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11 East Superior Street
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October 1, 2020

Mr. Steve Kahl
Executive Director, North Dakota Public Service Commission
600 Ease Boulevard, Dept. 408
Bismark, ND 58505-0480

RE: Case No. PU-13-848
Tree and Shrub Mitigation Plan

Mr. Kahl,

On behalf of North Dakota Pipeline Company, LLC, please find two (2) copies of the first annual monitoring report summarizing the results of a site inspection on September 11, 2020. In April, 2019, the PSC approved a Tree and Shrub Mitigation Plan and Addendum specifying that the replacement planting would be conducted at the Berthold Station on Enbridge property in the SWNW Section 21, Township 156N, Range 86W, Ward County, near an existing planting. Plantings were installed June 10, 2019. The attached report is the first of three annual reports that Enbridge will provide according to the terms of the Tree and Shrub Mitigation Plan.

Please contact me if you have any questions.

Sincerely,

Jason Risdall
Manager, Regulatory Affairs

cc: Patrick Fahn, ND PSC

Technical Memo



Responsive partner.
Exceptional outcomes.

To: Chad Mosser, Enbridge
From: Joseph Sander, Wenck Associates, Inc.
Copy: Justin Katke, Minnesota Limited; Chris Schaefer & Amber Senn, Enbridge
Date: September 22, 2020
Subject: Survival Monitoring - Enbridge Sandpiper (PU-13-848) Tree and Shrub Mitigation

Introduction

Under the jurisdiction of the North Dakota Public Service Commission (PSC), the North Dakota Pipeline Company, LLC (Enbridge) expanded its Beaver Lodge, Stanley, and Berthold Stations in association with its Sandpiper Pipeline Project (Project; PU-13-848). Expansions at the Beaver Lodge and Stanley stations required the removal of 45 trees and shrubs. Under the current rules regarding tree and shrub removal, Enbridge was required to replace the trees and shrubs following a 2:1 replacement ratio, or 90 total plants. This would have required the surviving plant community and count to contain two trees and 88 shrubs.

In April 2019, the PSC approved a Tree and Shrub Mitigation Plan (Plan) and Addendum specifying that the replacement planting would be conducted at the Berthold station on Enbridge property in the SWNW Section 21, Township 156N, Range 86W, Ward County, near an existing planting. Instead of a 2:1 replacement ratio, Enbridge used a 4:1 replacement ratio for trees, and a 3:1 ratio for shrubs to bring the planned number of plants to 136 to improve survival and success rates. Planting was conducted June 10th, 2019 by Premier Landscaping from Minot, ND.

After a documentation of the vegetation on June 11th, 2019, it was determined that there were 135 total plants (4 ash trees, 21 chokecherries shrubs, 42 prairie rose shrubs, and 69 western snowberry shrubs) surpassing the minimum 2:1 ratio of replacement planting. Some of the individual shrubs were observed to have minor broken stems, or no leaves, but these findings were not of major concern. If after the third annual report the survival rate is less than 75% (equal to 68 of the required 90 trees/shrubs), the Commission may order additional plantings (NDPSC "Tree and Shrub Mitigation Specifications" #16). Refer to the Tree and Shrub Mitigation Plan and Addendum for other background details.

Methods

Wenck Associates, Inc. (Wenck) was retained to document the number, variety, type, location and date of planting per the NDPSC "Tree and Shrub Mitigation Specifications" #15. Wenck environmental scientist Joseph Sander visited the site on September 11, 2020, accompanied by Minnesota Limited representative Dan Sandquist.

Results

After one year, a decline in the health and the number of planted vegetation was observed. Total surviving observed species included 4 green ash trees, 16 chokecherries, 35 prairie rose, and 64 western snowberry shrubs. Overall, 119 plants were recorded, a decrease of 13.0% from the original planting. The reductions in plant numbers occurred in the prairie rose (7), chokecherry (5), and western snowberry (5).

All ash trees were visibly stressed, with few leaves (**Photos 1-3**), roughly 50% of the 35 prairie rose shrubs were doing poorly, and remaining chokecherry, while green and hardy, had not exhibited much vegetative growth. All western snowberry plants observed were in good health and growing vigorously, despite evidence of some herbivory.

The planting area has become dominated with invasive weeds, some of which are considered noxious in the State of North Dakota, especially in original planting areas where shrubs have died (**Photos 4-5**). Noxious weed species observed in the planting included Absinthe Wormwood (*Artemisia absinthium*) and Canada Thistle (*Cirsium arvense*). Other dominant weedy species included annual bursage (*Ambrosia acanthicarpa*), sow thistle (*Sonchus arvensis*), Dandelion (*Taraxacum officianale*), and Hoary Tansyaster (*Machaeranthera canescens*); as well as an assortment of other common weedy species.



Photo 1. View of the four 10-foot high green ash trees ('Rugby' variety) are visible with existing tree/shrub planting in background. Note trees are bare of most leaves.



Photo 2. Close-up view of an ash tree that is lacking most leaves.



Photo 3. View from south to north of stressed green ash trees.



Photo 4. View of the planted row along south side, note degree of weedy presence.



Photo 5. View of the southwest end of the planting with the least amount of surviving shrubs.

Chad Mosser
Enbridge
September 22, 2020



Conclusion

The counts of planted trees and shrubs exceeded the required ratios and were of the appropriate species. A decline in plant survival since the initial planting was observed. The planted stock of green ash, chokecherry, and prairie rose appear to be in less than perfect condition, with all green ash trees seemingly experiencing drought stress and all prairie rose shrubs being out competed by weedy species. Western snowberry shrubs appear to be hardy and vital. The planting area has become dominated by noxious and other weedy species.

While the documented vegetation still meets the 2:1 replacement ratio required by the PSC, there may be additional die-off in the following years. Harsh winter temperatures common in the upper great plains may affect young plants, especially if the plants are stressed prior to winter. Another potential reason for stress is pressure from several invasive weeds observed in the planting area.

Wenck recommends control and maintenance of weedy species until the establishment of desirable native or hayland species and planted species is fully documented. Wenck also recommends watering drought stressed individuals during peak summer heat.

The services performed by Wenck scientists for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

If you have any questions, please feel free to call me at (701) 936-3061 or at jsander@wenck.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joseph Sander', is written over a horizontal line.

Joseph Sander, Environmental Scientist

September 22, 2020

Date