

2006 Annual Reclamation Report

November 2006



Reclaimed Flambeau Mine – July 2006

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November 14, 2006



Mr. Phil Fauble WA/3
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Waste and Material Management
101 South Webster Street, GEF II
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Dear Mr. Fauble:

RE: Flambeau Mining Company – 2006 Annual Reclamation Report

Flambeau Mining Company (Flambeau) is submitting the 2006 Annual Reclamation Report. The report satisfies the requirement of Part 3, Condition 26.d) of the Mining Permit (Docket IH-89-14, January 14, 1991). The 2006 Annual Reclamation Report records reclamation activities performed in 2006. As documented herein and as summarized in Attachment 1 Flambeau has met all the performance standards necessary to obtain the Certificate of Completion. The report consists of a narrative section in letter format and several attachments including photodocumentation that can be found in Attachment 2.

1 Reclamation Documents (November 2005 – November 2006)

A report of anticipated reclamation activities during 2006 was submitted to the Wisconsin Department of Natural Resources (Department) in a letter dated January 31, 2006. The January 31 report was submitted pursuant to Part 3, Condition 26.a) of the Mining Permit.

The Mid-Summer Progress Report, 2006 dated November 8, 2006 was submitted to the Department pursuant to Part 3, Condition 26.c) of the Mining Permit. The report addressed the items presented in the previous submittal (January 31, 2006) regarding anticipated reclamation activities at the site and additional items as they occurred on the site through August 2006.

The aforementioned documents can be found in Attachment 3.

Additional submittals were provided to the Department regarding activities related to the surface reclamation and environmental monitoring of the Flambeau Mine site. These documents are listed below.¹

Flambeau Submittals

- Flambeau Industrial Outlot Action Plan (November 22, 2005)
- Amended Flambeau Industrial Outlot Action Plan (December 2, 2005)
- 2005 Flambeau River Water Quality Results (January 23, 2006)
- 2005 Wetlands and 1.7-Acre Biofilter Baseline Monitoring (January 23, 2006)
- 2005 Wetland 1 (WT-5) Water Level Elevation (January 29, 2006)
- Environmental Monitoring – First Quarter 2006 (March 22, 2006)
- Flambeau Industrial Outlot (March 30, 2006)
- Prescribed Burning on Reclaimed Mine Site (April 27, 2006)

¹: These are provided for context and information with respect to activity on the site during the past year; however a number of the documents and topics discussed in this report are not part of the Certificate of Completion process.

- Flambeau Industrial Outlot Workplan (May 2, 2006)
- Environmental Monitoring – Second Quarter 2006 (June 30, 2006)
- Surface Water Quality Results – Summer 2006 (September 12, 2006)
- 2006 Aerial and Color Infrared Photography (September 12, 2006)
- Construction Documentation Report – Flambeau Industrial Outlot (September 18, 2006)
- Environmental Monitoring – Third Quarter 2006 (September 30, 2006)
- July 2006 Surface Water Withdrawal (October 5, 2006)
- Clear Span Bridge – General Permit Application (October 19, 2006)

2 Supply Procurement

2.1 Seeds & Plants

No seeding or planting was completed during 2006 on the 150-acre portion of the reclaimed mine site. Flambeau completed the planting plan from 1998 through 2001.

Seeding within the Industrial Outlot area is discussed in Section 8 of this submittal.

2.2 Erosion Control Supplies

Procurement of erosion control supplies for the reclaimed mine site did not occur through August 2006 as they were not necessary. Erosion control supplies such as straw bales and silt fence are stored on site. The site's soils continue to remain in a stable condition due to thriving vegetation and previously installed erosion control measures.

Erosion control supplies for the Industrial Outlot are discussed in Section 8 of this submittal.

3 Erosion Control

The reclaimed mine site did not require any reinforcement of existing erosion control due to the highly stabilized condition of the site's soils. Routine inspections following snowmelt runoff and significant precipitation events were performed to assess the site's continued stability. Significant precipitation events were limited due to the regional drought.

Erosion control within the Industrial Outlot is discussed in Section 8 of this submittal.

4 Onsite Vegetation Activities

There were no vegetation activities during 2006 on the reclaimed Flambeau Mine. Revegetation of the site in accordance with the approved planting plan had initiated during 1998 and was completed during 2001.

Discussion of vegetation activities within the Industrial Outlot is found in Section 8.

5 Water Management

During 2006, routine inspections of the reclaimed mine site during and following significant precipitation events occurred throughout spring, summer and fall. Significant precipitation events were limited due to the regional drought.

6 Maintenance

Maintenance of the reclaimed mine site included irrigation, mowing, grading, prescribed burning and controlling invasive plant species.

6.1 Irrigation

Woodlands were irrigated during 2006 due to low rainfall and an unseasonably hot spring and summer. On July 19, 2006, Governor Doyle issued an Executive Order declaring a State of Emergency in Wisconsin due to the drought conditions.

Flambeau performed irrigation in accordance with the May 5, 1998 Department approval of Flambeau's request to withdraw water from the Flambeau River for use on site for reclamation vegetation. The electrical line serving the irrigation pump was removed during May 2001 in accordance with the July 30, 1998 conditional approval of the Flambeau Mining Permit modification. As during 2001 – 2003 and 2005, the irrigation pump was operated during 2006 using a portable generator.

A monthly summary of irrigation and rain at the reclaimed mine site is found below in Table 1.

Table 1. Irrigation on the Reclaimed Flambeau Mine during 2006.

Month (2006)	Irrigation (Gallons)	Rain (Inches)
April	0	0.85
May	0	2.47
June	0	1.17
July	1,039,000	2.31
August	0	5.74
September*	0	2.23

*Irrigation system decommissioned for season due to freezing conditions.

6.2 Mowing & Grading

Mowing was conducted to maintain walking trails and to establish firebreaks for prescribed burns. Grading was performed to reduce vegetative growth on the gravel trails.

6.3 Prescribed Burning

The seventh year Burn Plan was submitted to the Department dated April 27, 2006. On May 2 - 3, 2006, the seventh year burn was conducted on the southern one-third of the site. Applied Ecological Services (AES) personnel performed the prescribed burn in accordance with the Burn Plan. A northern harrier was observed to be nesting within the 2006 burn area. After conferring with the Department Ladysmith Service Center wildlife manager, a 100 ft. setback was established around the northern harrier nest.

6.4 Herbicide Treatment

Site maintenance also included removal of invasive species by hand pulling spotted knapweed and cutting non-native thistle species. On June 12-13, 2006, reed canary grass was treated by AES personnel using RoundUp™. AES ecologists handpulled a limited number of purple loosestrife plants while conducting the late summer vegetative monitoring.

7 Monitoring

Monitoring of the site was performed in accordance with the Surface Reclamation Ecological Monitoring Program (12/98). AES conducted monitoring for vegetation diversity, biomass, survivorship of woody plants, and bird and butterfly surveys during Spring and late Summer 2006.

7.1 Vegetation Monitoring

AES conducted vegetation monitoring that consisted of quadrat sampling, Timed Meander Searches (TMS), biomass determinations, belted transects (woodlands), woody population census, and stem count observations.

On August 14 - 17, 2006, quadrat sampling was conducted at five-meter intervals along 29 permanent 50-meter transects for a total of 290 quadrats. In addition, three temporary transects (30 quadrats) were established during 2006, as they were in 1999 and 2005, to verify statistical reliability of the monitored permanent transects. Each quadrat measured one square meter in area. Data from transects was used to calculate percent cover and frequency of occurrence for each species in each plant community and the overall site. During previous years, 30 permanent transects had been sampled, however, during 2005 and 2006, one transect in the Industrial Outlot was not sampled since the area has been converted to the Copper Park Equestrian Trailhead.

7.1.1 Cover

Cover provides a measure of the reclaimed mine site's ability to withstand erosion. The performance standard requires a minimum of 70 percent average cover for Notice of Completion (NOC) and Certificate of Completion (COC).

Monitoring during 2006 found that the reclaimed mine site averages 99 percent cover (excluding wetlands and Industrial Outlot). The Industrial Outlot averages 90 percent cover. Table 2 summarizes total cover and native cover in each community, mixed transects, and the industrial outlot. All ecological communities on the reclaimed Flambeau Mine have percent cover greater than the 70 percent required by the performance standard.

7.1.2 Diversity

TMS were performed during Spring 2006 (May 24 – 25) and late Summer 2006 (August 14 -17). TMS were conducted by walking in the vicinity of each transect. TMS data was combined with the quadrat data and, when available, woody species data to provide a total species list. A total of 347 (native and non-native) plant species were found on the reclaimed mine site in 2006 and 79 percent were native species.

During 2000, Flambeau's restoration ecologist, AES, compiled the Target Species Planting List and Enhancement Species Planting List. AES defined a species as a Target Planted Species if it met the following criteria:

- Seeding rate greater than one ounce per acre;
- Planting rate greater than 100 plants per acre;
- Seed commercially procured and, therefore, tested for viability (not locally harvested);
- Species ecologically appropriate for reclaimed mine site; and
- Species native to Wisconsin.

Table 2. Vegetative Cover (%) on the Reclaimed Flambeau Mine (1999-2006).

Ecological Community	Total Cover (%)¹							
	1999	2000	2001	2002	2003	2004	2005	2006
Grassland	95	96	95	96	90	95	98	99
Woodland	78	98	98	98	98	99	98	100
Wetland	96	100	100	100	92	95	83	98
Mixed	82	94	96	94	94	98	94	97
Industrial Outlot	88	96	93	99	91	98	93	90

Ecological Community	Native Cover (%)²							
	1999³	2000	2001	2002	2003	2004	2005	2006
Grassland	--	42	56	55	67	70	60	45
Woodland	--	28	31	34	38	35	25	12
Wetland	--	132	144	90	119	99	105	64
Mixed	--	36	44	45	53	73	66	37
Industrial Outlot	--	21	35	44	39	48	76	24

¹Total Cover was calculated for each transect as 100% minus bare soil.

²Native Cover includes absolute cover of all native species and can be greater than 100%.

³Native Cover (native grass cover plus native forb cover) was not summarized in the 1999 Analysis of Revegetation Success For Reclamatic the Flambeau Mine and therefore not provided in this summary table.

In a document dated February 8, 2001, the Department approved the Target Species Planting List. As a result, Flambeau is required to meet diversity requirements for only the Target Species. Flambeau had to document that at least 80 percent of the Target Species in each of the three ecological communities were found. Monitoring during 2006 found 94 percent of the grassland Target Species, 92 percent of the woodland Target Species, and 82 percent of the wetland Target Species were found on the reclaimed mine site.

Tables 3, 4, and 5 summarize the Target Species Planting List by ecological community. In addition, the tables provide a summary of the Target Species found during monitoring of the site in 2000, 2001, 2002, 2003, 2004, 2005 and 2006. The Enhancement Species Planting List and occurrence of Enhancement Species on the reclaimed mine site can be found in Appendix 6 of Attachment 4.

Performance standards also require that a minimum of 15 planted native species be found each in the grassland and woodland communities, and a minimum of 12 planted native species be found in the wetland community. During 2006 monitoring, the number of planted native species (target and enhancement) found in the grassland, woodland, and wetland communities were 24, 32, and 73, respectively. The reclaimed Flambeau Mine exceeds the performance standards for the minimum number of planted native species.

Table 6 summarizes by ecological community the number of Target Planted Species and Enhancement Planted Species found on the reclaimed Flambeau Mine site during 2000, 2001, 2002, 2003, 2004, 2005 and 2006.

7.1.3 Woody Species Survival

The performance standard for woody species specifies that no less than 80 percent of the initially planted species must survive in a similar proportion to the initial planting and show signs of vigor and health.

During the late Summer 2006 monitoring, a total population count of woody species in the woodlands was conducted. The total population count combined with belted transect and TMS data show that 100 percent of the planted woody species were found in the woodland community and that the 80 percent performance standard has been met.

Comparing the woody species Plan and 2006 percent composition shows that oak, birch/hazelnut and basswood species continue to dominate the site while the increase in pines, an important species of the northern mixed forest, will benefit the woodlands of the site. Nannyberry, bitternut hickory and serviceberry continue to make up a lesser proportion of the woody species on the site.

Gray dogwood is an opportunistic shrub and is expected to persist on site despite its decreased proportion. Table 7 summarizes the Plan and 2006 Woody Species Composition by rank.

Survivorship has declined over the past years due to stress caused by lower than average snow pack, winter freezing rains, late spring freezes, droughty conditions, and herbivory. Increased mortality of woody plants by deer browsing is supported by the fact that woody survivorship is twice as great within the fenced woodland (Woodland #10) as compared to the average survivorship for woodlands located outside of the fenced enclosure.

Table 3. Target Species Planting List for the Grassland Community at the Reclaimed Flambeau Mine and Occurrence of Grassland Target Species (2000 - 2006).

Scientific Name	Common Name	2000	2001	2002	2003	2004	2005	2006
Herbaceous								
Andropogon gerardii	Big bluestem	X	X	X	X	X	X	X
Aster laevis	Smooth blue aster		X			X	X	X
Aster novae-angliae	New England aster	X	X	X	X	X	X	X
Bouteloua curtipendula	Side-oats gramma	X	X	X	X			X
Desmodium canadense	Canada tick trefoil	X	X	X	X	X	X	X
Elymus canadensis	Canada wild rye	X	X	X	X	X	X	X
Elymus hystrix	Bottlebrush grass	X	X	X		X		
Heliopsis helianthoides	False sunflower	X	X	X	X	X	X	X
Monarda fistulosa	Bergamot (wild)	X	X	X	X	X	X	X
Oenothera biennis	Evening primrose	X	X	X	X	X	X	X
Panicum virgatum	Switch grass	X	X	X	X	X	X	X
Ratibida pinnata	Yellow coneflower	X	X	X	X	X	X	X
Rudbeckia hirta	Black-eyed Susan	X	X	X	X	X	X	X
Schizachyrium scoparium	Little bluestem	X	X	X	X	X	X	X
Solidago nemoralis	Old field goldenrod			X	X	X	X	X
Solidago rigida	Stiff goldenrod	X	X	X	X	X	X	X
Sorghastrum nutans	Indiangrass	X	X	X	X	X	X	X
Total Grassland Target Species	17	15	16	16	15	16	15	16
% Grassland Target Species		88	94	94	88	94	88	94

Table 4. Target Species Planting List for the Woodland Community at the Reclaimed Flambeau Mine and Occurrence of Woodland Target Species (2000 - 2006).

Scientific Name	Common Name	2000	2001	2002	2003	2004	2005	2006
Herbaceous								
Aster macrophyllus	Big-leaved aster	X	X	X	X	X	X	X
Carex pensylvanica	Pennsylvania sedge	X	X	X	X	X	X	X
Glyceria striata	Fowl manna grass	X	X					
Smilacina racemosa	False solomon's seal (feathery)	X					X	X
Shrubs								
Amelanchier arborea	Serviceberry	X	X	X	X	X	X	X
Cornus racemosa	Gray dogwood	X	X	X	X	X	X	X
Corylus americana	Hazelnut	X	X	X	X	X	X	X
Viburnum lentago	Viburnum (nannyberry)	X	X	X	X	X	X	X
Trees								
Abies balsamea	Balsam fir	X	X	X	X	X	X	X
Acer rubrum	Red maple	X	X	X	X	X	X	X
Acer saccharinum	Silver maple	X	X	X	X	X	X	X
Acer saccharum	Sugar maple	X	X	X	X	X	X	X
Betula alleghaniensis	Yellow birch	X	X	X	X	X	X	X
Betula papyrifera	Paper birch	X	X	X	X	X	X	X
Carya cordiformis	Bitternut hickory	X	X	X	X	X	X	X
Cornus alternifolia	Pagoda dogwood	X	X	X			X	
Fraxinus americana	White ash	X	X	X	X	X	X	X
Picea alba (P. glauca)	White spruce	X	X	X	X	X	X	X
Pinus resinosa	Red pine	X	X	X	X	X	X	X
Pinus strobus	White pine	X	X	X	X	X	X	X
Populus tremuloides	Quaking aspen	X	X	X	X	X	X	X
Quercus alba	White oak	X	X	X	X	X	X	X
Quercus macrocarpa	Bur oak	X	X	X	X	X	X	X
Quercus rubra	Red oak	X	X	X	X	X	X	X
Tilia americana	Basswood	X	X	X	X	X	X	X
Total Woodland Target Species	25	25	24	23	22	22	24	23
% Woodland Target Species		100	96	92	88	88	96	92

Table 5. Target Species Planting List for the Wetland Community at the Reclaimed Flambeau Mine and Occurrence of Wetland Target Species (2000 - 2006).

Scientific Name	Common Name	2000	2001	2002	2003	2004	2005	2006
Herbaceous								
<i>Alisma subcordatum</i>	Water plantain	X	X	X	X	X	X	X
<i>Andropogon gerardii</i>	Big bluestem	X	X	X	X	X	X	X
<i>Aster lanceolatus</i>	Panicled aster	X	X	X	X	X	X	X
<i>Aster novae-angliae</i>	New England aster	X	X	X	X	X	X	X
<i>Bidens cernua</i>	Nodding bur marigold	X	X	X	X	X	X	X
<i>Calamagrostis canadensis</i>	Bluejoint grass	X	X	X	X	X	X	X
<i>Carex comosa</i>	Bristly sedge	X		X	X	X	X	X
<i>Carex crinita</i>	Fringed sedge		X	X	X	X	X	X
<i>Carex rostrata</i>	Retrorsa sedge				X	X	X	X
<i>Carex scoparia</i>	Pointed broom sedge	X	X	X	X	X	X	X
<i>Carex tuckermanii</i>	Bent-seed hop sedge				X		X	
<i>Carex vulpinoidea</i>	Fox sedge	X	X	X	X	X	X	X
<i>Eupatorium maculatum</i>	Joe-pye weed	X	X	X	X	X	X	X
<i>Eupatorium perfoliatum</i>	Boneset	X	X	X	X	X	X	X
<i>Euthamia graminifolia</i>	Grass-leaved goldenrod	X	X	X	X	X	X	X
<i>Helianthus grosseserratus</i>	Sawtooth sunflower	X	X	X	X	X	X	X
<i>Helianthus laetiflorus (pauciflorus)</i>	Prairie sunflower							
<i>Panicum virgatum</i>	Switch grass	X	X	X	X	X	X	X
<i>Polygonum pennsylvanicum</i>	Smartweed (Pennsylvania)	X	X	X	X	X	X	X
<i>Polygonum spp</i>	Smartweed	X	X	X	X	X	X	X
<i>Pycnanthemum virginianum</i>	Mountainmint	X	X	X	X	X	X	X
<i>Scirpus acutus</i>	Hard stemmed bulrush	X	X	X	X	X	X	
<i>Scirpus atrovirens</i>	Bullrush (dark green)	X	X	X	X	X	X	X
<i>Scirpus cyperinus</i>	Woolgrass	X	X	X	X	X	X	X
<i>Scirpus validus creber</i>	Soft-stemmed bulrush	X	X	X	X	X	X	X
<i>Sparganium eurycarpum</i>	Burreed	X	X	X	X	X	X	X
<i>Spartina pectinata</i>	Cordgrass	X	X	X	X	X	X	X
<i>Typha latifolia</i>	Cattail	X	X	X	X	X	X	X
<i>Verbena hastata</i>	Blue vervain	X	X	X	X	X	X	X
<i>Veronicastrum virginicum</i>	Culver's root	X				X	X	
<i>Zizania aquatica</i>	Wild rice	X	X	X	X	X	X	X
Shrubs								
<i>Alnus incana (A. rugosa)</i>	Speckled alder	X	X	X	X	X	X	X
<i>Cornus stolonifera</i>	Redtwig dogwood	X	X			X	X	X
<i>Corylus americana</i>	Hazelnut	X	X		X		X	
<i>Ilex verticillata</i>	Winter berry							
<i>Salix discolor</i>	Pussy willow		X		X	X	X	X
<i>Salix interior</i>	Sandbar willow	X	X	X	X	X	X	X
<i>Spiraea alba</i>	Meadowsweet	X	X	X	X	X	X	X
<i>Viburnum lentago</i>	Viburnum (nannyberry)						X	
Total Wetland Target Species	39	32	32	30	34	34	37	32
% Wetland Target Species		82	82	77	87	87	95	82

Table 6. Quantity of Planted Species Found on the Reclaimed Flambeau Mine (2000 - 2006).

Grassland Ecological Community							
15 Planted Species Required							
	2000	2001	2002	2003	2004	2005	2006
Target Planted Species	15	16	16	15	16	15	16
Enhancement Planted Species	6	4	6	10	5	5	8
Total Planted Species	21	20	22	25	21	20	24

Woodland Ecological Community							
15 Planted Species Required							
	2000	2001	2002	2003	2004	2005	2006
Target Planted Species	25	24	23	22	22	24	23
Enhancement Planted Species	10	11	8	7	9	9	9
Total Planted Species	35	35	31	29	31	33	32

Wetland Ecological Community							
12 Planted Species Required							
	2000	2001	2002	2003	2004	2005	2006
Target Planted Species	32	32	30	34	34	37	32
Enhancement Planted Species	35	32	37	33	41	40	41
Total Planted Species	67	64	67	67	75	77	73

Table 7. Plan and 2006 Woody Species Composition

Rank	Plan Woody Species	Composition (%)	2006 Woody Species	Composition (%)
1	Oaks	40.4	Oaks	27.5
2	Birches/Hazelnut	15.7	Pines	12.7
3	Basswood	9.3	Birches/Hazelnut	12.4
4	Gray Dogwood	7.6	Basswood	8.4
5	Maples	7.1	White Ash	8.0
6	Pines	4.0	White Spruce	7.0
7	Quaking Aspen	3.9	Maples	6.4
8	White Ash	3.2	Balsam	6.4
9	White Spruce	2.0	Quaking Aspen	5.1
10	Balsam	2.0	Nannyberry	2.6
11	Nannyberry	2.0	Bitternut Hickory	1.7
12	Serviceberry	2.0	Serviceberry	1.4
13	Bitternut Hickory	0.7	Gray Dogwood	0.3

On August 14 - 17, 2006, woody vegetation was sampled along nine 50-meter transects in woodland zones. Parallel belts two meters wide were laid out on both sides of each study transect within woodland zones. The belted transect data is primarily collected as baseline data for tracking the development of the woodlands on the site. Belted transect data alone does not represent woody species survivorship or diversity of the woodland zones.

Belted transects encountered ten of the twenty woody species planted. All but two of the ten species had 100 percent survivorship. Staghorn sumac, a woody species not planted on the site, had the highest stem density and canopy intercept. Of the species that were planted, quaking aspen and white pine had the greatest canopy intercept. Quaking aspen had the second highest tree density. White pine, red pine and bur oak are planted native species and had the greatest basal area.

7.1.3.1 Grazing Exclosure

Flambeau's perimeter fence was removed during Spring 2001 as required by the July 30, 1998 conditional approval of the Flambeau Mining Permit modification. The perimeter fence was removed in preparation for Flambeau's submittal of the NOC to the Department. A portion of the removed perimeter fence was installed around Woodland #10 (southwest of the 8.5-acre wetland) and a portion of grassland as a grazing exclosure. The grazing exclosure's purpose is to allow Woodland #10 to serve as a control area where the woody species will not be impacted by herbivorous browsing and other impacts. While the grasslands are not expected to experience measurable impacts from browsing, a portion of grassland was also enclosed within the grazing exclosure. Monitoring data collected from the area within the grazing exclosure allows the identification of impacts outside the exclosure associated with herbivorous browsing and other destructive activities associated with herbivores or other creatures.

Herbivore impact to woody species in the woodlands outside the exclosure has occurred on the reclaimed mine site. Browsing of tree seedlings, buck rubs and bark chewing by rodents

continues to be observed. As stated in Section 7.1.3, increased mortality of woody plants by deer browsing is supported by the fact that woody survivorship is twice as great within the fenced woodland (Woodland #10) as compared to the average survivorship for woodlands located outside of the fenced enclosure.

7.1.4 Stem Counts

As discovered in September 1999, the original planted stems within the wetlands and biofilters continue to be no longer identifiable in 2006. The original stems have multiplied and, for many species, are now represented by many hundreds to thousands of stems. Visual inspection of quadrats each year through 2003 verified that there was a substantial increase of stems of the planted species were present, having grown from the seeded and plugged individuals. The only exception being a decrease in spike rush. No change in abundance was noted for any of the measured species in 2004 or 2005. The 2006 extreme drought resulted in a decrease in the abundance of vegetation observed in the wetlands.

7.1.5 Biomass

Biomass is required to be collected for NOC and once for COC. During Summer 2001 monitoring (August 20 - 24, 2001), 50 biomass samples were collected by AES at randomly selected points. Twenty-five samples were collected from the areas that undergo prescribed burns and 25 samples were collected from areas where prescribed burns have not been conducted. Each biomass sample was sorted into native and non-native vegetation.

Biomass samples were collected again from the same 50 sample points (offset by four meters) during the August 2005 and August 2006 sampling. Table 8 summarizes the mean 2001, 2005 and 2006 total and native biomass from the burned and unburned areas. The 2005 and 2006 biomass results are consistently greater than the 2001 biomass results collected at the time of NOC. For COC the performance standard requires at least 80 percent of the NOC biomass.

Table 8. 2001, 2005 and 2006 Total and Native Biomass

Sample Areas	Total Biomass (g)			Native Biomass (g)		
	2001	2005	2006	2001	2005	2006
Burned	475	630	559	172	253	346
Unburned	541	707	658	171	267	436
All	508	668	609	172	264	391

Further detail on biomass can be found in Appendix 7 of Attachment 4.

7.1.6 Summary of Vegetation Monitoring

The results of the 2006 vegetation monitoring show that the plant communities anticipated in the restoration plan are established and continuing to develop. Since the initiation of revegetation of the reclaimed mine site in 1998, the abundance of planted native species have increased for seven years since that first full growing season. This year's 2006 data indicate that native species continue to be abundant on the site despite a severe drought in the region. Although average native vegetation cover for the entire site decreased to about 40 percent this year, biomass data and cover data from specific communities indicate that natives still dominate the site. Native species comprise nearly 65 percent of the biomass sampled in the upland grassland in 2006, and natives species biomass is over twice as great as it was in 2001. In addition, native cover in the wetlands was well over 60 percent this year. Therefore, native species dominate both the wetlands and the upland grasslands, and are common in the woodlands.

Native planted species diversity on the site is high, and the diversity performance criteria have been met or surpassed again this year in the three plant communities. Overall, the results of the

data collected for the reclaimed Flambeau Mine site demonstrates that the site continues to track the desired trajectory for plant community development, diversity, cover and productivity. All performance criteria for total plant cover, planted species diversity and woody species survivorship have been met during 2006 and native cover is abundant throughout most of the site.

A more detailed report of vegetation monitoring, Analysis of Revegetation Success for Reclamation of the Flambeau Mine in 2006 (November 2006), is found in Attachment 4.

7.2 Terrestrial Ecology

In accordance with Section 3.1.6 of the Updated Monitoring Plan (July 1991), aerial and color infrared photography has been completed in the late summer for four consecutive years following completion of closure and will continue every five years throughout the long-term care and maintenance period to monitor success of revegetation. Year 2005 was the fourth year of the four consecutive years for aerial and color infrared photography since the submittal of the NOC in 2001. Aerial and color infrared photography was completed on August 3, 2006 for a fifth additional year.

In the November 7, 2002 submittal of the 2002 Aerial and Color Infrared Photography, Flambeau requested a reduction of the area of coverage for the photography based upon the substantial rebound of groundwater around the reclaimed mine site. Flambeau proposed that the photography cover the reclaimed mine site and 500 feet beyond the site's perimeter including the area of Wetland 1. In a letter dated July 9, 2003, the Department authorized Flambeau to reduce the breadth of the aerial and color infrared photography as requested.

In a submittal dated September 12, 2006, the Department received aerial and color infrared photography of the reclaimed Flambeau Mine including the adjoining areas. The review of the photographs confirm that the entire reclaimed mine site remains stable and well covered with productive vegetation despite the previous years' (2005 and 2006) extreme drought conditions. The photographs also indicate that the vegetation cover and productivity on site is at least as great as similar areas offsite (e.g. grassland/pasture) not impacted by mining operations. Results of monitoring during 2006 show that the three general plant communities created on site, woodland, upland grassland, and wetland, have total plant cover of 100 percent, 99 percent, and 98 percent, respectively.

The 2006 photographs show that the entire reclaimed mine site is very well vegetated, and the three plant communities, woodland, upland grassland, and wetland, are easily found in appropriate locations according to the reclamation plan.

A memorandum prepared by AES, Aerial photography correlation with vegetation monitoring data on the reclaimed Flambeau Mine site, is found in Attachment 5.

7.3 Bird Monitoring

Bird surveys were performed by AES on May 24 - 25, 2006 four times during the breeding season. The same seven study points that had been selected in 1999 were again surveyed in 2006. At least 1.5 hours were spent surveying at each point. In total, over 9 hours were spent surveying birds on the reclaimed Flambeau Mine. Additional vegetation studies and butterfly studies gave surveyors another 29 hours of exposure to bird use of the reclaimed mine site. There are no specific performance standards associated with use of the reclaimed mine site by birds.

During 2006 a total of 52 species of birds were recorded using and visiting the site and immediate peripheral property. This is a large number of bird species for a 150 acre grassland dominated site in northern Wisconsin. Thirty-three of the 52 bird species were identified as breeding on the site. Table 9 provides a list of the birds on or adjacent to the mine site during the 1999, 2000, 2001, 2002, 2003, 2004, 2005 and 2006 studies. During 2006, the dominant species based on frequency were savanna sparrows, tree swallows, bobolinks, song sparrows, crows, meadowlarks, red-eyed vireos and red-winged blackbirds.

Table 9. Bird Species Observed Using & Visiting the Reclaimed Flambeau Mine Site (1999 - 2006).

Bird Species	1999	2000	2001	2002	2003	2004	2005	2006
Barn swallow			X		X		X	X
Barred owl	X							
Black and white warbler				X		X	X	
Blackburnian warbler	X							X
Black-capped chickadee	X	X	X		X			
Blue jay	X	X	X	X	X	X	X	X
Blue wing teal							X	
Bobolink			X	X	X	X	X	X
Boreal chickadee					X			
Brewers blackbird							X	
Brown thrasher	X	X	X					
Brown-headed cowbird	X	X	X	X	X	X		X
Canada goose	X	X			X	X	X	
Canada warbler							X	
Cardinal	X	X	X	X	X	X	X	X
Catbird							X	X
Cedar waxwing	X			X				
Chestnut-sided warbler	X	X	X	X	X	X	X	X
Chimney swift		X						
Chipping sparrow	X	X						X
Clay-colored sparrow	X	X	X		X	X	X	X
Coot			X	X	X	X	X	X
Crow	X	X	X	X	X	X	X	X
Downy woodpecker	X							
Eastern bluebird	X	X	X	X	X	X	X	X
Eastern kingbird	X		X	X	X	X		
Eastern wood pewee	X	X				X		
Flicker	X							
Goldfinch	X	X	X	X	X	X	X	X
Grackle	X	X	X	X	X	X	X	X
Grasshopper sparrow						X		X
Gray catbird	X	X	X			X		
Great blue heron								X
Great-crested flycatcher	X	X	X	X	X	X	X	X
Green heron						X		
Green wing teal							X	
Henslow sparrow								X
Hooded merganser	X							

Table 9. Bird Species Observed Using & Visiting the Reclaimed Flambeau Mine Site (1999 - 2006), continued.

Bird Species	1999	2000	2001	2002	2003	2004	2005	2006
Horned lark	X	X	X	X	X		X	X
House finch	X							
Indigo bunting				X	X	X	X	X
Killdeer	X	X	X	X	X	X	X	X
Kingbird							X	X
Kingfisher	X							
Long-billed marsh wren					X	X	X	X
Mallard	X	X	X	X	X	X	X	X
Marsh hawk	X	X		X	X			X
Meadow lark		X	X		X	X	X	X
Mourning dove	X		X	X	X		X	
Mourning warbler						X		
Northern oriole	X	X	X		X	X		
Ovenbird	X	X		X			X	
Pewee			X					
Phoebe	X							X
Pied-billed grebe			X	X			X	X
Pigeon	X							
Pileated woodpecker	X				X			X
Raven			X					
Red start	X		X	X		X	X	
Red-bellied woodpecker	X							
Red-eyed vireo	X	X	X	X	X	X	X	X
Red-shouldered hawk	X							
Red start								X
Red-tailed hawk	X							X
Red-winged blackbird	X	X	X	X	X	X	X	X
Ring-billed gull	X							
Robin	X	X	X	X	X	X	X	X
Rose-breasted grosbeak			X	X	X	X		X
Rough-wing swallow			X	X	X	X	X	X
Ruby-throated hummingbird	X							
Rusty blackbird							X	
Sandhill crane				X	X	X		
Savanna Sparrow	X	X	X	X	X	X	X	X
Scarlet tanager				X	X	X	X	X
Song sparrow	X	X	X	X	X	X	X	X
Sora rail		X	X	X	X	X	X	X

Table 9. Bird Species Observed Using & Visiting the Reclaimed Flambeau Mine Site (1999 - 2006), continued.

Bird Species	1999	2000	2001	2002	2003	2004	2005	2006
Spotted sandpiper	X							X
Starling	X	X	X	X	X	X	X	X
Tree sparrow								X
Tree swallow	X	X	X	X	X	X	X	X
Turkey vulture				X				
Warbling vireo	X							X
White-breasted nuthatch	X							
Wild turkey								X
Willow flycatcher								X
Wood cock							X	
Yellow warbler	X	X	X	X	X	X	X	X
Yellow-bellied sapsucker	X	X						
Yellow-billed cuckoo	X				X			
Yellow-headed blackbird			X	X	X	X	X	X
Yellow-rumped warbler				X				
Yellow-shafted flicker								X
Yellowthroat	X	X	X	X	X	X	X	X
Total	57	37	42	42	45	44	45	52

Avian studies indicate that the reclaimed Flambeau Mine site and the adjacent lands have a rich avifauna. The avifauna of the site has responded to planted vegetation that has developed since 1999, the initial growing season after site reclamation and revegetation. Bird communities have responded quickly and predictably to the habitats created on the reclaimed mine site. The use of the reclaimed Flambeau Mine site by birds in 2006 is an important record of the success of reclamation and revegetation activities at the mine.

A more detailed report, Birds of the Reclaimed Flambeau Mine (November 2006), is found in Attachment 6.

7.4 Butterfly Monitoring

The use of the reclaimed mine site by butterflies was documented by AES during Spring (May 24-25, 2006) and late Summer (August 14-16, 2006). The types and abundance of butterfly species using the site was assessed. Seven study areas corresponded to the following transects: AA418, I404, L422B, S398, W406, W415, and W427. A total of eight butterfly species were recorded as using the reclaimed mine site and all but two of the species were native. There are no specific performance standards associated with use of the reclaimed mine site by butterflies.

Table 10 summarizes the butterfly species found during surveys of the reclaimed mine site in 1999, 2000, 2001, 2002, 2003, 2004, 2005 and 2006. A more detailed report, Butterflies of the Reclaimed Flambeau Mine (November 2006), is found in Attachment 7.

7.5 Notice of Completion (NOC)/Certificate of Completion (COC)

Flambeau submitted its NOC to the Department in a document dated September 4, 2001. Flambeau's NOC submittal summarized the requirements for NOC which include performance standards for the surface reclamation of the reclaimed mine site, removal of the perimeter fence, and removal of the electric line serving the irrigation pump. The September 4, 2001 document provided a summary of the results of monitoring during 2000 showing that the performance standards were met in 2000. In addition, the NOC submittal provided formal notification to the Department that the electric line and perimeter fence had been removed. The electric line had been removed during May 2001 and the removal of the perimeter fence was completed during June 2001.

In a letter dated March 8, 2002, the Department found "...that all revegetation success criteria have been met and all other pertinent conditions have been satisfied. Therefore, the Department hereby accepts FMC's assertion contained in their (NOC) letter that site reclamation is complete... Thus, it is appropriate to begin the 4-year monitoring period, required by NR 132.13(1) prior to Certificate of Completion. The effective date on which the 4-year monitoring period commences is November 19, 2001..."

Last year, 2005, was the final year of the four-year monitoring period. All of the performance standards requirements for COC were met and documented during 2005. Flambeau voluntarily opted to monitor another year (2006) to provide additional data to document that performance standards have been met. During 2006, all of the performance standard requirements for COC were again met.

Table 11 summarizes the performance standards as compared to the results of monitoring during 2000, 2001, 2002, 2003, 2004, 2005 and 2006. A summary of the biomass performance standard can be found in Section 7.1.5.

7.6 Habitat Evaluation Procedure (HEP)

In a document dated August 14, 2000, Flambeau proposed HEP species (grassland-savanna sparrow; woodland-great crested flycatcher; wetland-tree swallow) to the Ladysmith Department Wildlife Manager. On August 18, 2000 the Department verbally notified Flambeau that the proposed species were satisfactory.

Table 10. Butterfly Species Using the Reclaimed Mine Site (1999 - 2006).

Butterfly Species	1999	2000	2001	2002	2003	2004	2005	2006
Bee Moth							X	
Black or sooty skipper		X					X	
Black swallowtail				X			X	
Comma	X					X		
Diana							X	
Eyed brown						X		
Monarch	X	X	X	X	X	X	X	X
Mourning cloak	X				X			
Northern blue	X	X	X	X	X	X	X	X
Painted Lady	X		X				X	
Pearly crescent				X	X		X	
Purple Swallow Tail	X							
Question Mark	X					X		X
Red Admiral	X							
Spring azure					X			X
Tiger swallowtail	X	X	X					X
Viceroy	X	X	X	X	X	X	X	X
White cabbage	X	X	X	X	X	X	X	X
Wood nymph					X	X		
Yellow sulfur	X	X	X	X	X	X	X	X
Total	12	7	7	7	9	9	11	8

Table 11. Performance Standards and Reclaimed Flambeau Mine Site Status (2000 - 2006).

		Total Cover (%)						
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005	2006
Grassland	70	96	95	96	90	95	98	99
Woodland	70	98	98	98	98	99	98	100
Wetland	70	100	100	100	92	95	83	98

		Planted Native Species Found (#)						
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005	2006
<u>Grassland Planted Species</u>								
Target		15	16	16	15	16	15	16
Enhancement		6	4	6	10	5	5	8
Total	15	21	20	22	25	21	20	24
<u>Woodland Planted Species</u>								
Target		25	24	23	22	22	24	23
Enhancement		10	11	8	7	9	9	9
Total	15	35	35	31	29	31	33	32
<u>Wetland Planted Species</u>								
Target		32	32	30	34	34	37	32
Enhancement		35	32	37	33	41	40	41
Total	12	67	64	67	67	75	77	73

		Diversity ² (%)						
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005	2006
Grassland	80	88	94	94	88	94	88	94
Woodland	80	100	96	92	88	88	95	92
Wetland	80	82	82	77	87	87	96	82

		Tree Species Survival (%)						
Ecological Community	Performance Standard	2000	2001	2002	2003	2004	2005	2006
Grassland	NA	NA ⁴	NA	NA	NA	NA	NA	NA
Woodland	80	100	100	100	100	100	100	100
Wetland	NA	NA	NA	NA	NA	NA	NA	NA

¹NA = Not Applicable

²As compared to Target Planted Species.

During a January 2001 meeting with the Department, an outline was provided of how the HEP would be conducted in conjunction with vegetation and wildlife monitoring. The first HEP report, Habitat Analyses, was prepared with 2000 monitoring data and submitted to the Department on October 31, 2002. Subsequent Habitat Analyses reports updated with 2001 and 2002 monitoring data were submitted on December 31, 2002. The fourth and final Habitat Analyses report was updated with 2003 monitoring data and submitted on November 12, 2004.

The updated Habitat Analyses reports provided summary findings consistent with the first report for each bird species:

Savanna Sparrow – Grassland habitats currently support savanna sparrows providing food, cover and reproductive requisites. This species can utilize a vast majority of the site because the grassland community covers a continuous area over more than 70 percent of the site.

Populations are assumed to be relatively stable or will fluctuate with seasonal seed and insect prey availability while the habitat quality may appear relatively stable.

Great Crested Flycatcher – Great Crested Flycatcher will be supported in the woodland in approximately 20-30 years with the current and anticipated rate of woodland development on the site. This species' need for woody vegetation, canopy closure, and nesting sites in larger woodland cavernous trees are not currently met in the young immature woodlands. Currently, Great Crested Flycatchers documented as utilizing the woods around the perimeter of the reclaimed mine site occasionally feed, but do not breed, on site.

Tree Swallow – Tree Swallows are currently supported within all restored habitats at the reclaimed mine. All communities of the site provide foraging habitat and nesting boxes provide reproductive habitat throughout the site as well. Cavernous trees are expected to provide natural nesting opportunities on the site within 20 years.

8 Industrial Outlot

8.1 Reuse of Industrial Outlot Facilities

The 32-acre industrial outlot includes the former mine administration building, water treatment plant (WTP) with equipment removed, and railspur. During 1999, following decommission of the WTP process equipment, Flambeau leased the 32-acre Industrial Outlot to the Ladysmith Community Industrial Development Corporation (LCIDC) for a nominal amount. The LCIDC negotiated subleases with the Wisconsin Department of Natural Resources (Department) and Xcel Energy (formerly Northern States Power) to occupy the former mine administration building and former WTP building.

During 2000, the LCIDC completed renovations on the administration building, now serving as the Department's Ladysmith Service Center, and WTP building, now housing Xcel Energy's line maintenance shop and the Department's equipment storage area. In addition, the LCIDC constructed another building for the Department between the Service Center and the former WTP to house additional Department equipment. The Department and Xcel Energy continued to occupy the former mine buildings during 2006.

During 2003, the LCIDC made an appeal to the Department for the retention of the rail spur located east of Highway 27 as part of the communities' on-going efforts to increase industrial development. In a letter dated June 12, 2003, the Department stated that it "...is satisfied that the portion of the rail spur east of the highway is being used for alternate purposes. Therefore, the rail spur east of Highway 27 will not need to be removed and revegetated..."

In a letter dated December 30, 2004, Flambeau provided notice of the acceptable alternative uses implemented within the Industrial Outlot and also the proposed use of the unused northern portion of the outlot. Flambeau presented to the Department the partnership developed with the local

communities to expand trails and construct an equestrian trailhead within the unused portion of the industrial outlot north of the reclaimed west rail spur area.

The Department responded in a letter dated February 18, 2005 that the only portion of the industrial outlot for which an acceptable alternate use had not been designated was the section lying north of the railspur in the area of the former Type II waste rock stockpile. The Department conceptually found the proposed use as an equestrian trail head acceptable, but required further details to review and approve the proposed construction plans. Further discussion on the approval and completion of the equestrian trailhead can be found below in Section 8.3.

During 2006 the Industrial Outlot was renamed as the Copper Park Business and Recreation Area.

8.2 Rail Spur Reclamation

During Fall 2003 the rail and ties in the rail spur areas west of Highway 27 and approximately 200 feet east of Highway 27 were removed. The west rail spur area was excavated to a depth of two feet and materials disposed in an off site licensed waste management facility. During Spring 2004 the fractured rock ballast was removed from the 200 foot section of the east rail spur area and the materials accepted at an off site gravel quarry to be commingled and reused for off site construction projects.

During Spring 2004 the excavated rail spur areas were covered with topsoil and seeded with native forbs and grasses.

Further detail on rail spur reclamation is provided in the 2003 and 2004 Annual Reclamation Reports.

8.3 Copper Park Equestrian Trailhead

In the December 30, 2004 letter discussed in Section 8.1, Flambeau presented to the Department the partnership developed with the local communities to expand trails and construct an equestrian trailhead within the unused portion of the industrial outlot north of the reclaimed west rail spur area.

The Department conceptually found the proposed use as an equestrian trail head acceptable, but required further details to review and approve the proposed construction plans.

In March and July 2005 submittals, Flambeau provided to the Department further detail regarding the development of the equestrian trailhead within Copper Park and trails on property located south of Copper Park. The Department provided approval subject to provisions for the construction of the equestrian trailhead in a letter dated July 28, 2005.

The construction of the equestrian trailhead initiated mid-August 2005 and was complete within one month. The grand opening of the Copper Park Equestrian Trails and Trailhead took place on September 10, 2005.

During early May and June 2006 landscaping was installed to separate the Ladysmith DNR Service Center parking lot from the equestrian trailhead access road. Landscaping included raised bed planters separated by split rail fencing. Native forbs and grasses were procured from Prairie Nursery, Westfield, WI and the Deertail 4-H Wildflower Youth Group installed the plant stock in the raised beds. In addition, between the planters and under the fencing, fractured limestone underlain by geotextile was installed.

The Flambeau High School greenhouse raised native plant species including Big Bluestem, Indiagrass, New England Aster, Lance Leaf Coreopsis, and Purple Prairie Clover. The native seedlings were installed along the access road leading to the equestrian trailhead.

8.4 Storm Water & Surface Water Monitoring

The Flambeau Mine remains committed to the protection of water quality in the Flambeau River. Since final reclamation in 1999, Flambeau has continued its monitoring of water quality in the Flambeau River as well as surface runoff into the Flambeau River. This monitoring indicates that the water quality of the Flambeau River remains fully protected.

Copper and zinc concentrations had been measured in offsite background storm water runoff and in runoff from the Industrial Outlot located on the former mine site. The non-point sources of runoff from the Industrial Outlot are being treated by the 0.9-acre biofilter that substantially reduces the concentrations of metals before flowing into Intermittent Stream C that eventually discharges to the Flambeau River. The biofilter itself supports populations of aquatic biota, including fish and frogs.

During 2004 and 2005 Flambeau conducted an expanded monitoring program which characterized the following:

- 0.9-acre biofilter influent, effluent and sediment;
- Storm water runoff from remaining east rail spur;
- Intermittent Stream C watershed upgradient from the 0.9-acre biofilter and reclaimed rail spur areas;
- Intermittent Stream C – water quality, hydrology and qualitative biology;
- Storm water runoff from Hwy 27 north and south from the former mine site.

In summary the results of the 2004 and 2005 surface runoff monitoring program found 1) the natural condition of Intermittent Stream C provides poor aquatic habitat and does not support any type of fishery; 2) sediment sampling of the biofilter indicates that it is functioning as designed; 3) off site background surface waters may naturally exhibit elevated copper levels; and 4) localized areas at the industrial outlot may be contributing elevated copper levels to storm water that flows into the biofilter.

Results of monitoring stormwater from Copper Park had indicated that increased copper concentrations were effectively being removed in the biofilter serving as part of the Best Management Practices for the Copper Park Business & Recreation Area. However, to minimize the loading of copper to the biofilter, Flambeau proposed to the Department a workplan to excavate a minimum of four inches of gravel from around the Copper Park buildings, fill with crushed limestone to grade, and asphalt the area. The area to be excavated had been driven over by vehicles used during the mining of the Flambeau orebody between 1993 and 1997. The workplan detail was provided to the Department in documents dated November 22 and December 2, 2005. The Department provided a December 6, 2005 letter stating that the plan was generally acceptable. Flambeau provided further detail to the Department in a document dated May 2, 2006 and the Department provided approval letter with recommendations dated May 4, 2006.

Foth & Van Dyke oversaw the design and implementation of the workplan. The workplan was implemented starting May 18, 2006 and complete by June 21, 2006. The work consisted of excavation of approximately 900 linear feet of the existing drainage ditch collecting storm water runoff from the area around the Copper Park buildings and replacement of the cobbled drainage way with limestone cobbles. Approximately 2.2 acres of gravel parking lot was excavated to a minimum depth of four

inches. Crushed limestone gravel was placed as subgrade material and the parking lot was paved with three inches of bituminous concrete (asphalt). A non-woven geotextile fabric was placed in the exposed subgrade of all excavated areas within the area of asphalt and the drainage ditch prior to backfilling. All excavated material (2300 cubic yards) was appropriately disposed at the licensed Timberline Trail Landfill.

Rainfall events occurred on July 26, 2006 and August 3, 2006 providing a set of storm water samples to obtain "immediate, post construction" data. The initial data indicates a marked reduction in copper concentrations of storm water reaching the biofilter.

A report prepared by Foth & Van Dyke titled Construction Documentation Report – Flambeau Industrial Outlot was submitted to the Department on September 12, 2006. The report provides further detail on the workplan.

9 Trails

In 1999, a four mile trail system was constructed in partnership with the City of Ladysmith on the reclaimed Flambeau Mine. The trails are both gravel and mowed grass. The trails are multi-purpose serving as firebreaks, vehicle access for maintenance and monitoring, and non-motorized recreation. Following submittal of the NOC in early September 2001, Flambeau hosted an openhouse to celebrate the grandopening and dedication of the trails. The local communities and visitors to the area have since used the trails on a regular basis. Local schools have also visited the site during science field trips. During 2003, Flambeau invited Rusk County residents to join the Flambeau Fitness Incentive Team (FFIT). FFIT members log their hours walked on the Reclaimed Flambeau Mine Nature Trails and receive incentive awards for reaching walking milestones.

Through a cooperative effort, Flambeau and the Department's Ladysmith Service Center along with assistance from the Audubon Society's Hunt Hill Nature Center, have held annual nature hikes on the reclaimed mine site. On July 5, 2006, a birding workshop was held at the Ladysmith Service Center for more than 50 members of the local community. The workshop was followed by a birdwatch on the reclaimed Flambeau Mine where 24 bird species were identified.

The UW-Extension's Healthy Lifestyles for Rusk County held their second annual community walk on the reclaimed Flambeau Mine nature trails on September 9, 2006. Nearly 100 individuals participated in the event this year; a three fold increase as compared to last year's event.

On September 23, 2006 the former mine site was a part of the Leaf It To Rusk Festival. Throughout the Rusk County, events were taking place to celebrate the fall season. Information signs had been recently installed along the Reclaimed Flambeau Mine Nature Trails and were the source of trivia for the Information Scavenger Hunt. Also, Flater's Trailrides hauled horses to the site and provided trailrides for nearly 50 riders on the Copper Park Equestrian Trails the morning of September 23.

Two geocache sites have been established on the reclaimed mine site by a local geocacher. In addition, one geocache site is located along the equestrian trails. Geocaching involves the use of a handheld GPS unit and coordinates found on the Internet to find "treasures".

With the establishment of the five miles of Copper Park Equestrian Trails, along with the four miles of Reclaimed Flambeau Mine Nature Trails, an extensive and varied trail system is available for non-motorized recreation. Further expansion of the equestrian trails is planned for 2007 once the Meadowbrook Creek bridge crossing is in place. Ultimately, the City of Ladysmith's Riverview Trail is planned to be connected to the Nature Trails.

During 2006, the gravel trails were minimally graded to maintain drainage and remove slight rutting and washboarding. Grass trails were mowed on several occasions throughout the growing season.

10 Project Area Activities (Outside Mine Site)

10.1 Buffer Screen

As anticipated in the January 31, 2006 submittal, no activities were necessary within the buffer screen.

10.2 Wetland 1

Wetland 1 is located immediately west of the reclaimed mine site. During permitting, it was recognized that groundwater seeps within Wetland 1 had a high probability of being impacted by groundwater drawdown associated with the development of the open pit. During mining, it was noted that these seeps did cease to produce water. With the backfilling of the open pit being complete in 1997, the groundwater table has recovered significantly and Wetland 1 has been documented to be notably moister with groundwater seeps again flowing.

During 2006, Flambeau remained prepared to provide supplementary water to Wetland 1. This was not necessary because routine inspection of the wetland indicated that groundwater seeps were producing water. Nonetheless, dryer wetland conditions were experienced during 2005 and 2006 because of the regional drought. The Wetland 1 staff gauge was observed in accordance with the monitoring plan. Aerial and color infrared photography taken on August 3, 2006 provides documentation of the vegetative condition of Wetland 1.

10.3 Flood Control Dike

During 2006 no further stabilization was needed or performed on the outer slope of the flood control dike.

10.4 South Watershed Drainage Channel (Formerly Outfall 002)

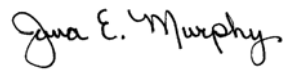
During 2006, routine inspection of the South Watershed Drainage Channel found it to remain in stable condition.

11 Conclusion

The reclaimed mine site continues to provide quality wildlife habitat and exhibit sound erosion control enhanced by established vegetation dominated by native species. Of the 347 plant species found on site, 79 percent are native species. The cover across the site is greater than 98 percent, far exceeding the minimum standard of 70 percent. The major portion of cover in the grassland and wetland communities is native, while the woodlands have substantial native cover. The diversity standard in all three ecological communities continues to be met in 2006. Wildlife abounds on the reclaimed mine site with 52 bird species and eight butterfly species using the site during 2006. Members of the local communities express their gratitude in having such a beautiful site available for their use and enjoy the four-mile trail system year round. Monitoring in 2006 documents that Flambeau has met all the required performance standards for Certificate of Completion.

Mr. Phil Fauble
November 14, 2006
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Sincerely,

A handwritten signature in black ink that reads "Jana E. Murphy". The signature is written in a cursive, flowing style.

Jana E. Murphy
Environmental & Reclamation Manager

Attachments

cc: Al Christianson, City of Ladysmith
Fred Fox, Kennecott Minerals
Hank Handzel, DeWitt, Ross & Stevens
Jim Hutchison, Foth & Van Dyke
Terry Koehn, WDNR (Spooner)
Randy Tatur, Rusk Co.
Tom Portle, WDNR (Madison)
Tom Riegel, Town of Grant
Mark Schmidt, WDNR (Ladysmith)
Bill Stoll, Applied Ecological Services
Mark Steward, Rusk Co. Zoning