



January 30, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

**RE: Flambeau Upper FERC Project Number 2640
Flambeau Hydro LLC
Final Report 2017 Purple Loosestrife Inventory Report**

Dear Ms. Bose:

On behalf of Flambeau Hydro LLC, "Flambeau" (Licensee), Renewable World Energies, LLC (RWE) is submitting a copy of the *Final Report 2017 Purple Loosestrife Inventory Report* for the Flambeau Upper Hydroelectric Project. The report is a requirement of Flambeau's Federal license pursuant to article 412. Monitoring was conducted on August 28, 2017. No out of the ordinary issues were encountered. Purple Loosestrife was observed on the Power Canal/Bypassed Reach at one site. As with last year, one Purple Loosestrife plant was observed, pulled and disposed of in an approved manner. The draft report was sent to the agencies by an attachment to an e-mail on November 16, 2017 for review and comment. No comments have been received from the WDNR. No comments have been received from the USFWS. The next scheduled monitoring event will be conducted in 2018.

If you have any questions concerning this submittal, please contact Brian Kreuzscher at the Renewable World Energies, LLC offices @ 855-994-9376 Ext 230. He can also be reached by e-mail at bkreuscher@rwehydro.com.

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Sincerely,
Renewable World Energies, LLC
Agent for Licensee

A handwritten signature in black ink, appearing to read "Bj/k", positioned above the typed name.

For Mr. Jason Kreuzscher
Vice President

Attachment: Flambeau Upper Final Purple Loosestrife Inventory Report

Cc: Ms. Cheryl Laatsch, WDNR
Mr. Nick Utrup, USFWS
RWE, Corporate

2017 Purple Loosestrife Inventory
for
Flambeau Upper Hydroelectric Project
FERC Project #2640
Flambeau Hydro, LLC
Price County, Wisconsin

Submitted by:



429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone: 906-822-7889

Summary of Purple Loosestrife Inventory for Flambeau Upper Hydroelectric Project, FERC #2640

On August 28, 2017, White Water Associates, Inc. performed an inventory of purple loosestrife at the Flambeau Upper 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.

2017 Observations

The Flambeau Upper Project boundary was divided into three different areas; *the impoundment* (from just downstream to the last rapids before the impoundment to the dam), *the power canal/bypassed reach* (the power canal from the dam to the powerhouse, and the bypassed reach area from the dam to the single lane service bridge just upstream of the HWY 182 bridge), and *the tailrace* (from the single lane service bridge just upstream of the HWY 182 bridge to the HWY 182 bridge).

The impoundment was surveyed by boat and no purple loosestrife plants were found.

The power canal/bypassed reach was surveyed on foot and one purple loosestrife plant was found. This plant was removed.

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

A map of purple loosestrife locations is available in Appendix A. Appendix B provides tables of historical purple loosestrife data as well as observations made in 2017. Appendix C provides scans of field data sheets.

Appendix A

Map



Map 1. Locations of purple loosestrife at Flambeau Upper observed in 2017.

Appendix B

Table

Table 1. GPS points for purple loosestrife inventory at Flambeau Upper, FERC#2640.					
<i>GPS Point</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Plant Height</i>	<i>Stand Area</i>	<i>Comments</i>
FLUPPL001	45.94678	-90.43405	N/A	N/A	2002-first observed. 15-25 plants. 2003-discovered plants were not purple loosestrife but winged loosestrife. 2004-plants removed. 2007-reoccurrence of plants. 2008-2015- no plants observed. 2016-no plants observed. 2017-no plants observed.
FLUPPL002	45.93593	-90.44344	N/A	N/A	2006-first observed. 2007-plants observed. 2008-2015-no plants observed. 2016-no plants observed. 2017-no plants observed.
FLUPPL003 (FLUP PLA)	45.93397	-90.44525	3'	1'x1'	2016-first observed. 1 plant was observed and pulled 2017-1 plant observed and removed.

Appendix C

Scans of Datasheets

Purple Loosestrife Survey

Flamborough Hydroelectric Project – FERC # 2090 Page ___ of ___
 Date 8-28-17 Conducted By Shirley Haag
 HWL 1480 TWL 1467 CFS 560 Equipment Used: Binoculars, GPS
 Air Temp: 20 °F Wind Speed: 7 mph Barometer: 30 Sky Conditions: Cloudy
 Time Survey Started 12:25 Time Survey Ended 2:20 pm Boat (14ft or Canoe) and/or Foot
 Latitude Start Boat landing Longitude End Boat landing
 Location of Survey Area: Tailrace ___ Bypass Reach ___ Impoundment FHLIC Property ___
 Description of Location downstream of last rapids before impoundment both dam
 Historic Info: 2016 NO PL 3 25 min
 Purple Loosestrife Found: Yes or No (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:

Turkey vultures, 26 painted turtles, many turtles, bald eagle, 2 Kingfisher

Purple Loosestrife Survey

Flambrau Upper Hydroelectric Project – FERC # 2640

Page ___ of ___

Date 8-26-17 Conducted By Shirley A. S. Haag

HWL 146.05 TWL 146.70 CFS 560 Equipment Used: _____

Air Temp: 70 °C Wind Speed: 7 mph Barometer: 30 Sky Conditions: cloudy

Time Survey Started 2:25 Am Time Survey Ended 2:45 Boat (14ft or Canoe) and/or Foot (circled)

Latitude Start _____ Longitude End _____

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

Description of Location _____

Historic Info: _____

Purple Loosestrife Found: Yes or (circled) 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: _____

Purple Loosestrife Survey

Flambeau Upper Hydroelectric Project – FERC # 2040

Page ___ of ___

Date 8-28-17 Conducted By Shirley Haag

HWL 1486.65 TWL 1467.60 CFS 560 Equipment Used: Camera GPS

Air Temp: 70 °F Wind Speed: 7 mph Barometer: 30 Sky Conditions: Cloudy

Time Survey Started 2:25 pm Time Survey Ended 2:45 pm Boat (14ft or Canoe) and/or Foot

Latitude Start _____ Longitude End _____

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

Description of Location Power canal from the dam to the powerhouse Single dam w/ 182 bridge

Historic Info: one plant in trail in small drainage wetland 2016

Purple Loosestrife Found: Yes or No

Information					
Site	<u>FLW PPL 003</u>				
Time	<u>14:40</u>				
Photo ID	<u>4147</u>				
Location	<u>wetland drain</u>				
Single or Multi-stem	<u>Single</u>				
# of Plants	<u>1</u> ^{2 non-flw}				
Acreage est.	<u>1x1</u>				
Stand Area Density	<u>1'x1'</u>				
Size Colony	<u>S</u>				
S=0-5, M=6-50, L=>50~					
Plant Height ~ Ft	<u>4.5'</u>				
Flowering %	<u>yes 100%</u>				
Beetle Feeding?					
Plant Vigor (Very poor to good)	<u>good</u>				
Plant Removed (explain)	<u>yes</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:

Brian Kreuzscher

From: Brian Kreuzscher
Sent: Thursday, November 16, 2017 10:45 AM
To: Cheryl Laatsch; Nick Utrup
Subject: Crowley (P-2473) Pixley (P-2395) Upper (P-2640) Lower (P-2421) 2017 Purple Loosestrife Draft Reports
Attachments: Crowley PL Draft Report 2017-Complete.pdf; Lower Flambeau PL Draft Report 2017-Complete.pdf; Pixley PL Draft Report 2017-Complete.pdf; Upper Flambeau PL Draft Report 2017-Complete.pdf; Grantsburg High School Purple Loosestrife Beetle Release on Clam Flowage_Clam River Delta 7 5 17.pdf

Cheryl and Nick,

Attached are copies of the Purple Loosestrife Draft Reports for the surveys conducted at Flambeau Upper (P-2640), Flambeau Lower (P-2421), Flambeau Pixley (P-2395) and Flambeau Crowley (P-2473). Danbury (P-9184) and Clam River (P-9185) did not require a Survey in Odd years. Clam River did have approximately 6,000 Galerucella Beetles released by the Grantsburg High School. I have attached the report that Science teacher Matt Berg wrote.

Please return any comments on the draft reports to me within 30 days.

Thanks

Brian Kreuzscher
Renewable World Energies
Regulatory & Compliance
855-994-9376 x230