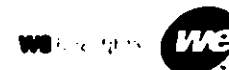


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800 Industrial Park Drive
Iron Mountain, MI 49801

November 17, 2006

2006 NOV 20 P 3:54

FEDERAL ENERGY
REGULATORY COMMISSION

Ms. Magalie Salas
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 24026

Dear Ms. Salas:

RE: WE ENERGIES MENOMINEE RIVER HYDRO ELECTRIC PROJECTS
PURPLE LOOSESTRIFE AND WATER MILFOIL MONITORING

Please find enclosed results from our annual monitoring of Purple Loosestrife and Eurasian Water Milfoil on our FERC regulated hydro electric project areas. We have prepared the 2006 reports for the following project areas:

- Brule Reservoir – (FERC Project #2431)
- Chalk Hill – (FERC Project #2394)
- Hemlock Falls – (FERC Project #2074)
- Lower Paint – (FERC Project #2072)
- Pine – (FERC Project #2486)
- Twin Falls – (FERC Project #11831)
- Way Dam – (FERC Project #1759)
- White Rapids – (FERC Project #2357)

These reports were distributed to the Wisconsin Department of Natural Resources, the Michigan Department of Natural Resources, and the U.S. Fish and Wildlife Service at our annual Land Management Meetings which were held in our offices on October 18 and 19, 2006. The aerial distribution mapping for each project area is not included in the enclosures, but was provided to the agency representatives at that meeting.

In accordance with the project licenses, we are actively coordinating with these respective agencies on the control methods and implementation for each of the affected reservoirs.

Please feel free to contact me at 906-779-2547 if you have any questions related to these reports or the control management we are coordinating.

Sincerely,

William R. Rauscher (s)

William R. Rauscher, Manager
Hydro Electric Operations

Enclosures

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Brule Reservoir
Project #2431**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Brule Reservoir project on July 22 & 23, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

No purple loosestrife plants were observed along the shores of the Brule Reservoir project area.

For each stand of Eurasian water milfoil encountered during the 2006 surveys, the stand location and perimeter were mapped using a Trimble Geo XH GPS unit. Where the stand size was negligible, a single point in the center of the stand was located with the GPS. Various data were collected at each stand including stand/mat density and mat thickness (when present). The stand size was subsequently calculated from the collected GPS boundaries. A percent cover scale from 1-5 (sparse – dense) was used to accurately and consistently estimate stand densities:

<u>Estimated Density Rating</u>	<u>% Cover</u>
1 (sparse)	0 - 5%
2 (moderately sparse)	>5 - 25%
3 (moderate)	>25 - 75%
4 (moderately dense)	>75 - 95%
5 (dense)	>95%

Twenty-two (22) stands of Eurasian water milfoil were observed at the Brule Reservoir project area (see attached map). The identified stands are distributed throughout the project area and range in size from <0.01-acre up to 8.98-acres.

Table 1. Eurasian Water Milfoil Stand Data.

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
1	3	None	0.22
2	1	None	0.95
3	4	None	0.92
4	1	None	8.98
5	4	2-5 inches	0.43
6	1	None	4.56
7	1	None	1.97
8	1	None	0.29
9	1	None	0.18
10	1	None	8.49
11	4	None	6.67
12	1	None	3.93
13	1	None	0.09
14	1	None	0.06

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
15	3	None	0.74
16	1	None	0.13
17	2	None	0.33
18	2	None	0.05
19	1	None	0.01
20	5	4-20 inches	1.76
21	2	None	3.93
22	1	None	0.72

Eurasian water milfoil is present in approximately 45-acres in the Brule Reservoir project area. Cumulatively, the average stand size is 2.05-acres and has an average density rating of 1.91 per stand.

Out of the 22 observed stands, 4 have a high density (>75%), stands #3, 5, 11, & 20. With the exception of stand #5 (far north end), these stands are clustered in the central portion of the reservoir, east of the boat landing. Cumulatively, the four stands cover approximately 21% (9.8-acres) of the total area observed to have Eurasian water milfoil present.

The majority of the stands have very low densities of Eurasian water milfoil with single stems growing sporadically among a lot of native species. The most common native species included northern water milfoil (*Myriophyllum sibiricum*), two-leaf water milfoil (*Myriophyllum heterophyllum*), a variety of pondweeds (*Potamogeton* sp.), common waterweed (*Elodea canadensis*), bladderwort (*Utricularia* sp.), coon's tail (*Ceratophyllum demersum*), water celery (*Vallisneria americana*), yellow pond lilies (*Nuphar* sp.), and white pond lily (*Nymphaea odorata*). 16 of the 22 stands have low densities and account for 77% (34.67-acres) of the total area observed to have Eurasian water milfoil present.

In consultation with the Wisconsin Department of Natural Resources, it was recommended that We Energies follow the established protocol for having suspected Eurasian water milfoil confirmed by a state herbarium. Several samples of Eurasian water milfoil were collected from stands #1, 4, 5, & 11. One sample from each of these stands was then pressed and sent to Dr. Robert Freckmann at the University of Wisconsin – Stevens Point, Robert W. Freckmann Herbarium for positive confirmation that the collected sample was Eurasian water milfoil.

Dr. Freckmann subsequently confirmed the samples on October 2, 2006. While he reviewed a number of samples from several reservoirs, he made a general statement that there is the possibility that some of the collected samples may be a hybrid (between Eurasian water milfoil and northern water milfoil).

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Chalk Hill Reservoir
Project #2394**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Chalk Hill Reservoir project on July 27, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

No purple loosestrife plants were observed along the shores of the Chalk Hill Reservoir project area.

For each stand of Eurasian water milfoil encountered during the 2006 surveys, the stand location and perimeter were mapped using a Trimble Geo XH GPS unit. Where the stand size was negligible, a single point in the center of the stand was located with the GPS. Various data were collected at each stand including stand/mat density and mat thickness (when present). The stand size was subsequently calculated from the collected GPS boundaries. A percent cover scale from 1-5 (sparse – dense) was used to accurately and consistently estimate stand densities:

<u>Estimated Density Rating</u>	<u>% Cover</u>
1 (sparse)	0 - 5%
2 (moderately sparse)	>5 - 25%
3 (moderate)	>25 - 75%
4 (moderately dense)	>75 - 95%
5 (dense)	>95%

Twenty-nine (29) stands of Eurasian water milfoil were observed at the Chalk Hill Reservoir project area (see attached map). The identified stands are distributed throughout the project area and range in size from <0.01-acre up to 57.61-acres.

Table 1. Eurasian Water Milfoil Stand Data.

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
1	1	None	1.50
2	1	None	3.82
3	4	None	0.13
4	1	None	0.05
5	1	None	57.61
6	3	None	1.65
7	3	None	0.14
8	3	None	7.67
9	3	None	0.46
10	3	None	0.38
11	1	None	7.85
12	1	None	0.01
13	1	None	0.01

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
14	1	None	0.90
15	1	None	0.01
16	1	None	0.01
17	1	None	0.01
18	1	None	0.01
19	2	None	0.11
20	2	None	6.08
21	2	None	1.71
22	1	None	0.46
23	1	None	13.85
24	3	None	1.09
25	1	None	18.61
26	1	None	3.2
27	1	None	2.8
28	1	None	8.78
29	3	None	0.42

Eurasian water milfoil is present in approximately 139-acres in the Chalk Hill Reservoir project area. Cumulatively, the average stand size is 4.08-acres and has an average density rating of 1.69 per stand.

Out of the 29 observed stands, only 1 has a high density (>75%), stand #3. This stand is located within stand #2 (a low density stand) in the southern portion of the reservoir. The stand covers less than 0.001% (0.13-acres) of the total area observed to have Eurasian water milfoil present.

The majority of the stands have very low densities of Eurasian water milfoil with single stems growing sporadically among a lot of native species. The most common native species included northern water milfoil (*Myriophyllum sibiricum*), two-leaf water milfoil (*Myriophyllum heterophyllum*), a variety of pondweeds (*Potamogeton* sp.), common waterweed (*Elodea canadensis*), bladderwort (*Utricularia* sp.), coon's tail (*Ceratophyllum demersum*), water celery (*Vallisneria americana*), yellow pond lilies (*Nuphar* sp.), and white pond lily (*Nymphaea odorata*). 21 of the 29 stands have low densities and account for greater than 91% (127.39-acres) of the total area observed to have Eurasian water milfoil present.

In consultation with the Wisconsin Department of Natural Resources, it was recommended that We Energies follow the established protocol for having suspected Eurasian water milfoil confirmed by a state herbarium. Several samples of Eurasian water milfoil were collected from stands #5, 21, & 29. One sample from each of these stands was then pressed and sent to Dr. Robert Freckmann at the University of Wisconsin – Stevens Point, Robert W. Freckmann Herbarium for positive confirmation that the collected sample was Eurasian water milfoil.

Dr. Freckmann subsequently confirmed the samples on October 2, 2006. While he reviewed a number of samples from several reservoirs, he made a general statement that there is the possibility that some of the collected samples may be a hybrid (between Eurasian water milfoil and northern water milfoil).

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Hemlock Falls
Project #2074**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Hemlock Falls project on July 23, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation. No purple loosestrife or Eurasian water milfoil plants were observed during the survey.

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Lower Paint
Project #2072**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Pine Reservoir project on July 28, 2006. Mapping of observed Eurasian water milfoil stands was completed on August 29, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

No purple loosestrife plants were observed along the shores of the Lower Paint project area.

For each stand of Eurasian water milfoil encountered during the 2006 surveys, the stand location and perimeter were mapped using a Trimble Geo XH GPS unit. Where the stand size was negligible, a single point in the center of the stand was located with the GPS. Various data were collected at each stand including stand/mat density and mat thickness (when present). The stand size was subsequently calculated from the collected GPS boundaries. A percent cover scale from 1-5 (sparse – dense) was used to accurately and consistently estimate stand densities:

<u>Estimated Density Rating</u>	<u>% Cover</u>
1 (sparse)	0 - 5%
2 (moderately sparse)	>5 - 25%
3 (moderate)	>25 - 75%
4 (moderately dense)	>75 - 95%
5 (dense)	>95%

Seventeen (17) stands of Eurasian water milfoil were observed at the Lower Paint project area (see attached map). The identified stands are distributed throughout the project area and range in size from 0.21-acre up to 41.58-acres.

Table 1. Eurasian Water Milfoil Stand Data.

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
1	1	None	0.21
2	2	None	10.38
3	1	None	12.48
4	1	None	18.45
5	1	None	0.37
6	2	None	41.58
7	1	None	3.94
8	5	None	0.41
9	1	None	0.47
10	1	None	9.22
11	1	None	2.28
12	1	None	0.40
13	1	None	1.00

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
14	1	None	1.76
15	1	None	5.75
16	1	None	0.34
17	4	None	5.50

Eurasian water milfoil is present in just under 115-acres in the Lower Paint project area. The average stand size is 6.73-acres and has an average density rating of 1.53 per stand. Out of the 17 observed stands, only 2 have a high density (>75%), stands #8 and #17. These stands combined cover 5.91-acres. Stand #8 actually occurs within a larger stand (#7) that has very low density.

The majority of the stands have very low densities of Eurasian water milfoil with single stems growing sporadically among a lot of native species. The most common native species included northern water milfoil (*Myriophyllum sibiricum*), two-leaf water milfoil (*Myriophyllum heterophyllum*), a variety of pondweeds (*Potamogeton* sp.), common waterweed (*Elodea canadensis*), bladderwort (*Utricularia* sp.), coon's tail (*Ceratophyllum demersum*), water celery (*Vallisneria americana*), yellow pond lilies (*Nuphar* sp.), and white pond lily (*Nymphaea odorata*).

In consultation with the Wisconsin Department of Natural Resources, it was recommended that We Energies follow the established protocol for having suspected Eurasian water milfoil confirmed by a state herbarium. Several samples of Eurasian water milfoil were collected from stand #8. One of these samples was then pressed and sent to Dr. Robert Freckmann at the University of Wisconsin – Stevens Point, Robert W. Freckmann Herbarium for positive confirmation that the collected sample was Eurasian water milfoil.

Dr. Freckmann subsequently confirmed the sample on October 2, 2006. While he reviewed a number of samples from several reservoirs, he made a general statement that there is the possibility that some of the collected samples may be a hybrid (between Eurasian water milfoil and northern water milfoil).

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Pine Reservoir
Project #2486**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Pine Reservoir project on July 22, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

No purple loosestrife plants were observed along the shores of the Pine Reservoir.

For each stand of Eurasian water milfoil encountered during the 2006 surveys, the stand location and perimeter were mapped using a Trimble Geo XH GPS unit. Where the stand size was negligible, a single point in the center of the stand was located with the GPS. Various data were collected at each stand including stand/mat density and mat thickness (when present). The stand size was subsequently calculated from the collected GPS boundaries. A percent cover scale from 1-5 (sparse – dense) was used to accurately and consistently estimate stand densities:

<u>Estimated Density Rating</u>	<u>% Cover</u>
1 (sparse)	0 - 5%
2 (moderately sparse)	>5 - 25%
3 (moderate)	>25 - 75%
4 (moderately dense)	>75 - 95%
5 (dense)	>95%

A single stand of Eurasian water milfoil was observed at the Pine Reservoir (see attached map). This single stand was observed in a small, sheltered bay located in the southwest corner of the flowage near where the Pine River enters the flowage.

Due to the small size of this stand (<0.1-acre), the perimeter of the stand was not mapped; however, a point in the center of the stand was collected. Specific coordinates for this stand is available upon request.

Table 1. Eurasian Water Milfoil Stand Data.

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
1	2	NA	< 0.10

In consultation with the Wisconsin Department of Natural Resources, it was recommended that We Energies follow the established protocol for having suspected Eurasian water milfoil confirmed by a state herbarium. Several samples of Eurasian water milfoil were collected from this stand. One of these samples was then pressed and sent to Dr. Robert Freckmann at the University of Wisconsin – Stevens Point, Robert W. Freckmann Herbarium for positive confirmation that the collected sample was Eurasian water milfoil.

Dr. Freckmann subsequently confirmed the sample on October 2, 2006. While he reviewed a number of samples from several reservoirs, he made a general statement that there is the possibility that some of the collected samples may be a hybrid (between Eurasian water milfoil and northern water milfoil).

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Twin Falls
Project #11831**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Twin Falls project on July 28, 2006. Mapping of observed Eurasian water milfoil stands was completed on August 30, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

No purple loosestrife plants were observed along the shores of the Lower Paint project area.

For each stand of Eurasian water milfoil encountered during the 2006 surveys, the stand location and perimeter were mapped using a Trimble Geo XH GPS unit. Where the stand size was negligible, a single point in the center of the stand was located with the GPS. Various data were collected at each stand including stand/mat density and mat thickness (when present). The stand size was subsequently calculated from the collected GPS boundaries. A percent cover scale from 1-5 (sparse – dense) was used to accurately and consistently estimate stand densities:

<u>Estimated Density Rating</u>	<u>% Cover</u>
1 (sparse)	0 - 5%
2 (moderately sparse)	>5 - 25%
3 (moderate)	>25 - 75%
4 (moderately dense)	>75 - 95%
5 (dense)	>95%

Sixty-seven (67) stands of Eurasian water milfoil were observed at the Twin Falls project area (see attached map). The identified stands are distributed throughout the project area and range in size from <0.01-acre up to 65.44-acres.

Table 1. Eurasian Water Milfoil Stand Data.

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
1	1	None	0.01
2	1	None	0.33
3	1	None	0.09
4	1	None	2.30
5	1	None	0.01
6	1	None	0.52
7	1	None	0.76
8	1	None	0.31
9	1	None	1.01
10	2	None	16.26
11	1	None	1.54
12	1	None	0.92
13	2	None	1.00

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
14	2	None	0.80
15	1	None	0.74
16	1	None	0.38
17	1	None	0.18
18	1	None	0.01
19	2	None	11.88
20	4	None	1.17
21	1	None	0.43
22	1	None	0.94
23	1	None	8.66
24	1	None	0.01
25	1	None	0.83
26	1	None	0.49
27	1	None	0.07
28	1	None	0.25
29	1	None	0.09
30	1	None	0.12
31	1	None	0.43
32	2	None	1.45
33	1	None	3.78
34	1	None	11.19
35	1	None	0.10
36	1	None	0.14
37	1	None	0.38
38	3	None	0.96
39	2	None	0.73
40	2	None	8.96
41	4	0-4 inches	1.38
42	3	None	4.27
43	1	None	0.01
44	1	None	0.37
45	2	None	19.95
46	5	2 inches	0.01
47	5	2 inches	0.01
48	5	2 inches	0.01
49	3	None	0.34
50	1	None	4.71
51	2	None	0.03
52	2	None	2.36
53	1	None	0.06
54	1	None	0.56
55	5	0-16 inches	65.44
56	4	None	4.80
57	5	0-6 inches	11.30
58	3	None	3.93
59	2	None	2.29
60	3	None	9.71
61	1	None	0.60
62	1	None	0.86
63	2	None	0.89

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
64	1	None	1.35
65	3	None	6.83
66	1	None	2.52
67	1	None	0.41

Eurasian water milfoil is present in approximately 307-acres in the Twin Falls project area. Cumulatively, the average stand size is 4.59-acres and has an average density rating of 1.79 per stand.

Out of the 67 observed stands, 8 (#20, 41, 46, 47, 48, 55, 56, and 57) have a high density (>75%). These stands are clustered in the south central portion of the reservoir in and adjacent to Badwater Lake, and they cover approximately 84-acres. Three of them (#46, 47, and 48) are each approximately 0.01-acres. The Badwater Lake stands are located in the west portion of Badwater Lake and cover approximately 81.5-acres.

The majority of the stands have very low densities of Eurasian water milfoil with single stems growing sporadically among a lot of native species. The most common native species included northern water milfoil (*Myriophyllum sibiricum*), two-leaf water milfoil (*Myriophyllum heterophyllum*), a variety of pondweeds (*Potamogeton* sp.), common waterweed (*Elodea canadensis*), bladderwort (*Utricularia* sp.), coon's tail (*Ceratophyllum demersum*), water celery (*Vallisneria americana*), yellow pond lilies (*Nuphar* sp.), and white pond lily (*Nymphaea odorata*). 53 of the 67 stands have low densities and account for 64% (197.24-acres) of the total area observed to have Eurasian water milfoil present.

In 2004, both Eurasian water milfoil and the hybrid were identified at the Twin Falls project area. Hybrid samples were collected and verified through DNA analysis. Since both the pure strain and hybrid have been identified in the past, no additional samples were collected in 2006.

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
Way Dam & Michigamme Reservoir
Project #1759**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the Way Dam and Michigamme Reservoir project on July 25 and 26, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

Purple loosestrife was observed within this project area at four locations (see attached map). These locations occur up the east portion of the project area along the shorelines of the Michigamme River. A single plant was observed at each of the four locations. Three of the observations are centrally located near where the Michigamme River empties into the larger Michigamme Reservoir basin. The fourth location occurs in the far eastern reaches of the project area. All four locations were documented using a Trimble Geo XH GPS unit. Specific coordinates for each stand are available upon request.

Table 1. Summary of the Purple Loosestrife Observations

Stand #	# of Plants	Stand/Plant Age	Stem Density or # of Stems	Notes
1	1	2 – Year	~35	~10 stems from 2005 present
2	1	1 – Year	3	Located In same general vicinity as previous observations
3	1	1 – Year	8	
4	1	2 – Year	~30	~5 stems from 2005 present

Of the four locations, only the second stand was in the same general vicinity as previously observed. It appears that stands 1 & 4 are second-year plants that likely first germinated in 2005.

Each of the four plants were in full flower, although there was no evidence that any of the plants had set seed. All four plants were carefully hand removed including flowers, stems, and roots. The removed plants were all bagged and disposed of appropriately.

We Energies plans to survey for purple loosestrife at the Way Dam & Michigamme Reservoir project site annually to insure that all plants germinating along the shorelines are detected prior to setting and releasing seed into the reservoir. Only the east portion of the project area will be surveyed in 2007 as no purple loosestrife has been observed in the central and western portions of the project area. The entire reservoir will be surveyed in 2008.

No stands of Eurasian water milfoil were observed during the survey at the Way Dam & Michigamme Reservoir project area.

**We Energies
2006 Annual Report - Nuisance Plant Control Survey
White Rapids Reservoir
Project #2357-003**

We Energies' Environmental department staff, Mr. Mike Grisar and Mr. John Hrobar, conducted a survey from a boat of the entire shoreline at the White Rapids Reservoir project on July 24, 2006. All waters and appropriate wetlands accessible from the boat were evaluated. Those species targeted for the survey included purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*). The visual meander survey included areas of shallow water adjacent to the shorelines. Shallow water was surveyed to a point where the water depth and clarity excluded visibility conducive to observing submerged vegetation.

No purple loosestrife plants were observed along the shores of the White Rapids Reservoir project area.

For each stand of Eurasian water milfoil encountered during the 2006 surveys, the stand location and perimeter were mapped using a Trimble Geo XH GPS unit. Where the stand size was negligible, a single point in the center of the stand was located with the GPS. Various data were collected at each stand including stand/mat density and mat thickness (when present). The stand size was subsequently calculated from the collected GPS boundaries. A percent cover scale from 1-5 (sparse – dense) was used to accurately and consistently estimate stand densities:

<u>Estimated Density Rating</u>	<u>% Cover</u>
1 (sparse)	0 - 5%
2 (moderately sparse)	>5 - 25%
3 (moderate)	>25 - 75%
4 (moderately dense)	>75 - 95%
5 (dense)	>95%

Twenty-nine (21) stands of Eurasian water milfoil were observed at the White Rapids Reservoir project area (see attached map). The identified stands are distributed throughout the project area and range in size from 0.59-acre up to 15.44-acres.

Table 1. Eurasian Water Milfoil Stand Data.

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
1	4	None	0.70
2	1	None	3.06
3	3	None	7.98
4	5	0-4 inches	1.01
5	5	0-4 inches	3.47
6	1	None	10.58
7	1	None	11.97
8	5	0-4 inches	1.88
9	1	None	1.46
10	1	None	0.64
11	1	None	1.20
12	1	None	1.11
13	4	None	0.59

Stand #	Stand/Mat Density	Mat Thickness	Stand Size (acres)
14	1	None	0.95
15	1	None	0.88
16	4	None	1.57
17	2	None	15.44
18	4	0-4 inches	0.92
19	5	0-4 inches	1.46
20	1	None	8.77
21	5	0-4 inches	3.57

Eurasian water milfoil is present in approximately 79-acres in the White Rapids Reservoir project area. Cumulatively, the average stand size is 3.77-acres and has an average density rating of 2.67 per stand.

Out of the 21 observed stands, 9 (#1, 4, 5, 8, 13, 16, 18, 19, and 21) have a high density (>75%). These stands are scattered throughout the reservoir in, and they cover approximately 15-acres. The average size of these densely covered stands is approximately 1.7-acres.

11 of the 21 stands have very low densities of Eurasian water milfoil with single stems growing sporadically among a lot of native species. The most common native species included northern water milfoil (*Myriophyllum sibiricum*), two-leaf water milfoil (*Myriophyllum heterophyllum*), a variety of pondweeds (*Potamogeton* sp.), common waterweed (*Elodea canadensis*), bladderwort (*Utricularia* sp.), coon's tail (*Ceratophyllum demersum*), water celery (*Vallisneria americana*), yellow pond lilies (*Nuphar* sp.), and white pond lily (*Nymphaea odorata*). These low density stands account for greater than approximately 71% (56.06-acres) of the total area observed to have Eurasian water milfoil present.

In consultation with the Wisconsin Department of Natural Resources, it was recommended that We Energies follow the established protocol for having suspected Eurasian water milfoil confirmed by a state herbarium. Several samples of Eurasian water milfoil were collected from stands #1, 5, 13, and 21. One sample from each of these stands was then pressed and sent to Dr. Robert Freckmann at the University of Wisconsin – Stevens Point, Robert W. Freckmann Herbarium for positive confirmation that the collected sample was Eurasian water milfoil.

Dr. Freckmann subsequently confirmed the samples on October 2, 2006. While he reviewed a number of samples from several reservoirs, he made a general statement that there is the possibility that some of the collected samples may be a hybrid (between Eurasian water milfoil and northern water milfoil).