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-Filed By: North East Wisconsin Hydro, LLC

-Signed By: Melissa Rondou

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E-File Submission

January 31, 2017

Ms. Kimberly D. Bose, Secretary
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: Oconto Falls Upper FERC Project P-2523
NEW Hydro, LLC
Article 407 – 2016 Purple Loosestrife – Eurasian Watermilfoil Inventory

Dear Secretary:

On behalf of NEW Hydro, LLC (Licensee), Eagle Creek Renewable Energy (ECRE) hereby submits the 2016 Annual Purple Loosestrife and Eurasian Watermilfoil Inventory in accordance with Article 407 (Purple Loosestrife-Eurasian Watermilfoil Monitoring Plan) of the Project License. This report will be e-filed; no paper copies will be mailed to the Commission's address.

The Wisconsin Department of Natural Resources (WDNR) has requested the Licensee to identify new infestations of exotic, non-native invasive species at the project. The Licensee plans to partner with the WDNR to conduct the 2017 inventory survey in August. The 2017 partnership will change the sampling methodology targeting the identification of new infestations. The monitoring will be imperative to aid the WDNR with rapid response protocols to slow the spread or eradicate new infestation.

With the conclusion that the sampling methodology and monitoring plan will be changing, the Licensee requests to extend the 2017 final report due date to March 1, 2018. The extension will allow the Licensee extra time to incorporate the revised sampling methodology and address agency comments.

Should you have any questions regarding this submittal, please contact Ms. Melissa Rondou with Eagle Creek Renewable Energy at 920-293-4628 ext. 347 or email at melissa.rondou@eaglecreekre.com.

Sincerely,
Eagle Creek Renewable Energy
Agent for Licensee(s)

For 
Mr. Robert A. Gates
Executive VP of Operations

Attached: Oconto Falls Upper 2016 Final Purple Loosestrife-Eurasian Watermilfoil Inventory

Cc: Cheryl Laatsch, WDNR
Nick Utrup, US FWS

File: 16-12-31_LC_ECRE_OFUP_Final 2016 PL-EWM Inventory

Eagle Creek Renewable Energy - Midwest Operations
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FINAL
2016 Purple Loosestrife & Eurasian
Watermilfoil Inventory
For the
Oconto Falls Upper Hydroelectric Project
Oconto County, Wisconsin
FERC Project P-2523 NATDAM ID WI00763
License Article 407



Prepared for
N.E.W. Hydro, LLC

December 31, 2016

Prepared by:
Eagle Creek Renewable Energy
116 North State Street – P.O. Box 167
Neshkoro, WI 54960-0167

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Goals and Objectives:

Article 407 of the Federal Energy Regulatory Commission (FERC) License for the Oconto Falls Hydroelectric Project requires the Licensee to monitor and control Purple Loosestrife and Eurasian Watermilfoil in project waters. The plan includes the method of monitoring, the frequency of monitoring, provisions to cooperate in the control/elimination of these vegetative species if deemed necessary by the agencies and documentation of transmission of monitoring data to the Wisconsin Department of Natural Resources (WDNR) and the U.S. Fish and Wildlife Service (FWS).

The primary objectives:

- Identify and determine Purple Loosestrife stand area, percent cover, stem density, and plant density.
- Inventory all areas of the impoundment and tailwater supporting the growth of submerged vegetation surveyed for Eurasian Watermilfoil
- Determine perimeter of the bed, mat density and overall mat thickness for each Eurasian Watermilfoil bed.

Purple Loosestrife:

On August 13, 2016, 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 – Purple Loosestrife (PL):

On August 13, 2016 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 annually. 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 fair with overcast cloud cover early in the morning. Conditions shifted to sunny with moderate wind speeds (ideal conditions for the survey) in the mid-morning, afternoon and into the evening hours. During the survey, purple loosestrife (PL) was located within the project boundary, but densities were reduced from previous year's survey totals.



Photo of weather conditions during the 2016 survey

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. Eight occurrences of purple loosestrife plants were observed in this area. Details and locations are noted in Appendix A of this report.

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 2016 resulted in the following;

In 2011 there were a total of six PL sites containing approximately 47 plants versus only four PL sites and 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, 2014, and 2015 no PL was located. During the 2016 inventory, a digital camera was used to document occurrences of purple loosestrife as noted in the survey comments at the end of this report.

At the Oconto Falls project there were approximately eighteen sites where purple loosestrife once existed with the current potential that PL has been almost completely eradicated. To this point, PL densities continue to decline in size from the baseline survey conducted in 2000. Hand pulling of PL plants, chemical treatment (on project owned lands), and the established biological control in the form of Cella beetles have all combined to be successful in controlling PL at the project. However, it has been noted that the licensee has no control in preventing the spread of PL from outside sources. An example of potential spreading could be the large amount of PL growing in the State Highway 32 right-of-way just south of the Oconto River Bridge. Water run-off in this area appears to flow to the river, which could bring PL see into the impoundment and continue the spread of this invasive species within the river system.

Eurasian Watermilfoil (EWM):

On August 13, 2016, 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 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. The eight transect sites that were established in 2000 have been sampled annually through 2016. Inspections of project waters where EWM mats/beds are visually located also occur on an annual basis. Details and locations are noted in Appendix B 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.

For the Eurasian Watermilfoil 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. The 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 assigned 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 B 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 B

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 2016, the furthest upstream infestation that could be located was just upstream of Larson Bride Road.

The 2016 EWM weed densities were decreased from observations in 2014 and 2015. In 2016, mat size shows a lesser consistency than years past with the exception of 2012 when a significant decrease in EWM density and mat size was observed.

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. Any water remaining in the hull was drained.

APPENDIX A

Purple Loosestrife Survey Results and Maps

Purple Loosestrife Survey**Project:** Oconto Falls Upper #2523**Datum:** WGS 84**Date:** 8/13/2016**Crew:** MRondou & Jklassy

GPS point	Latitude	Longitude	Plant Height	Stand Area	Beetle Damage	Comments
OFUP PL001	N44°53.0397'	W088°13.7630'	N/A	N/A	N/A	First observed in 2000. 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. In 2012, only 2 plants were located of which one was pulled. No treatment on remaining plants due to established Galerucella beetle population. The number of plans and plant size has dropped considerably compared to last year. the plants are all located on project owned lands. Video tape in 2000. Video taken of damaged plants in 2005. Galerucella beetles were positively identified on plants each year from 2007-2012. All plants sprayed with herbicide each year from 2003-2011. No herbicide spraying in 2012. No plants observed in 2013, 2014, 2015 and 2016.
OFUP PL002	N44°52.8626'	W088°14.9756'	N/A	N/A	N/A	First observed in 2000. Located ~30 yards bearing 180° (south) of GPS point on the south side of a marshy slough located directly west of the HWY 32 wayside boat landing. Video in 2000. No treatment has been made to this site since it was first observed due to location on private property and marshy area. Plants found in 2011. Eight plants found in 2012, similar in size to the previous year. Beetle damage has been observed on the plants. No plants observed in 2013, 2014, 2015 and 2016.
OFUP PL003	N44°53.012'	W088°13.614'	N/A	N/A	N/A	First observed in 2001. Located ~10 yards bearing 0° (north) of GPS point on the left side of the river. Video in 2001. Seed heads removed in 2002 and 2003. No plants visible in 2004. Reappeared in 2005, and pulled. No plants observed in 2006, 2007, and 2008. Reappeared in 2009, and pulled. No beetle damage observed in 2010, 2011, 2012, 2013, 2014, 2015 and 2016.
OFUP PL004	N44°52.943'	W088°14.809'	N/A	N/A	N/A	First observed in 2001. Located near the waters edge on the northeast side of the HWY 32 bridge. Video in 2001. All plants pulled in 2001. No plants observed since initial finding, including 2016.

Purple Loosestrife Survey

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/13/2016

Crew: MRondou & Jkassy

GPS point	Latitude	Longitude	Plant Height	Stand Area	Beetle Damage	Comments
OFUP PL005	N44°53.029'	W088°13.524'	N/A	N/A	N/A	First observed in 2002. Located on the edge of the far side of a slough ~30 - 60 yards northwest of waypoint 178. Recorded on video in 2002.
OFUP PL006	N44°53.059'	W088°13.549'	N/A	N/A	N/A	No treatment in 2002-2005, 2010 or 2011. All plants pulled in 2006, 2007 and 2008. In 2007 and 2008, all plants showed minor beetle damage. No plants observed in 2009. Three multi-stem plants observed in 2010. No plants were observed in 2011. Eight plants found in 2012. Beetle damage was undetectable due to location. Due to their close proximity, sites, #PL005-PL010 have been combined to make one continuous site.
OFUP PL007	N44°53.057'	W088°13.562'	N/A	N/A	N/A	No plants observed in 2013, 2014, 2015 and 2016
OFUP PL008	N44°53.056'	W088°13.578'	N/A	N/A	N/A	
OFUP PL009	N44°53.050'	W088°13.615'	N/A	N/A	N/A	
OFUP PL010	N44°53.055'	W088°13.530'	N/A	N/A	N/A	
OFUP PL011	N44°52.895'	W088°12.805'	5'	1 Plant	No	First observed in 2002. Located on left side of river ~10' due north of the waypoint on the bank. Video in 2002. Seed heads removed in 2002, 2003, and 2004. No plants observed in 2005. All plants pulled each year from 2006-2010. Five plants observed in 2011 and pulled. Beetle damage in 2007-2009. No beetle damage in 2010. Heavy beetle damage found in 2011 and 2012. Four plants pulled in 2012. No plants observed in 2013, 2014 and 2015. One plant observed in 2016 and pulled. No beetle damage was detected.
OFUP PL012	N44°53.024'	W088°13.439'	N/A	N/A	N/A	First observed in 2005. Located on left side of river ~10' due north of the waypoint on the bank. All plants pulled in 2005 had heavy beetle damage. No plants observed in 2006, 2007, or 2008. All plant pulled in 2009. No plants observed in 2010, 2011, 2012, 2013, 2014, 2015 or 2016
OFUP PL013	N44°53.024'	W088°13.439'	N/A	N/A	N/A	First observed in 2005. Located ~10' due south of the waypoint on the bank west of HWY 32 bridge. All plants pulled in 2005. No plants observed since initial finding, including 2016

Purple Loosestrife Survey**Project:** Oconto Falls Upper #2523**Datum:** WGS 84**Date:** 8/13/2016**Crew:** MRondou & Jkassy

GPS point	Latitude	Longitude	Plant Height	Stand Area	Beetle Damage	Comments
OFUP PL014	N44°52.915'	W088°14.823'	N/A	N/A	N/A	First observed in 2006. Located ~10' due south of the waypoint on the bank east of HWY 32 bridge. All plants pulled in 2006 and 2007. No plant observed in 2008, 2009, or 2010. One plant without beetle damage was found and pulled in 2011. No plants observed in 2012, 2013, 2014, 2015 or 2016
OFUP PL015	N44°52.915'	W088°52.915'	N/A	N/A	N/A	First observed in 2006. Located on the left side of river ~10' due north of the waypoint. All plants pulled in 2006. No plants observed in 2007 or 2008. All plants pulled in 2009, with beetle damage found on plants. No plants observed in 2010, 2011, 2012, 2013, 2014, 2015 or 2016.
OFUP PL016	N44°52.643'	W088°15.762'	N/A	N/A	N/A	First observed in 2007. Located ~10' due south of waypoint on small island in river. All plants pulled in 2007. No plants observed since initial finding, including 2016.
OFUP PL017	N44°53.050'	W088°13.863'	2' -3'	2 plants	No	First observed in 2007. Located on the left side of river, ~10' due north of waypoint. No old cane. No damage. All plants pulled in 2007, 2008 and 2009. No plants found at this site in 2010. Once plant with beetle damage was found and pulled in 2011. No plants observed in 2012, 2013, 2014 or 2015. Two plants observed and pulled in 2016. No beetle damage was detected.
OFUP PL018	N44°52.914'	W088°14.829'	3' - 4'	5 plants	No	First observed in 2008. Located below the southeast corner of the HWY 32 bridge at the waypoint. All plants pulled in 2008 and 2009. No plants found in 2010. One plant without beetle damage was found and pulled in 2011. No plants observed in 2012, 2013, 2014, or 2015. Five plants observed and pulled in 2016. No beetle damage was detected.
OFUP PL019	N44°52.898'	W088°14.868'	N/A	N/A	N/A	First observed in 2009. Located ~80' west of the HWY 32 bridge on the right side of river at the waypoint. No old cane in 2009. No beetle damage in 2009. All plants pulled in 2009.

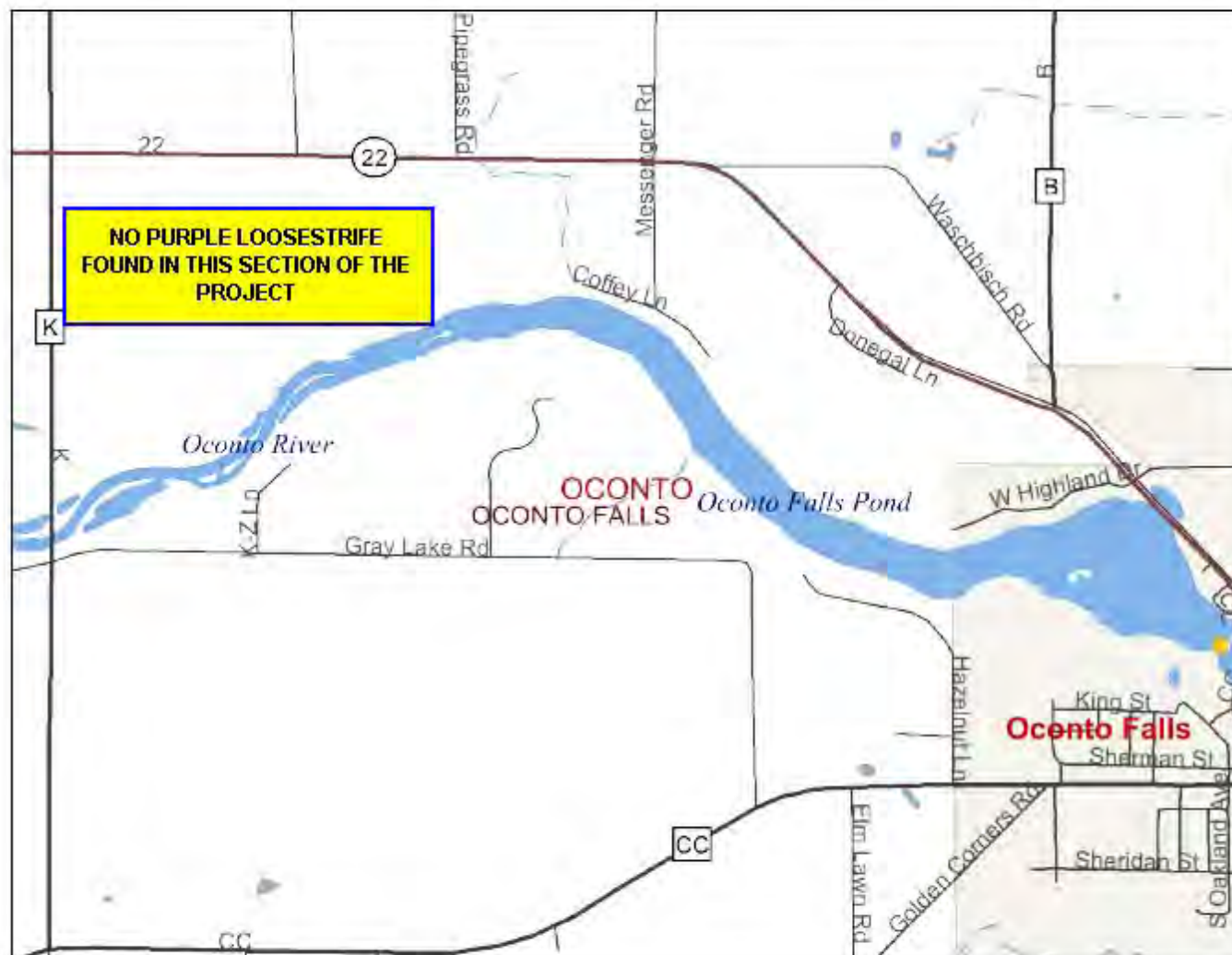
Oconto Falls Upper, Purple Loosestrife Location Map 2016

Oconto Falls WI, FERC #2523



Legend

- Dams
- Major Highways
- Interstate
- State Highway
- U.S. Highways
- County Roads
- Local Roads
- 24K County Boundaries
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Intermittent
- Fluctuating
- Perennial
- Cities and Villages
- Village
- City



0 2500 5000 7500 ft.

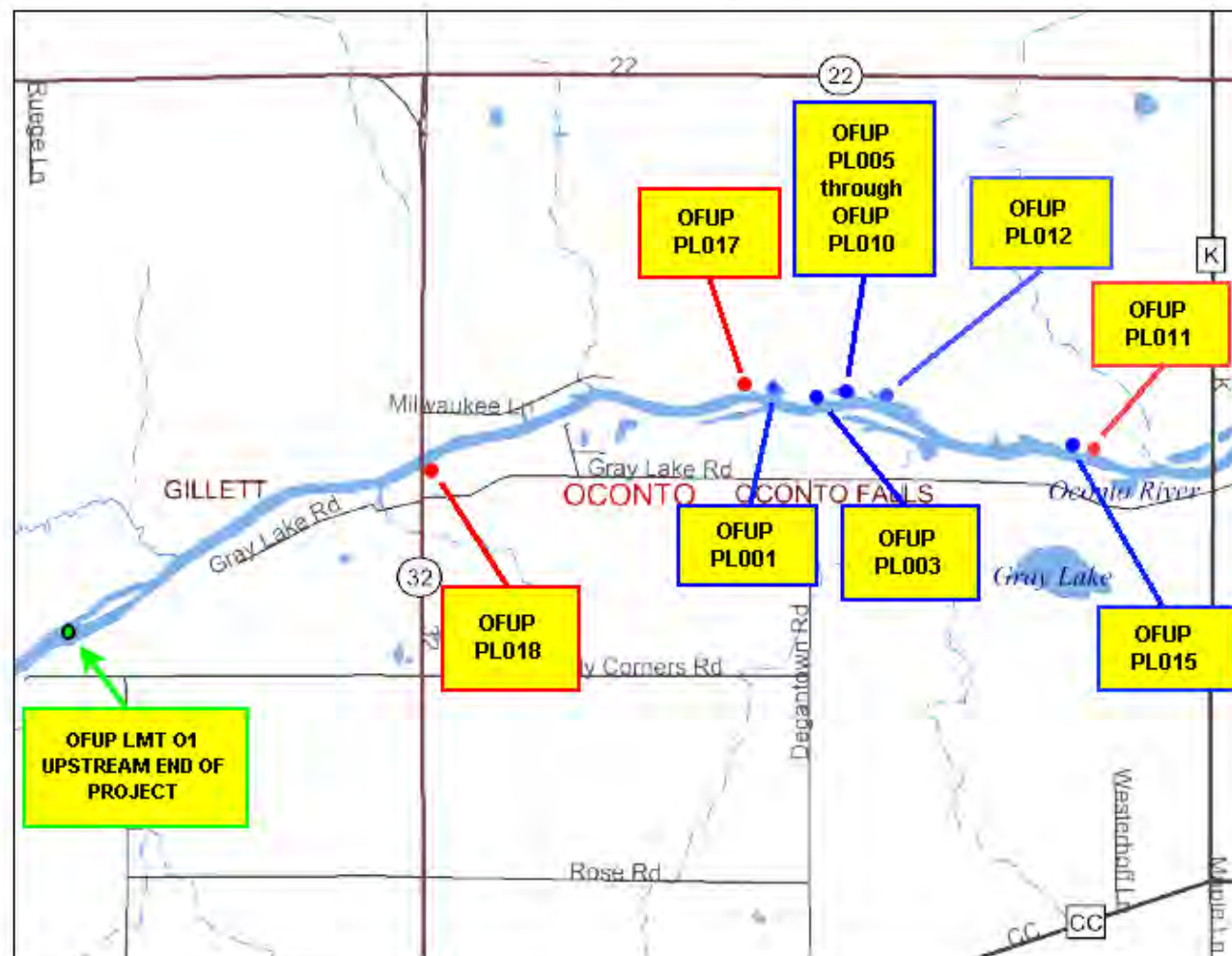


Scale: 1:26,808

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Oconto Falls Upper, Purple Loosestrife Location Map 2016

Oconto Falls WI, FERC #2523



Legend

- Dams
- Major Highways
- Interstate
- State Highway
- U.S. Highways
- County Roads
- Local Roads
- 24K County Boundaries
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Intermittent
- Fluctuating
- Perennial
- Cities and Villages
- Village
- City

● Purple Loosestrife Observed in 2016

● Purple Loosestrife Observed in Previous Years and not 2013, 2014, 2015 or 2016



Scale: 1:26,671

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

APPENDIX B

Eurasian Watermilfoil Survey Results and Maps

Eurasian Watermilfoil Survey - Transects

Project: Oconto Falls Upper #2523
 Date: 8/13/2016
 Crew: Jklassy & MRondou

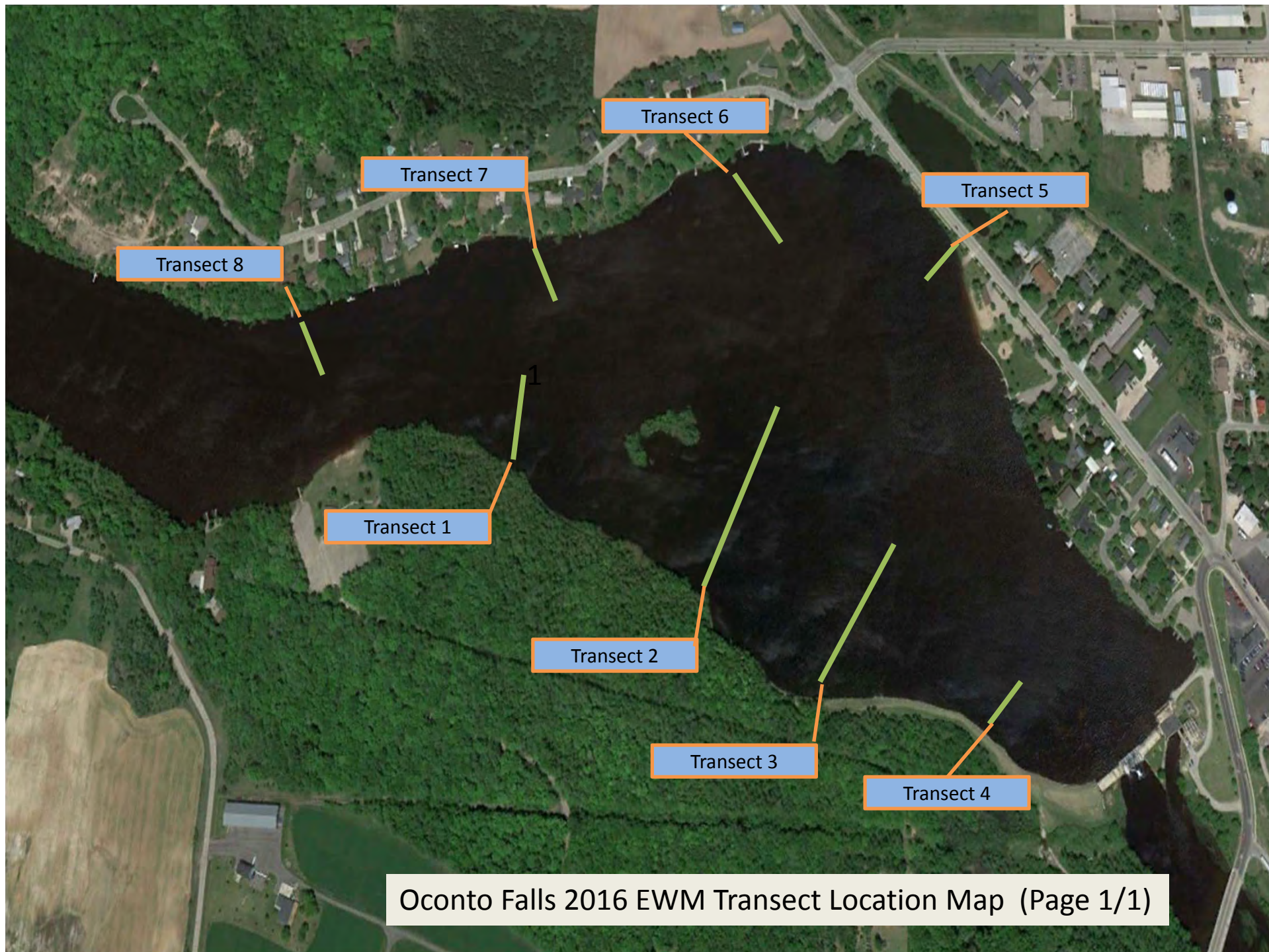
Datum: WGS 84
 Page: 1 of 1

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	Latitude	Longitude	Quad 1	Quad 2	Quad 3	Quad 4	Rating	Within 25'
1	1.5	OFUP TS01A	N44°52.7195'	W088°09.4319'	0	0	0	0	0	
	5	OFUP TS01B	N44°52.7343'	W088°09.4323'	0	0	0	0	0	
	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	0	0	0	1	
	5	OFUP TS02B	N44°52.7357'	W088°09.2024'	0	0	0	0	0	*
	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	1	0	0	1	
	5	OFUP TS03B	N44°52.6269'	W088°09.1521'	1	0	0	0	1	*
	10	OFUP TS03C	N44°52.6540'	W088°09.1324'	0	0	0	0	0	
	5	OFUP TS03D	N44°52.6842'	W088°09.1117'	0	0	0	0	0	
	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	0	1	
	5	OFUP TS04B	N44°52.6102'	W088°09.0244'	0	1	0	0	1	*
	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'	0	0	0	0	0	
	10	OFUP TS05C	N44°52.8383'	W088°09.0359'	0	0	0	0	0	
6	1.5	OFUP TS06A	N44°52.8919'	W088°09.2443'	0	0	0	0	0	
	5	OFUP TS06B	N44°52.8890'	W088°09.2434'	0	0	0	0	0	
	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 - latitude and longitude reflect offset



Oconto Falls 2016 EWM Transect Location Map (Page 1/1)

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/13/2016

Crew: JKlassy & MRondou

Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	Longitude	Comments
1	2'-5'	OFUP EW01-A OFUP EW01-B OFUP EW01-C	N44°52.7679' N44°52.7729' N44°52.7892'	W088°08.9863' W088°08.9940' W088°09.0109'	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 approx.. 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 approximately 15% of total plants. In 2014 the mat again decreased in size and was made up of approximately 15% EWM. In 2016, mostly native weeds. Little change from 2014 and 2015.
2	N/A	OFUP EW02-A OFUP EW02-B OFUP EW02-C	N44°52.8133' N44°52.8286' N44°52.8437'	W088°09.0233' W088°09.0265' W088°09.0283'	Located immediately on the west side of the swimming beach northwest to where State Hwy. 22 meets the lakeshore. The mat originally measured approximately 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 than EWM. EWM was approximately 15% of total plants. In 2014 the mat appears to be consistent with 2103 findings. In 2015 the mat appears to have decreased slightly in size with native plants still present. In 2016 the mat appears decreased by 50% reduction in density.

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/13/2016

Crew: JKlassy & MRondou

Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	Longitude	Comments
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. No observed changes in 2014. In 2015 the mat is not continuous with areas of individual plants and low density weed growth. EWM appears to be less than 10% of the total population. In 2016, this mat was observed having the most EWM weed growth, however the density is still less than 50% of overall plant species growing.
		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: 8/13/2016

Crew: JKlassy & MRondou

Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	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 densities of EWM reaching 50%. 2014 observance is consistent with 2013. 2016 Little to no change from 2014 and 2015 observations.
		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'	<i>OFUP EW05-H</i>	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 submerge weed growth in the 3' - 6' depth range. Total mat density is 30% - 60% of which 20% - 35% is Eurasian Watermilfoil. No changes observed in 2014, 2015 and 2016.
		<i>OFUP EW05-A</i>	N44°52.756'	W088°09.898'	
		<i>OFUP EW05-B</i>	N44°52.743'	W088°09.859'	
		<i>OFUP EW05-C</i>	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'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/13/2016

Crew: JKlassy & MRondou

Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	Longitude	Comments
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. In 2014 total mat density is significantly reduced and is made up of approximately 10% Eurasian Watermilfoil. Mat #6 is no longer joined with Mat 8. Little change observed in 2015 and 2016.
		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'	
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 and 2014. Mat not observed in 2016.
		OFUP EW07-B	N44°53.007'	W088°10.425'	
		OFUP EW07-C	N44°52.996'	W088°10.411'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/13/2016

Crew: JKlassy & MRondou

Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	Longitude	Comments
8	2' -5'	<i>OFUP EW08-A</i>	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. The mat density appears reduced in 2014 with less than 25% is Eurasian Watermilfoil. Mat #8 is no longer joined with mat #6 . Little to no change observed in 2015 and 2016.
		<i>OFUP EW08-B</i>	N44°52.755'	W088°09.547'	
		<i>OFUP EW08-C</i>	N44°52.761'	W088°09.488'	
		<i>OFUP EW08-D</i>	N44°52.763'	W088°09.407'	
		<i>OFUP EW08-E</i>	N44°52.766'	W088°09.313'	
		<i>OFUP EW08-F</i>	N44°52.765'	W088°09.253'	
9	2' - 5'	<i>OFUP EW09-A</i>	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. No mat was observed in 2014, 2015, or 2016.
		<i>OFUP EW09-B</i>	N44°52.631'	W088°08.852'	
		<i>OFUP EW09-C</i>	N44°52.651'	W088°08.891'	
		<i>OFUP EW09-D</i>	N44°52.684'	W088°08.936'	
		<i>OFUP EW09-E</i>	N44°52.707'	W088°08.955'	
		<i>OFUP EW09-F</i>	N44°52.702'	W088°08.955'	
10	2' - 5'	<i>OFUP EW10-A</i>	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. 2014 observances are consistent with 2013. No change in 2015. In 2016, observed less than 50% of total plant population of mat coverage.
		<i>OFUP EW10-B</i>	N44°53.353'	W088°10.845'	
		<i>OFUP EW10-C</i>	N44°53.353'	W088°10.882'	
		<i>OFUP EW10-D</i>	N44°53.341'	W088°10.899'	
		<i>OFUP EW10-E</i>	N44°53.336'	W088°10.871'	
		<i>OFUP EW10-F</i>	N44°53.333'	W088°10.838'	
		<i>OFUP EW10-G</i>	N44°53.337'	W088°10.809'	
		<i>OFUP EW10-H</i>	N44°53.315'	W088°10.679'	
		<i>OFUP EW10-I</i>	N44°53.320'	W088°10.814'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523

Datum: WGS 84

Date: 8/13/2016

Crew: JKlassy & MRondou

Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	Longitude	Comments
11	2' - 5'	<i>OFUP EW11-A</i>	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. 2015 observances are consistent with 2014 and 2013. In 2016 EWM was observe less than 50% of plant population coverage.
		<i>OFUP EW11-B</i>	N44°53.323'	W088°10.979'	
		<i>OFUP EW11-C</i>	N44°53.332'	W088°11.055'	
		<i>OFUP EW11-D</i>	N44°53.327'	W088°11.134'	
		<i>OFUP EW11-E</i>	N44°53.304'	W088°11.228'	
		<i>OFUP EW11-F</i>	N44°53.259'	W088°11.325'	
		<i>OFUP EW11-G</i>	N44°53.245'	W088°11.329'	
		<i>OFUP EW11-H</i>	N44°53.246'	W088°11.372'	
		<i>OFUP EW11-I</i>	N44°53.156'	W088°11.719'	
		<i>OFUP EW11-J</i>	N44°53.309'	W088°10.911'	
12	2' - 5'	<i>OFUP EW12-A</i>	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 approximately 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 approximately 500' in length with similar mat density as in 2012. EWM makes up approximately 50% if the total plant population. 2014 observances are consistent with 2013. No changes observed in 2015 and 2016.
		<i>OFUP EW12-B</i>	N44°53.274'	W088°11.358'	
		<i>OFUP EW12-C</i>	N44°53.259'	W088°11.398'	
		<i>OFUP EW12-D</i>	N44°53.243'	W088°11.474'	

Eurasian Watermilfoil Survey - Mat Descriptions

Project: Oconto Falls Upper #2523

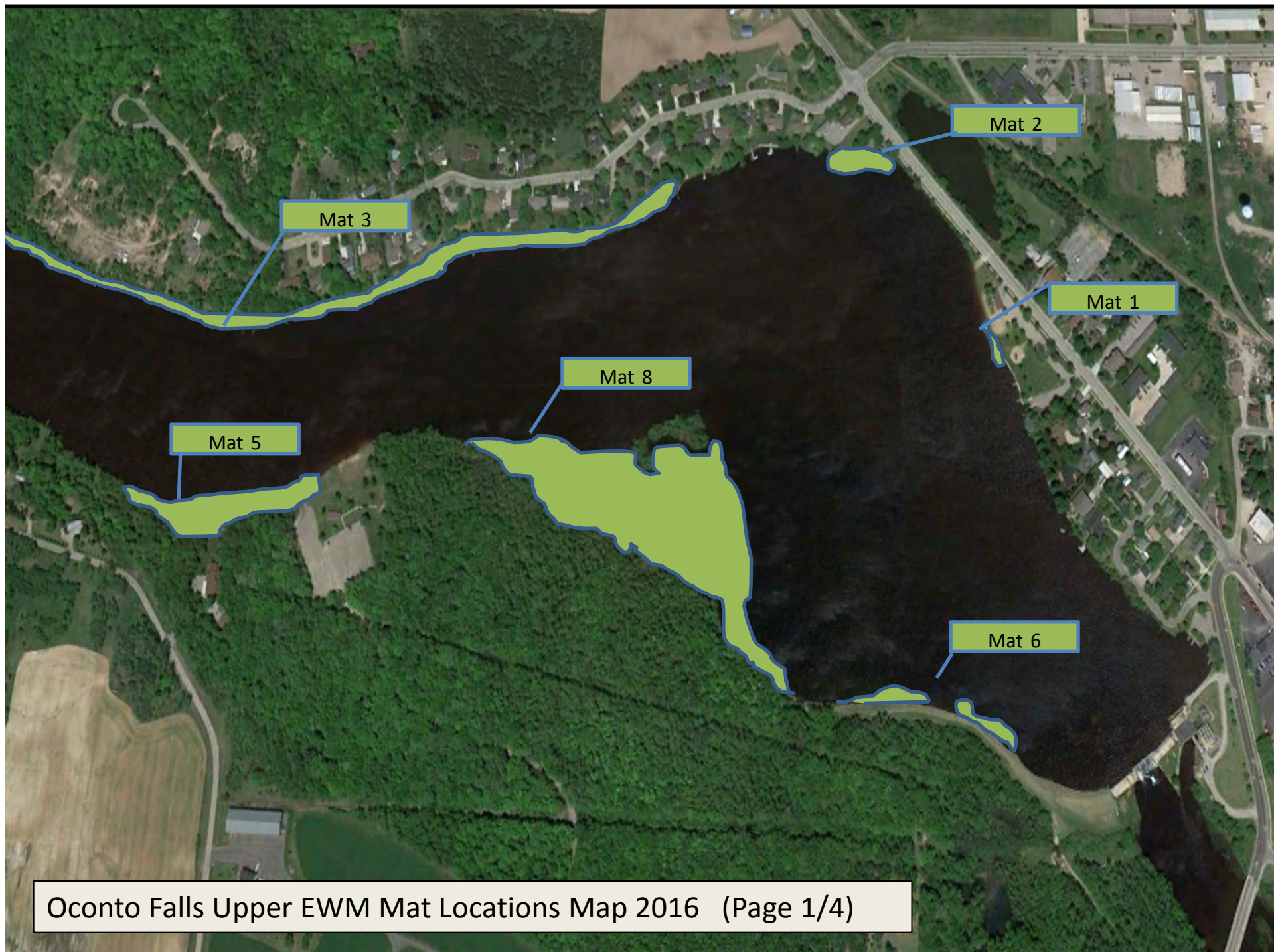
Datum: WGS 84

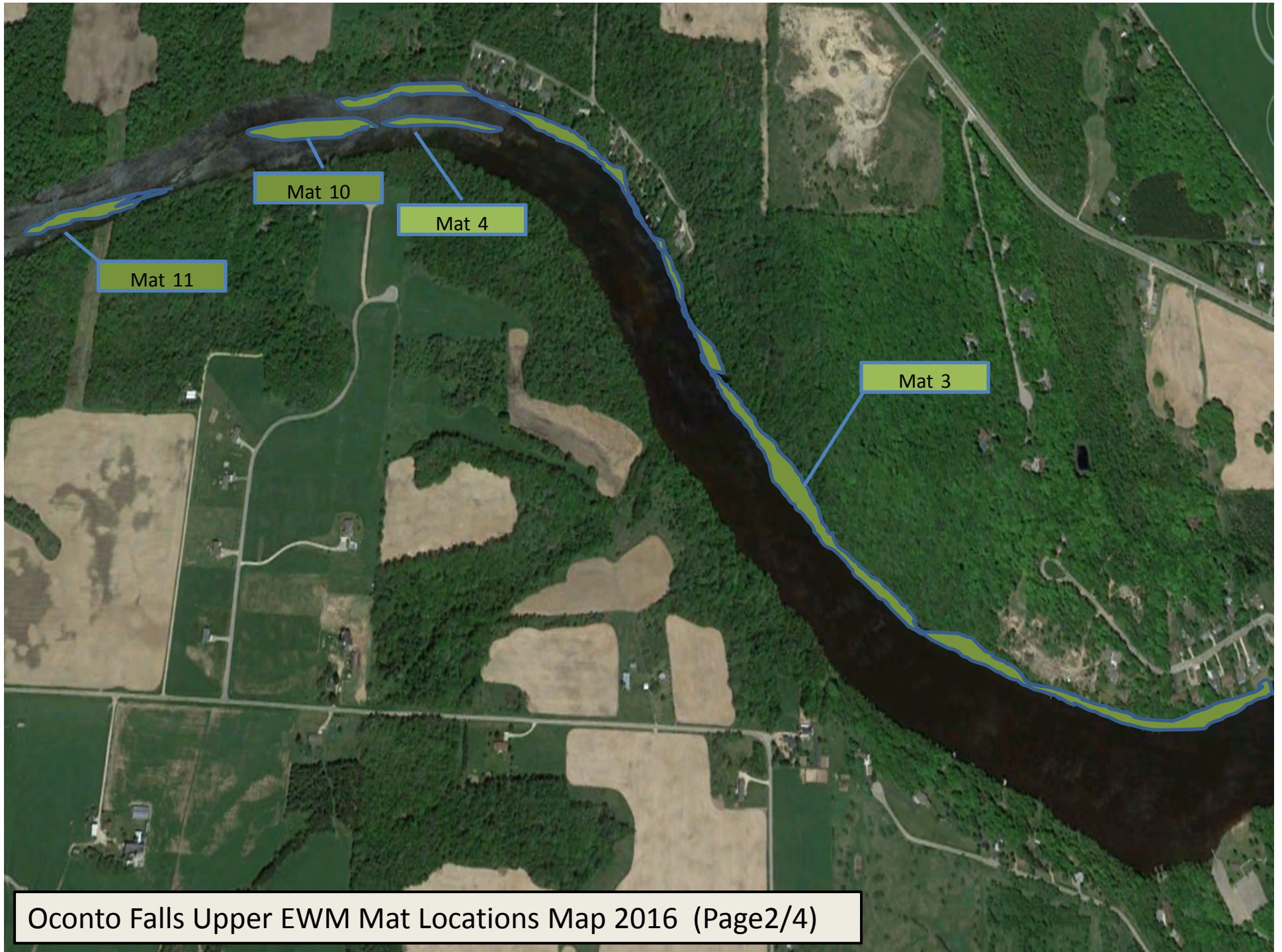
Date: 8/13/2016

Crew: JKlassy & MRondou

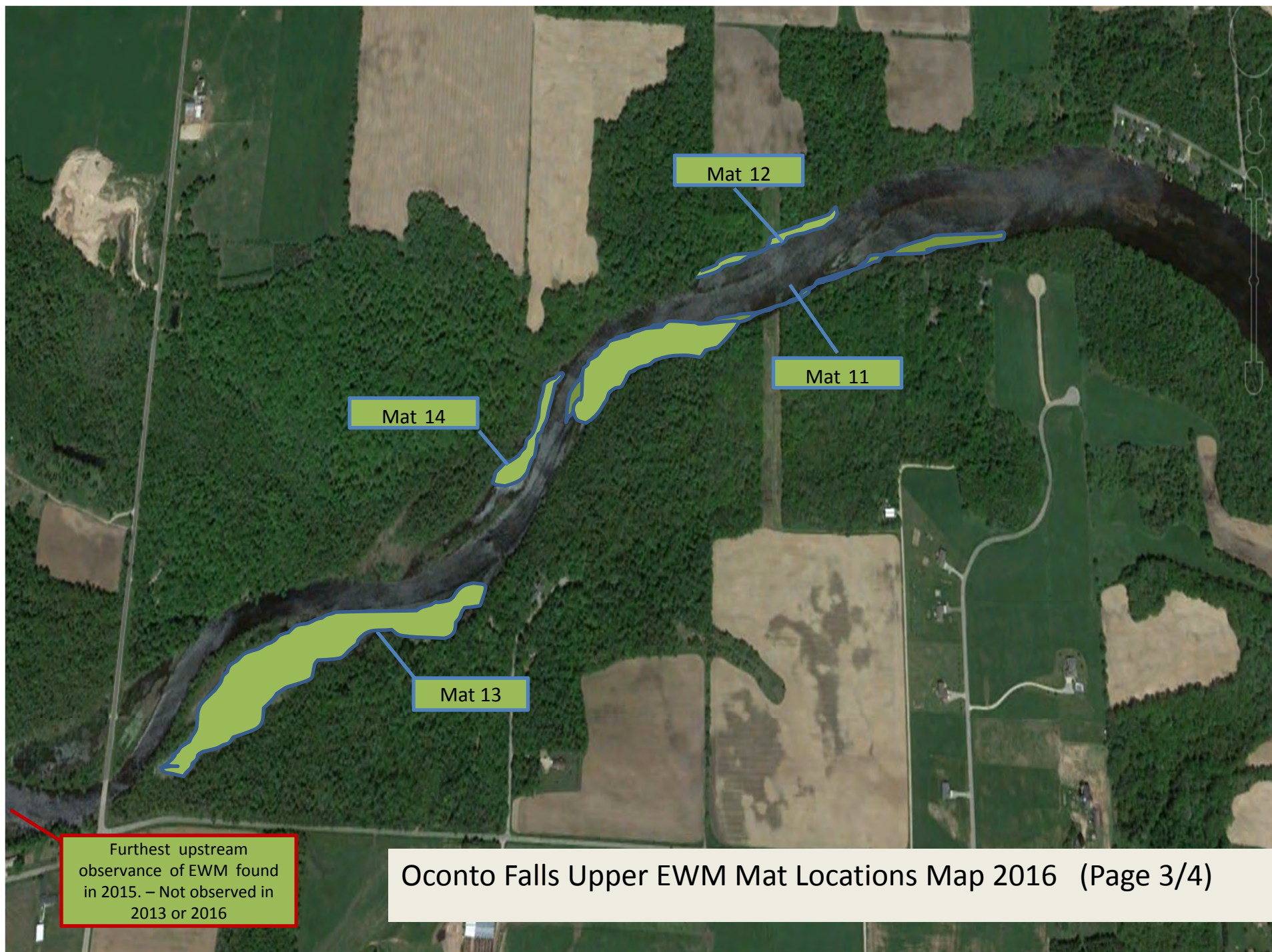
Note - Italicized GPS points were not used in this survey

Mat #	Depth	GPS point	Latitude	Longitude	Comments
13	2' - 5'	OFUP EW13-A OFUP EW13-B OFUP EW13-C OFUP EW13-D	N44°53.003' N44°52.995' N44°52.996' N44°52.997'	W088°11.943' W088°12.027' W088°12.074' W088°12.128'	The furthest EWM mat upriver to date. The mat is located approx. 560 yards downstream from the County K. highway bridge and on 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 approximately 400' x 30'. Total mat density was 50% - 60% of which 10% - 40% is Eurasian Watermilfoil. 2014 observances are consistent with 2013. Little to no change in 2015 or 2016.
14	2' - 5'	OFUP EW14-A <i>OFUP EW14-B</i> <i>OFUP EW14-C</i>	N44°53.184' N44°53.116' N44°53.113'	W088°11.726' W088°11.782' W088°11.787'	Mat #14 located 1158 yards downstream from the County K. highway bridge on 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 approximately 300 x 30'. Total mat density is 30% - 50% of which 30% - 40% is Eurasian Watermilfoil. 2015 observances are consistent with 2014 and 2013. No changes observed in 2016.



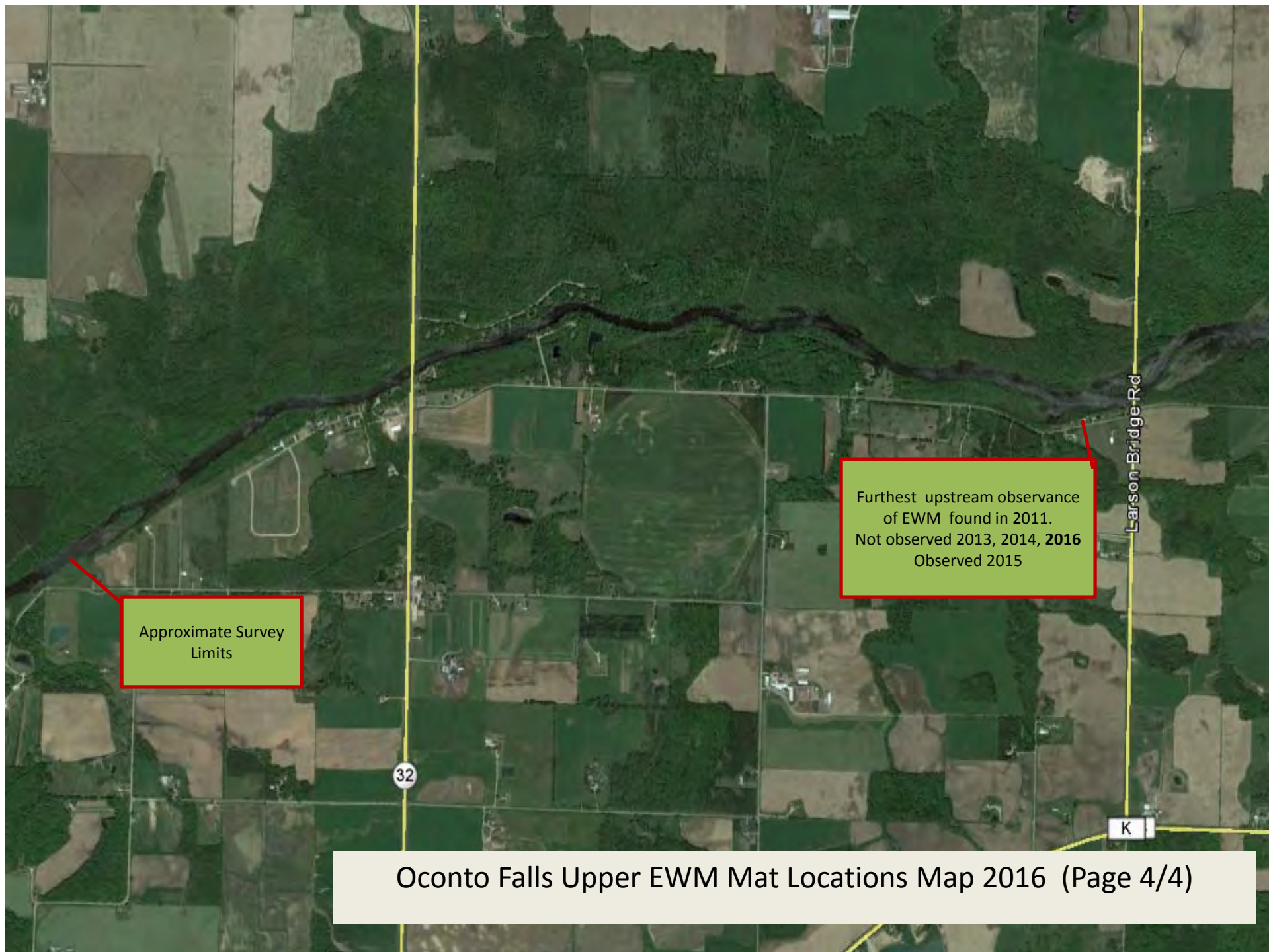


Oconto Falls Upper EWM Mat Locations Map 2016 (Page2/4)



Furthest upstream
observance of EWM found
in 2015. – Not observed in
2013 or 2016

Oconto Falls Upper EWM Mat Locations Map 2016 (Page 3/4)



Oconto Falls Upper EWM Mat Locations Map 2016 (Page 4/4)

APPENDIX C

Agency Correspondence

Melissa Rondou

From: Melissa Rondou
Sent: Monday, December 19, 2016 9:53 AM
To: Cheryl Laatsch; Nick Utrup
Subject: Oconto Falls 2016 PL & EWM Inventory Report - License Article 407
Attachments: 16-08-31_OFUP_Draft Purple Loosetrife and Eurasian Watermilfoil Report.pdf

Dear Cheryl and Nick,

Attached is the Oconto Falls Purple Loosestrife and Eurasian Watermilfoil Inventory DRAFT Report.

I apologize for getting this to you late in the season. If you could please review and provide your comments at your earliest convenience.

If you would like to discuss over a telephone conversation, please let me know.

Sincerely,

Melissa Rondou



116 N. State Street

P.O. Box 167

Neshkoro, WI 54960

(920) 293-4628 x 347

(920) 279-4804 Cellular

melissa.rondou@eaglecreekre.com

Melissa Rondou

From: Melissa Rondou
Sent: Monday, December 19, 2016 10:11 AM
To: 'Laatsch, Cheryl - DNR'; Michael Scarzello; Nordin, Brenda L - DNR; Nault, Michelle E - DNR; Hudak, Andrew J - DNR; McLennan, Robin - DNR
Subject: RE: AIS mgt and surveys for 2017

Thank you for sending the invite Cheryl.

Can we use this call-in number and passcode? Is there a need to connect a computer for the call this afternoon?

(888) 346-3950

Passcode: 70838927#

Thank you,

~Melissa Rondou

-----Original Appointment-----

From: Laatsch, Cheryl - DNR [<mailto:Cheryl.Laatsch@wisconsin.gov>]

Sent: Tuesday, December 06, 2016 10:01 AM

To: Laatsch, Cheryl - DNR; Melissa Rondou; Michael Scarzello; Nordin, Brenda L - DNR; Nault, Michelle E - DNR; Hudak, Andrew J - DNR; McLennan, Robin - DNR

Subject: AIS mgt and surveys for 2017

When: Monday, December 19, 2016 1:00 PM-1:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Skype Meeting

Agenda:

1. Quick overview of EC requirements for AIS surveys in 2017
2. July early Aug PL and EM
3. Plan for EC staff to participate and more training on AIS surveys
4. Aug 2017
5. Need a request to FERC to change the timeframe for AIS surveys for 2017
6. DNR will likely need to provide a letter of support.
7. EC will need to provide info to stakeholders
8. Need FERC approval or EC still needs to follow the current AIS mgt plan

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If you have a Skype for Business client installed but would prefer to use the Skype for Business Web App instead: copy the meeting URL, paste into your HTML5 browser, then add ?SL= to the end of the URL

[!OC([1033])!]

Melissa Rondou

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>
Sent: Monday, January 30, 2017 2:35 PM
To: Melissa Rondou; Michael Scarzello
Cc: Hudak, Andrew J - DNR
Subject: FW: AIS reports and Appleton License
Attachments: 20161102103448913.pdf

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



dnr.wi.gov



From: Hudak, Andrew J - DNR
Sent: Monday, January 30, 2017 12:36 PM
To: Laatsch, Cheryl - DNR
Subject: RE: AIS reports and Appleton License

Appleton-

In 2018 when the next survey is scheduled to be done, the Department would find additional value if Eagle Creek could include monitoring for the species on the attached handout. Surveying and reporting on EWM, PLS, and Zebra mussels alone has limited value, especially if no active management is occurring, it is more critical to be looking for new occurrences of species. Early detection and rapid response allows the department to enact protocols to either engage in active management or slow the spread by increasing education and outreach measures. It is more important to report new infestations of new species than to regularly report observations of established species.

Oconto Falls-

The current monitoring plan has been established since 1999. Currently monitoring activities are completed to track the occurrence of PLS and EWM within the Oconto Falls impoundment. The Department recognizes and appreciates the efforts that have been put forward to conduct monitoring activities as demonstrated to track the trends of these 2 species in 2016 and previous years. Although PLS and EWM are species of concern and have the ability to cause significant ecological change in the landscape, the Department encourages and would support a proposal by N.E.W. Hydro to propose a renewed effort to change sampling methodology and target species to aid in efforts to monitor and identify new infestations of exotic, non-native invasive species. This monitoring would be critical so that rapid response protocols could be utilized to slow the spread or eradicate a new infestation. Sampling methodology refinement would also allow the Department to analyze plant community changes in a larger context and aid in management activities that may be pursued by the Village of Oconto in future years. The Department also recognizes and appreciates the efforts by Eagle Creek and N.E.W. Hydro to provide data in a separate format so that the data can be accessed and utilized in a larger context.

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Andrew Hudak

Phone: (920) 662-5117

Andrew.hudak@wisconsin.gov

From: Laatsch, Cheryl - DNR

Sent: Monday, January 23, 2017 10:05 AM

To: Hudak, Andrew J - DNR; Koehnke, Scott E - DNR

Subject: FW: AIS reports and Appleton License

Andy – Please see the comments about the reports.

Scott – See the comments about water rights. Got time to educate me?

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Cheryl Laatsch

Statewide FERC Coordinator

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Wisconsin Dept of Natural Resources

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Cheryl.laatsch@wisconsin.gov



dnr.wi.gov



From: Melissa Rondou [<mailto:melissa.rondou@eaglecreekre.com>]

Sent: Monday, January 23, 2017 10:04 AM

To: Laatsch, Cheryl - DNR

Subject: AIS reports and Appleton License

Hi Cheryl,

I was hoping to get back comments on the Appleton and Oconto Falls AIS Draft Reports if you have some time.

Also I have another question; where would I find who has water rights? A questions came up with Woolen Mills asking if the Licensee has water rights and who owns the bottom of the river bed?

Maybe a phone call would be in order. Please let me know if you have time to talk or simply respond to this email.

Thank you.

Sincerely,

Melissa Rondou



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Invasive Species to be on the Lookout for in Wisconsin Streams

To report a sighting:

send an email to: invasive.species@wi.gov or CALL 608-266-6437

Please report invasive species to the Wisconsin DNR

Provide all the following information, if possible: exact location (latitude and longitude), population size, a photo or specimen and your contact information.

Aquatic plants and algae



pg 55

European frog-bit
Hydrocharis morsus-ranae



pg 60

Yellow floating heart
Nymphoides peltata



pg 61

Water chestnut
Trapa natans



pg 64

Brazilian waterweed
Egeria densa



pg 65

Hydrilla
Hydrilla verticillata



pg 76

Curly-leaf pondweed
Potamogeton crispus



pg 79

Fanwort
Cabomba caroliniana



pg 81

Parrot feather
Myriophyllum aquaticum



pg 82

Eurasian water milfoil
Myriophyllum spicatum



pg 86

Didymo or rock snot (alga)
Didymosphenia geminata



****Water hyacinth (floating or anchored)**
Eichhornia crassipes and *Eichhornia azurea*



****Water lettuce**
Pistia stratiotes

** Proposed Species



Restricted Species



Prohibited Species



Prohibited / Restricted Species

Photo credit: Sara Spaulding, USGS; Paul Skawinski; Chris Hamerla

Additional information on species descriptions, "look-alikes", and habitat can be found in A Field Guide to Wisconsin Streams by Michael Miller, Katie Songer, and Ron Dolen

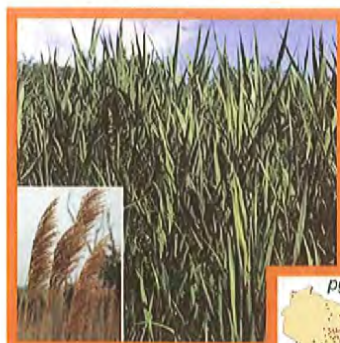
- see appropriate page# in the corner of each picture. Each species has an approximate distribution map.

Wetland plants



pg 41

Flowering rush
Butomus umbellatus



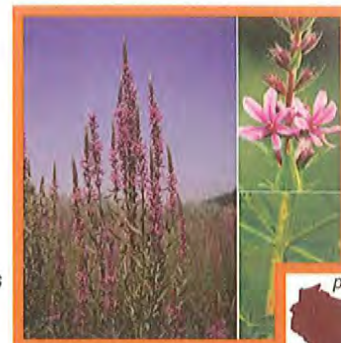
pg 45

Phragmites
Phragmites australis



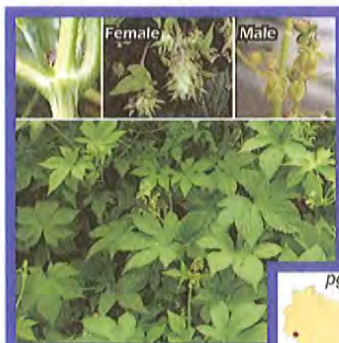
pg 36

Japanese & Giant knotweed
Polygonum cuspidatum & P. sachalinense



pg 51

Purple loosestrife
Lythrum salicaria



pg 36

Japanese hop
Humulus japonicus



pg 43

****Yellow iris**
Iris pseudacorus

Invertebrates



pg 163

Zebra mussels
Dreissena polymorpha



pg 163

Quagga mussels
Dreissena bugensis



pg 165

Asian clam
Corbicula fluminea



pg 165

Faucet snails
Bithynia tentaculata



pg 165

Chinese mystery snails
Cipangopaludina chinensis



pg 130

****Banded mystery snails**
Viviparus georgianus



pg 130

New Zealand mudsnails
Potamopyrgus antipodarum



pg 140

Red swamp crayfish
Procambarus clarkii



pg 138

Rusty crayfish
Orconectes rusticus

For more information about Wisconsin's Invasive Species Rule, Restricted, or Prohibited species, please visit: www.dnr.wi.gov keyword: "invasives"

Bureau of Water Quality
Wisconsin Department of Natural Resources, Box 7921
Madison, WI 53707-7921



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