discloses that the quantity of water to be drained will flood or adversely affect downstream lands, I will be required to obtain flowage easements and must file the easements in the office of the county recorder before a permit may be issued. My signature below acknowledges that I have read and agree to these statements, and will adhere to the conditions given on the back of this application.

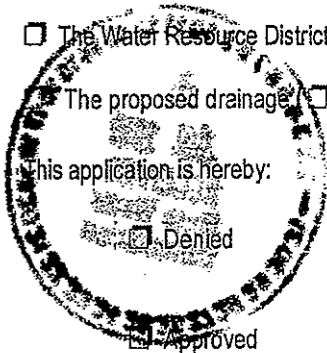
NAME (PRINT OR TYPE): <u>Paul R. Meneghini</u>	DATE SUBMITTED: <u>6/8/10</u>
ADDRESS: <u>1320 Grand Avenue</u>	PHONE NO: <u>715-398-4573</u>
ADDRESS: <u>Superior, WI 54880</u>	
SIGNATURE (Owner of the land on which the project is located or legal entity sponsoring project): <u>[Signature]</u>	

FOR USE BY WATER RESOURCE DISTRICT AND STATE ENGINEER

The Water Resource District Board has investigated according to NDAC Section 89-0201-09.2.

The proposed drainage will will not) flood or adversely affect lands of downstream landowners.

This application is hereby:



Denied

Approved

Signature: John m. Petsul
Chairman or Secretary of Water Resource District Board

Date: Sept 01-2010

(1) The State Engineer or Water Resource District Board may revoke or modify the project and the rights granted under the permit to protect the public health, safety, and welfare; to protect property; or to ensure the orderly control of water resources.

(2) Construction must be completed within two years from the date of final approval.

This application:

does involve drainage of state-wide or interdistrict significance

does not involve drainage of state-wide or interdistrict significance SEA 7/7/10

If the State Engineer has determined that this application does not involve drainage of state-wide or interdistrict significance, approval by the Water Resource District Board constitutes a permit to drain.

If the State Engineer has determined that this application involves drainage of state-wide or interdistrict significance, approval by both the Water Resource District Board and the State Engineer must be given to constitute a permit to drain.

This application involving drainage of state-wide or interdistrict significance is:

Denied

Signature: _____
State Engineer

Approved

Date: _____

CONDITIONS:

(1) The State Engineer may revoke or modify the project and the rights granted under the permit to protect the public health, safety, and welfare; to protect property; or to ensure the orderly control of water resources.

(2) Construction must be completed within two years from the date of final approval.

Mail to:

Office of the State Engineer
900 East Boulevard Avenue, Dept 770
Bismarck, ND 58505-0850

DRAIN APPLICATION No. #3563

Under North Dakota Century Code Section 61-32-03, a water resource district may not grant a permit to drain until an investigation determines that the quantity of water to be drained will not flood or adversely affect downstream lands. The investigation must include a written evaluation of the factors given in North Dakota Administrative Code Section 89-02-01-09.2, which will then become a permanent part of the permit record.

Therefore, the Water Resource District is required to provide written responses to each of the factors listed below. Additional sheets may be attached as necessary. Upon completion, this signed form is to be returned to the State Engineer's Office along with the original drain permit application. A signed copy of this completed form must also be provided to the permit applicant.

89-02-01-09.2. Evaluation of applications – Factors considered. The state engineer, for applications of statewide or interdistrict significance, and the board, for all applications to drain, shall consider the following factors:

1. The volume of water proposed to be drained and the impact of the flow or quantity of this water upon the watercourse into which the water will be drained.
 2. Adverse effects that may occur to the lands of lower proprietors. This factor is limited to the project's hydrologic effects such as erosion, duration of floods, impact of sustained flows, and impact on the operation of downstream water control devices.
 3. The engineering design and other physical aspects of the drain.
 4. The project's impact on flooding problems in the project watershed.
 5. The project's impact on ponds, sloughs, streams, or lakes having recognized fish and wildlife values.
 6. The project's impact on agricultural lands.
-
7. Whether easements are required.
 8. Other factors unique to the project.

Signature: John M. Pietsch
Chairman or secretary of Water Resource District Board

Date: Sept 01 - 2010

Conditions to Drain Application #3563

89-02-01-09.11. Conditions to permits - Extending time to complete project.
Unless otherwise specifically stated:

1. All permits must include the following conditions:
 - a. The project and the rights granted under the permit are subject to modification to protect the public health, safety, and welfare.
 - b. That construction must be completed within two years from the date of final approval.
2. ~~All permits of statewide or interdistrict significance must include the following conditions:~~
 - ~~a. All highly erodible drainage channels must be seeded to a sod-forming grass.~~
 - ~~b. The vegetative cover must be adequately maintained for the life of the project or control structures must be installed, or a combination of these two criteria.~~
3. A permit may be extended beyond two years for good cause shown. If the permit was not of statewide or interdistrict significance when it was originally approved, a request for an extension must be approved or disapproved by the board. ~~If the permit was of statewide or interdistrict significance when it was originally approved, a request for an extension must be approved or disapproved by the state engineer.~~ No extension may exceed two years.

The state engineer or the board may attach other conditions to the permit if deemed necessary.

History: Effective February 1, 1997; amended effective April 1, 2000.
General Authority: N.D.C.C. 28-32-02, 61-03-13
Law Implemented: N.D.C.C. 61-15-08, 61-32-03



Enbridge Pipeline LLC
T156N, R86W Section 20

Ward Co.
Per mit No.3563



Permit Number - ND2010-4200

**State of North Dakota
Temporary Water Permit
SWC Project No. 1400A**

In response to an application for a temporary water permit dated Jul 6, 2010 as received in this office Jul 8, 2010, authority is hereby granted to:

Enbridge Pipeline (ND) LLC
1409 Hammond Avenue
Superior, WI 54880

Contact Person: Sara Ploetz

Telephone (715) 398-4730

A Temporary Water Permit as follows:

Source: un-named slough

Point of Diversion: NE1/4 Sec. 20 Twp. 156 Rng. 086

Nature of Use: hydrostatic testing of pump station

Total Quantity of Water: 15,000.0 Gallons

Maximum Withdrawal Rate: 500.0 gpm

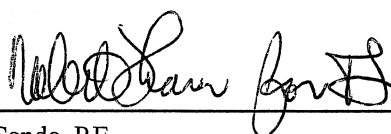
Period of authorized useage: Sep 15, 2010 through Oct 31, 2010

Conditions

This temporary water permit is granted subject to use from the source by senior appropriators. Permission for access to the source must be obtained from all affected landowners. Failure to comply with any order of the State Engineer may result in forfeiture of this permit. The granting of a temporary water permit does not create a water right.

Use of water withdrawn under this Temporary Water Permit is limited to the hydrostatic testing of 4.5, 6.625, 8.625, 10.75 and 12.75 inch diameter pipe in the Enbridge Pipeline facility located in the northeast quarter of Section 20, Township 156 North, Range 86 West.

Dated: Jul 16, 2010



Todd Sando, P.E.
Interim State Engineer
ND State Water Commission
900 East Boulevard
Bismarck, ND 58505

cc: Ward WRD



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



July 16, 2010

Sara Ploetz
Enbridge Pipelines (North Dakota) LLC
1409 Hammond Avenue
Superior, WI 54880

Re: NDPDES Permit No. NDG070231

Dear Ms. Ploetz:

We have received your "Application for Permit to Discharge - NDPDES Industrial-Short Form C" and have granted authority to discharge under the General Permit for Temporary Dewatering/Hydrostatic Testing Permit No. NDG070000. Your facility has been assigned permit no. **NDG070231**. This permit has been issued by the North Dakota Department of Health (NDDoH) with the understanding that all other applicable permits and permissions have been obtained for the start of the following project. The application indicates that the discharge(s) will consist of slough water for the hydrostatic testing of new steel pipelines:

<u>Discharge Point</u>	<u>Volume (Gallons)</u>	<u>Location</u>	
001H	12,000	Berthold Station	T156N, R86W, S20; Ward County


All discharge points shall be inspected daily. On a daily basis record the total volume of discharge and make a visual inspection for Oil and Grease. Analytical parameters for pH and Total Suspended Solids (TSS) shall be waived unless a visual for Oil and Grease is observed. The parameter of Oil and/or Grease is waived unless sheen is observed in the discharge; if observed then collect a sample for Total Petroleum Hydrocarbon (TPH). The department shall be contacted on all findings of Oil and Grease. All discharges made directly to a surface water body or wetland shall be inspected closely so as to minimize any turbidity issues. Best Management Practices (BMPs) must be used to minimize the impact of the discharge.

ADDITIVES: No additives were reviewed for this project.

Enclosed are Discharge Monitoring Report (DMR) forms for your use. If someone else is responsible for the submittal of the DMRs, please forward this letter and the enclosed forms to them. The reports cover three months; the dates and location have been filled out. If no discharge occurs during the reporting period, check "No" in section one. The reports must be post-marked by the last day of the month following the end of each reporting period. All original DMR forms should be sent to NDDoH and a copy should be kept for your files. **EPA no longer requires a copy of the DMR form.**

If any other testing is conducted during this project, copies of the results of any such test should be forwarded to the Department. **Should you wish to no longer be covered under this permit, you must submit a written request to terminate and cite the reasons for termination.** Coverage shall be maintained until a written notification to release has been issued to the permittee by NDDoH. Should you have any questions about your permit or how to complete the DMRs, please contact me at (701) 328-5234.

Sincerely,



Marty Haroldson
Environmental Scientist
Division of Water Quality

Enc.
Cc: EPA

Environmental Health
Section Chief's Office
701.328.5150

Division of
Air Quality
701.328.5188

Division of
Municipal Facilities
701.328.5211

Division of
Waste Management
701.328.5166

Division of
Water Quality
701.328.5210



September 3, 2010

North Dakota Pollutant Discharge Elimination System (NDPDES)
General Permit for Stormwater Discharges from Construction Activity
NOTICE OF COVERAGE

Permittee(s)

Owner Contact: Bruce Homeniuk
Enbridge Pipelines (North Dakota) LLC
2505 16th Street SW
Minot, ND 58701

Operator Contact: Not Listed

Coverage under the 2009 reissued construction general permit (NDR10-0000) is identified as follows:

Permit ID: **NDR103450** Site Name: **Berthold Truck Unloading Project**

Please remember to update the Stormwater Pollution Prevention (SWPP) plan as appropriate for site conditions. The best management practices (BMPs) and temporary structures must be inspected, maintained and adjusted until the site is stabilized following construction activities. Once the site is stabilized as outlined in the general permit, you may end permit coverage by filing a termination notice. Cities or counties may impose additional requirements and/or specific BMPs for construction affecting their storm drainage system. Please check with the local officials to be sure all local stormwater management considerations are addressed.

Additional Information

The permit conditions, forms and related information may be found on our web site at:

www.ndhealth.gov/vq/Storm/Construction/ConstructionHome.htm

Should you have any questions on the permit, please contact a stormwater staff person listed below.

Randy Kowalski
Division of Water Quality
701.328.5239
rkowalsk@nd.gov