



Enbridge Pipelines (North Dakota) LLC

Phase 5 Expansion Project

TREE & SHRUB RESTORATION PLAN

North Dakota Public Service Commission

Case No. PU-06-330

Prepared by:



April 2008

Enbridge Pipelines (North Dakota) LLC

Phase 5 Expansion Project

Tree & Shrub Restoration Plan

INTRODUCTION

On July 26, 2006 Enbridge Pipelines (North Dakota) LLC (Enbridge) filed a Consolidated Letter of Intent and Application for Waiver or Reduction of Procedures and Time Schedules and for a Corridor Certificate and Route Permit for the Phase 5 Expansion Project to the North Dakota Public Service Commission (Commission). On September 20, 2006, the Commission issued its Finding of Fact, Conclusion of Law and Order regarding the case (Case No. PU-06-330). On October 6, 2006, Enbridge filed a Request for Variance from Permit Condition 6 of the Order. The Commission granted Enbridge's Variance request and issued a revised Finding of Fact and Order on October 12, 2006.

Enbridge completed construction of the 52 mile, 10-inch pipeline between the Trenton and Beaver Lodge Stations in fall 2007. As part of its restoration requirements, Enbridge is required to replace trees and shrubs that were removed as part of the project. Condition 22 of the Commission's Order addresses tree and shrub restoration. The Order reads as follows:

Trees or other woody vegetation must be replaced with saplings that are two or more years old at a rate of two for every one removed. Landowners shall be given the option of having replacement trees/shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing Enbridge to plant the replacement trees/shrubs elsewhere. All effected trees and shrubs must be quantified before construction activity. Enbridge shall record, and file with the Commission, the number and variety of replacement tree and shrub plantings, the specific planting area(s) and dates of the plantings. Enbridge shall inspect tree replacements once a year for three years, on the anniversary of the plantings, and send a report on or shortly before October 1 of each year to the Commission documenting work completion and condition of woodlands planting. The Commission may order additional plantings if survival rates are less than 75%.

On February 14, 2007, Enbridge submitted a request clarification of, and a variance to, Condition 22 of the Order, which addresses the replanting of trees and shrubs following construction. The Commission approved the variance on August 22, 2007. The approved variance, which outlines Enbridge's proposed methods for tree and shrub inventory, clearing, and replacement is provided below.

Inventory

1. *Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (e.g., Caragana arborescens, Elaeagnus angustifolia, Rhamnus cathartica, Tamarix chinensis, T. parviflora, T. ramosissima, Ulmus pumila), shall be inventoried before cutting. The inventory shall record the location, number, and species of trees and shrubs.*
2. *In windbreaks and shelterbelts, trees or shrubs anticipated to be cleared, regardless of size, shall be inventoried for replacement.*

3. *In non-windbreak and non-shelterbelt areas, trees anticipated to be cleared that are 1 inch diameter at breast height ("dbh") or greater shall be inventoried for replacement.*
4. *In non-windbreak and non-shelterbelt areas, shrubs anticipated to be cleared in the permanent right-of-way shall be inventoried for replacement.*
5. *In non-windbreak and non-shelterbelt areas outside the permanent right-of-way, shrubs shall be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil shall be preserved and replaced after construction. Shrubs shall be allowed to regenerate naturally where native topsoil is preserved and replaced. Where topsoil is not preserved and replaced, shrubs anticipated to be cleared shall be inventoried for replacement.*

Clearing

6. *Trees and shrubs shall be selectively cleared, leaving mature trees and shrubs intact where practical.*
7. *The width of clear cuts through woody areas shall be limited to 50 feet or less.*
8. *If the number of trees or shrubs actually cleared differs from the number inventoried, the difference shall be noted on the inventory.*

Replacement

9. *Prior to tree/shrub replacement, documentation identifying the number and variety of trees removed as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings shall be filed with the North Dakota Public Service Commission (NSPSC) for approval.*
10. *Tree replacement shall be on a 2 to 1 basis with 2-year-old saplings. Shrub replacement shall be on a 2 to 1 basis with stem cuttings.*
11. *Trees and shrubs shall be replaced by the same species or similar species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.*
12. *Tree and shrub replacement shall not be conducted within 25 feet of the pipeline(s) to facilitate visual inspections of the right-of-way in accordance with U.S. Department of Transportation safety regulations.*
13. *Landowners shall be given the option of having replacement trees/shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing those replacement trees/shrubs to be planted at alternative locations.*
14. *At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings shall be filed with the NDPSC.*
15. *Tree/shrub replacements shall be inspected once a year for three years, on about the anniversary of the plantings, and, on or shortly before October 1 of each year, a report shall be submitted to the NDPSC documenting the condition of replacement planting and any woodlands work completed.*

To comply with Condition 22 and the approved variance described above, Enbridge is submitting the results of its tree and shrub inventory, information regarding landowner discussions, planting procedures, and a timeline for replanting. Enbridge requests that the Commission review this plan for adequacy and approval.

TREE AND SHRUB INVENTORY

A pre-construction inventory was made along the construction right-of-way in April and May, 2007. As required by the condition 22, the construction width was reduced to 50 feet in shelter belts and other wooded areas. The number of trees and shrubs within the construction right-of-way were documented. In some instances, the amount of wolf berry and chokeberry was estimated due to the high density of the species in a given area.

The width of the construction right-of-way was reduced to 50 feet at 25 locations: 17 shelter belts; 5 tree stands; 2 shrub stands; and 1 wooded wetland. At several locations selective tree cut signs were placed to save trees specific trees and remove others. For example, a large cottonwood and green ash were not cut 19 feet from pipeline center line. At one location a large, dying willow was cut one foot away from a large cottonwood that was not cut.

Of the 22 shelter belts crossed by the project, the construction right-of-way was not reduced at 5 of these locations. At these locations there were either no trees/shrubs in a 75 foot construction right-of-way or there was significant space between the trees that reducing the right-of-way to 50 feet would not have saved any trees or shrubs.

Trees and shrubs were documented at 49 locations on 21 separate properties within the construction right-of-way. Mileposts and site descriptions were recorded for all locations, and station numbers of all trees and some shrubs were recorded. A summary of the location, type, and quantity of trees and shrubs inventoried is provided in Table 1.

RESULTS OF PRELIMINARY LANDOWNER DISCUSSIONS

Enbridge has begun consultations with affected landowners to determine where trees and shrubs will be replaced. During the initial phase of consultations, landowners were given an option to have all, a portion of, or no trees/shrubs replaced on their property, keeping in mind that all trees and shrubs are to be replaced at a 2:1 ratio. To date, twelve landowners want all or portions of the replacement to be done on their property and nine have agreed to donate all replacement trees and shrubs to a location of Enbridge's choice.

REPLANTING PROCEDURES TO BE IMPLEMENTED

Enbridge proposes to contract the Williams County Soil Conservation District (SCD) to compete all tree and shrub plantings for the project. For those landowners that request planting on their property, the SCD has agreed to determine with the landowner how much land is available for planting, the quantity of plantings that can be completed within the specified land area, and which species should be planted based on the inventory of species removed from their property and existing habitat characteristics. Once all planting locations and replacement species have been determined, the SCD will provide the planting plan to the North Dakota State Forester (NDSF) to seek confirmation that the plan is sufficient. If necessary, the SCD and NDSF will collaborate to develop and mutually acceptable planting plan. The planting plan will be provided to the Commission once accepted.

**Table 1
Tree and Shrub Inventory for the Phase 5 Expansion Project***

Landowner Tract	Trees									Shrubs										
	CW	HT	PP	RO	SE	WS	BE	GA	Total	WB	BT	CC	SP	SB	CL	AP	GB	VS	US	Total
W-1B									-			52								52
W-2	1								1											-
W-6A & 7		20						23	43	1,135	17	103		58			19			1,332
W-9			19						19	45		7	19							71
W-11		9				1			10	250										250
W-14B		2				4			6	370	1									371
W-17					6				6											-
W-19					24			8	32			6	13							19
W-29		2							2											-
W-33			3						3											-
W-35A			5		53				58											-
W-37		1			12			7	20				14		6					20
W-46		1							1	3,800		130								3,930
W-49		86							86	1,500		9							500	2,009
W-51							1		1	450		11			12					473
W-57	3								3											-
W-63								16	16	85										85
W-69	1								1											-
W-74A								1	1	900	12	34						2		948
W-75 & 75H				22					22	425	75	331					8			839
W-76									-	225										225
Total by Species	5	121	27	22	95	5	1	55	331 Trees	9,185	105	683	46	58	6	12	27	2	500	10,624 Shrubs

* This inventory identifies trees and shrubs removed by construction activities. It does provide the quantity of trees and shrubs that will be replaced. Replacement will occur on a 2:1 basis based on the quantities provided in this table.

Key: CW = Cottonwood; HT = Hawthorn; PP = Ponderosa Pine; RO = Russian Olive; SE = Siberian Elm; WS = Willow species; BE = Box Elder; GA = Green Ash; WB = Wolf Berry; BT = Buckthorn; CC = Chokecherry; SP = Siberian Peashrub; SB = Silverberry; CL = Common Lilac; AP = American Plum; GB = Gooseberry; VS = VanHoutte Spirea; US = Unknown Shrub

Enbridge will be required to identify a location to complete tree and shrub replacements that cannot be completed on landowner's properties or for which landowners have donated their trees and shrubs. Once landowner discussions are complete, the SCD and Enbridge can determine how much additional land will be required to complete tree and shrub replacement. The SCD has stated land is available in Williams County to complete the necessary tree and shrub replacement; however, the exact location has not been determined.

Enbridge will replace trees and shrubs removed during construction with saplings at a rate of two for every one removed. Stock less than two years of age may be planted which is a variation from the requirements of Condition 22. As discussed in a letter provided in Exhibit A, stock less than two years of age should be suitable for planting. The SCD and North Dakota Forest Service will coordinate to ensure suitable stock is utilized for the project.

The SCD will conduct or coordinate site preparation and maintenance activities for the replacement project. These activities may include disking, plowing, or rototilling where mechanical plantings are recommended, installing weed barriers or tree tubes, and applying deer repellent or herbicides. The SCD will determine the appropriate preparation and maintenance procedures on a site by site basis.

TIMELINE FOR REPLANTINGS

Mechanical planting requires disking, plowing, or rototilling for one growing season prior to conducting planting. Therefore, all plantings will be completed in spring 2009. Mechanical planting will generally be utilized when large amounts of plantings are required. Hand planting will be utilized when a small amount of planting is required.

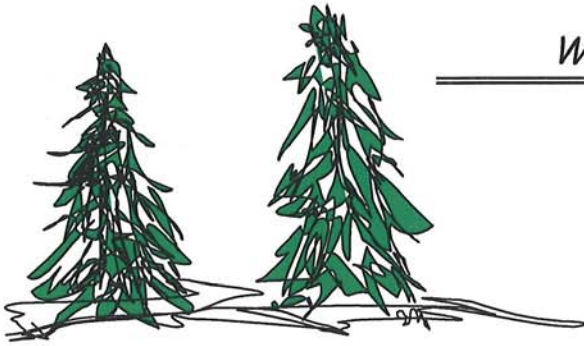
REPLACEMENT MONITORING

In accordance with Condition 22 and the approved variance described above, Enbridge or the SCD will inspect tree/shrub replacements once a year for three years, on the anniversary of the plantings, and send a report on or shortly before October 1 of each year to the Commission documenting work completion and condition of woodland plantings. Enbridge understands the Commission may order additional plantings if survival rates are less than 75%.

For wolfberry replacement plantings only, Enbridge proposes to include natural revegetation within the construction right-of-way when determining survival success rates of the replacement plantings. Wolfberry that naturally establishes itself within the pipeline right-of-way will not be cut or cleared during routine maintenance operations. Enbridge will only include natural revegetation of wolfberry on the tract where wolfberry is being replaced. For example, if wolfberry replacement plantings are conducted on tract 63, than only natural revegetation on tract 63 will be utilized to determine planting success rates. For all other replacement plantings, survival success rates will be determined by monitoring replacement plantings only and on a species-by-species basis.

Exhibit A

Letter from the Williams County Soil Conservation District Regarding Replacement Stock



Williams County Soil Conservation District

1106 W 2nd Street
Williston ND 58801
Phone (701)572-6729 Ext 3

February 5, 2008

Kris Benson
Enbridge (U.S.) Inc.
119 N 25th St E
Superior, WI 54880

Dear Kris,

I reviewed the PSC conditions regarding replacement of the trees for Enbridge. We purchase all our trees from Lincoln Oaks Nursery in Bismarck, North Dakota and from Towner Nursery in Towner, North Dakota. I called the Lincoln Oaks Nursery in reference to item number ten stating: "Tree replacement shall be on a 2 to 1 basis with 2-year-old saplings. Shrub replacement shall be on a 2 to 1 basis with stem cuttings." Most of the stock from Lincoln Oaks, who supplies all our deciduous trees, is 2 years old. There are varieties that are younger. The nurseryman told me that smaller plants tend to have better chances of survival and adaptability to the elements of the plantings. We order our evergreens from Towner Nursery. Their stock is two years old.

In item 11 it states: "Trees and shrubs shall be replaced by the same species or similar species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service." All plantings from our office will have to be suitable to the soils in the planting area to be approved for planting. Tom Claeys, North Dakota Forest Service and our office work closely in these issues.

Please feel free to contact our office if there are any questions concerning these plantings.

Sincerely,

Gwenda Freed
Williams County Technician

Cc: Jeff Mackenthun



CONSERVATION . DEVELOPMENT . SELF-GOVERNMENT

All programs and services of the District are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.