

2021 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 14, 2021, 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.

2021 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 and all of the tops were cut off and bagged but the plant roots and stems were too large to remove.

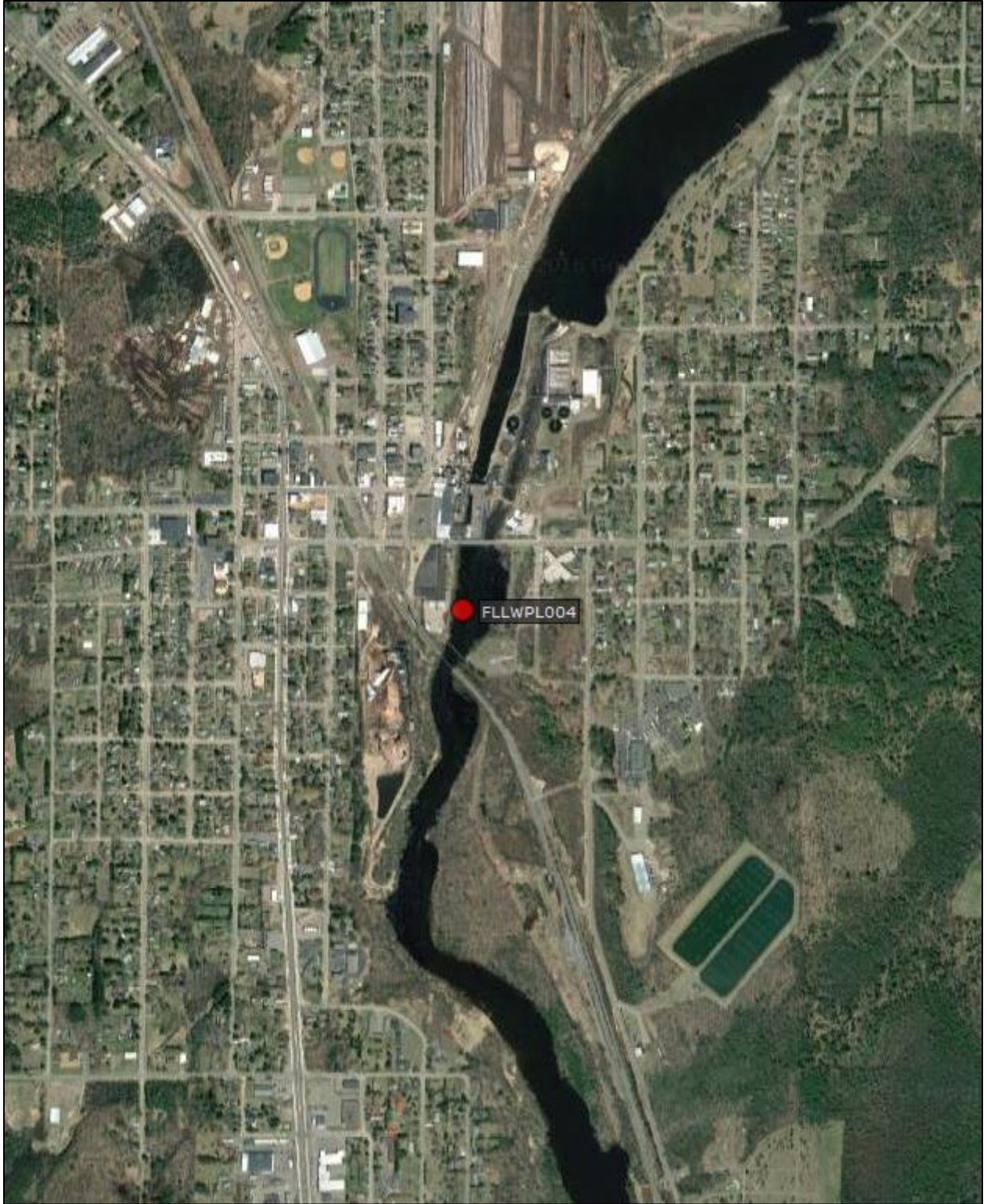
The FHLLC-owned property within the project boundary was surveyed on foot and no purple loosestrife plants were observed.

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 2021. 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 2021.

Appendix B

Tables

Table 1. GPS points for purple loosestrife inventory at Flambeau Lower, FERC#2421.					
<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'	<p>2016-first observed. 40 plants observed. Flowering heads clipped.</p> <p>2017- One large multi-stemmed plant. No treatment.</p> <p>2018-One large multi-stemmed plant. Cut a few tops but it is too large to remove.</p> <p>2019- One large multi-stemmed plant. Too large to remove.</p> <p>2020- flowering heads of the plant were removed.</p> <p>2021- Stems above ground were removed. Roots and stems toward the ground were too difficult to remove.</p>

Appendix C

Scans of Datasheets

Purple Loosestrife Survey

Lower Flambeau Hydroelectric Project – FERC # 2421

Page 1 of

Date 7-14-21 Conducted By Angie Shari Sean Cavan

HWL 1417.28 TWL 1446.5 CFS 448 Equipment Used: Binoculars, GPS, 14 Boat

Air Temp: 77°F Wind Speed: 5 mph Barometer: 29.79 Sky Conditions: 100% clouds

Time Survey Started 11:33 Time Survey Ended 12:53 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>009</u>				
Time	<u>12:08</u>				
Photo ID	<u>9278-71</u>				
Location					
Single or Multi-stem					
# of Plants	<u>Multi</u>				
Acreage est.					
Stand Area Density	<u>3x4'</u>				
Size Colony					
S=0-5, M=6-50, L=>50~	<u>M</u>				
Plant Height ~ Ft	<u>4'</u>				
Flowering %	<u>no</u>				
Beetle Feeding?	<u>no</u>				
Plant Vigor (Very poor to good)	<u>good</u>				
Plant Removed (explain)	<u>all tops</u>				

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:

Ducks, Bald Eagle, ring necked turtle
Aquatic forget-me-not (about landing) - blue flower.

Purple Loosestrife Survey

Louisa Flamban Hydroelectric Project – FERC # 2421 Page ___ of ___

Date 7/14/21 Conducted By Angie Stru Sean Coran

HWL 112 21TWL 11165 CFS 448 Equipment Used: _____

Air Temp: _____ °C Wind Speed: _____ Barometer: _____ Sky Conditions: 100% clouds

Time Survey Started _____ Time Survey Ended _____ Boat (14ft or Canoe) and/or Foot

Latitude Start _____ Longitude End _____

Location of Survey Area: Tailrace Bypass Reach Impoundment _____ FHLLC Property

Description of Location _____

Historic Info: _____

Purple Loosestrife Found: Yes or No

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)					

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: _____

Appendix D

Photos



Photo 1. Purple loosestrife growing in wetland area.



Photo 2. Photo after the stems were cut on the purple loosestrife plant.