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Engineering & Menutecturing: 8310 Technology Drive, Weston, WI 54476 USA Tel 715-359-0209 Fex 715-369-1049 Emeil schofield@nehydro.com Web www.nehydro.com

May 19, 2008

Mr. James Reyburn Water Quality Biologist Wisconsin Department of Natural Resources Northeast Region Headquarters P.O. Box 10448 2984 Shawano Ave. Green Bay, WI 54307-0448 Ms. Louise Clemency Field Supervisor U.S. Fish and Wildlife Service 2661 Scott Tower Drive New Franken, WI 54229

Re: Oconto Falls (Upper) FERC Project, No. 2523 N.E.W. Hydro, Inc. Article 407, Purple Loosestrife & Eurasian Watermilfoil Inventory

Dear Mr. Reyburn and Ms. Clemency:

Attached is a copy of our "Purple Loosestrife & Eurasian Watermilfoil Inventory" for 2007. This annual report has been prepared to comply with Article 407 of the project's federal hydropower license and is being filed with the Federal Energy Regulatory Commission.

We invite you to review and comment, but we respectfully request that any written response be provided to us ASAP from the date of this letter. Please contact me at 920-293-4628 ext. 18 if you wish to discuss or have any questions.

Sincerely, North American Hydro Holdings, Inc. Agent for Licensee

Charles Alsberg Executive Vice President

Attachment: Oconto Falls Upper, Project No. 2523 Purple Loosestrife Inventory/Eurasian Watermilfoil Inventory for 2007.

Cc: Mr. Scott Klabunde, NAHH, Inc. Mr. Dwight Weigal, NAHH, Inc.

File: 07-10-30 RAL OFUP Art 407 Loosestrife Milfoil Inv 2007.doc

# Oconto Falls Upper Project Purple Loosestrife & Eurasian Watermilfoil Inventory August 1, August 2, & August 3, 2007 FERC Project #2523 Article 407

NEW Hydro, Inc. 116 State St. Neshkoro, Wi 54960

#### Purple Loosestrife

On August 1, 2007, August 2, 2007, and August 3, 2007, NEW Hydro, Inc. (NEW) performed an inventory of purple loosestrife plants at the Oconto Falls Upper Project in Oconto County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of November 19, 1999 was defined as follows:

After Purple Loosestrife has bloomed in mid July to early August, the inventory should be conducted using a boat to survey the impoundment above the dam and on foot or by boat below the dam. County wetland maps will be used to determine other areas where Purple Loosestrife could be found on lands owned 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 07-10-30 RAL OFUP Art 407 Looget Milfoll Inv 2007.doc 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 on 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. Seven 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 (located on project owned land) was observed in 2000, 2001, 2002, 2003, 2004, 2005, 2006 and 2007 and appears to have reduced in numbers. In 2002 seed heads on three of the plants nearest the main river were removed, bagged, and burned to reduce possibility of spreading. In 2003, 2004, 2005, 2006, and 2007 all plants at this location were sprayed with an herbicide. It should also be noted that, in 2005 and 2007, a few mature plants appeared to have insect damage such as that produced by Gallerucella beetles. In 2007, Galerucella beetles were positively identified on a number of plants.

Sighting #2 was observed in 2000, 2001, 2002, 2003, 2004, 2005, 2006, and 2007 and appears to have reduced in density considerably since 2005. None of the plants were treated, pulled or had seed heads cut in 2000, 2001, 2002, 2003, 2004, 2005, 2006, or 2007. It should be noted that in 2006, the lower portion of the remaining plants appeared to have insect damage such as that produced by Gallerucella beetles.

Sighting #3 was first observed in 2001 and in 2002 and 2003 seed heads on all of the plants were removed to reduce possibility of spreading. In 2004, no plants were observed, but in 2005 they had retuned. Seed heads were removed again in 2005. In 2006 and 2007, no plants were observed at this location.

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Sighting #4 was observed, pulled, and burned in 2001 and was no longer present in 2002, 2003, 2004, 2005, 2006, or 2007.

Sighting #5 was observed in 2002, 2003, 2004, 2005, and 2006. In 2007, the number of plants appeared to have been reduced and all plants were pulled. Minor beetle damage was noted in 2007.

Sighting #6 was observed in 2002, 2003, 2004. In 2002, 2003, and 2004, seed heads on all of these plants were removed to reduce possibility of spreading. In 2005, no plants were observed at this location. In 2006, two plants were once again observed and were pulled. In 2007, 7 plants were observed and pulled. Minor beetle damage was noted in 2007.

Sighting #7 was observed in 2005 and was pulled and destroyed. In 2006 and 2007, no plants were observed at this location.

Sighting #8 was observed in 2005 and was pulled and destroyed. In 2006 and 2007, no plants were observed at this location.

Sighting #9 was observed in 2006 and 2007. All plants were pulled and destroyed in 2006 and 2007.

Sighting #10 was observed in 2006 and was pulled and destroyed. No plants were observed in 2007.

Sighting #11 was first discovered in 2007. Three plants were found at this site. All plants were pulled and destroyed.

Sighting #12 was first discovered in 2007. One plant was found. It was pulled and destroyed.

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

During the inventory, a video camcorder or digital camera was used to document new occurrences of purple loosestrife as noted in the survey comments at the end of this report.

## Eurasian Watermilfoil

On August 1, 2007, August 2, 2007, and August 3, 2007, NEW Hydro, Inc. performed an inventory of Eurasian watermilifoil 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:

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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 na 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).

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Water clarity at the Project at the time of the survey was limited to 1' - 2'. It was determined at that time to use a 14" wide garden rake with a 5.5' handle for shallow areas and a 14" wide garden rake attached to an 18' aluminum pole for deeper areas. In the past, a throw rake (garden rake with a rope attached) was used to retrieve weed samples, but the 18' handle gives better control and cuts down on sampling time. For 2000 and 2001 surveys, no weed growth of any kind was retrieved from waters deeper than 10', so sampling at the 15' depth was discontinued.

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

<u>The tailrace</u> was surveyed visually and with the use of a rake mounted on an 18' aluminum pole. No Eurasian watermilfoil plants were found.

<u>The main basin</u> was surveyed visually and with the use of a 14" wide garden rake with a 5.5' handle for shallow areas and a 14" wide garden rake attached to an 18' aluminum pole for deeper areas. Eight transects were established in 2000 in this area with sample points at 1.5', 5', and 10' depths. Each sample point of each transect was an 8' circle divided into quadrants. Each quadrant was sampled using one of the rakes. 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 weed samples of any kind were detected at the 10' depth. On the sampling date, boat traffic was medium and observations of floating segments of Eurasian watermilfoil were common. Special attention was paid to each of the boat landings.

The northeast boat landing near the hydroelectric plant is within mat #9 and a few floating strands were observed here. Eurasian watermilfoil was also observed on the apron of the landing.

The north boat landing immediately east of the north swimming beach had a few floating strands of Eurasian watermilfoil near the landing with no plants appearing to be growing from the bottom. There appeared to be a few strands of Eurasian watermilfoil on the apron of the landing.

The boat landing at the West Park is within mat #5 and a few Eurasian watermilfoil plants were found floating around the landing and dock, and a few were observed 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.

In past years, some sampling points did not yield any Eurasian watermilfoil plants, 07-10-30 RAL OFUP Art 407 Loosetrife Milfoil Inv 2007.doc although there may have been some plants floating on the surface and/or growing from the bottom within 25' of the sampling point. In 2002, a column was added to the survey sheet at the end of this report to show these observations.

Eleven mats containing Eurasian watermilfoil were identified within the project boundary of which mat #1, #2, #3, and #4 were first identified in the 2000, mat #5 was first identified in 2001, mat #6 and #7 were first identified in 2003, mat #8 was first identified in 2005, and mat #9, #10, and #11 were identified in 2006. All eleven mats were discovered using the visual search method. All of these mats were interspersed with other types of plants and all of the mats had Eurasian watermilfoil densities as noted in the survey comments at the end of this report. Mats #1 through #10 are located in the *main basin* while mat #11 is located in the *headwaters*.

Mat #1 was first observed in 2000 and remained the same size and density through 2003. It decreased in size in 2004 and, in 2005, was not visible at all. The mat reappeared in 2006. It has remained the same size, but has increased in density during 2007.

Mat #2 was first observed in 2000 and remained the same size and density through 2003. It decreased in size in 2004 and, in 2005, was not visible at all. The mat reappeared in 2006. It has increased in size and density during 2007.

Mat #3 was first observed in 2000, it increased in size and density through 2003. In 2004, a drastic reduction in density was observed while its size remained the same. In 2005, its density reduced further to where it could be considered the same as when it was first observed in 2000 while the size remained the same size as in 2004. In 2006, it remained the same size, but increased in density from 2005. It has remained the same size but has increased in density during 2007.

Mat #4 was first observed in 2000, it increased in size and density through 2003. In 2004, a drastic reduction in density was observed while its size remained the same. In 2005, its density reduced further to where it could be considered the same as when it was first observed in 2000 while the size remained the same size as in 2004. In 2006, it remained the same size, but increased in density from 2005. It has remained the same size but has decreased in density during 2007.

Mat #5 was first observed in 2001. It increased in size and density through 2003. In 2004, a drastic reduction in density was observed while its size remained the same. In 2005, its density reduced further to where it could be considered the same as when it was first observed in 2001 while the size remained the same as in 2004. In 2006, it remained the same size, but increased in density. In 2007, it has decreased in size but increased in density.

Mat #6 was first observed in 2003. In 2004, it remained the same size but reduced in density. In 2005, its size and density remained the same. In 2006, its size and density increased. In 2007, it increased in size and density until it joined with mat #8 to form 07-10-30 RAL OFUP At 407 Locentrife Millfold Inv 2007.doc

one continuous mat.

- Mat #7 was first observed in 2004. It was not visible in 2005 and reappeared in 2006. In 2007, it was not visible once again.
- Mat #8 was first observed in 2005. In 2006, it increased in size and density. In 2007, it increased in size and density until it joined with mat #6 to form one continuous mat.
  - Mat #9 was first observed in 2006. In 2007, it increased in size, but the density remained the same.
- Mat #10 was first observed in 2006. In 2007, it remained the same size but increased in density.
- <u>The headwaters</u> were surveyed visually and with the use of a 14" wide garden rake with a 5.5' handle. One mat was observed in this part of the project boundary.
- Mat #11 was first observed in 2006. In 2007, it remained the same size and decreased in density.
  - Observations of individual plants are the furthest upstream since surveys began in 2000 and have reached a point at N44°52.996' W88°12.091' (Datum: WGS84) which is ~3.1 miles upstream from the dam and ~0.3 miles downstream from the Larson Bridge. Plants had not been previously observed further upstream than a point at N44°53.152' W88°11.755' (Datum: WGS84) which is ~2.7 miles upstream from the dam and ~0.7 miles downstream from the Larson Bridge.
  - Eurasian watermilfoil weed densities, overall, increased noticeably from 2006 to 2007. It seems to be at its highest density and is located furthest upstream since surveys began in 2000.

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Project:	Oconto Fails Upper #2523	Datum:	<u>₩</u>
Date:	8/1, 8/2, & 8/3/2007		
Crew:	RAL & CTM		

Sighting #	<b>GPS point</b>	Latitude	Longitude	Plant Height	Stand Area	Comments
1	66	N44*53.0397	W088°13.7630'	4' - 6'	~100' x 20'	Located ~30 yards bearing 0° (north) of GPS point on the
	ļ	ļ			ļ	north side of a marshy slough. Appears to be on a
					1	snowmobile trail, as snowmobile trail signs are on either side
						of slough opening into the river channel. This occurrance
						discovered in 2000. There are 25-30 plants with 1 - 8 stems
}	1					per plant. The plants cover ~5% - 10% of the stand area.
	]					There is also one 5' tall 5 stems plant located ~50 yards
						bearing 270° (west) of the GPS point on the west side of the
						slough. These plants are all located on project owned lands.
1	1	]				This occurrence recorded on video tape in 2000. Seed heads
						of 3 plants nearest main river channel removed in 2002, all
						plants sprayed with herbicide in 2003, 2004, 2005, 2006 and
ļ		1			1	2007. NOTE: In 2005 and 2007, few mature PL plants
						showed extensive leaf damage as if eaten by Galerucella
						beetles. Video taken in 2005 of damaged plant. In 2007,
1					l	Galerucella beetles were positivly identified on a number of
		1				plants.
ź	67	N44*52.8626'	W088*14.9756	4'-6'	~40' x 5'	Located ~30 vards bearing 180° (south) of GPS point on the
_						south side of a marshy slough located directly west of the
4	l	4				HWY 32 wayside boat landing. This occurrance discovered in
						2000. There are 3 plants with 5 - 8 stems per plant. The
	ľ					plants cover ~2% of the Stand Area. This occurrence
					Į	recorded on video tape in 2000. No treatment in 2000, 2001.
						2002, 2003, 2004, 2005, 2006, and 2007. NOTE: In 2006, all
						PL plants showed extensive leaf damage as if eaten by
	·					Galerucella beetles.
3	78	N44*53.012*	W088*13.614'	N/A	N/A	Located ~10 yards bearing 0° (north) of GPS point on the
1			ļ			north side of the river. This occurrance discovered in 2001.
					1	This occurrence recorded on video tape in 2001. Seed heads
	l	Į			Į	removed in 2002 and 2003. No plants were visible in 2004.
						Plants reappeared in 2005, pulled, and destroyed. No plants
L	_					visible in 2006 and 2007.

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Date:		8/1, 8/2	, & 8/3/20	007					-								
Crew:	<b>e</b>	RAL	& CTM														

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Signung #	GP3 point	LEUWUG	Longitude	Plant Height	Stand Area	Comments
4	79	N44*52.943'	W088°14.809'	N/A	N/A	Located near the waters edge on the northeast side of the HWY 32 bridge. This occurrance discovered in 2001. This occurrence recorded on video tape in 2001. This plant was pulled and disposed in 2001 and was not present in 2002, 2003, 2004, 2005, 2006, or 2007.
5	178 267 268 269 270 139	N44°53.029' N44°53.059' N44°53.057' N44°53.056' N44°53.055' N44°53.050'	W088*13.524' W088*13.549' W088*13.562' W088*13.578' W088*13.615' W088*13.530'	N/A 4' N/A N/A 5'	N/A 1 plant N/A N/A N/A 1 plant	Located on the edge of the far side of a slough ~30 yards - 60 yards northwest of waypoint 178. This occurrance discovered in 2002. In 2005, a more accurate inventory was performed of this sighting. All plants have 2 - 4 stems per plant. This occurrence was recorded on video tape in 2002. No treatment was performed in 2002, 2003, 2004, and 2005. All plants pulled in 2006 and 2007. NOTE: In 2007, all PL plants showed minor leaf damage as if eaten by Galerucella beetles.
6	179	N44*52.895'	W088°12.805'	2' - 4'	7 plants	Located ~10' due north of the waypoint on the bank. This occurrance discovered in 2002. All plants had single stems. Seed heads removed in 2002, 2003, and 2004. No plants were visible in 2005. All plants pulled in 2006 and 2007. This occurrence was recorded on video tape in 2002. NOTE: In 2007, all PL plants showed minor leaf damage as if eaten by Galerucella beetles.
7	264	N44*53.024'	W088°13.439'	N/A	N/A	Located ~10' due north of the waypoint on the bank. This occurrance discovered in 2005. One plant had 3 stems. Plant was pulled and destroyed in 2005. No plants visible in 2006 and 2007.
8	265	N44°53.024'	W088°13.439'	N/A	N/A	Located ~10' due south of the waypoint on the bank west of HWY 32 bridge. This occurrance discovered in 2005. One plant had 3 stems. Plant was pulled and destroyed in 2005. No plants visible in 2006 and 2007.
9	120	N44*52.915'	W088*14.823'	3'	1 plant	Located ~10' due south of the waypoint on the bank east of HWY 32 bridge. This occurrance discovered in 2006. One single stem plant. Plant was pulled and destroyed in 2006 and 2007.

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Project:	Oconto Falls	Upper #2523	Datum:	WGS 84								
Date:	8/1, 8/2	8 8/3/2007	•		_							
Crew:	RAL	. & <u>CTM</u>	-									
Sighting #	GPS point	Latitude	Longitude	Plant Height	Stand Area			Com	ments			
10	116	N44*52.915'	W088°52.915'	4' - 5'	2 plants	Located ~10 discovered in 2006. No pl	' due nor n 2006. F ants visib	h of the Nants we le in 200	waypoint. Ire pulled 7.	This oc and des	currance troyed in	
11	121	N44*52.643'	W088*15.762'	2' - 4'	3 plants	Located ~10 Stand size is 2007	' due sou ~20' x 2'	th of way . Plants	vpoint. Di were pull	iscovered led and d	d in 2007. lestroyed	in
12	122	N44°53.050'	W088°13.863'	4'	1 plant	Located ~10 Plants were	' due nor pulled an	h of way d destroy	point. Di red in 201	scovered	l in 2007.	

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May 19, 2008

Mr. James Reyburn Water Quality Biologist Wisconsin Department of Natural Resources Northeast Region Headquarters P.O. Box 10448 2984 Shawano Ave. Green Bay, WI 54307-0448 Ms. Louise Clemency Field Supervisor U.S. Fish and Wildlife Service 2661 Scott Tower Drive New Franken, WI 54229

Re: Oconto Falls (Upper) FERC Project, No. 2523 N.E.W. Hydro, Inc. Article 407, Purple Loosestrife & Eurasian Watermilfoil Inventory

Dear Mr. Reyburn and Ms. Clemency:

Attached is a copy of our "Purple Loosestrife & Eurasian Watermilfoil Inventory" for 2007. This annual report has been prepared to comply with Article 407 of the project's federal hydropower license and is being filed with the Federal Energy Regulatory Commission.

We invite you to review and comment, but we respectfully request that any written response be provided to us ASAP from the date of this letter. Please contact me at 920-293-4628 ext. 18 if you wish to discuss or have any questions.

Sincerely, North American Hydro Holdings, Inc. Agent for Licensee

Charles Alsberg Executive Vice President

Attachment: Oconto Falls Upper, Project No. 2523 Purple Loosestrife Inventory/Eurasian Watermilfoil Inventory for 2007.

Cc: Mr. Scott Klabunde, NAHH, Inc. Mr. Dwight Weigal, NAHH, Inc.

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## **Eurasian Watermilfoil Survey - Transects**

Project:	Oconto Falls Upper #2523	Datum:	WGS 84
Date:	8/2/2007	Page:	1 of 1
Crew:	RAL & CTM	•	

07-09-14 RAL CTM OFSU 2007 Milfoil Survey form.xls

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Eurasian watermilfoil growing from bottom within 25' of sample point =

Eurasian watermilfoil floating within 25' of sample point =

					1<50%	1<50%	1<50%	1<50%		
					2≥50%	2≥50%	2≥50%	2≥50%		
Transect #	Depth	GPS point	Lattitude	Longitude	Quad 1	Quad 2	Quad 3	Quad 4	Rating	Within 25
1	1.5	9	N44°52.7195'	W088°09.4319'	0	0	0	0	0	#
	5	10	N44°52.7343'	W088°09.4323'	1	1	1	1	4	#*
	10	11	N44°52.7684'	W088°09.4185'	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'	1	1	1	1	4	#*
	10	15	N44°52.7716'	W088°09.1844'	0	0	0	0	0	
3	1.5	17	N44°52.6085'	W088°09.1567'	0	1	1	1	3	#
	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	1	1	1	3	#
	10	21	N44°52.7166'	W088°09.0910'	0	0	0	0	0	
4	1.5	23	N44°52.5970'	W088°09.0412'	0	2	2	2	6	#*
	5	24	N44°52.6102'	W088°09.0244'	0	1	0	1	2	*
	10	25	N44°52.6183'	W088°08.9994'	0	0	0	0	0	
5	1.5	27	N44°52.8430'	W088°09.0258'	0	0	1	1	2	#*
	5	28	N44°52.8408'	W088°09.0274'	1	1	1	1	4	#
	10	29	N44°52.8383'	W088°09.0359'	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	1	1	#
	10	39	N44°52.8808'	W088°09.2402'	0	0	0	0	0	
7	a 1.5	41	N44°52.8467'	W088°09.4100'	0	0	0	0	0	#*
	a 5	42	N44°52.8433'	W088°09.4100'	0	0	0	0	0	#*
	a 10	43	N44°52.8400'	W088°09.4083'	0	0	0	0	0	#*
8	1.5	45	N44°52.7965'	W088°09.6999'	1	1	0	0	2	#
	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	

20080530-0136 FERC PDF (Unofficial) 05/19/2008



	Oconto Falls Upper #2523		Datum:	VVG5 04	
Date:	8/1, 8/2,	& 8/3/2006			_
Crew:	RAL	& CTM	•		
Mat #	Depth	GPS point	Lattitude	Longitude	Comments
1	0' - 5'	31 32 33	N44°52.7679' N44°52.7729' N44°52.7892'	W088°08.9863' W088°08.9940' W088°09.0109'	Located from immediately on the east side of the swimming beach to boat launch docks to the east. Mat is ~180' x 20' a extends out from shore in the 2' - 5' depth range. Mat is interspersed with other weeds. Total Mat density is ~20% - 80% of which ~50% - 90% is Eurasian Watermilfoil.
2	0' - 5'	34 35 36 126	N44°52.8133' N44°52.8286' N44°52.8437' N44°52.894'	W088°09.0233' W088°09.0265' W088°09.0283' W088°09.130'	Located from immediately on the west side of the swimming beach to where HWY 22 meets the lakeshore to the east. It is ~780' x 20' and extends out from shore in the 2' - 5' depth range. Mat is interspersed with other weeds. Total Mat density is ~10% - 60% of which ~20% - 50% is Eurasian Watermilfoil.
3	0' - 5'	180 181 49 50 51 52 53 54 55 56 182 183 184 185	N44°52.837' N44°52.843' N44°52.8465' N44°52.8541' N44°52.8613' N44°52.8675' N44°52.8952' N44°52.9184' N44°52.9358' N44°52.984' N44°52.984' N44°53.030' N44°53.094'	W088°09.914' W088°09.959' W088°09.9786' W088°10.0106' W088°10.0369' W088°10.0597' W088°10.0931' W088°10.1251' W088°10.1251' W088°10.1870' W088°10.217' W088°10.230' W088°10.230' W088°10.386'	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 ~2600' x 30' wide and runs parallel to shore in the 2' - 5' depth range. Mat is interspersed with oth weeds. Total Mat density is ~70% - 80% of which ~10% - 90% is Eurasian Watermilfoil.
4	4' -5'	57 58 59 60 62 63 64	N44°53.0944' N44°53.1284' N44°53.1601' N44°53.2086' N44°53.1968' N44°53.1701' N44°53.1220'	W088°10.4541' W088°10.4607' W088°10.4738' W088°10.5103' W088°10.5389' W088°10.5475' W088°10.5007'	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 ~2050' x ~200' and is the center of the river. Mat is interspersed with other weeds Total Mat density is ~50% - 90% of which ~1% - 50% is Eurasian Watermilfoil. Heaviest concentrations of Eurasian

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Eurasian Wa Project:	termilfoil Su Oconto Falls	rvey - Mat Dese S Upper #2523	criptions Datum:	WGS 84	07-09-14 RAL CTM OFSU 2007 Milfoil Survey form.xl				
Date:	8/1, 8/2,	& 8/3/2006	•		-				
Crew:	RAL	. & CTM							
Mat #	Depth	GPS point	Lattitude	Longitude	Comments				
		65	N44°53.1081'	W088°10.4868'	mat with lighter concentrations on the north and east sides.				
	[	249	N44°53.233'	W088°10.533'					
		250	N44°53.256'	W088°10.555'					
		251	N44°53.277'	W088°10.585'					
		252	N44°53.303'	W088°10.650'					
		253	N44°53.303'	W088°10.791'					
5	0' - 5'	71	N44°52 756'	W088°09 898'	I ocated from the west side of the heat landing at the West				
		72	N44°52,743'	W088°09 859'	Side Park on the south side of the impoundment in Ocente				
		73	N44°52 735'	W088°09 810'	Falls to $\sim 1100'$ unstream (west) of the heat landing. Europian				
		74	N44°52 720'	W088°09 750'	Watermilfoil mat is formed on the outside edge of an existing				
		75	N44°52 715'	W088°09 702'	mat of submergent wood growth in the 2' 6' dopth range				
		76	N44°52,723'	W088°09 673'	Mat is ~1100' x ~50'. Mat is interspersed with other woods				
		77	N44°52,728'	W088°09 643'	Total Mat density is ~30% 70% of which ~5% 70% is				
					Eurasian Watermilfoil. This mat was recorded on video tape in 2001.				
6	2' -5'	238	N44°52.761'	W088°09.256'	Located east of the island in the impoundment $\sim 600$ vards				
		239	N44°52.749'	W088°09.217'	least of the West Side Park hoat landing on the south side of				
		80	N44°52.737'	W088°09,193'	the impoundment in Oconto Falls Mat is ~2150' x ~200'				
		81	N44°52.721'	W088°09.170'	interspersed with other weeds. Total Mat density is ~25%				
		82	N44°52.715'	W088°09.154'	80% of which ~10% - 85% is Eurasian Watermilfoil				
		83	N44°52.704'	W088°09.140'					
		84	N44°52.695'	W088°09.143'					
		85	N44°52.688'	W088°09.150'					
		86	N44°52.698'	W088°09.188'					
		87	N44°52.697'	W088°09.205'					
		88	N44°52.694'	W088°09.212'					
		89	N44°52.688'	W088°09.217'					
		90	N44°52.677'	W088°09.204'					
		91	N44°52.659'	W088°09.188'					
		92	N44°52.643'	W088°09 161'					
		93	N44°52.621'	W088°09 139'					
		94	N44°52.613'	W088°09.118'					
		95	N44°52.611'	W088°09.071'					

# Eurasian Watermilfoil Survey - Mat DescriptionsProject:Oconto Falls Upper #2523Datum:

Project:	Oconto Falls Upper #2523
Date:	8/1, 8/2, & 8/3/2006
Crew:	RAL & CTM

WGS 84

07-09-14 RAL CTM OFSU 2007 Milfoil Survey form.xls

Mat #	Depth	GPS point	Lattitude	Longitude	Comments
		96	N44°52.604'	W088°09.042'	
		97	N44°52.600'	W088°09.027'	
		98	N44°52.593'	W088°09.018'	
		124	N44°52.577'	W088°09.983'	
7	0' - 5'	254	N44°53.042'	W088°10.468'	Located ~1250 yards upstream from the West Side Park boat
		255	N44°53.007'	W088°10.425'	landing on the south side of the impoundment in Oconto Falls.
		256	N44°52.996'	W088°10.411'	No Eurasian Watermilfoil was found at this location.
8	2' -5'	123	N44°52.749'	W088°09.560'	Located west of the island in the impoundment ~150 yards
		248	N44°52.745'	W088°09.483'	east of the West Side Park boat landing on the south side of
		257	N44°52.739'	W088°09.447'	the impoundment in Oconto Falls. Mat is ~600' x ~100'
		258	N44°52.736'	W088°09.433'	interspersed with other weeds. Total Mat density is ~5% -
		259	N44°52.741'	W088°09.419'	50% of which ~5% - 10% is Eurasian Watermilfoil.
		260	N44°52.751'	W088°09.402'	
		261	N44°52.755'	W088°09.383'	
		262	N44°52.758'	W088°09.358'	
		263	N44°52.759'	W088°09.320'	
		238	<u>N44°52.761'</u>	W088°09.256'	
9	2' 5'	125	N/4/850 C041	14/000800 0001	
5	2-5	125	N44 52.081	W088°08.938°	Located at the east end boat ramp nearest the hydroelectric
		99	N44 52.629	W088°08.844	plant. Mat is $\sim/5' \times \sim15'$ . Total Mat density is $\sim10 - 50\%$ of
		100	N44 02.028	VVU88°08.835	which ~50% is Eurasian Watermilfoil.
		101	N44 52.021	VV088 08.829	
10	2' - 5'	102	N44°53 343'	W/088°10 790'	I ocated in the center of the river - 2200 words whether from
		103	N44°53 353'	W088°10 845'	the West Side Park heat landing on the south side of the
		104	N44°53 353'	W088°10 882'	limpoundment in Ocente Felle. Met is 475' x 125' and is in
		105	N44°53 341'	W088°10 899'	the center of the river. Met is interpreted with other words.
		106	N44°53 336'	W088°10 871'	Total Mat density is a 60% 00% of which 40% 00% is
		107	N44°53 333'	W088°10 838'	Furasian Watermilfoil
		108	N44°53.337'	W088°10 809'	
11	2' - 5'	109	N44°53.337'	W088°10.809'	Located ~2475 vards upstream from the West Side Park boat
		110	N44°53.337'	W088°10.809'	landing on the south side of the impoundment in Oconto Falls.

Eurasian W	atermilfoil Su	rvey - Mat Desc	criptions		07-09-14 RAL CTM OFSU 2007 Milfoil Survey form vis	
Project: Date: Crew:	Oconto Falls Upper #2523 8/1, 8/2, & 8/3/2006 RAL & CTM		Datum:	WGS 84		
Mat #	Depth	GPS point 111 112 113 114 115 116	Lattitude N44°53.337' N44°53.337' N44°53.337' N44°53.337' N44°53.337' N44°53.337'	e Longitude Comme   37' W088°10.809' Mat is ~1600' x ~300' and is on th   37' W088°10.809' Mat is interspersed with other wee   37' W088°10.809' ~50% - 80% of which ~10% - 40%   37' W088°10.809' ~50% - 80% of which ~10% - 40%   37' W088°10.809' ~50% - 80% of which ~10% - 40%   37' W088°10.809' ~50% - 80% of which ~10% - 40%	<b>Comments</b> Mat is ~1600' x ~300' and is on the south side of the river. Mat is interspersed with other weeds. Total Mat density is ~50% - 80% of which ~10% - 40% is Eurasian Watermilfoil.	

