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August 11, 2003

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Magalie Roman Salas
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

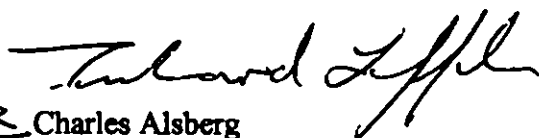
Re: N.E.W. Hydro, Inc., Oconto Falls, Wisconsin, FERC Project No. 2523
Submittal of Purple Loosestrife/Eurasian Watermilfoil Inventory for Year 2001

Dear Ms Salas:

Please find enclosed an original and 8 copies of the Oconto Falls, Wisconsin Project No. 2523 Purple Loosestrife/Eurasian Watermilfoil Inventory for Year 2001 for filing as requested by Diane Murray on August 11, 2003.

If you have any questions regarding this submission, please contact Mr. Richard Loeffler at 920-293-4628 ext. 18.

Sincerely,
NORTH AMERICAN HYDRO, INC.


FOR Charles Alsberg
Executive Vice President

Cc: FERC – CRO
Encl.: 1 original & 8 copies

03-08-11 RAL OFSU 2001 loosestrife milfoil survey to FERC.doc

**Oconto Falls Upper Project Purple Loosestrife & Eurasian Watermilfoil Inventory
August 3 & August 4, 2001
FERC Project #2523 Article 407**

**NEW Hydro, Inc.
116 State St.
Neshkoro, WI 54960**

Purple Loosestrife

Original

On August 3 & August 4, 2001, NEW Hydro purple loosestrife plants at the Oconto Falls Wisconsin. The method of inventory as a Regulatory Commission (FERC) Order of

ws:

After Purple Loosestrife has bloomed it should be conducted using a boat to search and on foot or by boat below the dam. determine other areas where Purple Loosestrife by NEW within the Project Boundary. These areas will be surveyed on foot. A pair of binoculars should be used to search for the purple flowered spikes of the plant. When plants are located, the person(s) inventorying should get close enough to make a positive identification without disturbing the plants or the immediate area around the plants as this could cause them to spread. A GPS receiver will be used to establish a GPS coordinate for the location of the plants. If it is not possible to get close enough to establish an accurate location, an approximate location will be established with reference to an established GPS coordinate. The plant should be inventoried by marking and numbering the location on a lake map along with notes approximating size of plants, stand area, percent cover, stem density, plant density, and location with reference to established GPS coordinates. Photos and/or videotape will be taken of the largest occurrences.

Example:

#1 6' tall plants; 4' X 20'; 30% cover; 4 – 5 stems per plant; 4 plants; on shoreline N44° 52.9092' E88° 10.0000'; no photo

#2 5' - 7' tall plants; 10' X 10'; 25% cover; 4 – 5 stems per plant; in marsh 50 feet bearing 25° from N44° 52.5092' E88° 10.0000'; photo No. 1

The area to be inventoried shall be the shoreline and lands owned by NEW within the Project Boundary as indicated on the Project Boundary map included as Exhibit G of NEW Hydro, Inc. Application For New License for the Oconto Falls Hydroelectric Project FERC Project #2523. The Project Boundary is shown as the water and shoreline of the impoundment from approximately 6000' upstream of the State Highway 32 bridge to approximately 500' downstream of the Project dam.

General Observations:

For purple loosestrife, the Oconto Falls Upper Project Boundary was divided into four distinctly different areas; the tailrace (from the dam to 500' immediately downstream of the dam on the east end of the impoundment), the main basin (from the dam to 2 miles upstream of the dam where the river narrows), the headwaters (from 2 miles upstream of the dam where the river narrows to the western point of the project boundary ~6,000 feet upstream of the Highway 32 bridge), and outlying project owned lands.

The tailrace was surveyed by foot and was found to contain no visible purple loosestrife plants.

The main basin was surveyed by boat and was found to contain no visible purple loosestrife plants.

The headwaters were surveyed by boat. Four occurrences of purple loosestrife plants were observed in this area and are noted on the lake map and survey comments at the end of this report. One of these occurrences appears to be on project owned land and is so noted. Sighting #1 and #2 of the four occurrences had been observed during the 2000 survey.

The outlying project owned lands were first researched using aerial wetland maps to determine the areas conducive to purple loosestrife growth. These areas were then surveyed by foot and were found to contain no visible purple loosestrife plants.

During the inventory, an 8mm camcorder was used to document all four occurrences of purple loosestrife as noted in the survey comments at the end of this report.

Eurasian Watermilfoil

On August 3 & August 4, 2001, NEW Hydro, Inc. performed an inventory of Eurasian watermilfoil plants at the Oconto Falls Upper Project in Oconto County, Wisconsin.

The method of inventory as approved and modified by FERC Order of November 19, 1999 was defined as follows:

After Eurasian watermilfoil has developed in mid July to early August, the inventory should be conducted by boating transects in the impoundment above and below the dam. Number and locations of transects will be determined at the time of the first inventory and appropriately marked on the inventory lake map. A GPS receiver will be used to establish GPS coordinates for the beginning and endpoints of the transects. The person(s) inventorying should visually search areas with depths of 12 feet or less for the dense mats of the plants on and below the water surface. When plants are located, the person(s) inventorying should get close enough to make a positive identification without disturbing the plants or the immediate area around the plants as this could cause them to spread. If necessary, a sample may be taken for identification later. The plant should be inventoried by marking and numbering the location on a lake map along with notes approximating area that they cover, perimeter of bed, mat density, overall mat thickness, and location with reference to the GPS coordinates. Photos and/or videotape will be taken of the largest occurrences.

Example:

#1 40' X 20'; 3' depth; perimeter N44° 52.8925' E88° 10.0000' N44° 52.8860' E88° 10.0000', N44° 52.8860' E88° 09.9953', N44° 52.8925' E88° 09.9953'; 50% density; 3' thick; no photo

#2 8' X 10'; 10' depth; N44° 52.9008' E88° 10.0000', N44° 52.8995' E88° 10.0000', N44° 52.8995' E88° 09.9980', N44° 52.9008' E88° 09.9980'; 25% density; 8' thick; photo No. 1

The area to be inventoried shall be that within the Project Boundary as indicated on the Project Boundary map included as Exhibit G of NEW Hydro, Inc. Application For New License for the Oconto Falls Hydroelectric Project FERC Project #2523. The project boundary is shown as the water and shoreline of the impoundment from approximately 6000' upstream of the State Highway 32 bridge to approximately 500' downstream of the Project dam.

General Observations:

For Eurasian watermilfoil, the Oconto Falls Upper Project Boundary was divided into three distinctly different areas; the tailrace (from the dam to 500' immediately

downstream of the dam on the east end of the impoundment), the main basin (from the dam to 2 miles upstream of the dam where the river narrows), and the headwaters (from 2 miles upstream of the dam where the river narrows to the western point of the project boundary ~6,000 feet upstream of the Highway 32 bridge).

Water clarity at the Project at the time of the survey was limited to 1' – 3'. It was determined at that time to use a 14" wide garden rake (throw rake) with a rope attached to retrieve weed samples in a more thorough and consistent manner.

The *main basin* was inventoried first followed by the *headwaters* and, finally, the *tallrace*.

The tallrace was surveyed visually and with the use of a throw rake. No Eurasian watermilfoil plants were found.

The main basin was surveyed visually and with the use of a throw rake. Eight transects were established in this area with sample points at 1.5', 5', 10', and 15' depths. Each sample point of each transect was an 8' circle divided into quadrants. Each quadrant was sampled using the throw rake. If the teeth of the rake contained less than 50% Eurasian watermilfoil, a rating of 1 was assigned, and if 50% or more, a rating of 2 was assigned. In addition, areas of weed growth were visually searched while skirting the perimeter of weed beds and shoreline.

No weeds of any kind were detected at depths greater than 10'. Weeds that were retrieved at the 10' level were mostly decomposed. The lack of weed growth at depths greater than 10' may be due to the turbidity of the river waters. On both sampling dates, boat traffic was heavy and observations of floating segments of Eurasian watermilfoil were common. Special attention was paid to each of the boat landings.

At the northeast boat landing near the hydroelectric plant, ~20 – 30 Eurasian watermilfoil plants were found growing from the bottom near the landing and docks along with ~5 – 10 floating strands. No Eurasian watermilfoil was observed on the apron of the landing. This occurrence was not considered a "mat" since the plants were spread far apart. This will probably attain "mat" status in the future.

The north boat landing immediately east of the north swimming beach had ~5 – 10 floating strands of Eurasian watermilfoil near the landing apron with no plants appearing to be growing from the bottom.

The boat landing at the West Park is within mat #5 and Eurasian watermilfoil plants were found floating around the landing and dock and was mixed in with other weeds on the apron of the landing.

No Eurasian watermilfoil was detected at sampling locations with depths greater than 5'. Those occurrences at 5' depth and less were easily identified without the use of dredging techniques as the plants had grown to the surface and most had reddish tops.

It should also be noted that, although no Eurasian watermilfoil plants were discovered at the 1.5 foot depth sampling points of transects #6, #7, and #8, some individual plants were found attached to the bottom within 25 feet of these points. These occurrences were not observed in the 2000 survey.

Five mats containing Eurasian watermilfoil were identified within the project boundary of which mat #1, #2, #3, and #4 were previously identified in the 2000 survey. All five mats were discovered using the visual search method. All of these mats were interspersed with other types of weeds and all of the mats had a Eurasian watermilfoil density of less than 20% as noted in the survey comments at the end of this report.

The headwaters were surveyed visually and with the use of a throw rake. No Eurasian watermilfoil plants were found.

During the inventory, an 8mm camcorder was used to document one of the five mats of Eurasian watermilfoil as noted in the survey comments at the end of this report. Other mats were recorded on previous survey videos and have not changed in size or density.

Purple Loosestrife Survey

Project: Oconto Falls Upper #2523
 Date: 8/3/2001 & 8/4/2001
 Crew: RAL & CTM

Datum: WGS 84
 Page: 1 of 1

Sighting #	GPS point	Latitude	Longitude	Plant Height	Stand Area	Comments
1	66	N44°53.0397'	W088°13.7630'	4' - 6'	~50' x 20'	Located ~30 yards bearing 0° (north) of GPS point on the north side of a marshy slough. Appears to be on a snowmobile trail, as snowmobile trail signs are on either side of slough opening into the river channel. ~30 - 50 plants with 1 - 10 stems per plant. The plants cover ~20% - 30% of the stand area. There is also one 4' tall single stem plant located ~10 yards, one 4' tall single stem plant located ~20 yards, and three 4' - 6' tall 1 - 5 stems per plant located ~50 yards all bearing 270° (west) of the GPS point on the west side of the slough. These plants are all located on project owned lands. This occurrence recorded on video tape.
2	67	N44°52.8626'	W088°14.9756'	4' - 6'	~10' x 10'	Located ~30 yards south of GPS point on the south side of a marshy slough located directly west of the HWY 32 wayside boat landing. ~5 plants with 5 - 15 stems per plant. The plants cover ~75% of the Stand Area. This occurrence recorded on video tape.
3	78	N44°53.012'	W088°13.614'	4' - 6'	2 plants	Located ~10 yards north of GPS point on the north side of the river. 2 plants are ~5 yards apart with 2 - 5 stems per plant. This occurrence recorded on video tape.
4	79	N44°52.943'	W88°14.809'	5'	1 plant	Located near the waters edge on the northeast side of the HWY 32 bridge. This plant was pulled and disposed. This occurrence recorded on video tape.

Eurasian Watermilfoil Survey - Transects

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/3/2001 & 8/4/2001

Page: 1 of 1

Crew: RAL & CTM

1<50% 1<50% 1<50% 1<50%
2≥50% 2≥50% 2≥50% 2≥50%

Transect #	Depth	GPS point	Latitude	Longitude	Quad 1	Quad 2	Quad 3	Quad 4	Rating
1	1.5	9	N44°52.7195'	W088°09.4319'	0	0	0	0	0
	5	10	N44°52.7343'	W088°09.4323'	0	0	0	0	0
	10	11	N44°52.7684'	W088°09.4185'	0	0	0	0	0
	12	12	N44°52.7885'	W088°09.4102'	0	0	0	0	0
2	1.5	13	N44°52.6616'	W088°09.2612'	0	0	0	0	0
	5	14	N44°52.7357'	W088°09.2024'	0	0	0	1	1
	10	15	N44°52.7716'	W088°09.1844'	0	0	0	0	0
	15	16	N44°52.7818'	W088°09.1873'	0	0	0	0	0
3	1.5	17	N44°52.6085'	W088°09.1567'	0	0	0	0	0
	5	18	N44°52.6269'	W088°09.1521'	0	0	0	0	0
	10	19	N44°52.6540'	W088°09.1324'	0	0	0	0	0
	5	20	N44°52.6842'	W088°09.1117'	0	0	0	0	0
	10	21	N44°52.7166'	W088°09.0910'	0	0	0	0	0
	15	22	N44°52.7347'	W088°09.0827'	0	0	0	0	0
4	1.5	23	N44°52.5970'	W088°09.0412'	0	0	0	0	0
	5	24	N44°52.6102'	W088°09.0244'	0	0	0	0	0
	10	25	N44°52.6183'	W088°08.9994'	0	0	0	0	0
	15	26	N44°52.6253'	W088°08.9984'	0	0	0	0	0
5	1.5	27	N44°52.8430'	W088°09.0258'	1	0	0	0	1
	5	28	N44°52.8408'	W088°09.0274'	0	0	0	0	0
	10	29	N44°52.8383'	W088°09.0359'	0	0	0	0	0
	15	30	N44°52.8271'	W088°09.0714'	0	0	0	0	0
6	1.5	37	N44°52.8919'	W088°09.2443'	0	0	0	0	0
	5	38	N44°52.8890'	W088°09.2434'	0	0	0	0	0
	10	39	N44°52.8808'	W088°09.2402'	0	0	0	0	0
	15	40	N44°52.8289'	W088°09.2018'	0	0	0	0	0
7	1.5	41	N44°52.8450'	W088°09.4266'	0	0	0	0	0
	5	42	N44°52.8420'	W088°09.4280'	0	0	0	0	0
	10	43	N44°52.8376'	W088°09.4237'	0	0	0	0	0
	15	44	N44°52.8278'	W088°09.4233'	0	0	0	0	0
8	1.5	45	N44°52.7965'	W088°09.6999'	0	0	0	0	0
	5	46	N44°52.7952'	W088°09.6999'	0	0	0	0	0
	10	47	N44°52.7887'	W088°09.6960'	0	0	0	0	0
	15	48	N44°52.7474'	W088°09.6777'	0	0	0	0	0

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523 **Datum:** WGS 84
Date: 8/3/2001 & 8/4/2001 **Page:** 1 of 2
Crew: RAL & CTM

Mat #	Depth	GPS point	Latitude	Longitude	Comments
1	0' - 5'	31	N44°52.7679'	W088°08.9863'	Located from immediately on the east side of the swimming beach to boat launch docks to the east. Mat extends from shore to ~20' out from shore. Mat is interspersed with other weeds. Total Mat density is ~50% - 75% of which ~20% - 30% is Eurasian Watermilfoil.
		32	N44°52.7729'	W088°08.9940'	
		33	N44°52.7892'	W088°09.0109'	
2	0' - 5'	34	N44°52.8133'	W088°09.0233'	Located from immediately on the west side of the swimming beach to where HWY 22 meets the lakeshore to the east. Mat extends from shore to ~20' out from shore. Mat is interspersed with other weeds. Total Mat density is ~50% - 75% of which ~20% - 30% is Eurasian Watermilfoil.
		35	N44°52.8286'	W088°09.0265'	
		36	N44°52.8437'	W088°09.0283'	
3	2' - 5'	49	N44°52.8465'	W088°09.9786'	Located on north shore ~550 yards upstream from the boat landing in the park on the south side of the impoundment in Oconto Falls. Mat is narrow ~10' - 20' wide and runs parallel to shore in the 2' - 5' depth range. Mat is interspersed with other weeds. Total Mat density is ~10% - 20% of which ~15% - 20% is Eurasian Watermilfoil.
		50	N44°52.8541'	W088°10.0106'	
		51	N44°52.8613'	W088°10.0369'	
		52	N44°52.8675'	W088°10.0597'	
		53	N44°52.8805'	W088°10.0931'	
		54	N44°52.8952'	W088°10.1251'	
		55	N44°52.9184'	W088°10.1610'	
56	N44°52.9358'	W088°10.1870'			
4	4' - 5'	57	N44°53.0944'	W088°10.4541'	Located in center of river ~1400 yards upstream from the West Side Park boat landing on the south side of the impoundment in Oconto Falls. Mat is ~750' x ~200' and is in the center of the river. Mat is interspersed with other weeds. Total Mat density is ~75% - 80% of which ~10% is Eurasian Watermilfoil. It should also be noted that only the downstream half of the Mat appeared to contain Eurasian Watermilfoil.
		58	N44°53.1284'	W088°10.4607'	
		59	N44°53.1601'	W088°10.4738'	
		60	N44°53.2086'	W088°10.5103'	
		62	N44°53.1968'	W088°10.5389'	
		63	N44°53.1701'	W088°10.5475'	
		64	N44°53.1220'	W088°10.5007'	
65	N44°53.1081'	W088°10.4868'			

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523
Date: 8/3/2001 & 8/4/2001
Crew: RAL & CTM

Datum: WGS 84
Page: 2 of 2

Mat #	Depth	GPS point	Latitude	Longitude	Comments
5	0' - 5'	71	N44°52.756'	W88°09.898	Located from ~50' downstream (east) of the boat landing at the West Side Park on the south side of the impoundment in Oconto Falls to ~1100' upstream (west) of the boat landing. Eurasian Watermilfoil mat is formed on the outside edge of an existing mat of sumergent weed growth in the 3' - 6' depth range. Mat is interspersed with other weeds. Total Mat density is ~50% - 75% of which ~5% - 20% is Eurasian Watermilfoil. This mat is recorded on video tape.
		72	N44°52.743	W88°09.859	
		73	N44°52.735	W88°09.810	
		74	N44°52.720	W88°09.750	
		75	N44°52.715	W88°09.702	
		76	N44°52.723	W88°09.673	
		77	N44°52.728	W88°09.643	

LARGE-FORMAT IMAGES

One or more large-format images (over 8 1/2" X 11") go here.
These images are available in FERRIS at:

For Large-Format(s):

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Parent Accession No.: 030820-0152

Set No.: 1 of 1

Number of page(s) in set: 3