ORIGINAL

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December 27, 2013

Ms. Kimberly D Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, DC 20426

Re: Article 407 Purple Loosestrife & Eurasian Watermilfoil Inventory
North East Wisconsin Hydro LLC
Oconto Falls Upper P-2523

Dear Ms. Bose:

On behalf of N.E.W. Hydro LLC, North American Hydro herby submits the annual Purple Loosestrife (PL) and Eurasian Watermilfoil (EWM) inventory for 2013. The submittal of this report is in accordance with Article 407 of the project License.

On August 10, 2013 the Licensee conducted their annual inventory of PL and EWM within the project boundary of the Oconto Falls Upper Dam. Subsequently, the Licensee prepared a draft report of the inventory and circulated it by email to the WIDNR and USFWS, requesting comments. The Agency comments received are found in "Appendix B" of this submittal. Additionally, a summary of the 2013 report and agency comments are described below:

2013 Inventory Summary

Purple Loosestrife - The past few years (2011-2013) have shown a reduction in PL within the project boundary. In 2011, six PL sites were observed containing approximately 47 plants. In 2012, four sites were observed containing a total of 22 plants. In 2013 two separate meanders surveys were conducted. The first survey was conducted by the Oconto County AIS Coordinator, the second by the Licensee. No PL was observed in 2013 by the Licensee or Oconto County, who conducted their own meander survey in July.

Eurasian Watermilfoil - Since 2000, a total of fourteen EWM mats have been identified. All of these mats are interspersed with other types of aquatic plants. Furthermore, not all weed mats within the surveyed area contain EWM. In 2012 a significant reduction in the EWM mat sizes and densities was observed. In 2013 EWM mat size and density was generally more consistent with observances made in previous years. The maps included in "Appendix A" of the report document the extent of EWM progression upstream and the upstream limits of the survey.

2013 Agency Comments

Questions Regarding 2013 Report – The questions received from the WIDNR via email on December, 10 2013 are addressed within this submittal.

General Agency Comments Regarding AIS - Over the past couple of years the State and County Agencies have expressed a desire for the scope of License Article 407 to be broadened to include additional species of concern and allow greater flexibility to provide adaptive invasive species monitoring and control measures. The objective of this request is to modify the FERC License to address the changing needs of the watershed.

As a cooperative participant in these discussions the Licensee understands the benefits of a holistic watershed approach to managing AIS and support a more adaptive flexible approach to address AIS issues within the watershed. However, as the Licensee we have clearly expressed to the agencies our continued cooperation should not be misinterpreted as willingness to accept, added financial risk, or any responsibilities outside the project boundary.

The WIDNR email comments from December 10, 2013 suggest a possible License amendment by NAH to gain adaptability within Article 407. The DNR further recommends that priority focus move away from Purple Loosestrife and Eurasian Water milfoil, shifting the focus to species of greater concern. These written DNR comments appear to be consistent with the AIS concerns discussed on a September 24, 2013 teleconference that included representatives from the Licensee, WIDNR, USFWS, and Oconto County. The Licensee plans to continue cooperative discussions that may lead to a proposed amendment of article 407 and a more adaptive focus to address AIS issues within the watershed.

Please except this submittal as a demonstration of our compliance regarding Article 407 of our License. If you have any questions concerning this matter, please contact Jereme Klassy at North American Hydro Holdings offices at 1-920 293-4628 ext.22 or by e-mail at jklassy@nahydro.com.

Sincerely,
North American Hydro Holdings
Agent for Licensee

For Scott Klabunde
Vice President of Operations

Cc: Nick Utrup – US Fish and Wildlife Service
Cheryl Laatsch – WI Department of Natural Resources
Dwight Wiegal – Regional Manager
NAHH – File

Attachments: 2013 Purple Loosestrife and Eurasian Watermilfoil Inventory for Oconto Falls Upper

ORIGINAL

The 2013 Purple Loosestrife & Eurasian Watermilfoil Inventory

For the

Oconto Falls Upper Hydroelectric Project

Oconto County, Wisconsin

FERC Project #2523 License Article 407

Prepared For

Northeast Wisconsin Hydro, LLC

December 2013

Prepared By

North American Hydro, LLC

Neshkoro, Wisconsin 54960

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Purple Loosestrife:

On August 10, 2013, NEW Hydro, LLC (*Licensee*) performed an inventory of purple loosestrife plants at the Oconto Falls Upper Project in Oconto County, Wisconsin. The inventory is a requirement of license article 407 for the project. The method of inventory as approved and modified by the 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 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 – (PL):

In August, 2013, a meandered survey for purple loosestrife (*Lythrum salicaria*), was performed at the Oconto Falls Upper Hydroelectric Project in Oconto County, Wisconsin. The purpose of the survey is to inventory all purple loosestrife growing within the project boundaries. The survey was conducted using a boat on project waters and by land on project owned property.

Weather conditions at the time of the survey were overcast with calm winds creating fair conditions for the survey. During the survey no purple loosestrife (PL) was located within the project boundary. The Licensees findings are consistent with the findings of the Oconto County AIS directors survey conducted near the end of July 2013.

For the purple loosestrife survey, 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 and was found to contain no visible purple loosestrife plants.

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 on foot and were found to contain no visible purple loosestrife plants.

A comparison of PL quantities from all sites within the Oconto Falls project beginning in 2011 to 2012 resulted in the following;

In 2011 there were a total of six PL sites containing approximately 47 plants versus only four PL sites with only 22 plants in 2012. Of the four sites located in 2012, three contained damage from Galerucella beetles (Cella) and one was undetectable due to its location on private property. In 2013 No PL was located. In 2013 no purple loosestrife plants were observed.

At the Oconto Falls project there are approximately eighteen sites where purple loosestrife once existed with the potential that PL has been eradicated.

Eurasian Watermilfoil:

On August 10, 2013, NEW Hydro, LLC (*Licensee*) performed an inventory of Eurasian Watermilfoil plants (EWM) at the Oconto Falls Upper Project in Oconto County, Wisconsin. The inventory is a requirement of license article 407 for the project. 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 – (EWM):

Monitoring for Eurasian Watermilfoil (EWM) at the Oconto Falls Project began in 2000. Data has been collected annually on EWM distribution throughout the project. Eight transects sites, established in 2000 have been sampled annually through 2013 along with annual inspections of project waters where EWM mats/beds are visually located. Details and locations are noted in Appendix A of this report.

Annual reports have shown that EWM has been found growing in the waters of the Oconto Falls project in all survey years. Results of the 2013 survey indicate densities of EWM are consistent with previous surveys.

For the Eurasian Water milfoil survey, the Oconto Falls Upper Project was divided into three 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).

Eurasian Watermilfoil plants were found in the **tailrace** of the Oconto Falls project. An area of established plants was located below the County Highway CC Bridge. The plants were dispersed in a shallow area and were not considered a mat or bed of EWM.

Eight transects were established in the **main basin** in 2000 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 a survey 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. A (0) was used if

no EWM was found. In addition, areas of weed growth were searched while skirting the perimeter of the weed beds and shoreline.

EWM was primarily detected at sampling locations with depths less than 5'. The 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 EWM plants, 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 Transects spreadsheet in "Appendix A" of this report to show these observations.

Since 2000, a total of fourteen mats/beds containing EWM have been identified within the project boundary. No new mats were found in 2013. Mats #1 through #4 were first identified in 2000. Mat #5 was found in 2001. Mats #6 and #7 were found in 2003. Mat #8 was found in 2005. Mats #9 through #11 were found in 2006. Mat #12 was found in 2008. Mats #13 and #14 were found in 2009. All fourteen mats/beds were discovered visually. All of these mats were interspersed with other types of aquatic plants and all of them had Eurasian Watermilfoil densities as noted in the survey comments in "Appendix A" of this report. Mats #1 through #10 are located in the **main basin.** The **headwaters** contain mats #11, #12, #13, and #14.

Each year during the survey the furthest upstream infestation of EWM is noted in the annual report. Since the baseline was established in 2000, EWM has made a constant progression upstream. In 2013, the furthest upstream infestation that could be located was at the upstream end of mat 13.

The 2013 EWM weed densities, increased from 2012. Mat size, in 2013, has also increased with some EWM mats not located in 2012 reemerging in 2013.

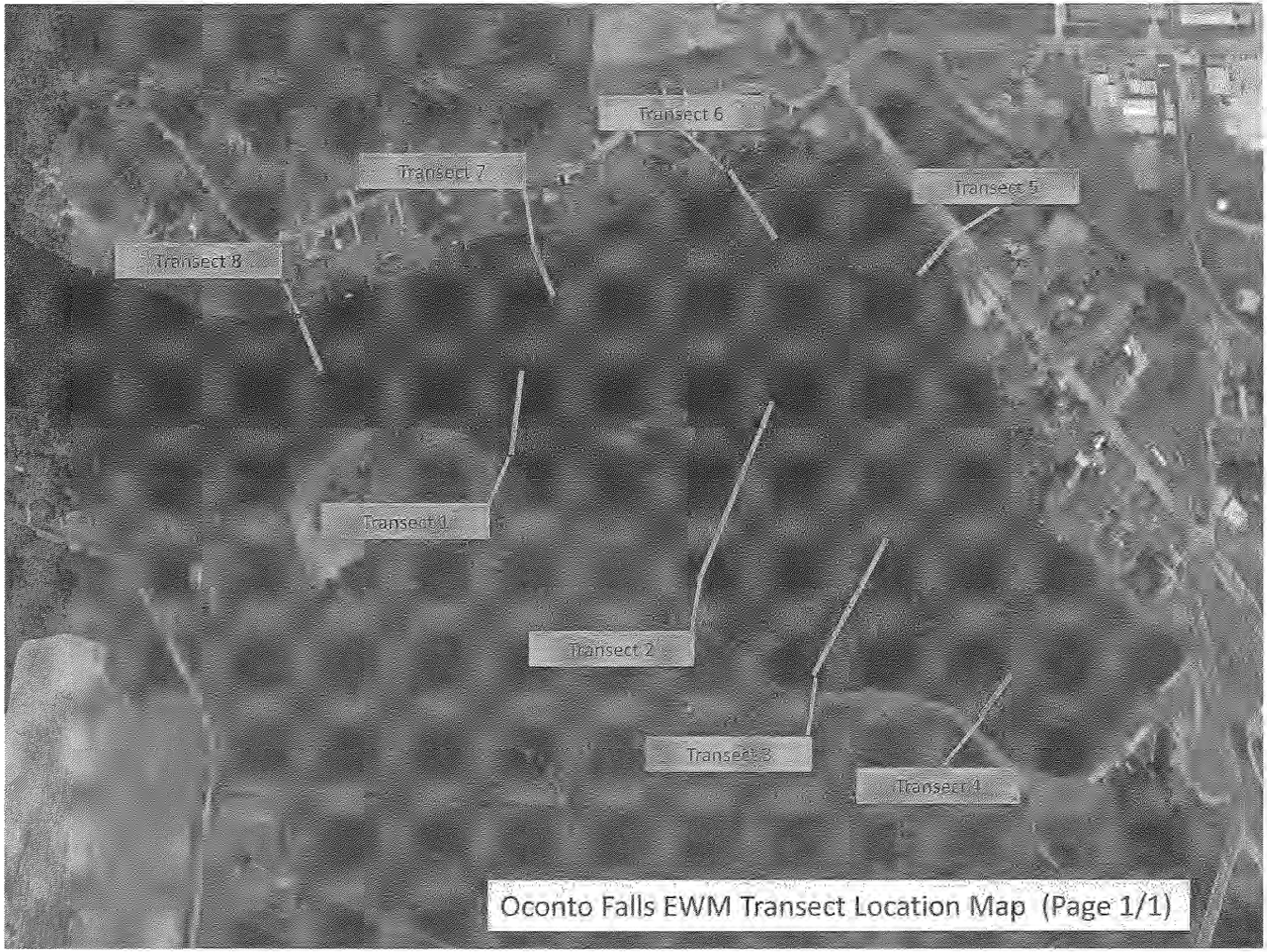
Floating segments of EWM were found during the survey, so special attention was paid to each of the boat landings. All public boat landings located within the project boundaries were inspected for EWM and all were found to have individual strands or broken fragments of EWM on the launch ramp. The canoe takeout located near the Highway 32 Bridge was checked and no EWM was found at that location.

Miscellaneous:

Previous to initially launching into Oconto Falls Upper Hydroelectric Project waters, the survey boat and survey equipment were treated with a bleach solution to prevent the possible spread of invasive species from other locations. After the survey was completed and before launching into other waters, the survey boat and survey equipment were again treated with a bleach solution. Weeds were removed from boat and trailer after each recovery and before leaving the boat launch and any water remaining in the hull was drained.

APPENDIX A

EWM Survey Results and Maps



Oconto Falls EWM Transect Location Map (Page 1/1)

Eurasian Watermilfoil Survey - Transects

Project: Oconto Falls Upper #2523 **Datum:** WGS 84

Date: 8/10/2013 **Page:** 1 of 1

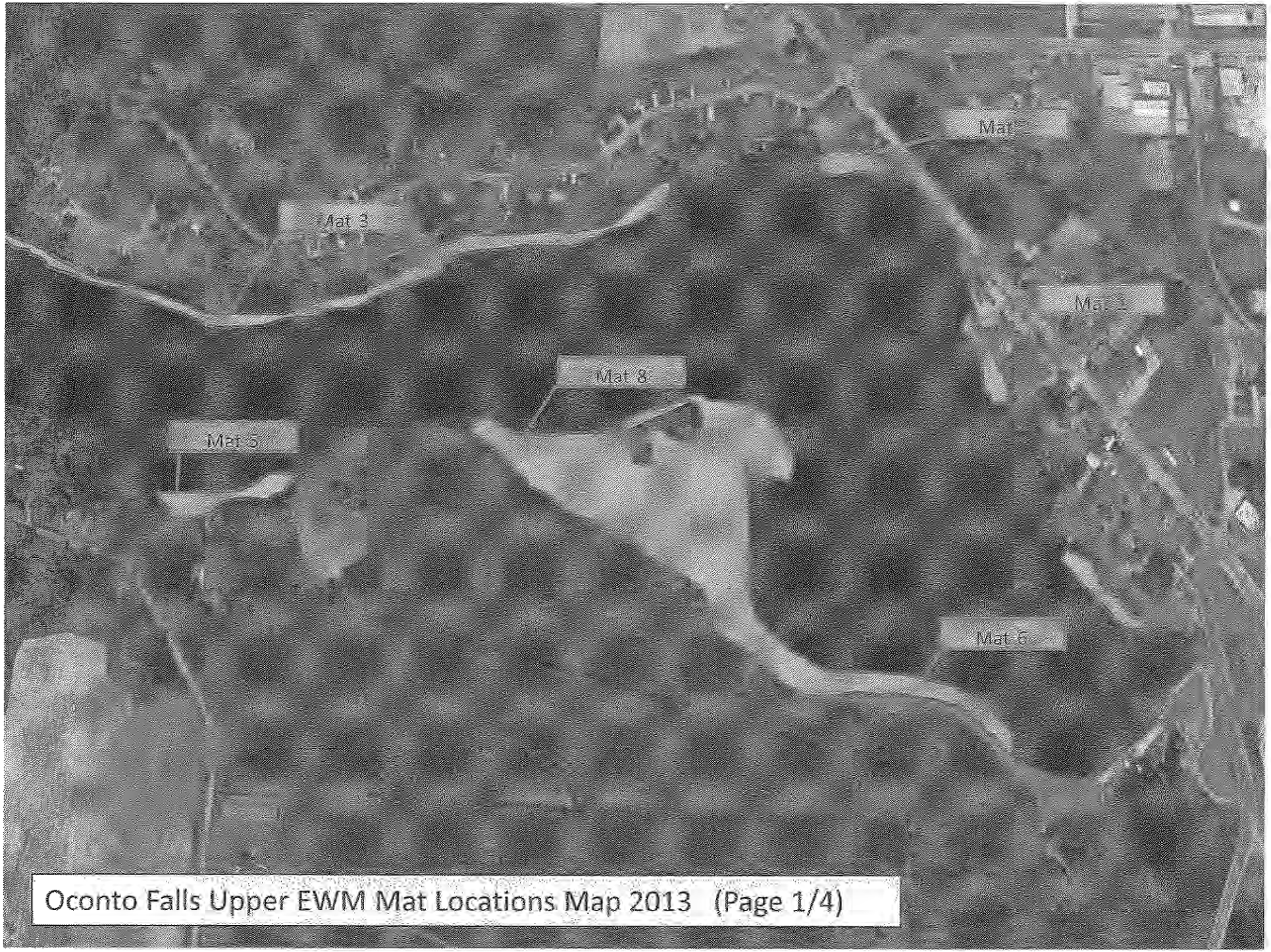
Crew: JK

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

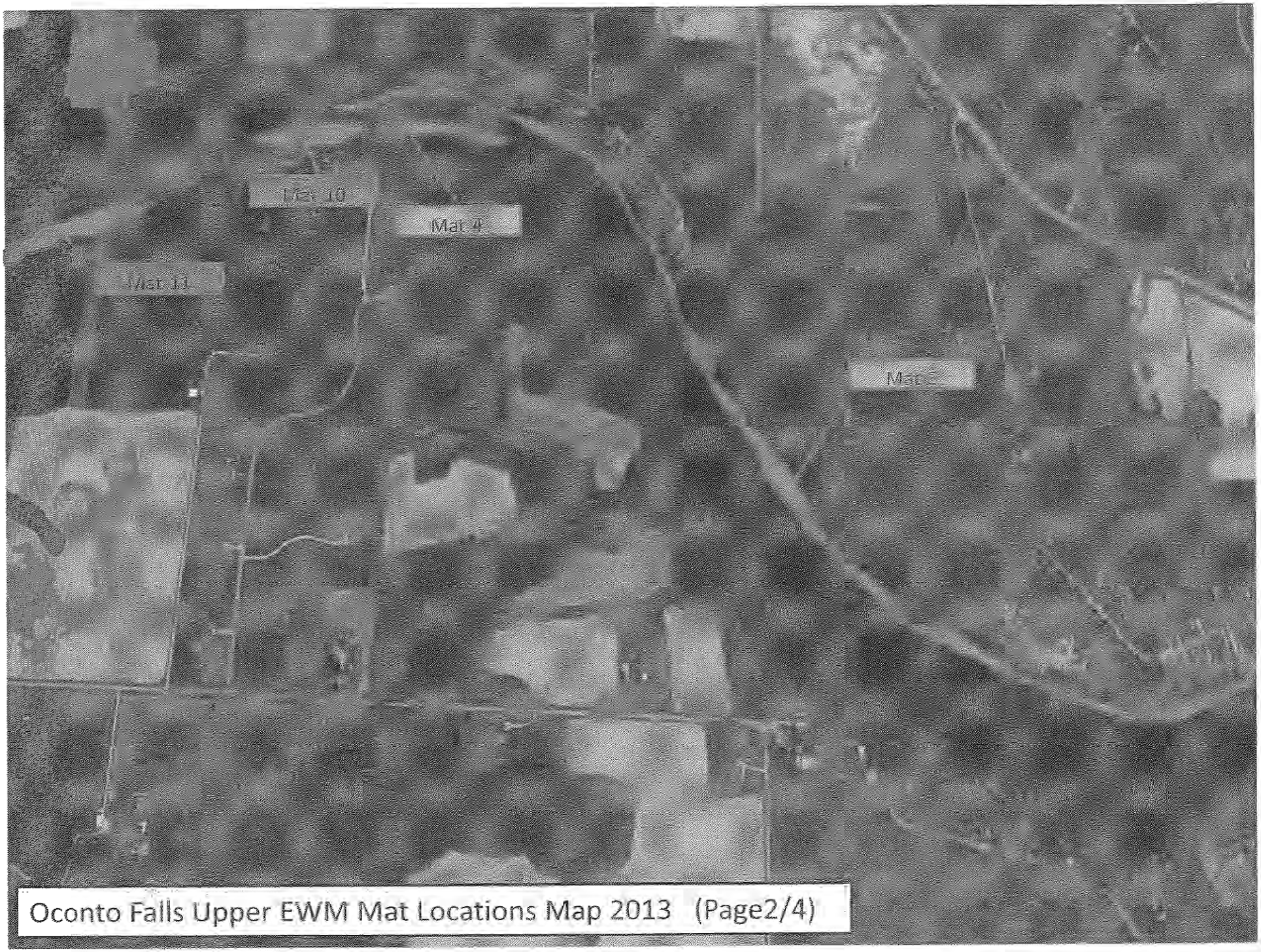
Eurasian watermilfoil floating within 25' of sample point = *

Transect #	Depth	GPS point	Lattitude	Longitude	Quad 1 (1<50% 2≥50%)	Quad 2 (1<50% 2≥50%)	Quad 3 (1<50% 2≥50%)	Quad 4 (1<50% 2≥50%)	Rating	Within 25'
1	1.5	OFUP TS01A	N44°52.7195'	W088°09.4319'	1	1	1	1	4	#
	5	OFUP TS01B	N44°52.7343'	W088°09.4323'	1	1	1	1	4	#
	10	OFUP TS01C	N44°52.7684'	W088°09.4185'	0	0	0	0	0	*
2	1.5	OFUP TS02A	N44°52.6616'	W088°09.2612'	1	1	1	1	4	
	5	OFUP TS02B	N44°52.7357'	W088°09.2024'	1	2	1	1	5	# *
	10	OFUP TS02C	N44°52.7716'	W088°09.1844'	0	0	0	0	0	*
3	1.5	OFUP TS03A	N44°52.6085'	W088°09.1567'	0	0	0	0	0	# *
	5	OFUP TS03B	N44°52.6269'	W088°09.1521'	2	2	1	1	6	# *
	10	OFUP TS03C	N44°52.6540'	W088°09.1324'	0	0	1	0	1	#
	5	OFUP TS03D	N44°52.6842'	W088°09.1117'	1	2	2	1	6	#
	10	OFUP TS03E	N44°52.7166'	W088°09.0910'	0	0	0	0	0	
4	1.5	OFUP TS04A	N44°52.5970'	W088°09.0412'	0	0	1	1	2	
	5	OFUP TS04B	N44°52.6102'	W088°09.0244'	1	1	0	1	3	#
	10	OFUP TS04C	N44°52.6183'	W088°08.9994'	0	0	0	0	0	#
5	1.5	OFUP TS05A	N44°52.8430'	W088°09.0258'	0	0	0	0	0	# *
	5	OFUP TS05B	N44°52.8408'	W088°09.0274'	2	1	1	2	6	#
	10	OFUP TS05C	N44°52.8383'	W088°09.0359'	0	1	0	0	0	#
6	1.5	OFUP TS06A	N44°52.8919'	W088°09.2443'	0	1	1	0	2	#
	5	OFUP TS06B	N44°52.8890'	W088°09.2434'	1	0	1	1	3	#
	10	OFUP TS06C	N44°52.8808'	W088°09.2402'	0	0	0	0	0	#
7	(a) 1.5	OFUP TS07A	N44°52.8467'	W088°09.4100'	0	0	0	0	0	#
	(a) 5	OFUP TS07B	N44°52.8433'	W088°09.4100'	0	0	0	0	0	#
	(a) 10	OFUP TS07C	N44°52.8400'	W088°09.4083'	0	0	0	0	0	
8	1.5	OFUP TS08A	N44°52.7965'	W088°09.6999'	0	0	0	0	0	#
	5	OFUP TS08B	N44°52.7952'	W088°09.6999'	0	0	0	0	0	#
	10	OFUP TS08C	N44°52.7887'	W088°09.6960'	0	0	0	0	0	

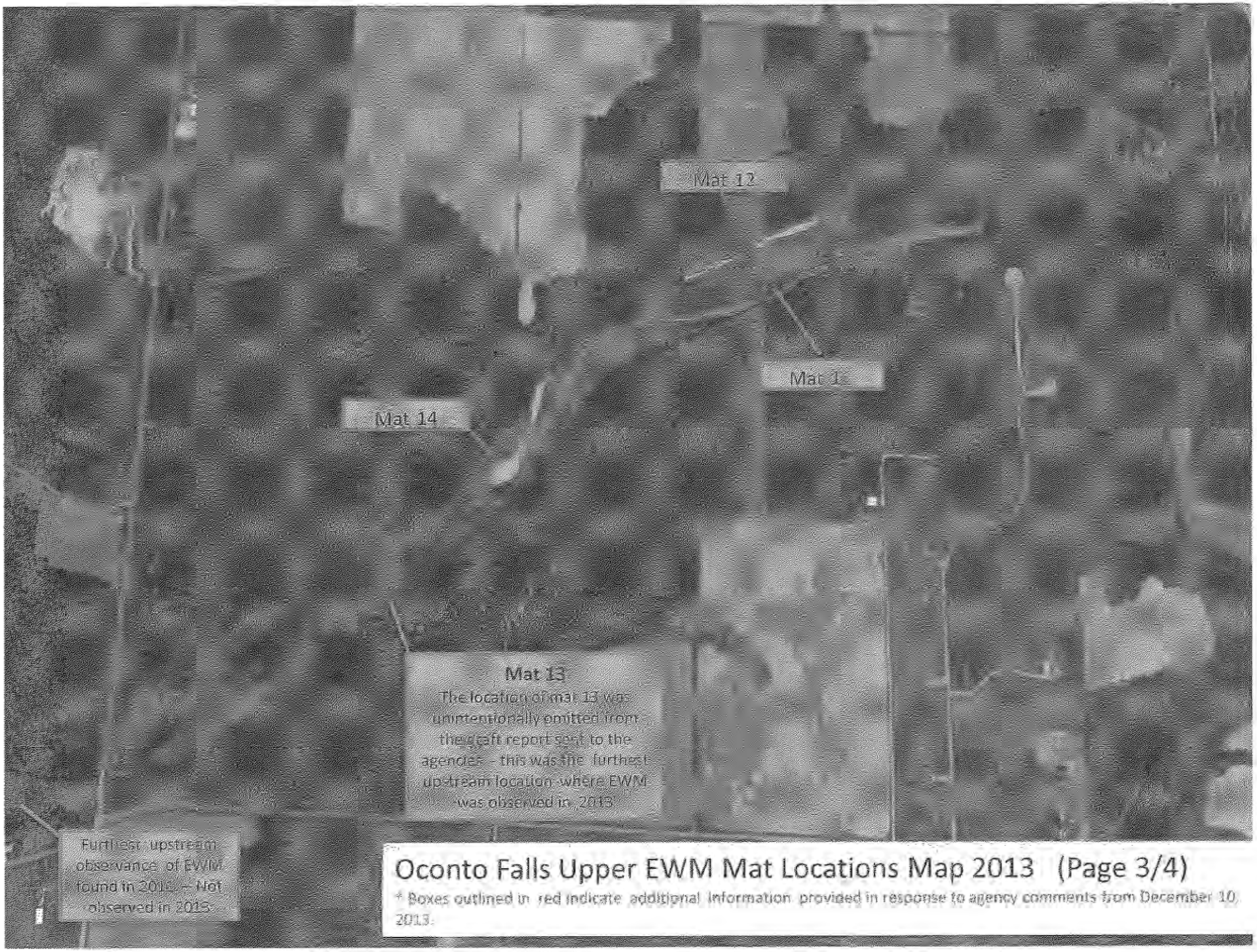
(a) = offset of ~75ft east from original transect due to willow tree fallen in water - lattitude and longitude reflect offset



Oconto Falls Upper EWM Mat Locations Map 2013 (Page 1/4)

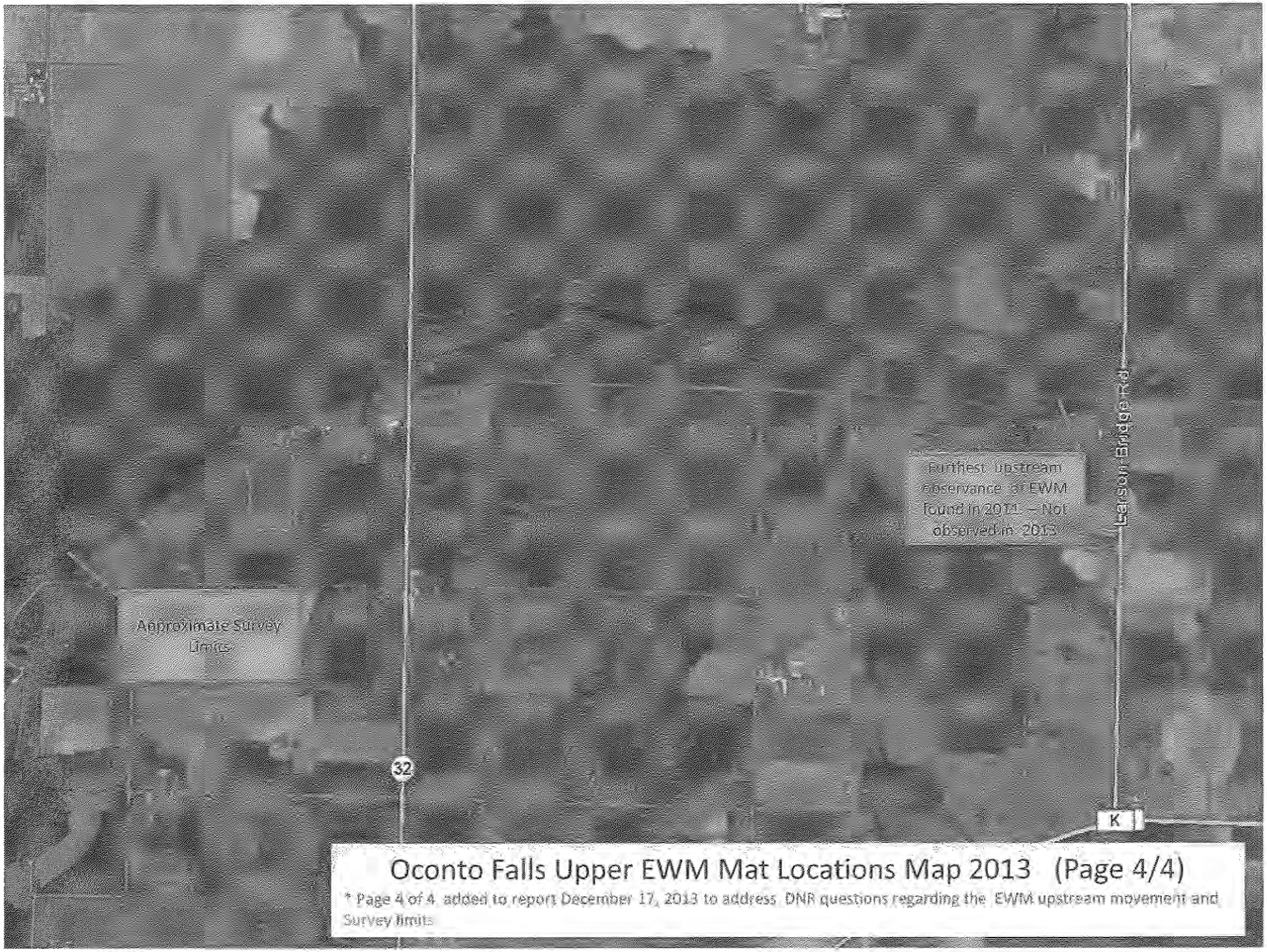


Oconto Falls Upper EWM Mat Locations Map 2013 (Page2/4)



Oconto Falls Upper EWM Mat Locations Map 2013 (Page 3/4)

* Boxes outlined in red indicate additional information provided in response to agency comments from December 10, 2013.



Oconto Falls Upper EWM Mat Locations Map 2013 (Page 4/4)

* Page 4 of 4 added to report December 17, 2013 to address DNR questions regarding the EWM upstream movement and Survey limits

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523 Datum: WGS 84

Date: 8/10/2013

Crew: JK

Note - Italicised GPS points were not used in this survey

Mat #	Depth	GPS point	Lattitude	Longitude	Comments
1	2'-5'	*OFUP EW01-A*	N44°52.7679'	W088°08.9863'	Located immediately on the east side of the swimming beach and following the shoreline to the boat launch docks to the southeast. In previous years this mat has measured appox. 180' x 20' and extended out from shore in the 2' - 5' depth range. In 2012 there was no visible mat and no visible EWM at this location. In 2013 mat is reestablished, and interspersed with plants other than EWM. EWM was aproximatly 15% of total plants
		OFUP EW01-B	N44°52.7729'	W088°08.9940'	
		OFUP EW01-C	N44°52.7892'	W088°09.0109'	
2	N/A	*OFUP EW02-A*	N44°52.8133'	W088°09.0233'	Located immediately on the west side of the swimming beach northwest to where State Hwy. 22 meets the lakeshore. The mat orignally measured appoximately 695' x 20' and extended out from shore in the 2' - 5' depth range. In 2012, no mat was located only sparse individual plants were observed. In 2013 the mat reestablished, and was interspersed with plants other that EWM. EWM was approximatly 15% of total plants
		OFUP EW02-B	N44°52.8286'	W088°09.0265'	
		OFUP EW02-C	N44°52.8437'	W088°09.0283'	
3	0' - 5'	OFUP EW03-O	N44°52.887'	W088°09.245'	Located on the north shore beginning 500 feet upstream from where State Hwy. 22 meets the lakeshore. In 2009 the survey crew divided mat #3 into two sections (Mat #3 East & Mat #3 West) to produce a more accurate report. Mat #3 East is .7 miles long x 30' wide and runs parallel to shore in the 2' - 5' depth range. Eurasian Watermilfoil was interspersed with other weeds in the area. Total mat density was 25% - 30% of which less than 10% is Eurasian Watermilfoil. Mat #3 west is 1 mile x 30' wide and runs parallel to shore in the 2' - 5' depth range. This mat is also interspersed with other weeds. Of the total plants observed at this location in 2012, less than 10% was identified as Eurasian Watermilfoil. No observed changes in 2013.
		OFUP EW03-P	N44°52.868'	W088°09.309'	
		OFUP EW03-I	N44°52.837'	W088°09.914'	
		OFUP EW03-J	N44°52.843'	W088°09.959'	
		OFUP EW03-A	N44°52.8465'	W088°09.9786'	
		OFUP EW03-B	N44°52.8541'	W088°10.0106'	
		OFUP EW03-C	N44°52.8613'	W088°10.0369'	
		OFUP EW03-D	N44°52.8675'	W088°10.0597'	
		OFUP EW03-E	N44°52.8805'	W088°10.0931'	
		OFUP EW03-F	N44°52.8952'	W088°10.1251'	
		OFUP EW03-G	N44°52.9184'	W088°10.1610'	
		OFUP EW03-H	N44°52.9358'	W088°10.1870'	
		OFUP EW03-K	N44°52.964'	W088°10.217'	
		OFUP EW03-L	N44°52.984'	W088°10.230'	
		OFUP EW03-M	N44°53.030'	W088°10.300'	
		OFUP EW03-N	N44°53.094'	W088°10.386'	
		OFUP EW03-Q	N44°53.287'	W088°10.571'	
		OFUP EW03-R	N44°53.094'	W088°10.386'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523 Datum: WGS 84

Date: 8/10/2013

Crew: JK

Note - Italicised GPS points were not used in this survey

Mat #	Depth	GPS point	Lattitude	Longitude	Comments
4	4' -5'	OFUP EW04-A	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 previous years this mat measured 2050' x 200' and is located in the center of the river. In 2012 this mat was still in place but densities of EWM were at times, nonexistent. In 2013 total mat density is 50% - 95% of which 20 - 50% is Eurasian Watermilfoil. Heaviest concentrations of Eurasian Watermilfoil are located on the south and east side of the mat. Only the southeastern tip of the mat had densieties of EWM reaching 50%.
		OFUP EW04-B	N44°53.1284'	W088°10.4607'	
		OFUP EW04-C	N44°53.1601'	W088°10.4738'	
		OFUP EW04-D	N44°53.2086'	W088°10.5103'	
		OFUP EW04-E	N44°53.1968'	W088°10.5389'	
		OFUP EW04-F	N44°53.1701'	W088°10.5475'	
		OFUP EW04-G	N44°53.1220'	W088°10.5007'	
		OFUP EW04-H	N44°53.1081'	W088°10.4868'	
		OFUP EW04-I	N44°53.233'	W088°10.533'	
		OFUP EW04-J	N44°53.256'	W088°10.555'	
		OFUP EW04-K	N44°53.277'	W088°10.585'	
		OFUP EW04-L	N44°53.303'	W088°10.650'	
		OFUP EW04-M	N44°53.303'	W088°10.791'	
5	0' - 5'	*OFUP EW05-H*	N44°52.778'	W088°10.002'	This mat is located west of the boat landing at West Side Park in Oconto Falls. The mat can be found on the south side of the impoundment and extends 350' x 50' upstream (west) of the boat landing. In 2013 Eurasian Watermilfoil was observed growing on the outside edge of an existing mat of submergent weed growth in the 3' - 6' depth range. Total mat density is 30% - 60% of which 20% - 35% is Eurasian Watermilfoil.
		OFUP EW05-A	N44°52.756'	W088°09.898'	
		OFUP EW05-B	N44°52.743'	W088°09.859'	
		OFUP EW05-C	N44°52.735'	W088°09.810'	
		OFUP EW05-D	N44°52.720'	W088°09.750'	
		OFUP EW05-E	N44°52.715'	W088°09.702'	
		OFUP EW05-F	N44°52.723'	W088°09.673'	
		OFUP EW05-G	N44°52.728'	W088°09.643'	
6	2' -5'	OFUP EW06-A	N44°52.765'	W088°09.253'	Located southeast of the island in the impoundment 600 yards east of the West Side Park boat landing and on the south side of the impoundment in Oconto Falls. Mat is 2500' x 200' and has not changed in size in 2013. The mat is interspersed with other weeds. Total mat density is 30% - 70% of which 25% - 35% is Eurasian Watermilfoil. Mat #6 remains joined with mat #8 to form one continuous mat.
		OFUP EW06-B	N44°52.759'	W088°09.218'	
		OFUP EW06-C	N44°52.746'	W088°09.186'	
		OFUP EW06-D	N44°52.736'	W088°09.154'	
		OFUP EW06-E	N44°52.718'	W088°09.125'	
		OFUP EW06-F	N44°52.700'	W088°09.109'	
		OFUP EW06-G	N44°52.684'	W088°09.094'	
		OFUP EW06-H	N44°52.681'	W088°09.095'	
		OFUP EW06-I	N44°52.680'	W088°09.134'	
		OFUP EW06-J	N44°52.686'	W088°09.172'	
		OFUP EW06-K	N44°52.680'	W088°09.184'	
		OFUP EW06-L	N44°52.671'	W088°09.183'	
		OFUP EW06-M	N44°52.650'	W088°09.146'	
		OFUP EW06-N	N44°52.629'	W088°09.119'	
		OFUP EW06-O	N44°52.623'	W088°09.088'	
		OFUP EW06-P	N44°52.619'	W088°09.051'	
		OFUP EW06-Q	N44°52.623'	W088°09.027'	
		OFUP EW06-R	N44°52.608'	W088°09.005'	
		OFUP EW06-S	N44°52.580'	W088°08.986'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523 Datum: WGS 84

Date: 8/10/2013

Crew: JK

Note - Italicised GPS points were not used in this survey

Mat #	Depth	GPS point	Lattitude	Longitude	Comments
7	0' - 5'	OFUP EW07-A	N44°53.042'	W088°10.468'	Located 1250 yards upstream from the West Side Park boat landing on the south side of the impoundment in Oconto Falls. This mat could not be located in 2007, 2008, 2009, 2010, 2011, 2012 and 2013
		OFUP EW07-B	N44°53.007'	W088°10.425'	
		OFUP EW07-C	N44°52.996'	W088°10.411'	
8	2' -5'	*OFUP EW08-A*	N44°52.743'	W088°09.595'	This mat is located west of the island in the impoundment and 150 yards east of the West Side Park boat landing. The mat measures approximately 1100 x 100' and is interspersed with other weeds. Total mat density is 30% - 70% of which 25% - 35% is Eurasian Watermilfoil. Mat #8 remains joined with mat #6 to form one continuous mat.
		OFUP EW08-B	N44°52.755'	W088°09.547'	
		OFUP EW08-C	N44°52.761'	W088°09.488'	
		OFUP EW08-D	N44°52.763'	W088°09.407'	
		OFUP EW08-E	N44°52.766'	W088°09.313'	
		OFUP EW08-F	N44°52.765'	W088°09.253'	
9	2' - 5'	*OFUP EW09-A*	N44°52.623'	W088°08.831'	Located at the boat ramp northeast of the hydroelectric plant. Previously measuring 515' x 15', this mat could not be found in 2012. in 2013 no mat was observed but sparse individual Eurasian Watermilfoil plants could be seen in the area.
		OFUP EW09-B	N44°52.631'	W088°08.852'	
		OFUP EW09-C	N44°52.651'	W088°08.891'	
		OFUP EW09-D	N44°52.684'	W088°08.936'	
		OFUP EW09-E	N44°52.707'	W088°08.955'	
		OFUP EW09-F	N44°52.702'	W088°08.955'	
10	2' - 5'	*OFUP EW10-A*	N44°53.343'	W088°10.790'	Located in the center of the river 2200 yards upstream from the West Side Park boat landing in Oconto Falls. The size of mat #10 has remained approximately 985' x 610' since 2009 and was interspersed with other weeds. In 2012, no mat could be found only small pockets of Eurasian Watermilfoil with a density of less than 10%. I 2013 mat 10 reemerged with EWM making up less than 20% of the total plant population
		OFUP EW10-B	N44°53.353'	W088°10.845'	
		OFUP EW10-C	N44°53.353'	W088°10.882'	
		OFUP EW10-D	N44°53.341'	W088°10.899'	
		OFUP EW10-E	N44°53.336'	W088°10.871'	
		OFUP EW10-F	N44°53.333'	W088°10.838'	
		OFUP EW10-G	N44°53.337'	W088°10.809'	
		OFUP EW10-H	N44°53.315'	W088°10.679'	
		OFUP EW10-I	N44°53.320'	W088°10.814'	
11	2' - 5'	*OFUP EW11-A*	N44°53.305'	W088°10.960'	Located 2475 yards upstream from the West Side Park boat landing on the south side of the impoundment in Oconto Falls. In previous years, this mat had reached a length of 4400' x 30' and was located on the south side of the river. In 2012 only 237' x 30' could be considered an EWM mat and was interspersed with other weeds. In 2013 total mat density is 20% - 40% of which 15% - 20% is Eurasian Watermilfoil.
		OFUP EW11-B	N44°53.323'	W088°10.979'	
		OFUP EW11-C	N44°53.332'	W088°11.055'	
		OFUP EW11-D	N44°53.327'	W088°11.134'	
		OFUP EW11-E	N44°53.304'	W088°11.228'	
		OFUP EW11-F	N44°53.259'	W088°11.325'	
		OFUP EW11-G	N44°53.245'	W088°11.329'	
		OFUP EW11-H	N44°53.246'	W088°11.372'	
		OFUP EW11-I	N44°53.156'	W088°11.719'	
		OFUP EW11-J	N44°53.309'	W088°10.911'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523 Datum: WGS 84

Date: 8/10/2013

Crew: JK

Note - Italicised GPS points were not used in this survey

Mat #	Depth	GPS point	Lattitude	Longitude	Comments
12	2' - 5'	*OFUP EW12-A*	N44°53.293'	W088°11.320'	Located 2880 yards upstream from the West Side Park boat landing in Oconto Falls. In past years this mat measured approximatley 738' x 30' and is on the north side of the river at a power line crossing. In 2012 the length of this mat was only 398' and it was interspersed with other weeds. Total mat density was 35% - 85% of which 50% - 60% is Eurasian Watermilfoil. In 2013 was approximatly 500' in length with similar mat density as in 2012. EWM makes up approximatly 50% if the total plant population
		OFUP EW12-B	N44°53.274'	W088°11.358'	
		OFUP EW12-C	N44°53.259'	W088°11.398'	
		OFUP EW12-D	N44°53.243'	W088°11.474'	
13	2' - 5'	OFUP EW13-A	N44°53.003'	W088°11.943'	The furthest EWM mat upriver to date. The mat is located approx. 560 yards downstream from the County K. highway bridge and on the the south side of the river. In previous years this mat measured 807' x 30' wide and ran parallel to shore in the 2' - 5' depth range. In 2013 it measured approsimatly 400' x 30'. Total mat density was 50% - 60% of which 10% - 40% is Eurasian Watermilfoil.
		OFUP EW13-B	N44°52.995'	W088°12.027'	
		OFUP EW13-C	N44°52.996'	W088°12.074'	
		OFUP EW13-D	N44°52.997'	W088°12.128'	
14	2' - 5'	OFUP EW14-A	N44°53.184'	W088°11.726'	Mat #14 located 1158 yards downstream from the County K. highway bridge on the the north side of the river. In previous years mat #14 measured approximately 509' x 30' wide and ran parallel to shore in the 2' - 5' depth range. This mat is interspersed with other weeds. In 2013, mat #14 measured aproximatly 300 x 30'. Total mat density is 30% - 50% of which 30% - 40% is Eurasian Watermilfoil.
		OFUP EW14-B	N44°53.116'	W088°11.782'	
		OFUP EW14-C	N44°53.113'	W088°11.787'	

APPENDIX B

Agency Correspondence

- August 13, 2013 email from Oconto County (Amanda Strick)
- September 5, 2013 email from Oconto County (Amanda Strick)
- September 24, 2013 Teleconference Agenda and Meeting notes on AIS from (Amanda Strick) Oconto County
- November 13, 2013 FWS (Nick Utrup) "No Comment" response to report
- December 10, 2013 WIDNR (Cheryl Latch) FW: email response comments from WIDNR (Andy Hudak)

Jereme Klassy

From: Amanda Strick <amanda.strick@co.oconto.wi.us>
Sent: Tuesday, August 13, 2013 9:15 AM
To: Jereme Klassy
Subject: FW: Oconto Falls Upper 2012 PL and EWM inventory
Attachments: SKMBT_C45112112714260.pdf.pdf

Jereme,

On July 17th, I there was an AIS early detection survey conducted by myself and the WDNR, it was an interesting and educational exploration saw lots of EWM, curly leaf pondweed, zebra mussels, (no Purple Loosestrife), and made some new discoveries, the most troubling being Flowering Rush (pressed and sent to the Freckmann Herbarium by the WDNR). Flowering Rush is a resilient and aggressive AIS. I am currently making contacts with various groups who have dealt with Flowering Rush in an attempt to find the best control method. I was curious about the resources that North American Hydro has for the control of the AIS on the Oconto Falls impoundment. I will be in the office until 3:30p today, periodically away from my desk but will return calls/emails as soon as I return.

Thank you,

Amanda Strick <'}}}><{
amanda.strick@co.oconto.wi.us
Aquatic Invasive Species Coordinator
Oconto County Land Conservation Department
111 Arbutus Ave.
Oconto, WI 54153
Office:920-834-7155
Fax: 920-834-6406

A lake is the landscape's most beautiful and expressive feature. It is earth's eye; looking into which the beholder measures the depth of his own nature.
-Henry David Thoreau

From: Amanda Strick
Sent: Monday, January 07, 2013 9:22 AM
To: Steltenpohl, Jennifer R - DNR (Jennifer.Steltenpohl@wisconsin.gov)
Subject: FW: Oconto Falls Upper 2012 PL and EWM inventory

PL project potential in Oconto Falls.

From: Hudak, Andrew J - DNR [mailto:Andrew.Hudak@wisconsin.gov]
Sent: Wednesday, December 05, 2012 1:59 PM

Jereme Klassy

From: Amanda Strick <amanda.strick@co.oconto.wi.us>
Sent: Thursday, September 05, 2013 3:12 PM
To: Jereme Klassy; Steltenpohl, Jennifer R - DNR (Jennifer.Steltenpohl@wisconsin.gov); Nordin, Brenda L - DNR (Brenda.Nordin@Wisconsin.gov); Hudak, Andrew J - DNR (Andrew.Hudak@wisconsin.gov); 'Cheryl.laatsch@wisconsin.gov'; 'Nick_Utrup@fws.gov'; Motiff, Ryan M - DNR (Ryan.Motiff@wisconsin.gov)
Cc: Ken Dolata
Subject: Oconto Falls Pond Aquatic Invasive Species

Good afternoon all,

On July 17th, 2013, the WDNR conducted an early detection survey on the Oconto Falls Pond. The crew consisted of Jennifer Steltenpohl, WDNR Water Resources Management Specialist, Ryan Motiff, WDNR LTE, and myself. The survey revealed a potential species of concern, flowering rush, samples were taken on July 17th, additional samples were collected on August 27th, these samples have been sent to the Freckmann Herbarium at UW-Steven's Point to be verified as flowering rush. The discovery of potential flowering rush prompted recent conversations with the North American Hydro, LLC. Under current FERC permits the USFWS and WDNR require the North American Hydro, LLC to conduct AIS surveys on the Oconto Falls Pond. The North American Hydro, LLC has expressed interest in discussing and possible revision of current requirements to potentially shift focus from surveying to control efforts. I would like to propose that these discussions continue with the Oconto County Land Conservation Division, the WDNR, and the USFWS and to invite everyone to a phone conference the week of September 23rd, the last week of this month, to discuss how AIS on these types of waterways can be addressed.

Please respond to survey to assist with scheduling and availability: http://www.surveymonkey.com/s/ZDKWHPT

Thank you,

Amanda Strick <'}}}><{
amanda.strick@co.oconto.wi.us
Aquatic Invasive Species Coordinator
Oconto County Land Conservation Department
111 Arbutus Ave.
Oconto, WI 54153
Office:920-834-7155
Fax: 920-834-6406

A lake is the landscape's most beautiful and expressive feature. It is earth's eye; looking into which the beholder measures the depth of his own nature.
-Henry David Thoreau

OCONTO COUNTY

a place for you

Amanda Strick - Aquatic Invasive Species Coordinator, Oconto County Conservation Division, 111 Arbutus Ave., Oconto, WI 54153

Meeting
Tuesday, September 24, 2013
2:00pm to 3:00pm

Amanda Strick
amanda.strick@co.oconto.wi.us

To Join Call: 920-834-7192

AGNEDA TOPICS

1- Welcome and Introductions
Present: Brenda Nordin- WDNR, Water Resources Management Specialist for Northeast Wisconsin. Andrew Hudak-WDNR, Water Resource Management Specialist for Northeast Wisconsin (streams and FERC). Jereme Klassy- Regulatory/Compliance for North American Hydro, Nick Utrup- U.S. Fish and Wildlife Service, Jennifer Steltenpohl- Aquatic Invasive Species Specialist

2- Jereme Klassy Summary
a.) Oconto Falls Upper Hydroelectric Project
North American Hydro monitors purple loosestrife and Eurasian water milfoil for the Upper Oconto Falls Pond under the company's current FECR requirements.
b.) Discuss possibility for alterations
North American Hydro is interested in exploring the ability to amend their FERC requirements to allow for EWM and Purple Loosestrife monitoring every 5 years. In addition, NAH would like to provide alternative monitoring/control efforts during years not monitoring for these two species. Andy was asked to write a comment in regards to the WDNR's position for the type of monitoring/ usefulness of the current data that the North American Hydro is collecting under their current FERC requirements.

3- Amanda Strick

a.) 2013 Early Detection Monitoring on Oconto Falls Pond

-Potential Flowering Rush in the system

Discussion about flowering rush in the Oconto River system/watershed. Brenda raised the question 'is this a species of concern if there has been a known population in the Machickanee for over 30 years?' Andy suggested completing a watershed assessment to better understand the extent of the flower rush population. This will be done utilizing the Project RED protocol. Amanda and Jennifer will work collaboratively to develop a project scope for this assessment.

-AIS prioritization on riverine systems

4- DNR

-Feasibility of seeking funding for treatment of Flowering Rush

To be determined

-Feasibility of Northeast Wisconsin Hydro, LLC using funding currently allocated for FERC required Purple Loosestrife and EWM surveys as possible grant match toward AIS control efforts on the Oconto Falls Pond

Suggestion from Jereme that this group could set up a yearly meeting to discuss collaborative resource management and stakeholder needs.

5- Other discussion points

6- Adjourn

Jereme Klassy

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>
Sent: Tuesday, December 10, 2013 9:47 AM
To: Jereme Klassy
Subject: FW: OFUP Invasive Survey (Draft)

Here are the agency comments. Please let me know if you would like to discuss. Thanks

Cheryl Laatsch
Statewide FERC Coordinator
Wisconsin Dept of Natural Resources
N7725 Hwy 28
Horicon WI 53032
(T) 920-387-7869 (Fax) 920-387-7888
Cheryl.laatsch@wisconsin.gov

From: Hudak, Andrew J - DNR
Sent: Tuesday, December 10, 2013 9:43 AM
To: Laatsch, Cheryl - DNR
Cc: Nordin, Brenda L - DNR
Subject: RE: OFUP Invasive Survey (Draft)

Sorry about the confusion this morning. Here are the comment and questions for this report.
Questions:
How has the trend of EWM been documented to move upstream over the last couple of years? Where and what has been the extent of looking upstream?
Are the plant beds identified only EWM beds or are the plant beds with EWM? Are there other plant beds out there that do not contain EWM?

Comments:
The report from 2013 is acceptable and adequately documents the requirements within the licensee. I would advocate that in 2014 attention was given to address the population and distribution of Flowering Rush within the Oconto Falls Upper Hydro project area and the Lower Oconto River Watershed system. This is an invasive species of concern and it appears adequate attention has been given to purple loosestrife in the project areas to maintain control. Flowering rush in a non-native invasive species that has been present in the system for quite some time and no population or distribution information is available for this species. I would encourage NAH to provide adaptive surveillance for this species in cooperation with WDNR-AIS Program and Oconto County.

If NAH seeks to pursue a formal license amendment to gain the adaptive ability to address aquatic invasive species of regional concern and remove focus away from PLS and EWM I would support this amendment. Yearly EWM transect surveys and PLS meander surveys currently provide little to no value for the state and county to address AIS. I would prefer at a minimum to see a 5-year point intercept aquatic survey to monitor all submergent vegetation to address trends in the system and also identify potential new AIS species. I would also support a shoreline meander survey every other year unless a species specific plan was in place in cooperation with WDNR or Oconto County to address local or regional AIS concerns. This amendment would provide a holistic approach to address multiple AIS species within the project boundary and within the Oconto River System.

From: Laatsch, Cheryl - DNR
Sent: Wednesday, December 04, 2013 8:01 AM
To: Hudak, Andrew J - DNR
Cc: Nordin, Brenda L - DNR
Subject: FW: OFUP Invasive Survey (Draft)

See below. I don't recall seeing any comments yet, but we have some time. Thanks
Cheryl

From: Jereme Klassy [mailto:jklassy@nahydro.com]
Sent: Tuesday, December 03, 2013 3:12 PM
To: Laatsch, Cheryl - DNR
Subject: FW: OFUP Invasive Survey (Draft)

Just a reminder that I am awaiting comments. Nick has no comments. Thanks

From: Jereme Klassy
Sent: Wednesday, November 13, 2013 3:31 PM
To: 'Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov)'; Nick_Utrup@fws.gov
Subject: OFUP Invasive Survey (Draft)

Cheryl and Nick,

Please find attached the 2013 PL and EWM inventory that is required as a part of our FERC license. The 2013 findings for EWM show a slight increase from what was observed 2012 but overall appear to be similar to what was observed in past years. In 2013 PL was not observed within the project boundary by the Licensee. Additionally the Oconto County AIS supervisor conducted her own survey of the watershed and didn't observe any PL in 2013.

I am requesting that you review the attached draft and provide any comments via email prior to December 15, 2013. Your comments will be included with the Final submittal to the FERC. If you do not have any comments please indicate that in a brief email as well. Thank you for your attention to this matter.

Jereme Klassy
Regulatory/Compliance
NORTH AMERICAN HYDRO
North American Hydro
116 State Street, P.O. Box 167
Neshkoro, WI 54960 USA

Tel: 920-293-4628 ext. 322
Cell: 920-765-0713
E-mail: jklassy@nahydro.com

Jereme Klassy

From: Utrup, Nick <nick_utrup@fws.gov>
Sent: Wednesday, November 13, 2013 3:40 PM
To: Jereme Klassy
Cc: Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov); Lisa Mandell
Subject: Re: OFUP Invasive Survey (Draft)

Hi Jereme,

The USFWS will not be providing comments on the draft invasive report for Oconto Falls Upper Hydro and will defer to WDNR.

Thanks,

Nick

Nicholas J. Utrup
U.S. Fish and Wildlife Service
Wisconsin/Minnesota Ecological Services Field Office
4101 American Boulevard East
Bloomington, MN 55425

Office: 612-725-3548 Ext. 2204
Cell: 920-530-9937
FAX: 612-725-3609
Email: Nick_Utrup@fws.gov

On Wed, Nov 13, 2013 at 3:30 PM, Jereme Klassy <jklassy@nahydro.com> wrote:

Cheryl and Nick,

Please find attached the 2013 PL and EWM inventory that is required as a part of our FERC license. The 2013 findings for EWM show a slight increase from what was observed 2012 but overall appear to be similar to what was observed in past years. In 2013 PL was not observed within the project boundary by the Licensee. Additionally the Oconto County AIS supervisor conducted her own survey of the watershed and didn't observe any PL in 2013.

I am requesting that you review the attached draft and provide any comments via email prior to December 15, 2013. Your comments will be included with the Final submittal to the FERC. If you do not have any comments please indicate that in a brief email as well. Thank you for your attention to this matter.

Jereme Klassy

Regulatory/Compliance

North American Hydro

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