

2020 Purple Loosestrife Inventory  
for  
Flambeau Lower Hydroelectric Project  
FERC Project #2421  
Flambeau Hydro, LLC  
Price County, Wisconsin

Submitted by:



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## Summary of Purple Loosestrife Inventory for Flambeau Lower Hydroelectric Project, FERC #2421

On July 22, 2020, White Water Associates, Inc. performed an inventory of purple loosestrife at the Flambeau Lower Project. The method of inventory approved and modified by a Federal Energy Regulatory Commission (FERC) Order (June 18, 2003) was defined as follows:

While purple loosestrife is blooming in mid-July to early August, the inventory should be conducted using a boat to survey the impoundment above the dam within the Project Boundary and on foot or by boat below the dam within the Project Boundary. County wetland maps may be used to determine other areas where Purple Loosestrife could be found on lands owned by Flambeau Hydro, LLC (FHLLC) within the Project Boundary. Lands owned by FHLLC within the Project Boundary 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 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 plants should be inventoried by marking and numbering the location on a project 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.

### 2020 Observations

The Flambeau Lower Project boundary was divided into three different areas; *the impoundment* (HWY 182 bridge in Park Falls to the dam), *FHLLC-owned property within the project boundary* (FHLLC-owned property adjacent to the dam and powerhouse), and *the tailrace* (from the dam and powerhouse to the HWY 13 bridge).

*The impoundment* was surveyed by boat. One multi-stem purple loosestrife plant was observed. A few of the tops were cut off and bagged but the plant is too large to remove.

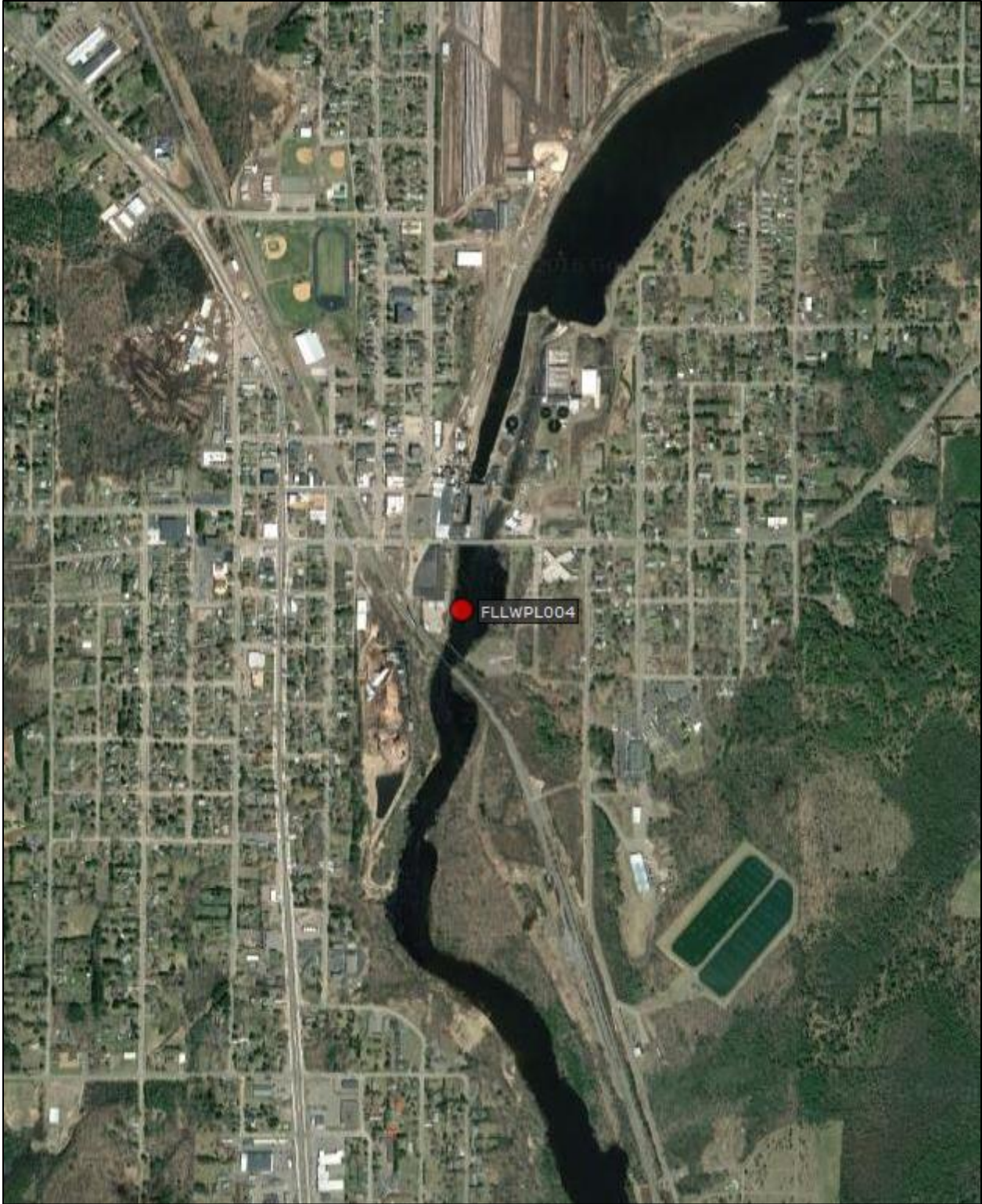
*The FHLLC-owned property within the project boundary* was surveyed on foot and no purple loosestrife plants were observed.

*The tailrace* was surveyed by boat and no purple loosestrife plants were observed.

A map of the purple loosestrife location is available in Appendix A. Appendix B provides tables of historical purple loosestrife data as well as observations made in 2020. Appendix C provides scans of field data sheets. Appendix D provides photos of purple loosestrife found at the project area.

# **Appendix A**

## **Maps**



Map 1. Locations of purple loosestrife at Flambeau Lower observed in 2020.

# **Appendix B**

## **Tables**

<b>Table 1. GPS points for purple loosestrife inventory at Flambeau Lower, FERC#2421.</b>					
<i>GPS Point</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Plant Height</i>	<i>Stand Area</i>	<i>Comments</i>
FLLWPL004 (FLLW PLB)	45.93290	-90.44688	5'	4'x3'	2016-first observed. 40 plants observed. Flowering heads clipped. 2017- One large multi-stemmed plant. No treatment. 2018-One large multi-stemmed plant. Cut a few tops but it is too large to remove. 2020- plant was removed.

# **Appendix C**

## **Scans of Datasheets**

## Purple Loosestrife Survey

Lower Flambeau

Hydroelectric Project – FERC # 2421

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Date 7-22-2020 Conducted By Breanna Kemppainen Sean Cannon

HWL 1467 TWL 1481 CFS 700 Equipment Used: Binoculars, Camera, GPS

Air Temp: 58 °C Wind Speed: W 5 mph Barometer: 24.93 Sky Conditions: 100% clouds

Time Survey Started 9:20 Time Survey Ended 10:10 Boat (14ft or Canoe) and/or Foot

Latitude Start BL Longitude End BL

Location of Survey Area: Tailrace  Bypass Reach  Impoundment  FHLIC Property

Description of Location \_\_\_\_\_

Historic Info: \_\_\_\_\_

Purple Loosestrife Found:  Yes or No

Information				
Site	<u>PL 8004</u>			
Time	<u>9:45</u>			
Photo ID	<u>369</u>			
Location				
Single or Multi-stem	<u>multi</u>			
# of Plants	<u>20+</u>			
Acreage est.				
Stand Area Density	<u>4x3</u>			
Size Colony S=0-5, M=6-50, L=>50~	<u>M 30 stems</u>			
Plant Height ~ Ft	<u>3+ feet</u>			
Flowering %	<u>50%</u>			
Beetle Feeding?	<u>NO</u>			
Plant Vigor (Very poor to good)	<u>good</u>			
Plant Removed (explain)	<u>NO, plants</u>			

are small and most are coming

Information				
Site				
Time				
Photo ID				
Location				
Single or Multi-stem				
# of Plants				
Acreage est.				
Stand Area Density				
Size Colony S=0-5, M=6-50, L=>50~				
Plant Height ~ Ft				
Flowering %				
Beetle Feeding?				
Plant Vigor (Very poor to good)				
Plant Removed (explain)				

Other Species Observed:

Others



Year ~~2020~~ Invasive & Other Plants Survey Purple loosestrife

Winter Hydroelectric Project – FERC #2064

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Date 7-22-2020 Conducted By Breanna Kemppainen Sean Cavan  
 HWL 1467.9 TWL 1486 CFS Flab  
 Air Temp: 59 °C Wind Speed: W 5 mph Barometer: 29.93 Sky Conditions: 100% clouds  
 Time Survey Started 10:10 Time Survey Ended 10:20 Boat (14 ft/Canoe) or Foot  
 Latitude Start Dam Longitude End Dam  
 Location of Survey Area: Tailrace  Bypass Reach  Impoundment \_\_\_\_\_ FHLLC Property   
 Description of Location \_\_\_\_\_  
 Historic Info: \_\_\_\_\_

Invasive Found: Yes or No  
Purple loosestrife

Purple loosestrife

Invasive Plant Info				
Site ID				
Photo ID				
Time				
Latitude				
Longitude				
Species Name				
Acreage (<1/2 acre, 1/2-1 acre, 1-10 acres, > 10 acres)				
Number of Plants				
Single or Multi-stem				
Plant height				
Location type (lake/pond edge) (stream edge) (roadside) (ditch)				
Plant removed				

Other Species Observed: \_\_\_\_\_

\* Asiatic Honeysuckles: *Lonicera tartarica*, *L. morrowii*, *L. x bella*; Buckthorns: *Rhamnus carthartica*, *R. fangula*; Curly Leaf Pondweed; Garlic Mustard; Eurasian Water-Milfoil; Japanese Knotweed; Purple Loosestrife; etc.

Signature \_\_\_\_\_



# **Appendix D**

## **Photos**



**Photo 1. Purple loosestrife growing in wetland area.**