



Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

October 30, 2017

FERC Project No. 1864
NATDAM Nos. MI00153,
MI00203, MI00028,
MI00052

Mr. Burr Fisher, USFWS
Mr. Stephen Gilbert, WDNR
Ms. Elle Gulotty, MDNR
Mr. Anthony Holland, USFS
Mr. Gene Mensch, KBIC
Mr. James Schramm, MHRC

Bond Falls Implementation Team Members:

Bond Falls Hydroelectric Project
2017 Purple Loosestrife and Eurasian Watermilfoil Survey Results

Per the Federal Energy Regulatory Commission (FERC) Order Modifying and Approving Article 411 Nuisance Plant Control Plan issued February 24, 2005, Upper Peninsula Power Company (UPPCO) is required to submit the results of the purple loosestrife (*Lythrum salicaria*) and Eurasian watermilfoil (*Myriophyllum spicatum*) surveys for the Bond Falls Hydroelectric Project (FERC Project No. 1864) to the Bond Falls Implementation Team (BFIT).

Purple loosestrife and Eurasian watermilfoil surveys for the Bond Falls Hydroelectric Project were completed on August 8, 2017 for the Bond Falls and Victoria developments and on August 14, 2017 for the Bergland Development.

No purple loosestrife was identified at the Bond Falls and Victoria developments; however, it was identified at the Bergland Development. These findings are consistent with the results of previous surveys. A purple loosestrife survey report for the Bergland Development is enclosed in Appendix 1. No formal reports were generated for either the Bond Falls or Victoria developments because those surveys were completed internally by UPPCO.

Eurasian watermilfoil was not identified during surveys at the Bond Falls and Victoria developments, which is again consistent with previous findings. Results are included in Appendix 2.

Since Eurasian watermilfoil has not been observed, maintaining the current monitoring protocol will provide UPPCO with the best opportunity to quickly control and/or eliminate Eurasian watermilfoil if it is identified at the Bond Falls, Victoria, or Bergland developments. The next five-year report is due to be filed after the 2019 monitoring year.

Please contact me directly at (906) 232-1434 if you have any questions regarding the content of this letter.

Regards,

A handwritten signature in black ink, appearing to read "Kenneth Carruthers".

Kenneth M. Carruthers
Environmental Specialist

SCP/klk

Enc: Appendix 1: 2017 Purple Loosestrife Survey Results
Appendix 2: 2017 Eurasian Watermilfoil Survey Results

cc:	Ms. Katie Kern, UPPCO	Mr. Shawn Puzen, Mead & Hunt
	Ms. Cheryl Laatsch, WDNR	Mr. Virgil Schlorke, UPPCO
	Mr. James Melchiori, UPPCO	

Appendix 1:
2017 Purple Loosestrife Survey Results



August 23, 2017

Mr. James Melchiori
Upper Peninsula Power Company

Lake Gogebic 2017 Purple Loosestrife Monitoring Report

Dear Mr. Melchiori:

Thank you for choosing Eco-Resource Consulting, Inc. (ERC) to complete this vegetation survey at Lake Gogebic in Ontonagon County, Michigan. The following is a summary of our efforts and findings.

On August 14, 2017 ERC completed a survey of the shoreline and adjacent wetlands of Lake Gogebic for Purple Loosestrife (*Lythrum salicaria*). The flowage was surveyed using a motorized boat to inspect the shoreline. In areas of emergent shoreline vegetation, periodic landings were made to verify visual observations.

Field investigations were conducted within the purple loosestrife flowering season. Field conditions during the survey included overcast skies, temperatures of 64 degrees Fahrenheit, and moderate breezes. Water levels at Lake Gogebic appeared to be at or near the OHWM. In addition to purple loosestrife, several other species were flowering. This included many stands of similarly colored joe pye weed (*Eutrochium purpureum*) and a few occurrences of fireweed (*Chamerion angustifolium*). These stands were examined carefully for the presence of purple loosestrife.

Through these investigations, one small colony of purple loosestrife was observed. This colony contained fewer than 10 plants. Plants which were accessible by water were removed by hand. Less than 5 plants were positioned on private land and were inaccessible without trespassing. These plants remain intact.

The location of the PL colony was recorded via GPS. These locations are noted in Figure 1. GPS coordinates for these sites are noted in Table 1.

Table 1

Comment	GPS DATE	LATITUDE (UTM15N)	LONGITUDE (UTM15N)
PL < 10 PLANTS	8/14/2017	46°24'47.00"N	89°32'16.41"W

Thank you again for this opportunity to be of assistance. Please let me know if you have any questions about this report.

Respectfully submitted,

ECO-RESOURCE CONSULTING, INC.

Andy Nelson
Senior Biologist

Stephen J. Hjort
President / Senior Biologist



Legend


Purple Loosestrife

Drawn By:
Daniel Fuhs

Date:
8/23/2017

Project Number:
17151

Figure 1



ERC
ECO-RESOURCE CONSULTING, INC

2554 County Road N Stoughton, WI 53589
www.eco-resource.net

Figure 1. Purple Loosestrife Monitoring
UPPCO Lake Gogebic
E. Shore Road Marenisco, MI
Section 3 T46N R42W
Marenisco Township, Gogebic County

Inset Image Source : NAIP 2016

Main Image Source : NAIP 2016

Projection : NAD 1983 UTM Zone 16



N

E

S

W

0250500

Feet

1 inch = 518 feet

Appendix 2:
2017 Eurasian Watermilfoil Survey Results



August 24, 2017

Mr. James Melchiori
Upper Peninsula Power Company

Lake Gogebic 2017 Eurasian Watermilfoil Monitoring Report

Dear Mr. Melchiori:

Thank you for choosing Eco-Resource Consulting, Inc. (ERC) to complete this vegetation survey at Lake Gogebic in Ontonagon County, Michigan. The following is a summary of our efforts and findings.

On August 14, 2017 ERC completed a survey of Lake Gogebic for *Myriophyllum spicatum*, Eurasian watermilfoil (EWM). Field conditions during the survey included fair skies, temperatures of 71 degrees Fahrenheit, and moderate breezes. Water levels at Lake Gogebic appeared to be at or near the OHWM. Overall, aquatic vegetation appeared to be at or near peak growth in the lake.

Methods:

The reservoir was surveyed using a motorized boat to access established transect locations in each reservoir. ERC surveyed five (5) predetermined transects, approximately 36 feet in length, for EWM. These transects were sampled with rake in three twelve-foot diameter sections. Each section was sampled in quarters. The first quarter was sampled at a depth of 0 to 0.5 meters below the surface, the second 0.5 to 1.5 meters, the third 1.5 to 3.0 meters, and the fourth beyond 3.0 meters. If EWM was found, the relative abundance of EWM was documented as follows:

1. Absence
2. Presence of less than half
3. Equal compared to other species
4. Dominant
5. Total infestation

Additionally, a meandering boat survey was completed on each reservoir. In areas of observed floating leaf and submerged vegetation, periodic stops were made to conduct rake throws and

make visual observations of aquatic vegetation. If EWM was found, the extent of the stand perimeter was documented via GPS coordinates.

Results:

The following table summarizes the findings of the transect surveys:

Table 2
Lake Gogebic Eurasian Watermilfoil Survey – August 14, 2017

Transect #	0-0.5m	0.5-1.5m	1.5-3.0m	>3.0m	Origin	Notes
1A	0	0	NA	NA	N 46 26.642	
1B	0	0	NA	NA	W 89 31.587	
1C	0	0	0	NA		
2A	0	0	NA	NA	N 46 27.653	
2B	0	0	NA	NA	W 89 34.259	
2C	0	0	0	NA		
3A	0	0	NA	NA	N 46 28.294	
3B	0	0	0	NA	W 89 31.932	
3C	0	0	0	NA		
4A	0	0	NA	NA	N 46 32.964	
4B	0	0	NA	NA	W 89 37.401	
4C	0	0	NA	NA		
5A	0	0	NA	NA	N 46 35.338	
5B	0	0	NA	NA	W 89 34.391	
5C	0	0	NA	NA		

In addition, EWM was not observed during the meander survey on Lake Gogebic.

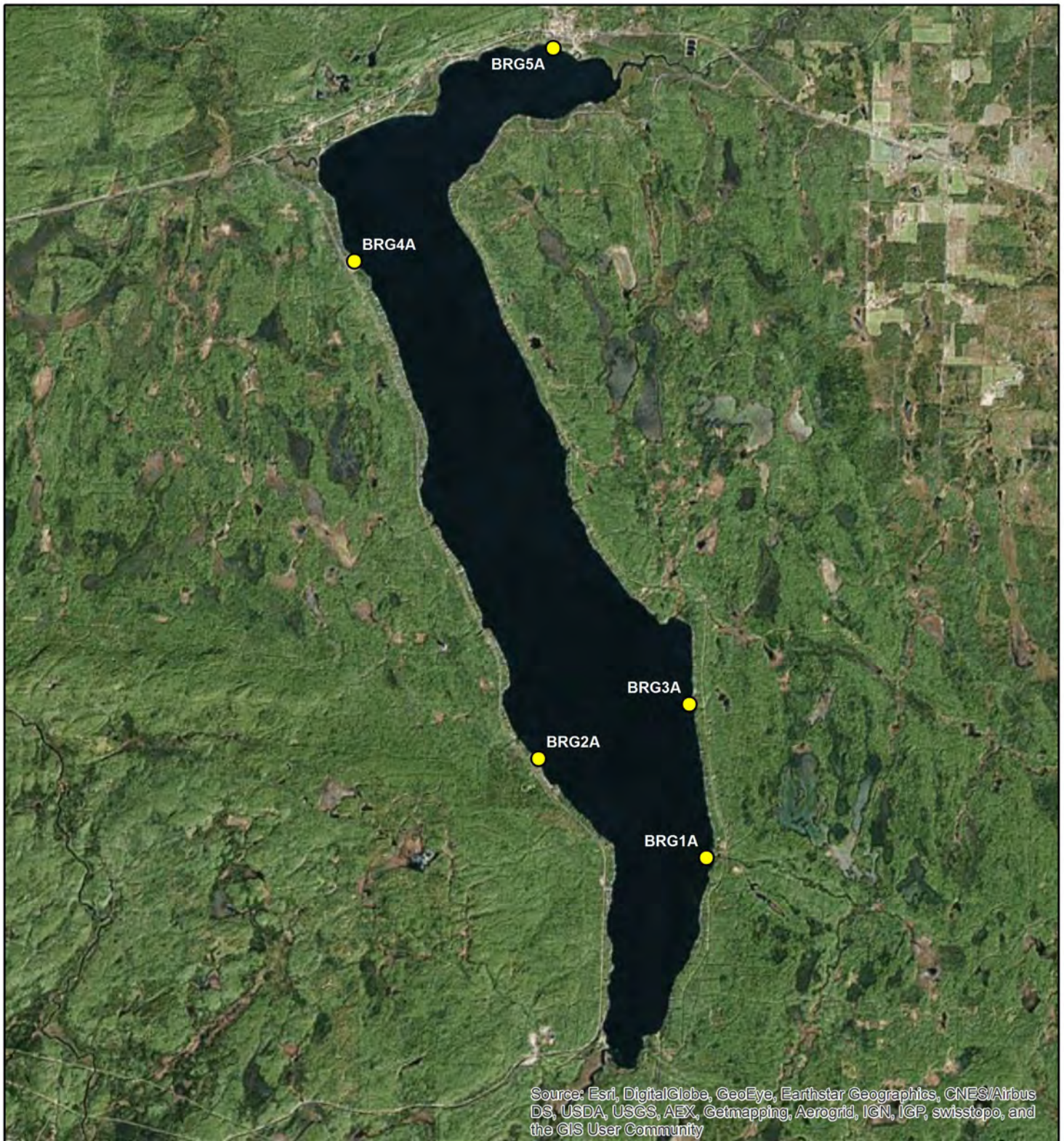
Thank you again for this opportunity to be of assistance. Please let me know if you have any questions about this report.

Respectfully submitted,

ECO-RESOURCE CONSULTING, INC.

Andy Nelson
Senior Biologist

Stephen J. Hjort
President / Senior Biologist



Upper Peninsula Power Company Bergland EWM 2017 Monitoring Year Transect Locations



Upper Peninsula Power Company

Surveys Conducted: 8/14/2017
Created: 10/26/2017

By: Generation & Environmental Services

Datum: NAD 83 Zone 16N

Note: Scale Bar is in reference to project dataframe

Map is for reference purposes only

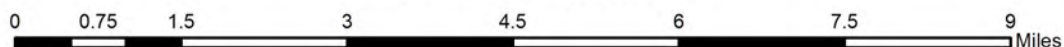


Table 3. Bond Falls Development 2017 invasive species monitoring results

Transect #	0.0-0.5 m	0.5-1.5 m	1.5-3.0 m	>3.0 m	Notes
1A	0	0	0	N/A	BFAEM01
1B	0	0	0	N/A	N 46 22.917
1C	0	0	0	N/A	W 89 04.757
2A	0	0	0	N/A	BFAEM02
2B	0	0	0	N/A	N 46 23.553
2C	0	0	0	N/A	W 89 07.631
3A	0	0	0	N/A	BFAEM03
3B	0	0	0	N/A	N 46 23.827
3C	0	0	0	N/A	W 89 07.631
Abundance Codes: 0 - Absent, 1-Presence less than half, 2-Equal presence compared to other species, 3-Dominant species, 4-Total infestation					
<p>Sampled on 8/8/17</p> <p>Weather: Windy (5 - 10 MPH), 72 °F</p> <p>No purple loosestrife was identified onshore as a result of the meandering surveys</p> <p>No EWM was found at the transect locations used in previous surveys</p>					



Upper Peninsula Power Company

Upper Peninsula Power Company Bond Falls EWM 2017 Monitoring Year Transect Locations

Surveys Conducted: 8/8/2017

Created: 8/11/2017

By: Generation & Environmental Services

Datum: NAD 83 Zone 16N

Note: Scale Bar is in reference to project dataframe

Map is for reference purposes only

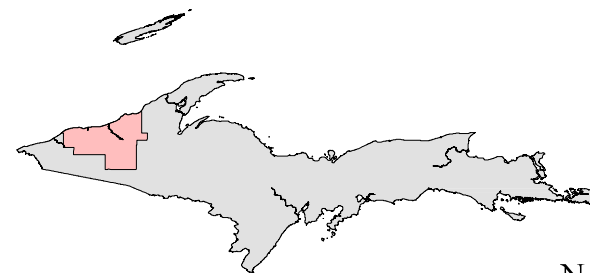


Table 4. Victoria Development 2017 invasive species monitoring results

Transect #	0.0-0.5 m	0.5-1.5 m	1.5-3.0 m	>3.0 m	Notes
1A	0	0	0	N/A	VFAEM01
1B	0	0	0	N/A	N 46 40.259
1C	0	0	0	N/A	W 89 15.038
2A	0	0	0	N/A	VFAEM02
2B	0	0	0	N/A	N 46 41.266
2C	0	0	0	N/A	W 89 13.837
Abundance Codes: 0 - Absent, 1-Presence less than half, 2-Equal presence compared to other species, 3-Dominant species, 4-Total infestation					
<p>Sampled on 8/8/17</p> <p>Weather: Clear/Calm, 60 °F</p> <p>No purple loosestrife was identified onshore as a result of the meandering surveys</p> <p>No EWM was found at the transect locations used in previous surveys</p>					



Upper Peninsula Power Company

Upper Peninsula Power Company Victoria EWM 2017 Monitoring Year Transect Locations

Surveys Conducted: 8/8/2017

Created: 8/11/2017

By: Generation & Environmental Services

Datum: NAD 83 Zone 16N

Note: Scale Bar is in reference to project dataframe

Map is for reference purposes only

