



Upper Peninsula Power Company  
800 Greenwood Street  
Ishpeming, MI 49849  
[www.UPPCO.com](http://www.UPPCO.com)

October 23, 2019

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

Mr. Stephen Gilbert, WDNR  
Ms. Elle Gulotty, MDNR  
Mr. Scott Hicks, USFWS  
Mr. Anthony Holland, USFS  
Mr. Gene Mensch, KBIC  
Mr. Bob Stuber, MHRC

SENT VIA ELECTRONIC MAIL

Dear Members of the Bond Falls Implementation Team:

***Bond Falls Hydroelectric Project***

***Article 411: Nuisance Plant Control Plan Monitoring Report***

Per the Order Modifying and Approving Nuisance Plant Control Plan Pursuant to Article 411, issued February 24, 2005, Upper Peninsula Power Company (UPPCO) is required to survey annually for purple loosestrife (*Lythrum salicaria*) and Eurasian watermilfoil (*Myriophyllum spicatum*) and file annual nuisance plant monitoring reports with the Bond Falls Implementation Team (BFIT) by October 31 each year over the term of the license.

Monitoring was completed on behalf of UPPCO by White Water Associates, Inc. (WWA) on August 15, 2019 for the Bond Falls Development, on August 19, 2019 for the Bergland Development (Lake Gogebic), and on August 20, 2019 for the Victoria Development. No Eurasian watermilfoil was identified during monitoring, despite reported observations by Michigan Department of Environment, Great Lakes & Energy staff subsequent to UPPCO's routine monitoring in 2018 (see addendum enclosed in Appendix 2). Purple loosestrife was not identified at either of the Bond Falls or Victoria developments; however, several colonies of purple loosestrife were identified at the Bergland Development. Complete results of monitoring are enclosed in Appendix 1.

Small-sized colonies (i.e., 1 to 5 plants) were removed by hand-pulling, flowers and stems were bagged and discarded, and roots were excavated. Readily accessible medium-sized colonies (i.e., 6 to 50 plants) were similarly removed; however, those that were inaccessible or were otherwise located in inundated areas could not be removed at the time of monitoring.

In the last Nuisance Plant Control Plan Monitoring Report, dated September 24, 2018, UPPCO proposed to treat colonies with an approved herbicide in the spring of 2019 at the onset of the growing season to preempt inflorescence and further spread in accordance with the recommendations received from a licensed herbicide applicator, Mr. Tim Dettman of Clean Kill Pest Control, who was consulted after monitoring identified the presence of purple loosestrife within the project boundary. However, as detailed in the Purple Loosestrife and Eurasian Watermilfoil Monitoring Report for Escanaba Hydroelectric Project (FERC Docket No. P-2506-011), originally dated September 10, 2019 and amended on October 16, 2019, UPPCO were unable to establish contact with Mr. Dettman despite several attempts to contract removal services this year. UPPCO proposes to work with Ontonagon Conservation District, Lake Gogebic Improvement Association, and/or other local entities to implement control measures in 2020.

Nuisance Plant Control Plan monitoring pursuant to Article 411 of the Bond Falls Hydroelectric Project license will occur again next year. The next Comprehensive Five-Year Eurasian Watermilfoil Monitoring Report is also due to be filed with both the BFIT and the Federal Energy Regulatory Commission (FERC) in 2019.

Please contact me directly at (906) 485-2482 if you have any questions regarding the content of this report.

Regards,



Kenneth M. Carruthers  
Environmental Specialist

KMC/ebr

Enc: Appendix 1 – Results of Nuisance Plant Control Plan Monitoring  
Appendix 2 – Addendum to WWA Report for Bond Falls Development

cc: Ms. Cheryl Laatsch, WDNR	Mr. Virgil Schlorke, UPPCO
Ms. Emily Rushford, UPPCO	Mr. Eugene Soumis, UPPCO

**Appendix 1**  
**Results of Nuisance Plant Control Plan  
Monitoring**

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## 2019 MONITORING REPORT

### **Monitoring the Bergland Dam Project (Lake Gogebic) for Purple Loosestrife and Eurasian Watermilfoil Part of the Bond Falls Hydroelectric Project (FERC No. 01864)**

**Prepared for:**

Upper Peninsula Power Company  
Contact: Kenneth M. Carruthers  
Environmental Specialist – UPPCO  
1002 Harbor Hills Drive, Marquette, MI 49855  
Office: (906) 232-1434

**Prepared by:**

White Water Associates, Inc.  
429 River Lane, P.O. Box 27  
Amasa, Michigan 49903  
Contacts: Dean Premo or Angie Stine, Field Biologist  
Voice: (906) 822-7889

September 2019



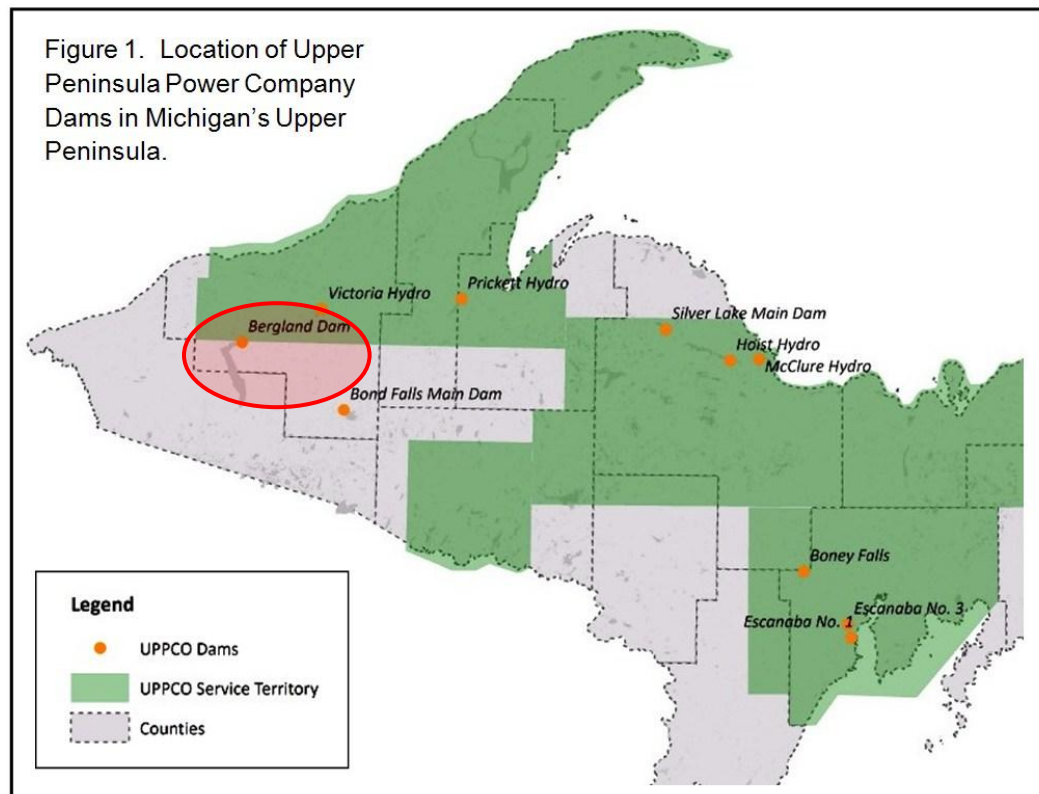
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## Introduction

In 2019, the Upper Peninsula Power Company (UPPCO) contracted with White Water Associates, Inc. to conduct monitoring for the aquatic invasive species (AIS) Purple Loosestrife (*Lythrum salicaria*) and Eurasian Watermilfoil (*Myriophyllum spicatum*) for the Bond Falls Hydroelectric Project (FERC No. 01864). This project is comprised of three dams (Bergland, Bond Falls, and Victoria). This document reports our findings from the monitoring conducted on the Bergland Dam Project (also known as Lake Gogebic).

## Project Area Location

The Bergland Dam Project area is contained in Ontonagon and Gogebic Counties (Michigan) and is comprised of Lake Gogebic. It is a part of the Bond Falls Hydroelectric Project (FERC No. 01864). Figure 1 is a map of UPPCO Dams and highlights Bergland Dam.



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## Monitoring Methods

The monitoring work followed the methodology described in the Bond Falls Hydroelectric Project (FERC No. 01864) Nuisance Plant Control Plan (Article 411) prepared by the UPPCO in 2005. In short, according to the Nuisance Plant Control Plan, the entire perimeter of the water body and associated wetlands were examined for Purple Loosestrife and five pre-established transects were sampled for Eurasian Watermilfoil.

Scientists from White Water (an independent consulting firm) conducted fieldwork from a Jon boat outfitted with a 60 HP engine. Pedestrian surveys were conducted when the boat did not provide adequate access for observation. Monitoring was conducted at the time of year when both Purple Loosestrife and Eurasian Watermilfoil are readily identified by an experienced field biologist. Binoculars were used to assist in search (specifically for purple loosestrife). A fifteen foot plant sampling rake was used to collect aquatic plants for inspection during the Eurasian Watermilfoil sampling. Field work for the Bergland Dam Project took place on August 19, 2019.

## Survey Results

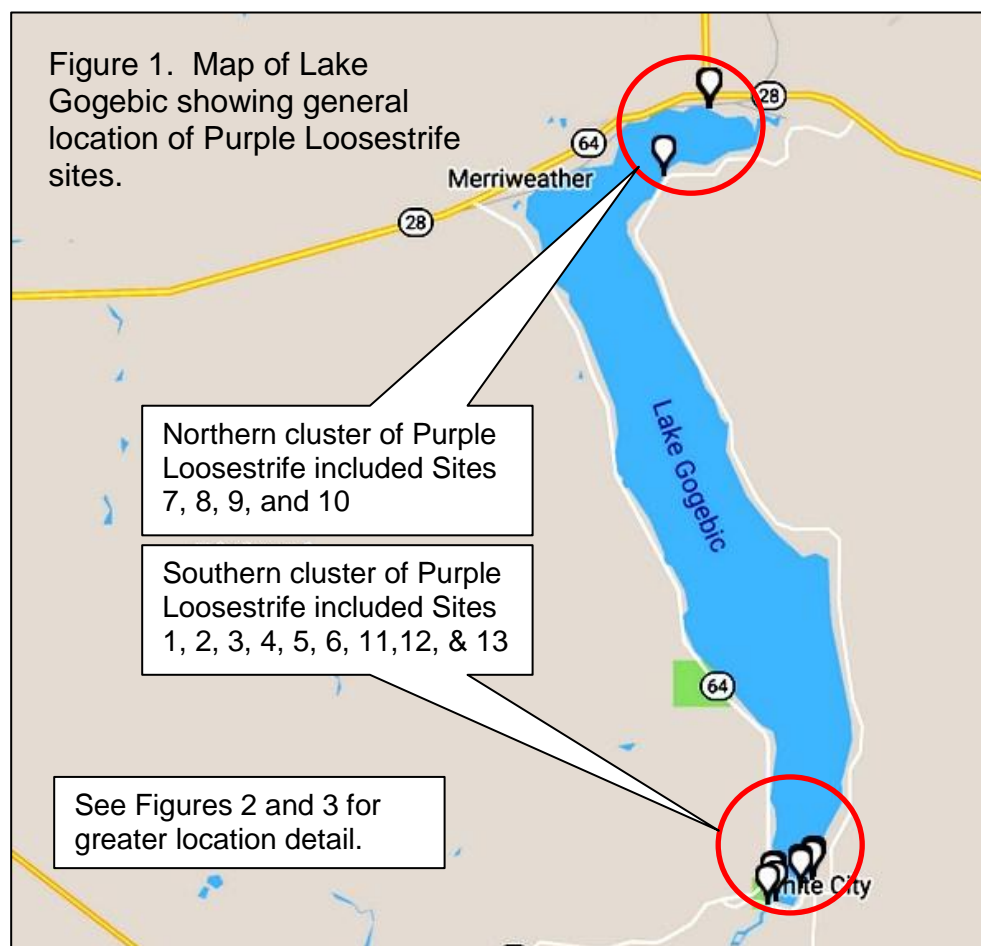
The survey results for Purple Loosestrife and Eurasian Watermilfoil are reported below under respective headings.

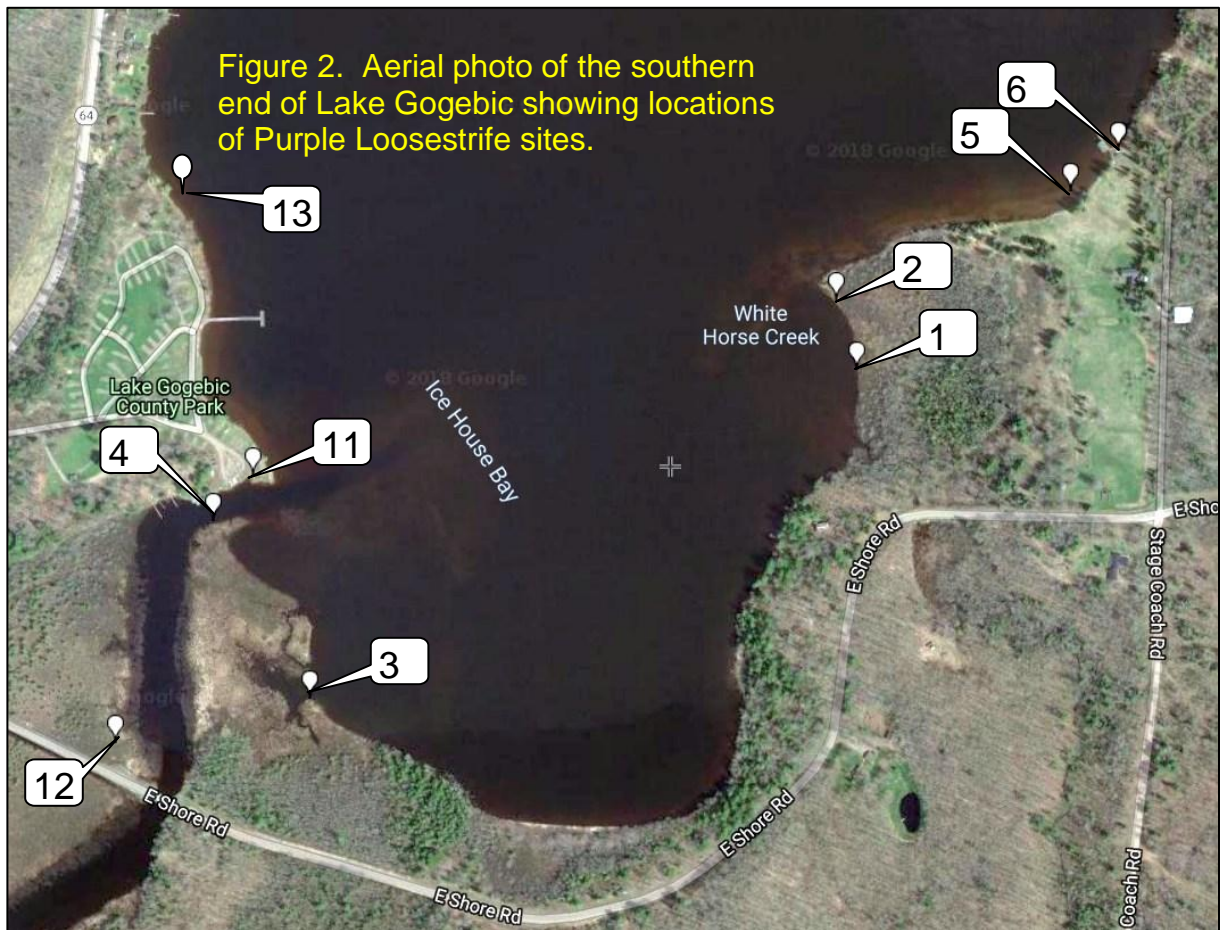
### Purple Loosestrife

A total of eleven sites were found to contain Purple Loosestrife on Lake Gogebic in 2019. The locations of these sites are shown on Figures 1, 2, and 3. The sites were clustered at the north and south portions of Lake Gogebic. Table 1 provides information regarding geographic location (latitude and longitude coordinates), colony size (*small* at 1-5 plants, *medium* at 6-50 plants, and *dense* for any site with greater than 50 plants), and whether any management action was taken at the time of the monitoring activity.

**Table 1. Purple Loosestrife Colonies Observed on Lake Gogebic in 2019**

Site #	Latitude	Longitude	Colony Size	Management / Notes
1	46.410869	-89.541748	Medium	No action
2	46.411585	-89.542072	Medium	No action
3	46.407450	-89.550010	Medium	No action
4	46.409300	-89.551460	Small	No action
5	46.412720	-89.538530	Small	No action
6	46.413160	-89.537810	No plants	Present in 2018
7	46.589672	-89.572406	Small	No action
8	46.589338	-89.573065	No plants	Present in 2018
9	46.589758	-89.572158	Small	No action
10	46.573881	-89.588090	Small	No action
11	46.409769	-89.550860	Small	No action
12	46.406981	-89.552943	Small	No action
13	46.412690	-89.551920	Small	No action; New location







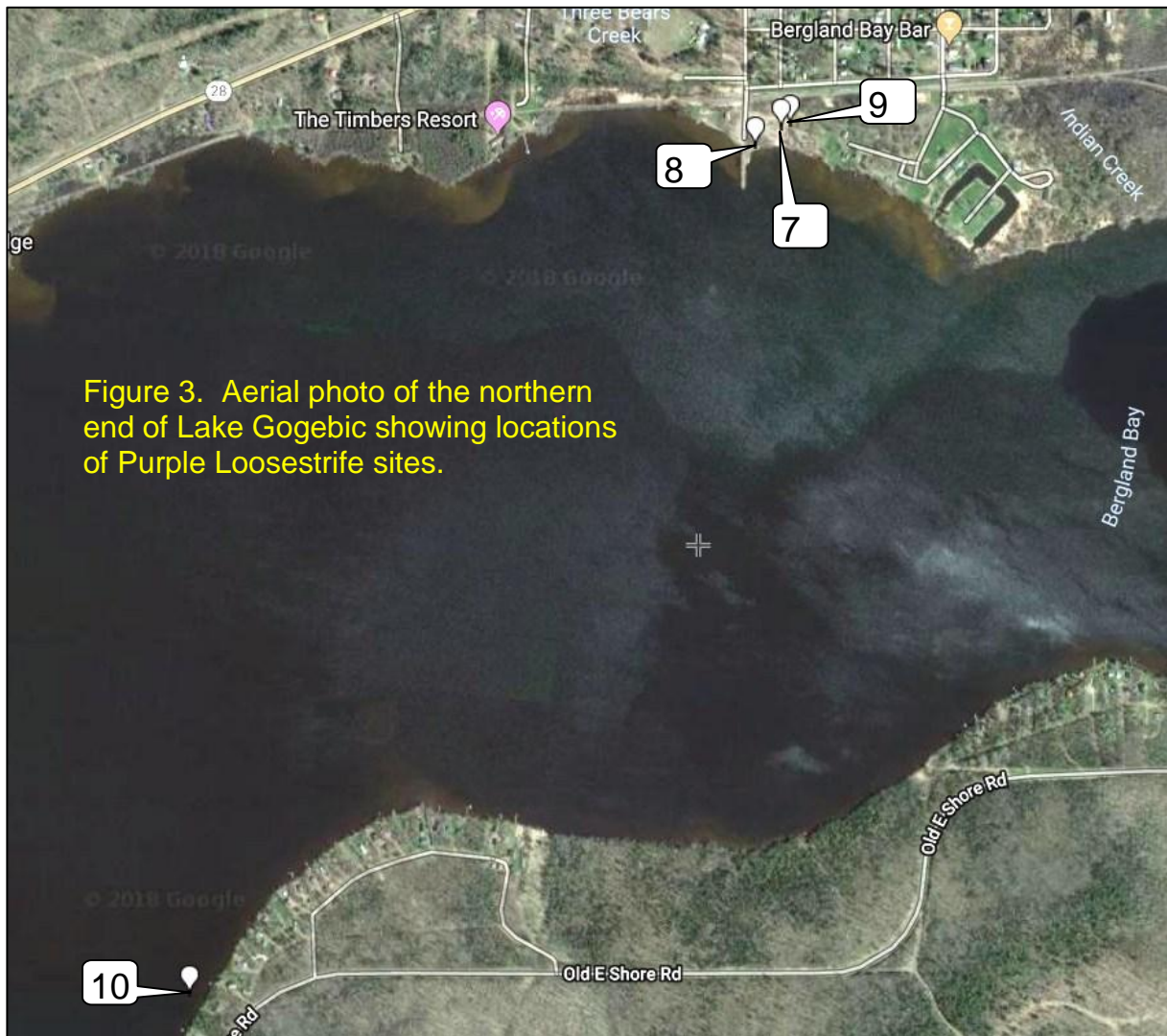


Figure 3. Aerial photo of the northern end of Lake Gogebic showing locations of Purple Loosestrife sites.

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## Eurasian Watermilfoil

Figure 4 shows an aerial photo of Lake Gogebic with the origin points for the five transects used for monitoring for Eurasian Watermilfoil.

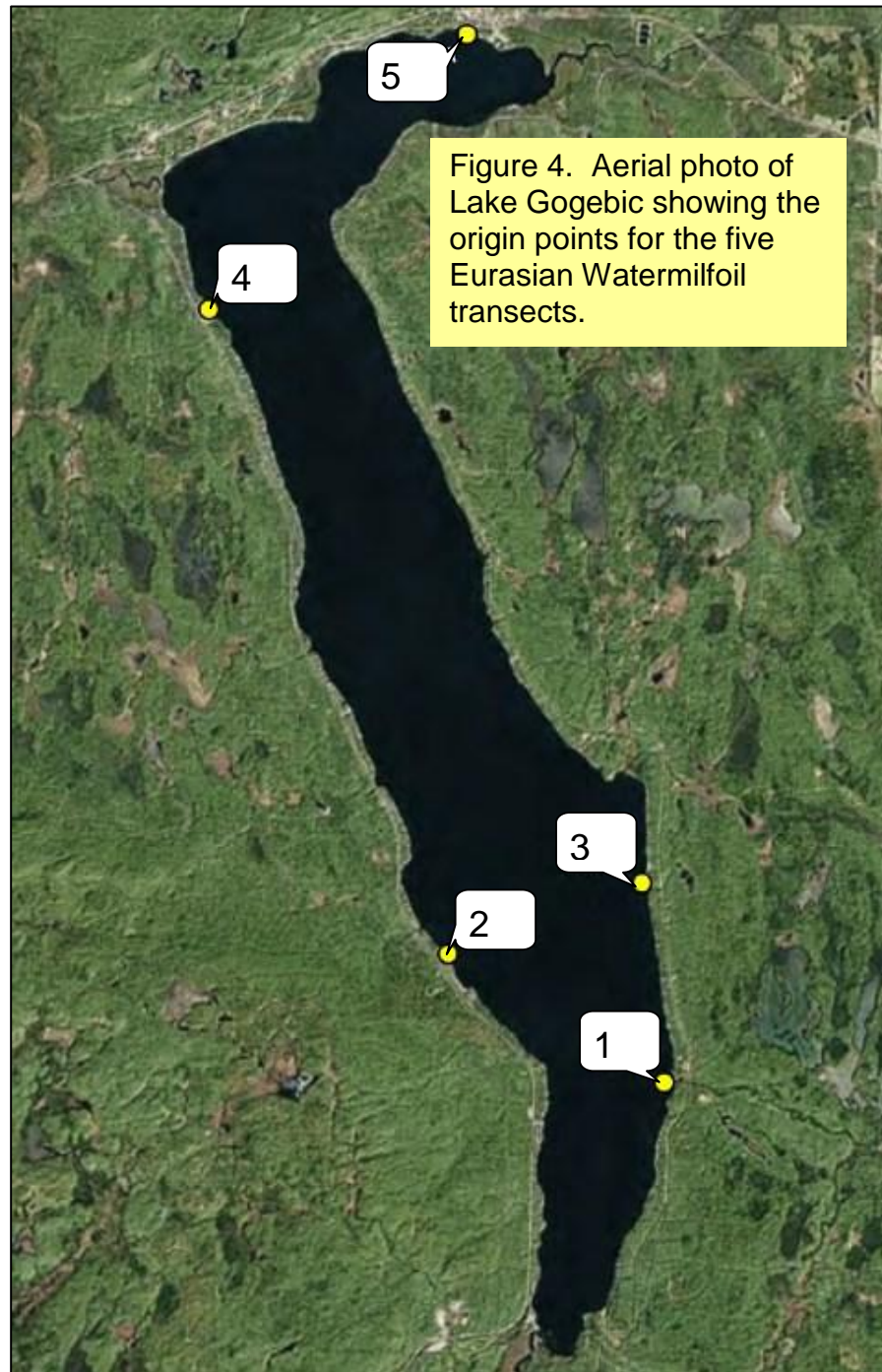


Table 2 provides sampling results from each of the transects sampled at Lake Gogebic. Each transect had three circular plots from which samples were collected in four depth quadrants. If a depth was not represented in the circular plot, “NA” (not applicable) was entered. No Eurasian Watermilfoil was found on transects or at boat landings in 2019.

Table 2. Results from Lake Gogebic Eurasian Watermilfoil transects in 2019						
Transect #	0-0.5 m	0.5-1.5 m	1.5-3.0 m	>3.0 m	Origin	Notes
1A	0	0	NA	NA	N 46 26.642 W 89 31.587 (46.44403, -89.52645)	BRG1
1B	0	0	NA	NA		
1C	0	0	NA	NA		
2A	0	0	NA	NA	N 46 27.653 W 89 34.259 (46.46088, -89.57098)	BRG2
2B	0	0	0	NA		
2C	0	0	0	NA		
3A	0	0	NA	NA	N 46 28.294 W 89 31.883 (46.47157, -89.53138)	BRG3
3B	0	0	0	NA		
3C	0	0	0	NA		
4A	0	0	0	NA	N 46 32.964 W 89 37.401 (46.54940, -89.62335)	BRG4
4B	0	0	0	NA		
4C	0	0	0	NA		
5A	0	NA	NA	NA	N 46 35.338 W 89 34.391 (46.58897, -89.57318)	BRG5
5B	0	0	0	NA		
5C	0	0	0	NA		
Boat Landings: No EWM was found at the boat landings. NA: Not Applicable Abundance Scale: 0-EWM absent, 1-EWM present, 2 –EWM presence less than half, 3-EWM equal presence compared to other species, 4-EWM dominant species present, 5-EWM total infestation. Note: Transects are 36 ft long & proceed perpendicular away from the shoreline						

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## **2019 MONITORING REPORT**

### **Monitoring the Bond Falls Dam Project for Purple Loosestrife and Eurasian Watermilfoil Part of the Bond Falls Hydroelectric Project (FERC No. 01864)**

**Prepared for:**

Upper Peninsula Power Company  
Contact: Kenneth M. Carruthers  
Environmental Specialist – UPPCO  
1002 Harbor Hills Drive, Marquette, MI 49855  
Office: (906) 232-1434

**Prepared by:**

White Water Associates, Inc.  
429 River Lane, P.O. Box 27  
Amasa, Michigan 49903  
Contacts: Dean Premo or Angie Stine, Field Biologist  
Voice: (906) 822-7889

August 2019



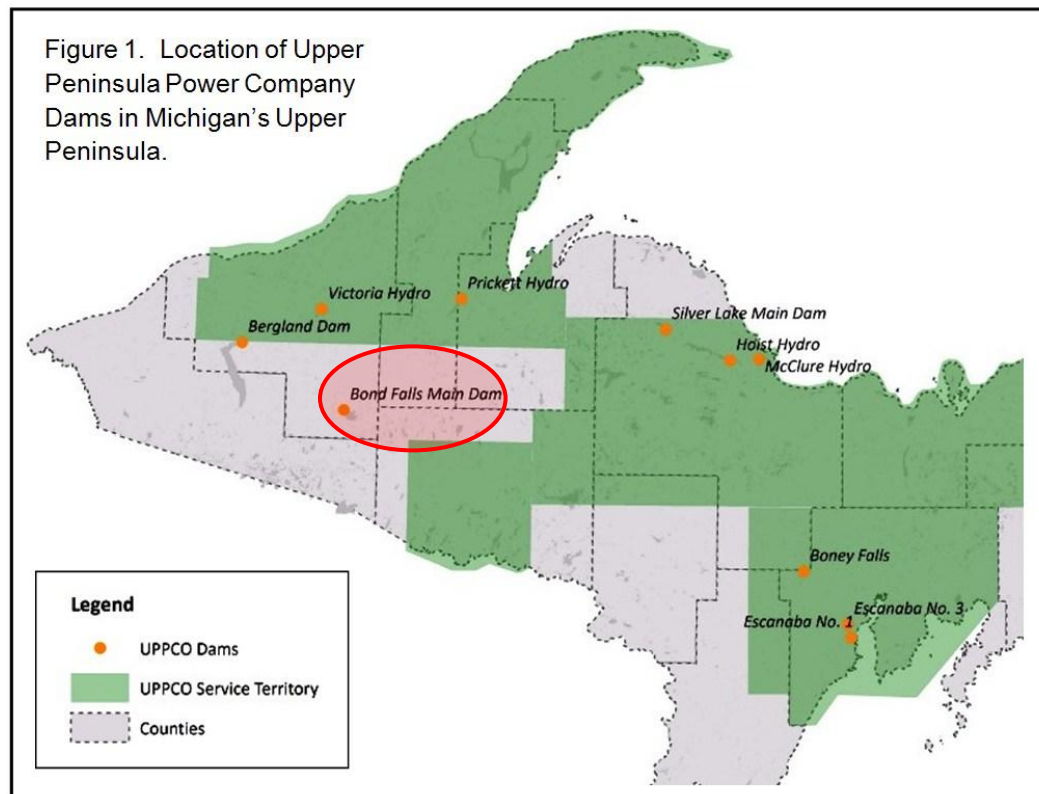
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## Introduction

In 2019, the Upper Peninsula Power Company (UPPCO) contracted with White Water Associates, Inc. to conduct monitoring for the aquatic invasive species (AIS) Purple Loosestrife (*Lythrum salicaria*) and Eurasian Watermilfoil (*Myriophyllum spicatum*) for the Bond Falls Hydroelectric Project (FERC No. 01864). This project is comprised of three dams (Bergland, Bond Falls, and Victoria). This document reports our findings from the monitoring conducted on the Bond Falls Dam Project.

## Project Area Location

The Bond Falls Dam Project area is contained in Ontonagon County (Michigan). It is a part of the Bond Falls Hydroelectric Project (FERC No. 01864). Figure 1 is a map of UPPCO Dams and highlights the Bond Falls Dam.



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## **Monitoring Methods**

The monitoring work followed the methodology described in the Bond Falls Hydroelectric Project (FERC No. 01864) Nuisance Plant Control Plan (Article 411) prepared by the UPPCO in 2005. In short, according to the Nuisance Plant Control Plan, the entire perimeter of the water body and associated wetlands were examined for Purple Loosestrife and three pre-established transects were sampled for Eurasian Watermilfoil.

Scientists from White Water (an independent consulting firm) conducted fieldwork from a Jon boat outfitted with a 60 HP engine. Pedestrian surveys were conducted when the boat did not provide adequate access for observation. Monitoring was conducted at the time of year when both Purple Loosestrife and Eurasian Watermilfoil are readily identified by an experienced field biologist. Binoculars were used to assist in search (specifically for purple loosestrife). A fifteen foot plant sampling rake was used to collect aquatic plants for inspection during the Eurasian Watermilfoil sampling. Field work for the Bond Falls Dam Project took place on August 15, 2019.

## **Survey Results**

The survey results for Purple Loosestrife and Eurasian Watermilfoil are reported below under respective headings.

### **Purple Loosestrife**

No Purple Loosestrife plants were documented on the Bond Falls Flowage or associated wetlands in 2019.

### **Eurasian Watermilfoil**

Figure 1 shows an aerial photo of the project area with the origin points for the three transects used for monitoring for Eurasian Watermilfoil.



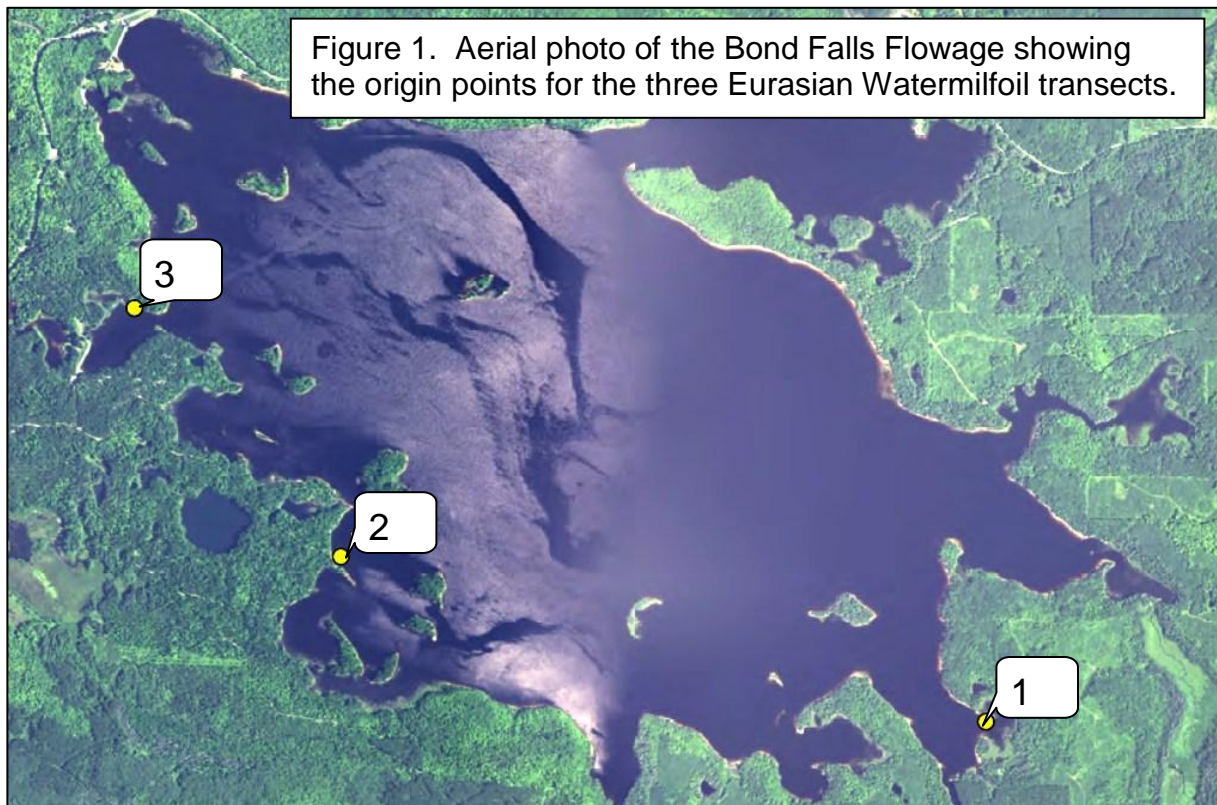


Table 2 provides sampling results from each of the transects sampled at the Bond Falls Flowage. Each transect had three circular plots from which samples were collected in four depth quadrants. If a depth was not represented in the circular plot, “NA” (not applicable) was entered. No Eurasian Watermilfoil was found on transects or at boat landings in 2019.

In 2018, Eurasian Watermilfoil was reported from several sites in Bond Falls by Michigan Department of Environment, Great Lakes and Energy (personal communication, William Keiper, EGLE). No voucher specimens documented these reports. In 2019, William Keiper provided White Water Associates with the latitude/longitude coordinates for his Eurasian Watermilfoil observations. In 2019, White Water Associates scientists visited each of the 2018 sites and carefully inspected for Eurasian Watermilfoil. None were observed. Table 3 provides the latitude/longitude coordinates for the Keiper observations and the subsequent 2019 follow-up.

Table 2. Results from Bond Falls Eurasian Watermilfoil transects in 2019						
Transect #	0-0.5 m	0.5-1.5 m	1.5-3.0 m	>3.0 m	Origin	Notes
1A	0	0	NA	NA	N 46 22.917 W 89 04.757 (46.382096, -89.079496)	BFAEM01
1B	0	0	NA	NA		
1C	0	0	0	0		
2A	0	0	0	NA	N 46 23.553 W 89 07.631 (46.387846, -89.115993)	BFAEM02
2B	0	0	0	0		
2C	0	0	0	0		
3A	0	NA	NA	NA	N 46 23.827 W 89 07.631 (46.397290, -89.127960)	BFAEM03
3B	0	0	0	NA		
3C	0	0	0	NA		
Boat Landings: No EWM was found at the boat landings. NA: Not Applicable Abundance Scale: 0-EWM absent, 1-EWM present, 2 –EWM presence less than half, 3-EWM equal presence compared to other species, 4-EWM dominant species present, 5-EWM total infestation. Note: Transects are 36 ft long & proceed perpendicular away from the shoreline						

<b>Table 3. Bond Falls Eurasian Watermilfoil (EWM) observations in 2018 by Michigan Department of Environment, Great Lakes and Energy and follow up monitoring by White Water Associates in 2019</b>				
<b>Latitude</b>	<b>Longitude</b>	<b>2018 AIS species</b>	<b>2018 AIS Density</b>	<b>2019 Follow-up Observations</b>
46.40539	-89.083124	EWM	2	No EWM observed in vicinity
46.40411	-89.081096	EWM	1	No EWM observed in vicinity
46.40222	-89.084892	EWM	1	No EWM observed in vicinity
46.40036	-89.086611	EWM	1	No EWM observed in vicinity
46.39521	-89.077207	EWM	1	No EWM observed in vicinity
46.38733	-89.072234	EWM	1	No EWM observed in vicinity
46.38813	-89.08116	EWM	2	No EWM observed in vicinity
46.38055	-89.080164	EWM	1	No EWM observed in vicinity
46.38439	-89.118563	EWM	1	No EWM observed in vicinity
46.40747	-89.124518	EWM	1	No EWM observed in vicinity
46.40488	-89.083951	EWM	1	No EWM observed in vicinity



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## **2019 MONITORING REPORT**

# **Monitoring the Victoria Hydroelectric Project for Purple Loosestrife and Eurasian Watermilfoil Part of the Bond Falls Hydroelectric Project (FERC No. 01864)**

### **Prepared for:**

Upper Peninsula Power Company  
Contact: Kenneth M. Carruthers  
Environmental Specialist – UPPCO  
1002 Harbor Hills Drive, Marquette, MI 49855  
Office: (906) 232-1434

### **Prepared by:**

White Water Associates, Inc.  
429 River Lane, P.O. Box 27  
Amasa, Michigan 49903  
Contacts: Dean Premo or Angie Stine, Field Biologist  
Voice: (906) 822-7889

August 2019



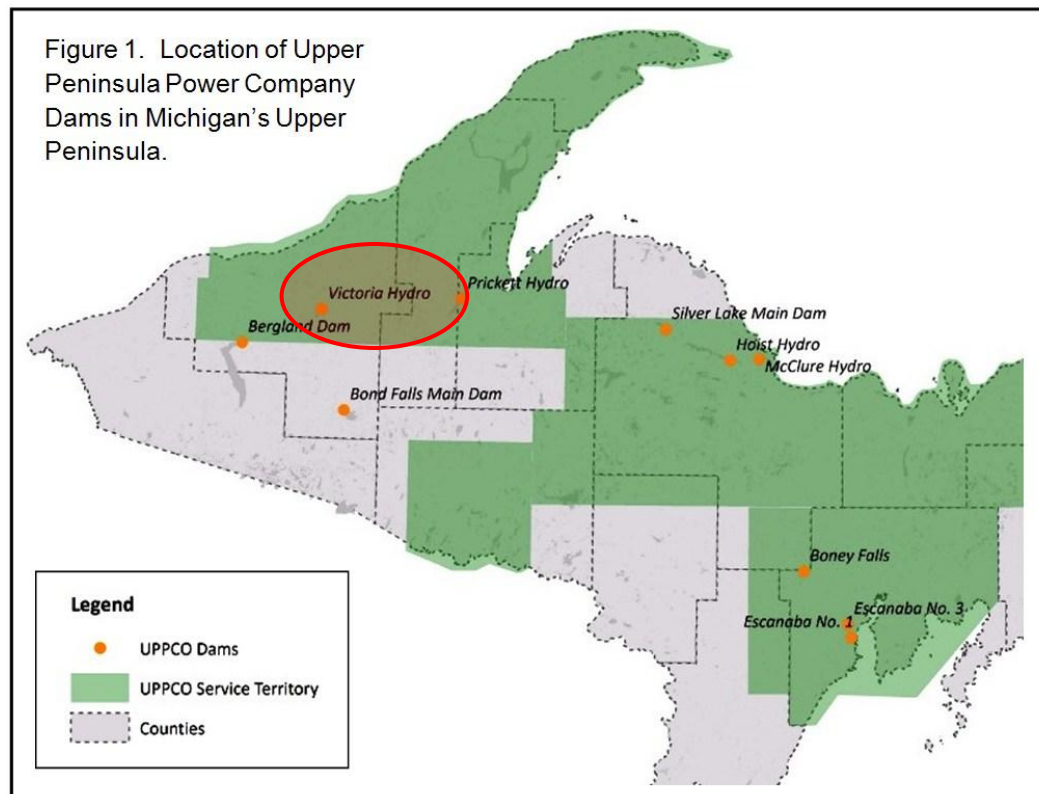
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## Introduction

In 2019, the Upper Peninsula Power Company (UPPCO) contracted with White Water Associates, Inc. to conduct monitoring for the aquatic invasive species (AIS) Purple Loosestrife (*Lythrum salicaria*) and Eurasian Watermilfoil (*Myriophyllum spicatum*) for the Bond Falls Hydroelectric Project (FERC No. 01864). This project is comprised of three dams (Bergland Dam, Bond Falls Dam, and Victoria Hydro). This document reports our findings from the monitoring conducted on the Victoria Hydro Project.

## Project Area Location

The Victoria Hydroelectric Project area is contained in Ontonagon County (Michigan). It is a part of the Bond Falls Hydroelectric Project (FERC No. 01864). Figure 1 is a map of UPPCO Dams and highlights the Victoria Hydroelectric project.



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## **Monitoring Methods**

The monitoring work followed the methodology described in the Bond Falls Hydroelectric Project (FERC No. 01864) Nuisance Plant Control Plan (Article 411) prepared by the UPPCO in 2005. In short, according to the Nuisance Plant Control Plan, the entire perimeter of the water body and associated wetlands were examined for Purple Loosestrife and two pre-established transects were sampled for Eurasian Watermilfoil.

Scientists from White Water (an independent consulting firm) conducted fieldwork from a Jon boat outfitted with a 60 HP engine. Pedestrian surveys were conducted when the boat did not provide adequate access for observation. Monitoring was conducted at the time of year when both Purple Loosestrife and Eurasian Watermilfoil are readily identified by an experienced field biologist. Binoculars were used to assist in search (specifically for purple loosestrife). A fifteen foot plant sampling rake was used to collect aquatic plants for inspection during the Eurasian Watermilfoil sampling. Field work for the Victoria Dam Project took place on August 20, 2019.

## **Survey Results**

The survey results for Purple Loosestrife and Eurasian Watermilfoil are reported below under respective headings.

### **Purple Loosestrife**

No Purple Loosestrife plants were documented on the Victoria Flowage or associated wetlands in 2019.

### **Eurasian Watermilfoil**

Figure 1 shows an aerial photo of the project area with the origin points for the two transects used for monitoring for Eurasian Watermilfoil.

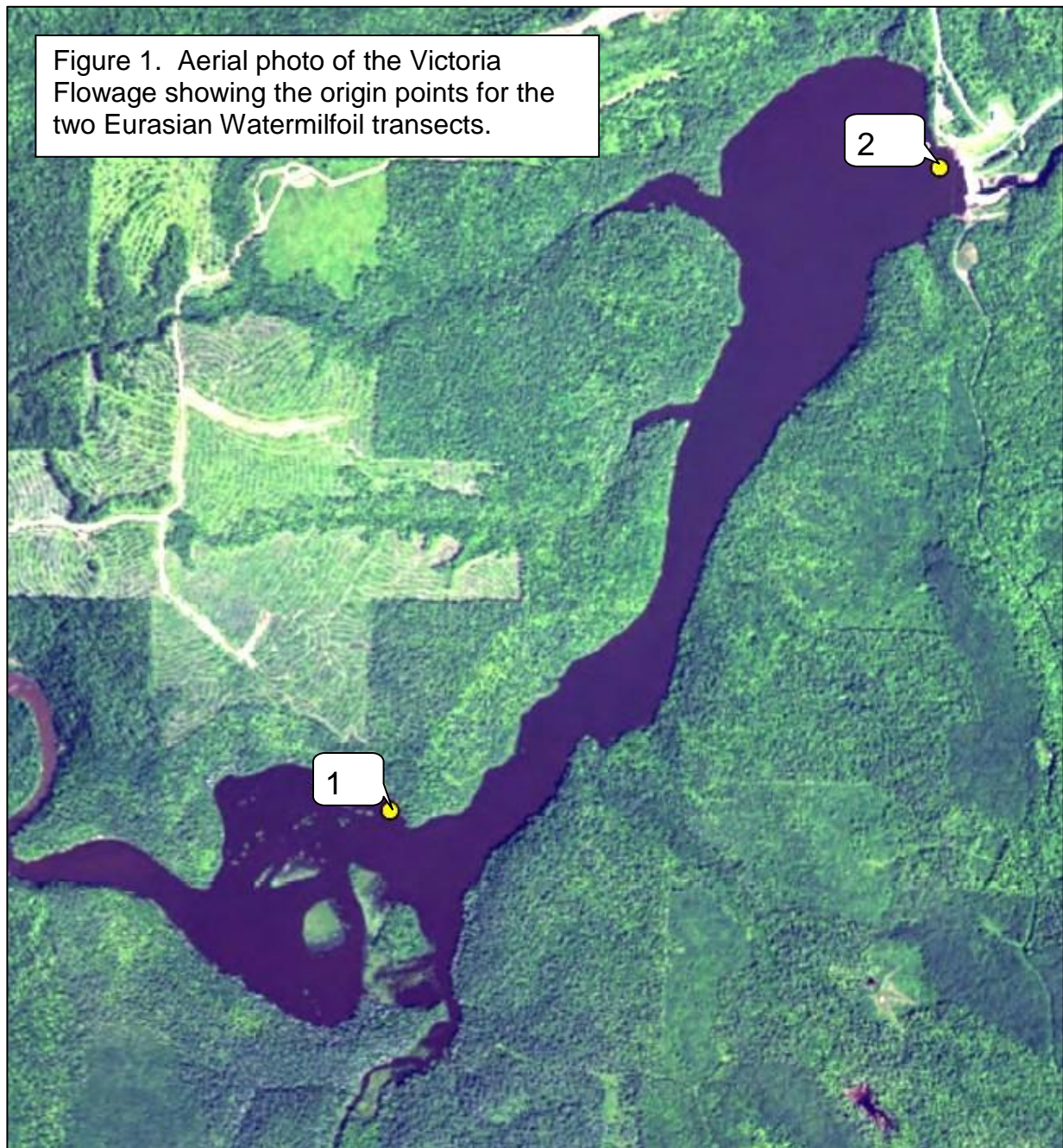


Table 2 provides sampling results from each of the transects sampled at the Victoria Flowage. Each transect had three circular plots from which samples were collected in four depth quadrants. If a depth was not represented in the circular plot, “NA” (not applicable) was entered. No Eurasian Watermilfoil was found on transects or at boat landings in 2019.

Table 2. Results from Victoria Hydro Eurasian Watermilfoil transects in 2019						
Transect #	0-0.5 m	0.5-1.5 m	1.5-3.0 m	>3.0 m	Origin	Notes
1A	0	0	NA	NA	N 46 40.259	VFAEM01
1B	0	0	0	0	W 89 15.038	
1C	0	0	0	0	(46.671240, -89.249568)	
2A	0	0	NA	NA	N 46 41.266	VFAEM02
2B	0	0	0	0	W 89 13.837	
2C	0	0	0	0	(46.687347, -89.230673)	
Boat Landings: No EWM was found at the boat landing. NA: Not Applicable Abundance Scale: 0-EWM absent, 1-EWM present, 2 –EWM presence less than half, 3-EWM equal presence compared to other species, 4-EWM dominant species present, 5-EWM total infestation. Note: Transects are 36 ft long & proceed perpendicular away from the shoreline						

## **Appendix 2**

### **Addendum to WWA Report for Bond Falls Development**

## Kenneth M. Carruthers

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**From:** Dean Premo <dean.premo@white-water-associates.com>  
**Sent:** Thursday, August 29, 2019 11:39 AM  
**To:** Kenneth M. Carruthers  
**Subject:** RE: 2019 PL and EWM Monitoring Reports for Bond Falls and Victoria

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**WARNING: This email was sent from an external address. Exercise caution when opening links or attachments.**

Kenneth,

Earlier this summer, I spoke with William Keiper (EGLE) regarding his EWM observations at Bond Falls. I got the impression that he had not verified that what he was recording as Eurasian Watermilfoil (EWM) by an in-hand inspection. He simply assumed he was looking at EWM because "EWM is something we see commonly across the state." He did not take a voucher specimen. The paragraph below is taken from his follow-up email to me in which he conveyed the lat/lon locations of his observations and a poor photo.

*"Attached is a spreadsheet with the locations we sampled including those we observed Eurasian watermilfoil. I've also included a pic that has the suspect EWM in it (right side and upper left). Unfortunately I didn't take any close up pictures of it and just have this one. As I mentioned EWM is something we see commonly across the state and I was more focused at looking for other AIS species. Admittedly, the characteristics fit EWM when we first looked at it (with the exception of a red stem) and we didn't look at it much beyond that. I'm looking forward to seeing what you find and please let me know if you need any additional information."*

As you might imagine, this EWM report on Bond Falls caused us a degree of professional embarrassment since we had conducted work on Bond Falls in 2018 and not documented EWM. Upon speaking with Keiper earlier this summer, I was eager to thoroughly look for EWM at these sites to determine whether we had actually missed seeing EWM. After our inspection, I am very confident that we did not overlook this aquatic invasive species. Please know that we conduct this work with great care and a high level of responsibility.

As a follow-up with William Keiper, I will suggest that he has the record removed from the MISIN Database.

Dean

Dean Premo, Ph.D., President  
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Web: <http://www.white-water-associates.com>

