

3 Reclamation Activities

As required by the Mine Permit Section 3, reports on progress of reclamation activities are prepared throughout the year. An annual report is required by Condition 3-26(d). The 2005 Annual Reclamation Report dated November 15, 2005 was submitted to the Department and is incorporated by reference. Other reclamation updates submitted on January 31 and November 11, 2005 are incorporated by reference.

Reclamation activities reported in the November 2005 Annual Reclamation Report included a summary of onsite vegetation activities such as reports on monitoring of vegetation, birds and butterflies. Also reported are management activities during 2005 that included herbicide treatment of invasive species, irrigation of woodlands, mowing firebreaks and grass trails, and completion of the sixth year of the 10-year prescribed burn period.

Flambeau submitted its Notice of Completion (NOC) to the Department during September 2001. In March 2002, the Department concurred with Flambeau's NOC. The four-year monitoring period to Certificate of Completion began on November 19, 2001. The submittal of the 2005 Annual Reclamation Report completes the fourth year of the four-year monitoring period to the Certificate of Completion.

Reclamation monitoring of the site was performed by Applied Ecological Services, Brodhead, WI during Spring and late Summer. Vegetation monitoring was performed in 29 permanent 50-meter transects for a total of 290 quadrants. Bird and butterfly monitoring was performed to document use of the site by wildlife. Following are highlights of the 2005 monitoring program results:

- An average of 97 percent plant cover across reclaimed site excluding wetlands and industrial outlot;
- 20 planted species were found in the grassland community, 33 in the woodlands, and 77 in the wetlands;
- woody species survival within the defined woodlands is at 100 percent;
- 45 bird species identified as using the site or immediate peripheral property; and
- 11 butterfly species recorded as using site.

A Habitat Analysis for the reclaimed mine site was submitted during October 2002. The document, Habitat Analysis (HEP) for Savanna Sparrow, Great Crested Flycatcher and Tree Swallow at the Reclaimed Flambeau Mine site, was prepared by Applied Ecological Services using the Habitat Suitability Index model developed by the U.S. Fish and Wildlife Service. The Habitat Analysis using year 2000 monitoring data found that habitat is currently being provided in the grassland for the Savanna Sparrow. The Great Crested Flycatcher will be supported in the woodland in about 20-30 years when the woodland develops. Natural

habitat in the wetland communities for the Tree Swallow will also be provided in about 20 years as cavernous trees begin to provide natural nesting opportunities. The Tree Swallow is currently on site and using “bluebird” boxes for nesting. The Habitat Analysis was updated with years 2001 and 2002 monitoring data and findings were consistent with the initial analysis. The fourth and final Habitat Analysis updated with the 2003 monitoring data was submitted on November 12, 2004. The findings of the final Habitat Analysis were consistent with the previous years’ Analyses.

The wetlands are highly diverse with 217 native plant species found in 2005. Seventy-seven native plant species found in the wetlands were planted by Flambeau prior to the NOC. With such a diverse system, competition and environmental factors such as annual water level fluctuations can impact the occurrence of some species from year to year. The total number of native plant species found in the wetlands was 144 in 2002, 153 in 2003, and 203 in 2004. Flambeau is required to establish a minimum of 12 native planted species in the wetlands and has far exceeded this requirement.

The results of monitoring on the reclaimed Flambeau Mine site show that the site continues to track with the desired trajectory for plant community development, diversity, cover, plant frequency, productivity, and wildlife use.

Table 3-1 summarizes the performance standards and the results of monitoring, 2000-2005.

Table 3-1. Performance Standards and Reclaimed Flambeau Mine Site Status (2000 - 2005).

Total Cover (%)							
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005
Grassland	70	96	95	96	90	95	98
Woodland	70	98	98	98	98	99	98
Wetland	70	100	100	100	92	95	83
Industrial Outlot	70	96	93	99	91	98	93
Planted Native Species Found (#)							
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005
<u>Grassland Planted Species</u>							
Target		15	16	16	15	16	15
Enhancement		6	4	6	10	5	5
Total	15	21	20	22	25	21	20
<u>Woodland Planted Species</u>							
Target		25	24	23	22	22	24
Enhancement		10	11	8	7	9	9
Total	15	35	35	31	29	31	33
<u>Wetland Planted Species</u>							
Target		32	32	30	34	34	37
Enhancement		35	32	37	33	41	40
Total	12	67	64	67	67	75	77
Industrial Outlot	NA ¹	NA	NA	NA	NA	NA	NA
Diversity² (%)							
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005
Grassland	80	88	94	94	88	94	88
Woodland	80	100	96	92	88	88	95
Wetland	80	82	82	77	87	87	96
Industrial Outlot	NA	NA	NA	NA	NA	NA	NA
Tree Species Survival (%)							
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005
Grassland	NA	NA ⁴	NA	NA	NA	NA	NA
Woodland	80	100	100	100	100	100	100
Wetland	NA	NA	NA	NA	NA	NA	NA
Industrial Outlot	NA	NA	NA	NA	NA	NA	NA

¹NA = Not Applicable

²As compared to Target Planted Species.