

DEPARTMENT OF THE INTERIOR  
U.S. FISH AND WILDLIFE SERVICE  
REGION #3

## **NATURAL RESOURCE RESTORATION**

Enbridge-Cohasset Project (# 0387)

### **Interim Report**

by

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for

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## INTRODUCTION

On July 4<sup>th</sup>, 2002, a crude oil pipeline ruptured releasing approximately 250,000 gallons of oil into surrounding wetland area. The wetland was within the watershed of Blackwater Creek, a tributary to Mississippi River. Response strategies included a controlled burn to remove free oil and a berm constructed to contain residuals. The incident resulted in near-complete loss of 11 acres of wetland vegetation in the impacted area, decreasing migratory bird habitat.

The Natural Resource Trustees (Minnesota PCA, Minnesota DNR, Leech Lake Band of Ojibwe, USFWS and BIA) and Enbridge completed a final Restoration Plan (November 2005) through a cooperative NRDAR. The preferred restoration project restored approximately 30 acres of migratory bird habitat consisting of forested and scrub shrub wetlands on Chippewa National Forest Land. Enbridge funded all assessment costs. Funds were provided to USFWS for oversight and scheduled monitoring through the Consent Decree (finalized July 2008) as described in Appendix B & C. The U. S. Forest Service has provided several monitoring reports for the restoration site, consistent with the project's Work Plan. We anticipate the Forest Service submitting additional monitoring reports in 2016 and 2018.

### Monitoring Reports

Morley, David. CNF Site 3 West Wetland Restoration Project: Years 1 – 4 & 6 Monitoring Report. Chippewa National Forest. August 18, 2014.

Morley, David. CNF Site 3 West Wetland Restoration Project: Years 1 – 4 Monitoring Report. Chippewa National Forest. January 3, 2013.

Morley, David. CNF Site 3 West Wetland Restoration Project: Years 1 – 3 Monitoring Report. Chippewa National Forest. July 26, 2011.

Morley, David. CNF Site 3 West Wetland Restoration Project: Years 1 – 2 Monitoring Report. Chippewa National Forest. September 9, 2010.

Morley, David. CNF Site 3 West Wetland Restoration Project: Year 1 Monitoring Report. Chippewa National Forest. September 28, 2009.

## RESULTS and RECOMMENDATIONS

Re-vegetation of target species has not met all criteria defined in the Restoration Plan. For example, establishment of willow in the shrub-scrub portion of the project area has not reached its goal—it is 40 percent of its goal of 500 stems per acre. However, its increase in abundance and range suggest successful reestablishment over the long-term. Before implementation of the

restoration project, very few willow trees were present in the area. A majority of the project site was inundated (with water depths exceeding a foot in some areas); conditions which allowed tag alder to out-compete more desirable species (e.g., willow). Recent monitoring results indicate significant potential for progress. There appears to be an abundance of willow seedbank in the soil that is rapidly responding to more ideal soil moisture and sunlight conditions.

Goals for the other tree species have also not been met. Trees have reached a density of 200 per acre, which is substantially less than the restoration target (500 trees per acre). However, the trees that have survived are in good condition. A number of factors influenced the survival of trees planted in the project area, including: unnecessary soil compaction during construction with respect to establishing final grades, periods of prolonged flooding and drought, and intense competition with native wetland grasses and sedges. Despite installing mats with a second tree planting in 2011, grasses and sedges still appear to have a significant competitive edge on tree seedling establishment.

Reed canarygrass, an invasive species, on the east side of the project area will continue to be monitored and may be removed as necessary. Illegal ATV use also disturbed the restoration site, but to a lesser extent as the previous listed factors. Methods (e.g., displaying signage and berm construction) used to deter ATV use in the restoration area have been successful in the past few years.

For future restoration projects, the Chippewa National Forest reforestation staff may encase seedlings in tubes during planting to improve survival. Another recommendation is to avoid soil compaction by not doing a final grading pass with heavy machinery as was done for this project when the road was removed.

Although some of the restoration goals for the project have not been met, current conditions indicate success over the long-term. Natural succession occurs over several decades in forested wetland communities. It may be appropriate to monitor over a longer period. Without a substantial investment in reforestation funds, it may be unrealistic to achieve all of its designated restoration targets within a ten-year monitoring timeframe.



**Figure 1. (left to right) Mixed shrub and forested wetland along the east portion CNF Site 3 West dating August 2008 and July 2014 (USDA Forest Service David Morley).**



**Figure 2. (left to right) Easternmost flowage on CNF Site 3 West dating August 2008 and July 2014 (USDA Forest Service David Morley).**



**Figure 9. (left to right) Forested wetland along the western portion of CNF Site 3 West dating August 2008 and July 2014 (USDA Forest Service David Morley).**