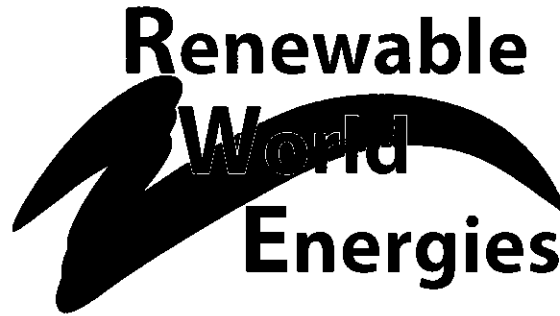


ORIGINAL



January 22, 2013

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

**Re: FINAL 2012 Purple Loosetrife Report Flambeau Hydro, LLC**  
**Flambeau Upper Project #2640 Article 412**  
**Flambeau Lower Project #2421 Article 410**  
**Flambeau Pixley Project #2395 Article 410**  
**Flambeau Crowley Project #2473 Article 410**

RECEIVED  
 SECRETARY OF THE  
 COMMISSION  
 2013 JAN 25 AM 11:11  
 FEDERAL ENERGY  
 REGULATORY COMMISSION

Dear Secretary Bose,

Enclosed you will find 1 original and 8 copies of the 2012 Purple Loosetrife Final Report conducted by Flambeau Hydro, LLC for the Flambeau Upper, Flambeau Lower, Flambeau Pixley and Flambeau Crowley hydroelectric projects. No changes have been made to the final draft as the agencies were happy with the draft copy as written after the December phone meeting and explanations (see below under Crowley). As per the Federal Energy Regulatory Commission (FERC) Order of June 18, 2003 this annual report is respectfully submitted by Renewable World Energies, LLC on behalf of Flambeau Hydro, LLC.

Flambeau Upper

A purple loosetrife survey was completed on August 8, 2012 at the Flambeau Upper Project in Price County, Wisconsin. No purple loosetrife was observed.

Flambeau Lower

A purple loosetrife survey was completed on August 8, 2012 at the Flambeau Lower Project in Price County, Wisconsin. No purple loosetrife was observed.

Flambeau Pixley

A purple loosetrife survey was completed on August 8, 2012 at the Flambeau Pixley Project in Price County, Wisconsin. No purple loosetrife was observed.

**Corporate Office**  
 P.O. Box 264  
 100 S. State Street  
 Neshkoro, WI 54960  
 Fax: 920-293-4100

Phone: 855-99HYDRO  
 (855-994-9376)  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

**Administrative Office**  
 1001 Stephenson Street  
 Norway, MI 49870  
 Fax: 906-563-9344

2


Flambeau Crowley A purple loosestrife survey was completed on August 9, 2012 at the Flambeau Crowley Project in Price County, Wisconsin. 11 multi-stemmed plants were observed along the causeway. They were treated again in August of 2012 with Glyphosate. This was the only occurrence of purple loosestrife observed in 2012 on the Flambeau Projects.

Draft copies of the purple loosestrife reports for Flambeau Upper, Flambeau Lower, Flambeau Pixley, and Flambeau Crowley were sent out to both the Wisconsin DNR and the US Fish and Wildlife Service on November 21, 2012. In correspondence received on January 18, 2013 the FWS replied that it had no comments. Correspondence was also received from WDNR December 6, 2012. A phone conference with WDNR representatives was held on December 7, 2012 to discuss their comments. All concerns were addressed, questions answered and report data explained. Most of the questions or concerns that the WDNR had were caused by staff changes and the fact they could not find copies of the plans in their respective files. The Licensee sent a PDF of each plan and order to Ms. Cheryl Laatsch for distribution to her staff. They are going to review it among their staff and consult with RWE if they decide changes need to be made prior to the next monitoring season, but no changes were to be made in the report. Both sets of agency correspondence are attached in Appendix E.

The next scheduled monitoring event will be conducted in 2013.

If you have any questions concerning this survey please feel free to contact Aneta Rietveld at Renewable World Energies, LLC offices phone (855) 994-9376 ext. 108 or email at [arietveld@rwehydro.com](mailto:arietveld@rwehydro.com).

Sincerely,  
Renewable World Energies, LLC  
Agent for the Licensee,



Mr. Jason Kreuzscher  
Vice President Operations

For:

Cc: RWE Corporate  
Mr. Peter Fasbender  
Ms. Cheryl Laatsch  
Mr. Craig Roestler

Attachment: Final 2012 Purple Loosestrife Report Flambeau Hydro, LLC

# Appendix A

Flambeau Upper

FERC # 2640

**Flambeau Upper Project Purple Loosestrife Inventory**

**August 8, 2012**

**FERC Project # 2640 Article 412**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 8, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Upper Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

**Example:**

#1 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1487.4 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Maps 1 & 2, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Upper Hydroelectric Project FERC Project #2640.

**General Observations:**

The Flambeau Upper Project Boundary was divided into three different areas; *the impoundment* (from just downstream of 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 tailrace* was surveyed by boat and no purple loosestrife plants were observed.

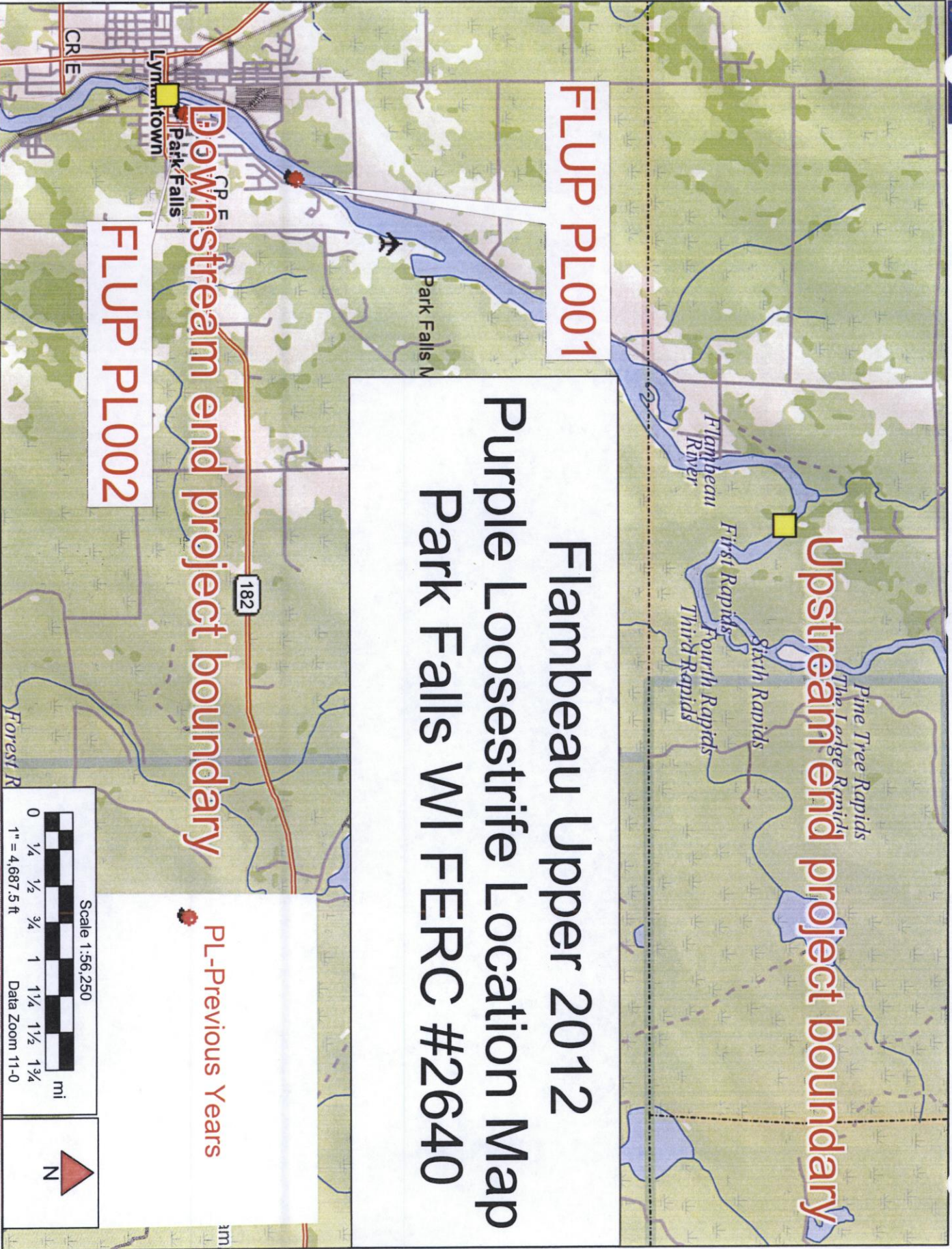
*The power canal/bypassed reach* was surveyed on foot and no purple loosestrife plants were found. No occurrences of purple loosestrife have been found in this area since 2007.

*The impoundment* was surveyed by boat and no purple loosestrife plants were found. No occurrences of purple loosestrife have been found in this area since 2007.

If any purple loosestrife plants had been found during the inventory, a digital camera would have been used to document these occurrences and GPS coordinates for the location of the plants would have been recorded.

**Purple Loosestrife Survey****Project:** Flambeau Upper #2640**Datum:** WGS 84**Date:** August 8, 2012**Page:** 1 of 1**Crew:** GGR and AKR

| <b>Sighting #</b> | <b>GPS Point</b>         | <b>Latitude</b>    | <b>Longitude</b>   | <b>Plant Height</b> | <b>Stand Area</b> | <b>Comments</b>   |
|-------------------|--------------------------|--------------------|--------------------|---------------------|-------------------|---|
| <b>1</b>          | <b>2<br/>FLUPPL001</b>   | <b>N45 56.807'</b> | <b>W90 26.043'</b> | <b>N/A</b>          | <b>N/A</b>        | <b>No occurrences of purple loosestrife were found within the project boundary in 2012. Located 3 yards bearing 90 degrees (east) of GPS point on residence shore. First observed in 2002, approx. 15-25 plants growing close together. Plants appeared to have 3-5 stems per plant. In 2003 samples were taken of this occurrence along with a recording on video tape. Analysis revealed that the plants were winged loosestrife (Lythrum Alatum) and not purple loosestrife (Lythrum Salicaria). In 2004 the land owner removed the plants. In 2007 the plants reoccurred at this location. During the 2008,2009,2010,2011, and 2012 survey the plants could not be located. This site is videotaped in 2002 and photographed in 2007.</b> |
| <b>2</b>          | <b>246<br/>FLUPPL002</b> | <b>N45 56.157'</b> | <b>W90 26.607'</b> | <b>N/A</b>          | <b>N/A</b>        | <b>Located on the waypoint in the cattails at the northwest corner of the electrical sub-station fence, this occurrence was first observed in 2006 and removed. No old cane or damages visible. Reoccurred and pulled again in 2007. During the 2008,2009,2010,2011, and 2012 survey, no purple loosestrife plants could be located at this site. Plants at this location were photographed in 2006.</b>  |





## 2012 Flambeau Upper Purple Loosestrife Survey



Year 2012 Purple Loosetrife Survey

Flambeau Upper Hydroelectric Project – FERC # 2640

Date: 8-8-12 Conducted By: AKR GGR

HWL: 1486.77 TWL: 1467.3 TFlow-392

Time Survey Started: 8:00 Time Survey Ended: 10:15am

Weather Conditions: 60° Rainy Cloudy

Location of Survey Area: Tailrace \_\_\_\_\_ Bypass Reach \_\_\_\_\_ Impoundment X

Time of Sighting(s): \_\_\_\_\_

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

(Attach Photos & Map if Applicable)

Purple Loosetrife: X none observed

Other Species Observed: 1 eagle, 3 mallards

1 goose, 1 northern

Other Pertinent Survey Information

# Appendix B

Flambeau Lower

FERC # 2421

**Flambeau Lower Project Purple Loosestrife Inventory**

**August 8, 2012**

**FERC Project # 2421 Article 410**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 8, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Lower Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1) 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2) 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1468 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Maps 1, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Lower Hydroelectric Project FERC Project #2421.

General Observations:

The Flambeau Lower Project Boundary was divided into three different areas; *the impoundment* (from 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 tailrace* was surveyed by boat and no purple loosestrife plants were observed.

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

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

If any purple loosestrife plants had been found during the inventory, a digital camera would have been used to document these occurrences and GPS coordinates for the location of the plants would have been recorded.

Purple Loosestrife Survey

Project: Flambeau Lower #2421

Datum: WGS 84

Date: August 8, 2012

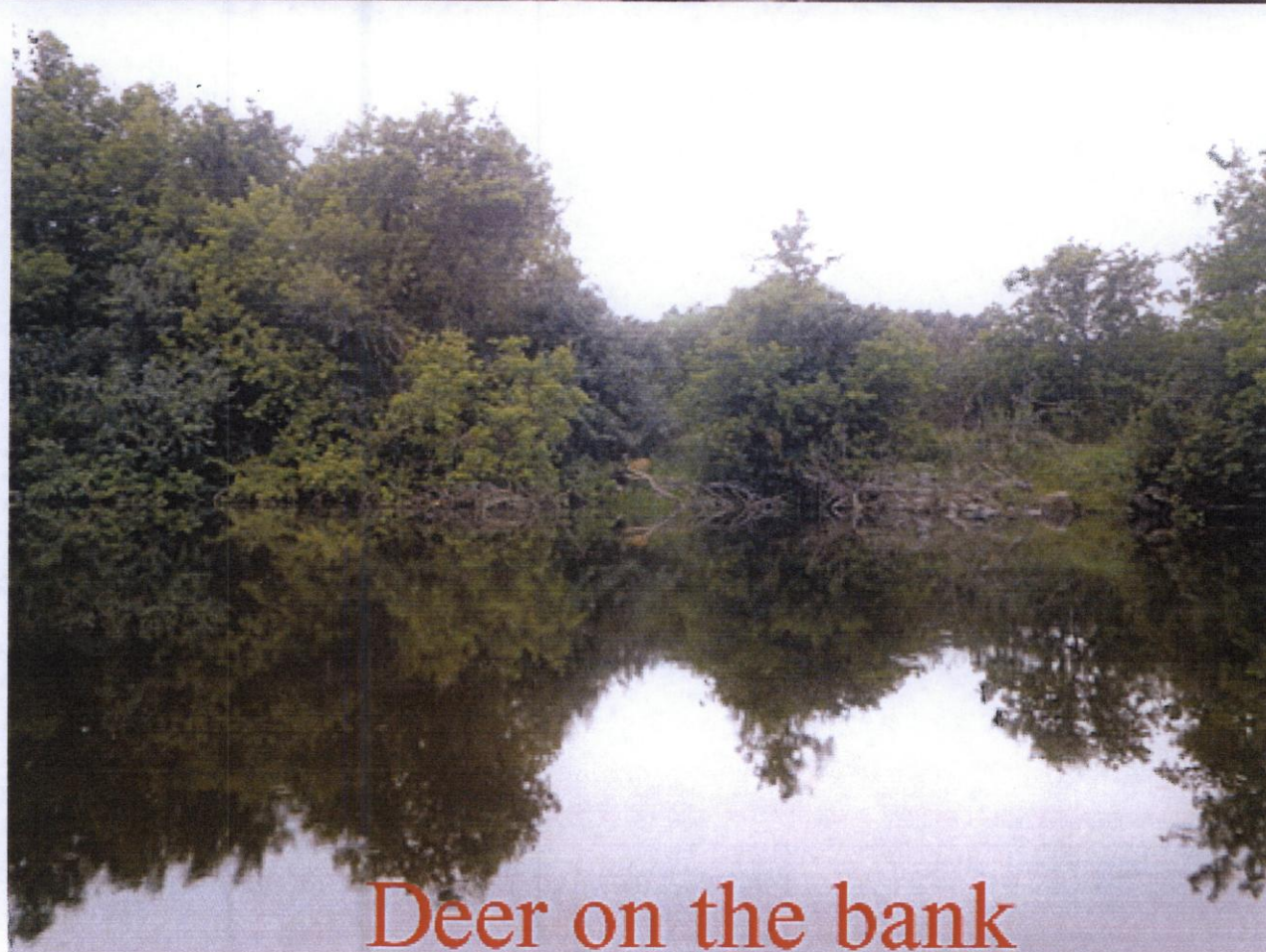
Page: 1 of 1

Crew: GGR and AKR

| Sighting # | GPS Point | Latitude | Longitude | Plant Height | Stand Area | Comments   |
|------------|-----------|----------|-----------|--------------|------------|--|
|            |           |          |           |              |            | No occurrences of purple loosestrife were found within the project boundary in 2012. |



# Purple Loosestrife Survey 2012 Flambeau Lower



Deer on the bank

Year 2012 Purple Loosestrife Survey

Flambeau Lower Hydroelectric Project - FERC # 2421

Date: 8-8-12 Conducted By: AKR GGR

HWL: 1467.21 TWL: 1448.4 PFlow -362

Time Survey Started: 12:00 Time Survey Ended: 1:45

Weather Conditions: cloudy 61° rainy

Location of Survey Area: Tailrace  Bypass Reach \_\_\_\_\_ Impoundment

Time of Sighting(s): none observed

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

(Attach Photos & Map if Applicable)

Purple Loosestrife:  none observed

Other Species Observed: 6 mallards, doe + 2 fawns

Other Pertinent Survey Information

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Appendix C

Flambeau Pixley

FERC # 2395

**Flambeau Pixley Project Purple Loosestrife Inventory**

**August 8, 2012**

**FERC Project # 2395 Article 410**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 8, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Lower Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1) 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2) 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1450 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Maps 1, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Pixley Hydroelectric Project FERC Project #2395.

General Observations:

The Flambeau Pixley Project Boundary was divided into three different areas; *the impoundment* (from HWY 13 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 approximately 500 feet downstream of the dam).

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

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

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

If any purple loosestrife plants had been found during the inventory, a digital camera would have been used to document these occurrences and GPS coordinates for the location of the plants would have been recorded.

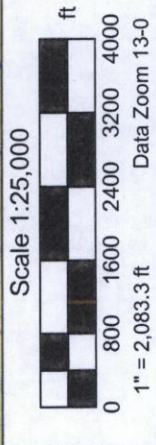
**Purple Loosestrife Survey**

**Project:** Flambeau Pixley #2395      **Datum:** WGS 84  
**Date:** August 8, 2012      **Page:** 1 of 1  
**Crew:** GGR and AKR

| Sighting # | GPS Point | Latitude | Longitude | Plant Height | Stand Area | Comments   |
|------------|-----------|----------|-----------|--------------|------------|--|
|            |           |          |           |              |            | No occurrences of purple loosestrife were found within the project boundary in 2012. |



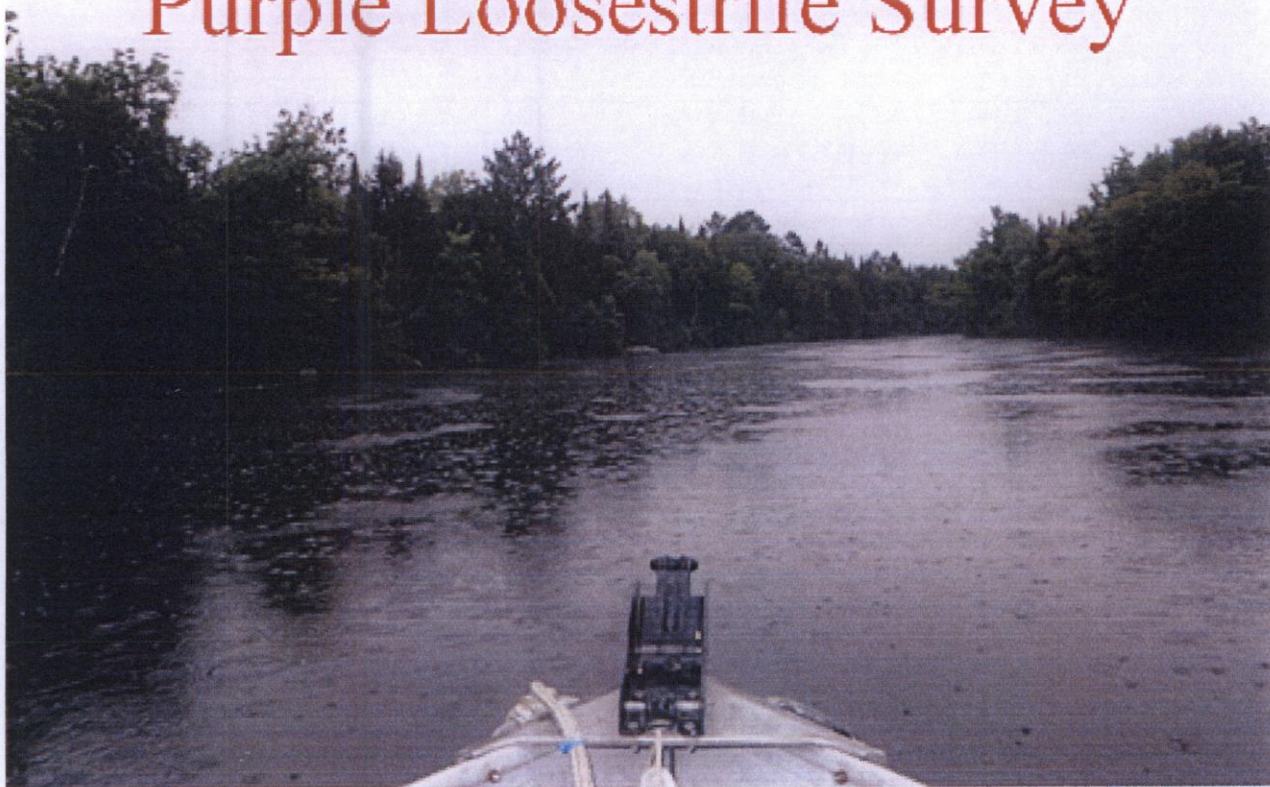
Top A© 6.0



# Flambeau Pixley, Purple Loosestrife Location Map

## 2012 Park Falls, Wisconsin FERC #2395

# 2012 Pixley Purple Loosestrife Survey



# Year 2012 Purple Loosetrife Survey

## Flambeau Pixley Hydroelectric Project – FERC # 2395

Date: 8-8-12 Conducted By: AKR GGR

HWL: 1448.72 TWL: 1427.50 PFlow-360

Time Survey Started: 2:10 Time Survey Ended: 4:30

Weather Conditions: 61° rainy cloudy

Location of Survey Area: Tailrace  Bypass Reach  Impoundment

Time of Sighting(s): \_\_\_\_\_

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

(Attach Photos & Map if Applicable)

Purple Loosetrife: none observed

Other Species Observed: blue heron

### Other Pertinent Survey Information

# Appendix D

Flambeau Crowley

FERC # 2473



**Flambeau Crowley Project Purple Loosestrife Inventory**

**August 9, 2012**

**FERC Project # 2473 Article 410**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 9, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Lower Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1) 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2) 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1428 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Map 1, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Crowley Hydroelectric Project FERC Project #2473.

General Observations:

The Flambeau Crowley Project Boundary was divided into three different areas; *the impoundment* (from approximately 500 feet downstream of the Pixley dam to the Crowley 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 approximately 500 feet downstream of the dam).

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

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

*The impoundment* was surveyed by boat and one occurrence of purple loosestrife plants was observed.

The first site is at FLCR PL001- FLCR PL002. This is the tenth year of treatment at this location, which is along the south side of the Highway 70 causeway at 6-Mile Creek. Since 2003, this site has been treated with a Glyphosate solution. In 2010 there were 21 purple loosestrife plants observed in this location. In 2011 that number was down to 3. In 2012 there were 11 multi-stem plants between 1-3 feet tall. No signs of Galerucella beetles were seen feeding of the plants. They were again treated with Glyphosate after the August Purple Loosestrife Inventory.

None of the other occurrences of purple loosestrife were observed during this year's survey.

Purple Loosestrife Survey

Project: Flambeau Crowley #2473

Datum: WGS 84

Date: August 9, 2012

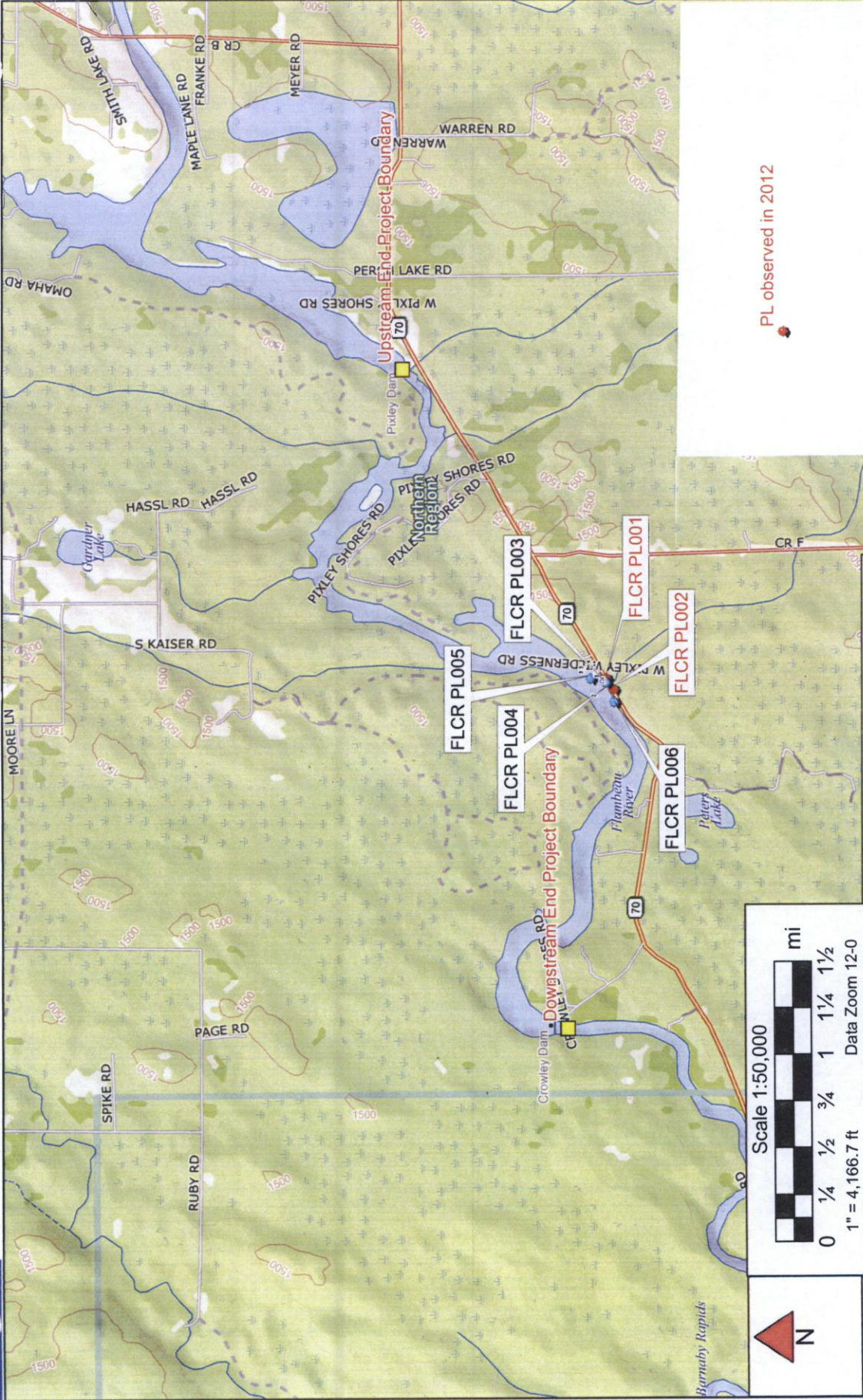
Page: 1 of 2

Crew: GGR and AKR

| Sighting # | GPS Point                            | Latitude                   | Longitude                  | Plant Height | Stand Area                             | Comments   |
|------------|--------------------------------------|----------------------------|----------------------------|--------------|--|--|
| 1          | 209-215<br>FLCR PL001<br>-FLCR PL002 | N45 51.816'<br>N45 51.850' | W90 32.859'<br>W90 32.786' | 1'-3'        | ~180' x 25'<br>11 multi-stem<br>plants | Located between GPS points 209 (FLCR PL001) and 215 (FLCR PL002) on the south side of the causeway formed by HWY 70 just east of the 6-Mile boat landing. First located in 2002 when 11 plants were observed over a 375 foot long area. All plants have been treated yearly with herbicide starting in 2003 through 2012 with the exception of 2005, when 1 immature single stem plant was pulled and the rest appeared to have been spot treated with an herbicide by other person(s) before the licensee survey crew arrived. The stand area had declined in size by 50% in 2009. In 2010 the stand area remained the same but experienced an increase in the number of plants growing at this site. Plants were small in size and most without blooms. In 2011 the number of plants decreased again. The 3 plants found were treated with herbicide. In 2012 the plant population went back up in number and was again treated with herbicide. This occurrence recorded on digital photos and/or video tape from 2002-2008. |

|   |                                       |                           |                            |     |     |   |
|---|---------------------------------------|---------------------------|----------------------------|-----|-----|---|
| 2 | 216-217<br>FLCR PL003<br>- FLCR PL004 | N45 51.857'<br>N45 51.853 | W90 32.806'<br>W90 32.814' | N/A | N/A | Located between GPS points 216 (FLCR PL003) and 217 (FLCR PL004) on the north side of the causeway formed by HWY 70 just east of the 6-Mile boat landing. First observed in 2002. All seed heads at this occurrence were harvested in August 2002 to prevent propagation. All plants were treated with herbicide in 2003. No purple loosestrife plants were observed at this location in 2004. The only plant found in 2005 was pulled. All plants were treated with herbicide in 2006. No plants were found at this location in 2007, 2008, and 2009. In 2010 one large plant was located at this site and treated with herbicide. The one plant found at this site in 2011 was pulled. This occurrence recorded on digital photos and/or video tape in 2002, 2003, 2005, & 2006. <b>No plants found at this site in 2012.</b> |
| 3 | 208<br>FLCR PL005                     | N45 51.926'               | W90 32.788'                | N/A | N/A | Located at GPS point on a bog in a stump field in the river east of the 6-Mile boat landing. All seed heads were harvested in August 2002 to prevent propagation. This site has not reoccurred since 2002.  |
| 4 | FLCR PL006                            | N45 51.814'               | W90 32.9445'               | N/A | N/A | Located at GPS point on the east side of the 6-Mile boat landing. First observed in 2008. All plants pulled in 2008 and 2009. No plants observed in 2010, 2011, or 2012. Photos in 2008.  |

Top A@ 6.0



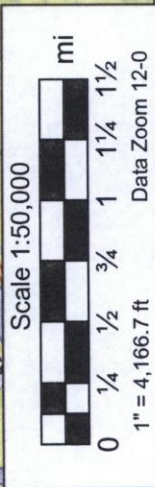
PL observed in 2012

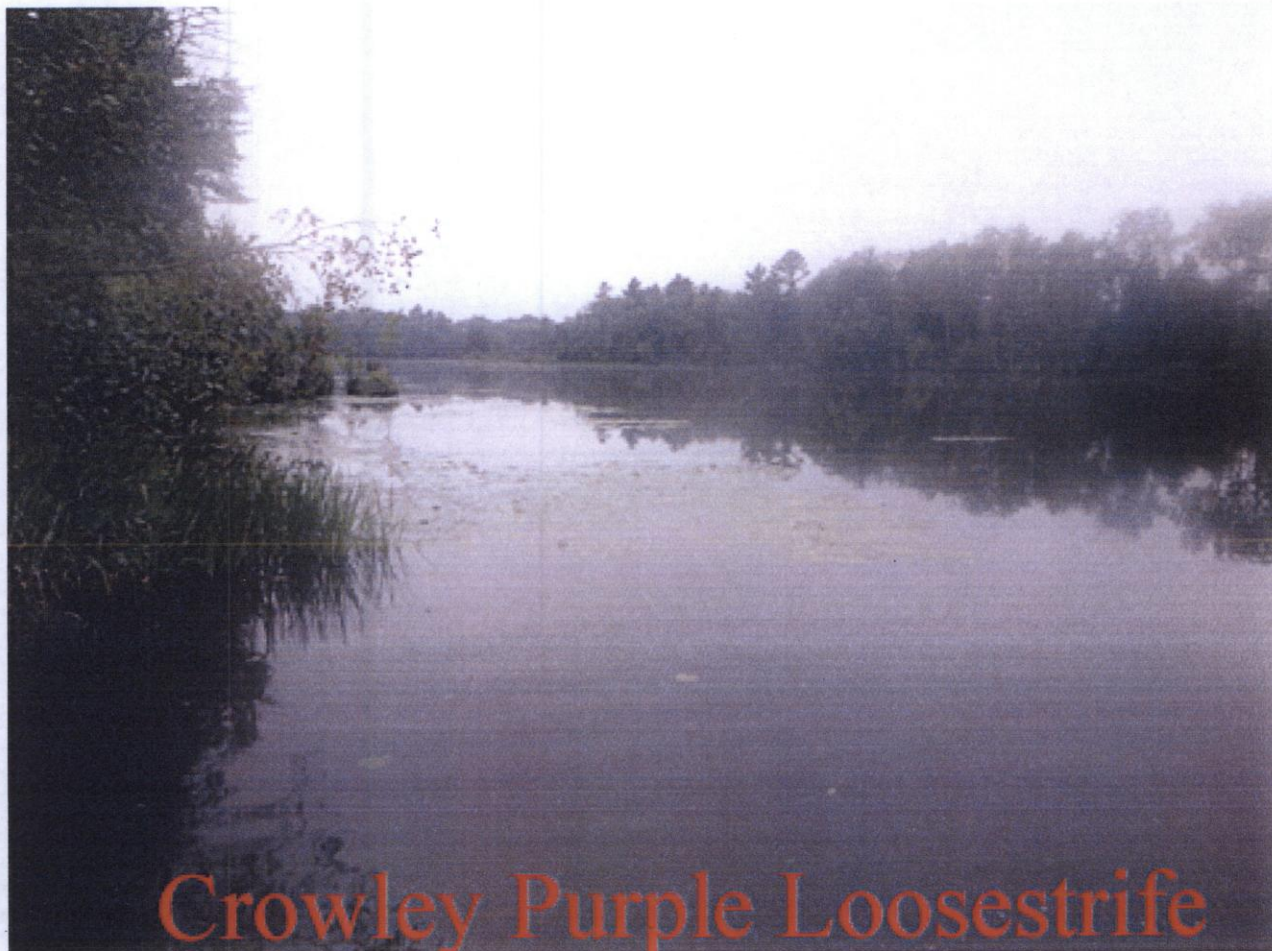
PL seen previous years, not 2012

# Flambeau Crowley, Purple Loosestrife

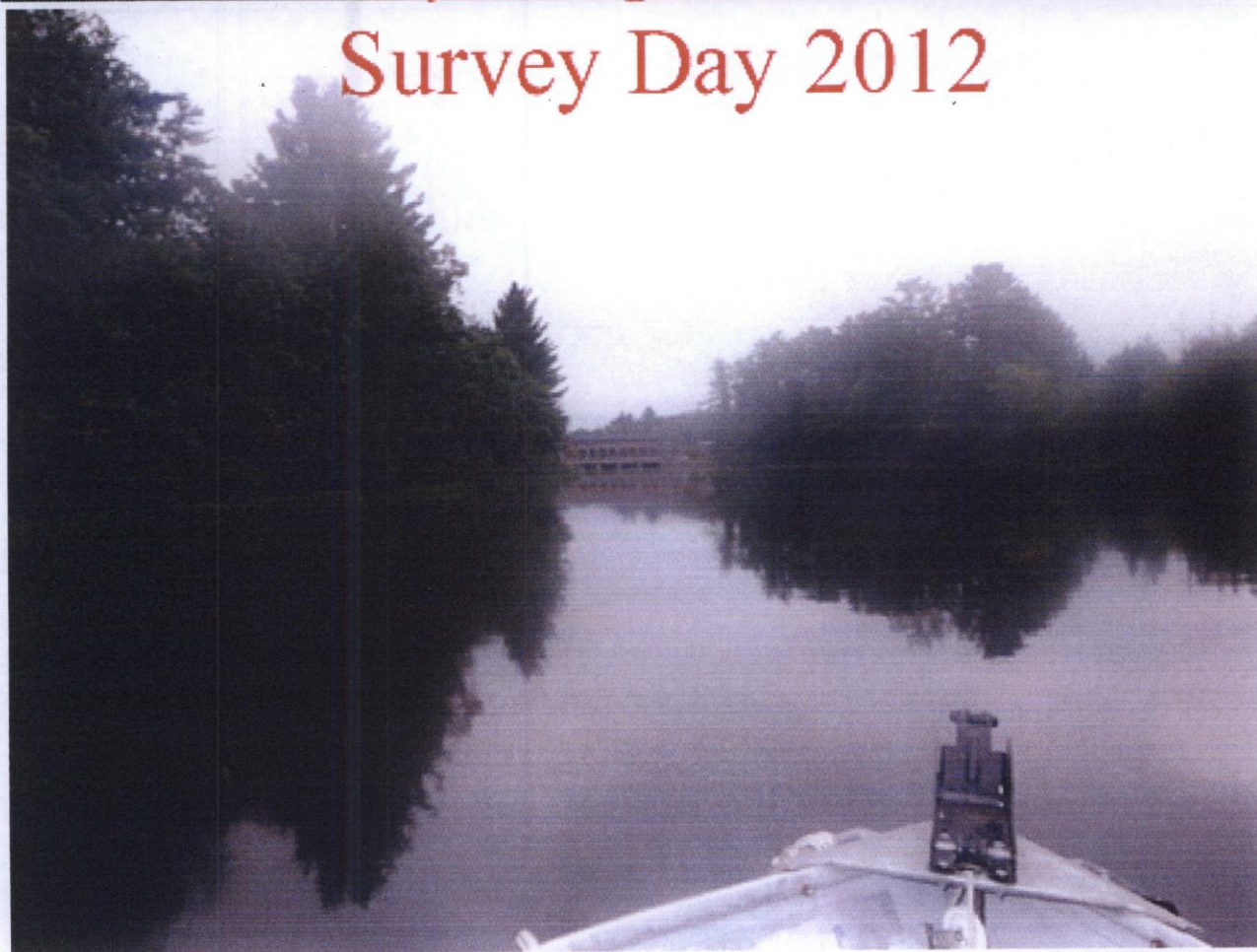
## Location Map 2012

### Park Falls WI, FERC #2473





Crowley Purple Loosestrife  
Survey Day 2012



Year 2012 Purple Loosetrife Survey

Flambeau Crowley Hydroelectric Project - FERC # ~~2640~~

Date: 8-9-12 Conducted By: AKR GGR

HWL: 1427.15 TWL: 1405.5 418 Flow

Time Survey Started: 8:45 Time Survey Ended: 12:15

Weather Conditions: cloudy 60°

Location of Survey Area: Tailrace  Bypass Reach  Impoundment

Time of Sighting(s): \_\_\_\_\_

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

(Attach Photos & Map if Applicable)

Purple Loosetrife:  see below

Other Species Observed: 1 eagle 1 otter 7 geese

Other Pertinent Survey Information

11 plant clumps on south side of  
causeway by 6-mile creek.  $\approx$  3' tall  
no sign of beetles.

# Appendix E

## Agency Comments



**Aneta Rietveld**

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**From:** Utrup, Nick <nick\_utrup@fws.gov>  
**Sent:** Friday, January 18, 2013 11:07 AM  
**To:** Aneta Rietveld  
**Cc:** Peter Fasbender  
**Subject:** Loosestrife reports - FWS response

Aneta,

Regarding the Purple Loosestrife reports for the following FERC projects:

Clam River FERC #9185

Danbury FERC # 9184

Flambeau area (Upper #2640, Lower #2421, Pixley #2395, and Crowley #2473)

And Winter #2064

The FWS has no comments and concurs with comments already provided by WDNR. I appreciate having the opportunity to respond, please let me know if you have any questions.

Sincerely,

Nicholas J. Utrup

U.S. Fish and Wildlife Service  
Wisconsin Ecological Services Office  
2661 Scott Tower Drive  
New Franken, WI 54229

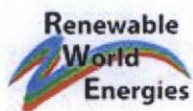
Office: (920) 866-1736  
Cell: (920) 530-9937  
FAX: (920) 866-1710  
Email: [Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)

**Aneta Rietveld**

---

**From:** Gary Rast  
**Sent:** Monday, January 07, 2013 3:26 PM  
**To:** Aneta Rietveld  
**Subject:** FW: FLAM PL Plans  
**Attachments:** 02-10-02 RAL Pixley 2395 Art 410 Purple Loosestrife Plan.pdf; 03-06-18 FERC FLLW Order Approving Purple loosestrife plan.pdf; 02-10-02 RAL Crowley 2473 Art 410 Purple Loosestrife Plan.pdf; 02-10-02 RAL Flambeau Lower 2641 Art 410 Purple Loosestrife Plan.pdf; 02-10-02 RAL FLUP 2640 Art 412 Purple Loosestrife Plan.pdf

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC  
100 S. State Street  
P.O. Box 264  
Neshkoro, WI 54960  
Phone: 855-994-9376 Ext. 105  
Fax: 920-293-4100  
Cell: 920-570-0995  
E-mail: [grast@rwehydro.com](mailto:grast@rwehydro.com)

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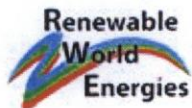
**From:** Gary Rast  
**Sent:** Friday, December 07, 2012 1:52 PM  
**To:** Laatsch, Cheryl - DNR ([Cheryl.Laatsch@Wisconsin.gov](mailto:Cheryl.Laatsch@Wisconsin.gov))  
**Subject:** FLAM PL Plans

Cheryl,

Flam PL Plans attached. The order approving is for all 4 even though it is titled FLLW.

Gary

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC

**From:** Laatsch, Cheryl - DNR [<mailto:Cheryl.Laatsch@Wisconsin.gov>]  
**Sent:** Thursday, December 06, 2012 12:27 PM  
**To:** Gary Rast  
**Subject:** WDNR comments on the WQ and Invasive Species Report Submittals

WQ 2012 Monitoring

General Comments:

1. Include the FERC and/or WQC WQ monitoring requirement information as directly stated in the order and/or state issued water quality certification.
2. Secchi disk reading is unclear. Please document these columns as feet below surface.
3. Most of the data was fine. However, the time or data of the data collection may not be appropriate.
4. Provide more detailed sampling location for Crowley, due to noticeable low DO levels.
5. We also request that the data for each year sampled, be included in a summary table.

Flambeau Upper P-2640  
Crowley P-2473  
Flambeau Lower P-2421  
Pixley P-1960

Invasive Reports

Wisconsin is a mosaic of waterways representing the Mississippi River and the Great Lakes Regions. With this vast mosaic of waterways and river systems, comes an array of aquatic invasive species. As we move forward with identifying and eradicating AIS, there are basic steps that all hydro owners need to participate in, to help improve the resource. Some AIS can significantly hinder hydro operations that may result in excessive operation and maintenance costs, including lost generation. We encourage the utility to work with the WDNR to develop Best Management Practices for their operations and maintenance of the hydro, to reduce the introduction and spread of AIS. Additionally, the WDNR recommends revisions to the current AIS plan to address the following concerns:

- a. Identify all existing AIS within the study area and discuss which new AIS are most likely to arrive (i.e. SMART analysis).
- b. Determine an acceptable survey and mapping methodology
- c. Identify and implement quality control measures, and equipment calibration measures
- d. Improve awareness and the dynamics of the study area
- e. Avoid duplicate workload for agency staff, utilities, and local associations
- f. Manage and analyze the data collected to define population characteristics, establish trends, and evaluate management success.
- g. Establish and implement protocols for management/removal of AIS
- h. Provide a timeline to review the current AIS plans and revise the plans as appropriate for the project area

If purple loosestrife (*Lythrum salicaria*) is present, control or eliminate all small populations of loosestrife (usually 50 plants or less), with acceptable manual/chemical/mechanical methods annually, as necessary, and establish viable, on-going, and effective populations of biocontrol beetles (*Galerucella pusilla* and/or *G. californiensis*) on all larger loosestrife populations.

Flambeau Pixley P-2395

Flambeau Upper P-2640

Flambeau Lower P-2421

Flambeau Crowley P-2473

***Cheryl Laatsch, Water Mgt Specialist***

***Horicon DNR***

***N7725 HIGHWAY 28***

***HORICON WI 53032***

***(920) 387-7869***

e-mail: [Cheryl.laatsch@wisconsin.gov](mailto:Cheryl.laatsch@wisconsin.gov)

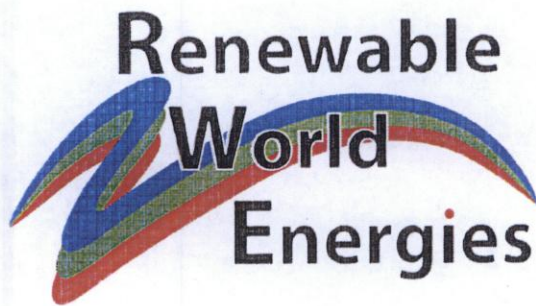
Website: [dnr.wi.gov](http://dnr.wi.gov)

[www.facebook.com/WIDNR](http://www.facebook.com/WIDNR)

# Appendix F

Proof of

Submittal to Agencies



November 20, 2012

Mr. Craig Roestler  
Water Quality Biologist, Upper Chippewa Basin  
Wisconsin Department of Natural Resources  
10220 State HWY 27  
Hayward, WI 54843

Ms. Cheryl Laatsch  
Water Regulations and Zoning Specialist  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison, WI 53707-7921

Mr. Peter Fasbender  
Field Supervisor  
U.S. Fish and Wildlife Service  
2661 Scott Tower Drive  
New Franken, WI 54229

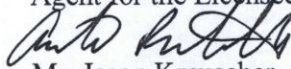
**Re: Flambeau Upper Project  
FERC # 2640  
Flambeau Hydro, LLC  
Article 412, 2012 Purple Loosetrife Inventory**

Dear Mr. Roesler, Ms. Laatsch, and Mr. Fasbender:

Attached you will find a copy of the Flambeau Hydro, LLC "Purple Loosetrife Inventory" for 2012. This annual report has been prepared to comply with the federal hydropower license of the project and article named above and is being filed with the Federal Energy Regulatory Commission.

If you have any questions regarding this submission, please contact Mr. Gary Rast at Renewable World Energies Neshkoro office @ (855)994-9376, ext 105 or Aneta Rietveld at Renewable World Energies Norway office @ (855)994-9376, ext 108. They can also be reached via email at [grast@rwehydro.com](mailto:grast@rwehydro.com) or [arietveld@rwehydro.com](mailto:arietveld@rwehydro.com).

Sincerely,  
Renewable World Energies, LLC  
Agent for the Licensee

  
Mr. Jason Kreuzscher

For: Vice President Operations

**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Fax: 920-293-4100

Phone: 855-99HYDRO  
(855-994-9376)  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

**Administrative Office**  
1001 Stephenson Street  
Norway, MI 49870  
Fax: 906-563-9344

**Flambeau Upper Project Purple Loosestrife Inventory**

**August 8, 2012**

**FERC Project # 2640 Article 412**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 8, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Upper Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1487.4 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Maps 1 & 2, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Upper Hydroelectric Project FERC Project #2640.

General Observations:

The Flambeau Upper Project Boundary was divided into three different areas; *the impoundment* (from just downstream of 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 tailrace* was surveyed by boat and no purple loosestrife plants were observed.

*The power canal/bypassed reach* was surveyed on foot and no purple loosestrife plants were found. No occurrences of purple loosestrife have been found in this area since 2007.

*The impoundment* was surveyed by boat and no purple loosestrife plants were found. No occurrences of purple loosestrife have been found in this area since 2007.

If any purple loosestrife plants had been found during the inventory, a digital camera would have been used to document these occurrences and GPS coordinates for the location of the plants would have been recorded.



## Purple Loosestrife Survey

Project: Flambeau Upper #2640 Datum: WGS 84Date: August 8, 2012 Page: 1 of 1Crew: GGR and AKR

| Sighting # | GPS Point        | Latitude    | Longitude   | Plant Height | Stand Area | Comments   |
|------------|------------------|-------------|-------------|--------------|------------|--|
| 1          | 2<br>FLUPPL001   | N45 56.807' | W90 26.043' | N/A          | N/A        | No occurrences of purple loosestrife were found within the project boundary in 2012. Located 3 yards bearing 90 degrees (east) of GPS point on residence shore. First observed in 2002, approx. 15-25 plants growing close together. Plants appeared to have 3-5 stems per plant. In 2003 samples were taken of this occurrence along with a recording on video tape. Analysis revealed that the plants were winged loosestrife ( <i>Lythrum Alatum</i> ) and not purple loosestrife ( <i>Lythrum Salicaria</i> ). In 2004 the land owner removed the plants. In 2007 the plants reoccurred at this location. During the 2008,2009,2010,2011, and 2012 survey the plants could not be located. This site is videotaped in 2002 and photographed in 2007. |
| 2          | 246<br>FLUPPL002 | N45 56.157' | W90 26.607' | N/A          | N/A        | Located on the waypoint in the cattails at the northwest corner of the electrical sub-station fence, this occurrence was first observed in 2006 and removed. No old cane or damages visible. Reoccurred and pulled again in 2007. During the 2008,2009,2010,2011, and 2012 survey, no purple loosestrife plants could be located at this site. Plants at this location were photographed in 2006.  |



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**Flambeau Upper 2012  
Purple Loosetrife Location Map  
Park Falls WI FERC #2640**



## 2012 Flambeau Upper Purple Loosestrife Survey

Year 2012 Purple Loosetrife Survey

Flambeau Upper Hydroelectric Project - FERC # 2640

Date: 8-8-12 Conducted By: AKR GGR

HWL: 1486.77 TWL: 1467.3 T Flow - 392

Time Survey Started: 8:00 Time Survey Ended: 10:15am

Weather Conditions: 60° Rainy Cloudy

Location of Survey Area: Tailrace \_\_\_\_\_ Bypass Reach \_\_\_\_\_ Impoundment X

Time of Sighting(s): \_\_\_\_\_

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

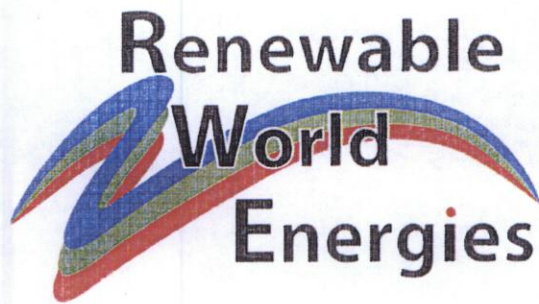
(Attach Photos & Map if Applicable)

Purple Loosetrife: X none observed

Other Species Observed: 1 eagle, 3 mallards

1 goose, 1 northern

Other Pertinent Survey Information



November 20, 2012

Mr. Craig Roestler  
Water Quality Biologist, Upper Chippewa Basin  
Wisconsin Department of Natural Resources  
10220 State HWY 27  
Hayward, WI 54843

Ms. Cheryl Laatsch  
Water Regulations and Zoning Specialist  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison, WI 53707-7921

Mr. Peter Fasbender  
Field Supervisor  
U.S. Fish and Wildlife Service  
2661 Scott Tower Drive  
New Franken, WI 54229

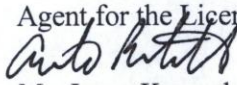
**Re: Flambeau Lower Project**  
**FERC # 2421**  
**Flambeau Hydro, LLC**  
**Article 410, 2012 Purple Loosestrife Inventory**

Dear Mr. Roesler, Ms. Laatsch, and Mr. Fasbender:

Attached you will find a copy of the Flambeau Hydro, LLC "Purple Loosestrife Inventory" for 2012. This annual report has been prepared to comply with the federal hydropower license of the project and article named above and is being filed with the Federal Energy Regulatory Commission.

If you have any questions regarding this submission, please contact Mr. Gary Rast at Renewable World Energies Neshkoro office @ (855)994-9376, ext 105 or Aneta Rietveld at Renewable World Energies Norway office @ (855)994-9376, ext 108. They can also be reached via email at [grast@rwehydro.com](mailto:grast@rwehydro.com) or [arietveld@rwehydro.com](mailto:arietveld@rwehydro.com).

Sincerely,  
Renewable World Energies, LLC  
Agent for the Licensee

  
Mr. Jason Kreuzscher  
Vice President Operations

**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Fax: 920-293-4100

Phone: 855-99HYDRO  
(855-994-9376)  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

**Administrative Office**  
1001 Stephenson Street  
Norway, MI 49870  
Fax: 906-563-9344

**Flambeau Lower Project Purple Loosestrife Inventory**

**August 8, 2012**

**FERC Project # 2421 Article 410**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 8, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Lower Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1) 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2) 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1468 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Maps 1, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Lower Hydroelectric Project FERC Project #2421.

General Observations:

The Flambeau Lower Project Boundary was divided into three different areas; *the impoundment* (from 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 tailrace* was surveyed by boat and no purple loosestrife plants were observed.

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

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

If any purple loosestrife plants had been found during the inventory, a digital camera would have been used to document these occurrences and GPS coordinates for the location of the plants would have been recorded.

**Purple Loosestrife Survey**

**Project:** Flambeau Lower #2421

**Datum:** WGS 84

**Date:** August 8, 2012

**Page:** 1 of 1

**Crew:** GGR and AKR

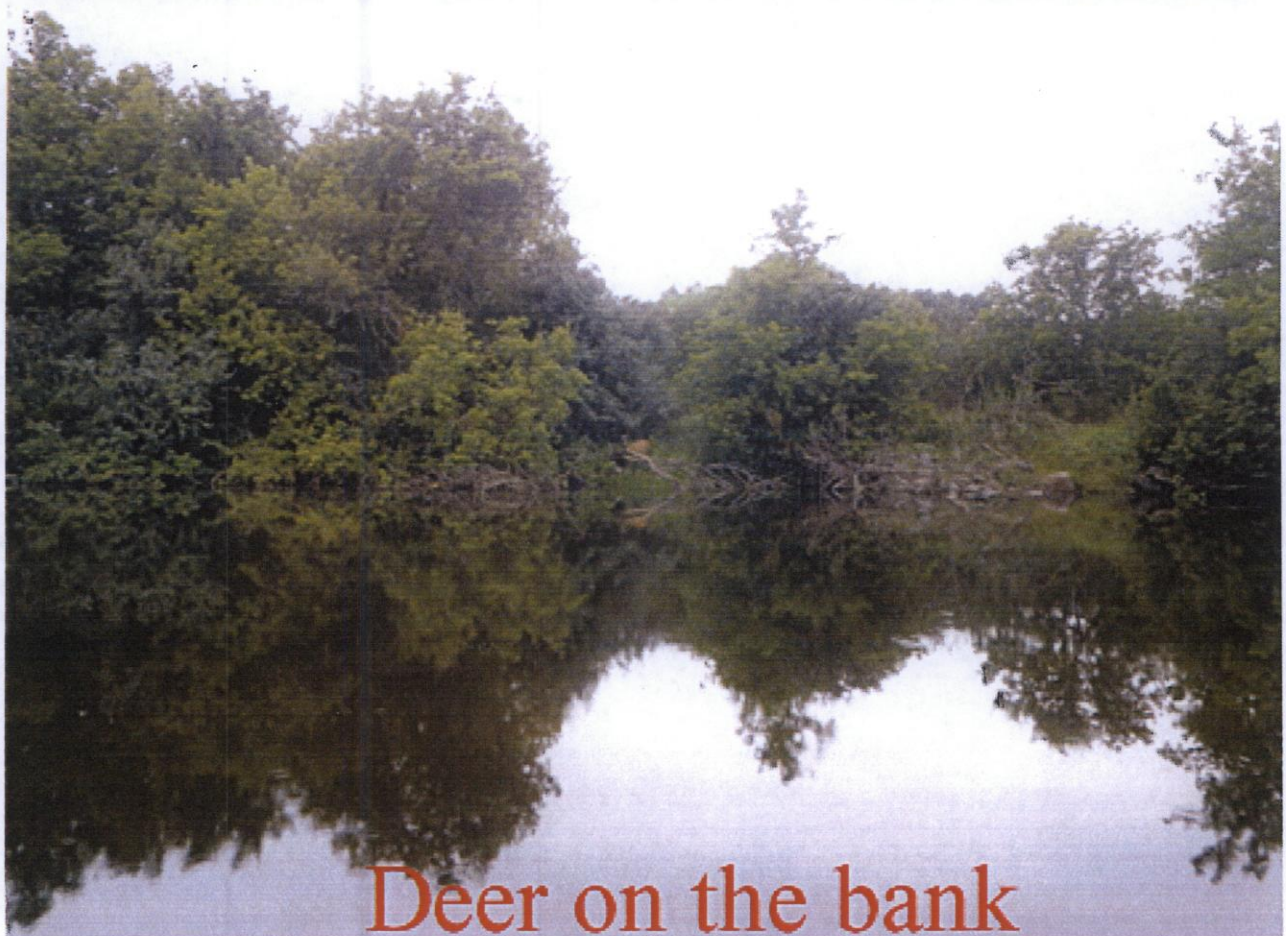
| Sighting # | GPS Point | Latitude | Longitude | Plant Height | Stand Area | Comments   |
|------------|-----------|----------|-----------|--------------|------------|--|
|            |           |          |           |              |            | No occurrences of purple loosestrife were found within the project boundary in 2012. |





## Flambeau Lower, Purple Loosestrife Map 2012 Park Falls, WI FERC # 2421

# Purple Loosestrife Survey 2012 Flambeau Lower



Deer on the bank

Year 2012 Purple Loosestrife Survey

Flambeau Lower Hydroelectric Project - FERC # 2421

Date: 8-8-12 Conducted By: AKR GGR

HWL: 1467.21 TWL: 1448.4 PFlow -362

Time Survey Started: 12:00 Time Survey Ended: 1:45

Weather Conditions: cloudy 61° rainy

Location of Survey Area: Tailrace  Bypass Reach \_\_\_\_\_ Impoundment

Time of Sighting(s): none observed

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

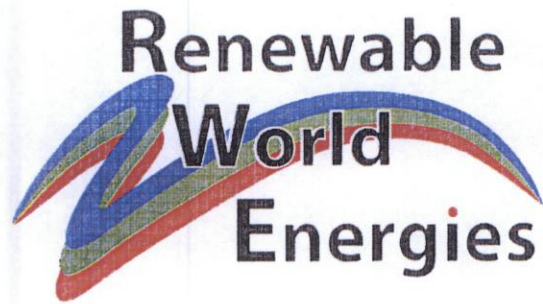
(Attach Photos & Map if Applicable)

Purple Loosestrife:  none observed

Other Species Observed: 6 mallards, doe + 2 fawns

Other Pertinent Survey Information

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



November 20, 2012

Mr. Craig Roestler  
Water Quality Biologist, Upper Chippewa Basin  
Wisconsin Department of Natural Resources  
10220 State HWY 27  
Hayward, WI 54843

Ms. Cheryl Laatsch  
Water Regulations and Zoning Specialist  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison, WI 53707-7921

Mr. Peter Fasbender  
Field Supervisor  
U.S. Fish and Wildlife Service  
2661 Scott Tower Drive  
New Franken, WI 54229

**Re: Flambeau Pixley Project**  
**FERC # 2395**  
**Flambeau Hydro, LLC**  
**Article 410, 2012 Purple Loosestrife Inventory**

Dear Mr. Roesler, Ms. Laatsch, and Mr. Fasbender:

Attached you will find a copy of the Flambeau Hydro, LLC "Purple Loosestrife Inventory" for 2012. This annual report has been prepared to comply with the federal hydropower license of the project and article named above and is being filed with the Federal Energy Regulatory Commission.

If you have any questions regarding this submission, please contact Mr. Gary Rast at Renewable World Energies Neshkoro office @ (855)994-9376, ext 105 or Aneta Rietveld at Renewable World Energies Norway office @ (855)994-9376, ext 108. They can also be reached via email at [grast@rwehydro.com](mailto:grast@rwehydro.com) or [arietveld@rwehydro.com](mailto:arietveld@rwehydro.com).

Sincerely,  
Renewable World Energies, LLC  
Agent for the Licensee

*for: [Signature]*  
Mr. Jason Kreuzer  
Vice President Operations

**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
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[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

**Administrative Office**  
1001 Stephenson Street  
Norway, MI 49870  
Fax: 906-563-9344

**Flambeau Pixley Project Purple Loosestrife Inventory**

**August 8, 2012**

**FERC Project # 2395 Article 410**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 8, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Lower Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1) 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2) 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1450 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Maps 1, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Pixley Hydroelectric Project FERC Project #2395.

General Observations:

The Flambeau Pixley Project Boundary was divided into three different areas; *the impoundment* (from HWY 13 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 approximately 500 feet downstream of the dam).

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

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

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

If any purple loosestrife plants had been found during the inventory, a digital camera would have been used to document these occurrences and GPS coordinates for the location of the plants would have been recorded.

**Purple Loosestrife Survey**

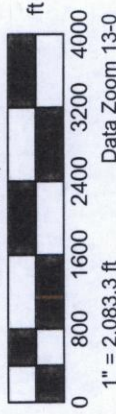
**Project:** Flambeau Pixley #2395      **Datum:** WGS 84  
**Date:** August 8, 2012      **Page:** 1 of 1  
**Crew:** GGR and AKR

| Sighting # | GPS Point | Latitude | Longitude | Plant Height | Stand Area | Comments   |
|------------|-----------|----------|-----------|--------------|------------|--|
|            |           |          |           |              |            | No occurrences of purple loosestrife were found within the project boundary in 2012. |

Top A® 6.0



Scale 1:25,000



# Flambeau Pixley, Purple Loosestrife Location Map

## 2012 Park Falls, Wisconsin FERC #2395





# 2012 Pixley Purple Loosestrife Survey



Year 2012 Purple Loosetrife Survey

Flambeau Pixley Hydroelectric Project - FERC # 2395

Date: 8-8-12

Conducted By: AKR GGR

HWL: 1448.72

TWL: 1427.50

PFlow-360

Time Survey Started: 2:10

Time Survey Ended: 4:30

Weather Conditions: 61° rainy cloudy

Location of Survey Area: Tailrace  Bypass Reach  Impoundment

Time of Sighting(s): \_\_\_\_\_

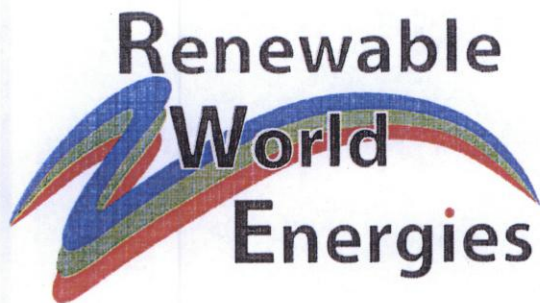
Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

(Attach Photos & Map if Applicable)

Purple Loosetrife: none observed

Other Species Observed: blue heron

Other Pertinent Survey Information



November 20, 2012

Mr. Craig Roestler  
Water Quality Biologist, Upper Chippewa Basin  
Wisconsin Department of Natural Resources  
10220 State HWY 27  
Hayward, WI 54843

Ms. Cheryl Laatsch  
Water Regulations and Zoning Specialist  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison, WI 53707-7921

Mr. Peter Fasbender  
Field Supervisor  
U.S. Fish and Wildlife Service  
2661 Scott Tower Drive  
New Franken, WI 54229

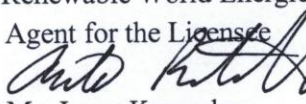
**Re: Flambeau Crowley Project**  
**FERC # 2473**  
**Flambeau Hydro, LLC**  
**Article 410, 2012 Purple Loosetrife Inventory**

Dear Mr. Roesler, Ms. Laatsch, and Mr. Fasbender:

Attached you will find a copy of the Flambeau Hydro, LLC "Purple Loosetrife Inventory" for 2012. This annual report has been prepared to comply with the federal hydropower license of the project and article named above and is being filed with the Federal Energy Regulatory Commission.

If you have any questions regarding this submission, please contact Mr. Gary Rast at Renewable World Energies Neshkoro office @ (855)994-9376, ext 105 or Aneta Rietveld at Renewable World Energies Norway office @ (855)994-9376, ext 108. They can also be reached via email at [grast@rwehydro.com](mailto:grast@rwehydro.com) or [arietveld@rwehydro.com](mailto:arietveld@rwehydro.com).

Sincerely,  
Renewable World Energies, LLC  
Agent for the Licensee

*For:*   
Mr. Jason Kreuzscher  
Vice President Operations

**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Fax: 920-293-4100

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**Administrative Office**  
1001 Stephenson Street  
Norway, MI 49870  
Fax: 906-563-9344

**Flambeau Crowley Project Purple Loosestrife Inventory**

**August 9, 2012**

**FERC Project # 2473 Article 410**

**Flambeau Hydro LLC**

**100 S. State St.**

**Neshkoro, WI 54960**

*Purple Loosestrife*

On August 9, 2012, Flambeau Hydro, LLC (FHLLC) performed an inventory of purple loosestrife plants at the Flambeau Lower Project in Price County, Wisconsin. The method of inventory as approved and modified by Federal Energy Regulatory Commission (FERC) Order of 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 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 receiver 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.

Example:

#1) 6' tall plants; 4' x 20'; 30% cover; 4-5 stems per plant; 4 plants; on shoreline N45 56.183' W90 26.748'; no photo

#2) 5'-7' tall plants; 10' x 10'; 25% cover; 4-5 stems per plant; 10 plants; in marsh ~50 feet Bearing 25 degrees from N45 56.256' W90 26.710'; photo No. 1

The area to be inventoried shall be the shoreline of the impoundment to elevation 1428 feet NGVD and lands owned by FHLLC within the Project Boundary as indicated on the Project Map 1, dated November 1991, included in Exhibit G of Flambeau Paper Corp. Application for a Subsequent License for the Crowley Hydroelectric Project FERC Project #2473.

General Observations:

The Flambeau Crowley Project Boundary was divided into three different areas; *the impoundment* (from approximately 500 feet downstream of the Pixley dam to the Crowley 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 approximately 500 feet downstream of the dam).

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

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

*The impoundment* was surveyed by boat and one occurrence of purple loosestrife plants was observed.

The first site is at FLCR PL001- FLCR PL002. This is the tenth year of treatment at this location, which is along the south side of the Highway 70 causeway at 6-Mile Creek. Since 2003, this site has been treated with a Glyphosate solution. In 2010 there were 21 purple loosestrife plants observed in this location. In 2011 that number was down to 3. In 2012 there were 11 multi-stem plants between 1-3 feet tall. No signs of Galerucella beetles were seen feeding of the plants. They were again treated with Glyphosate after the August Purple Loosestrife Inventory.

None of the other occurrences of purple loosestrife were observed during this year's survey.

Purple Loosestrife Survey

Project: Flambeau Crowley #2473

Datum: WGS 84

Date: August 9, 2012

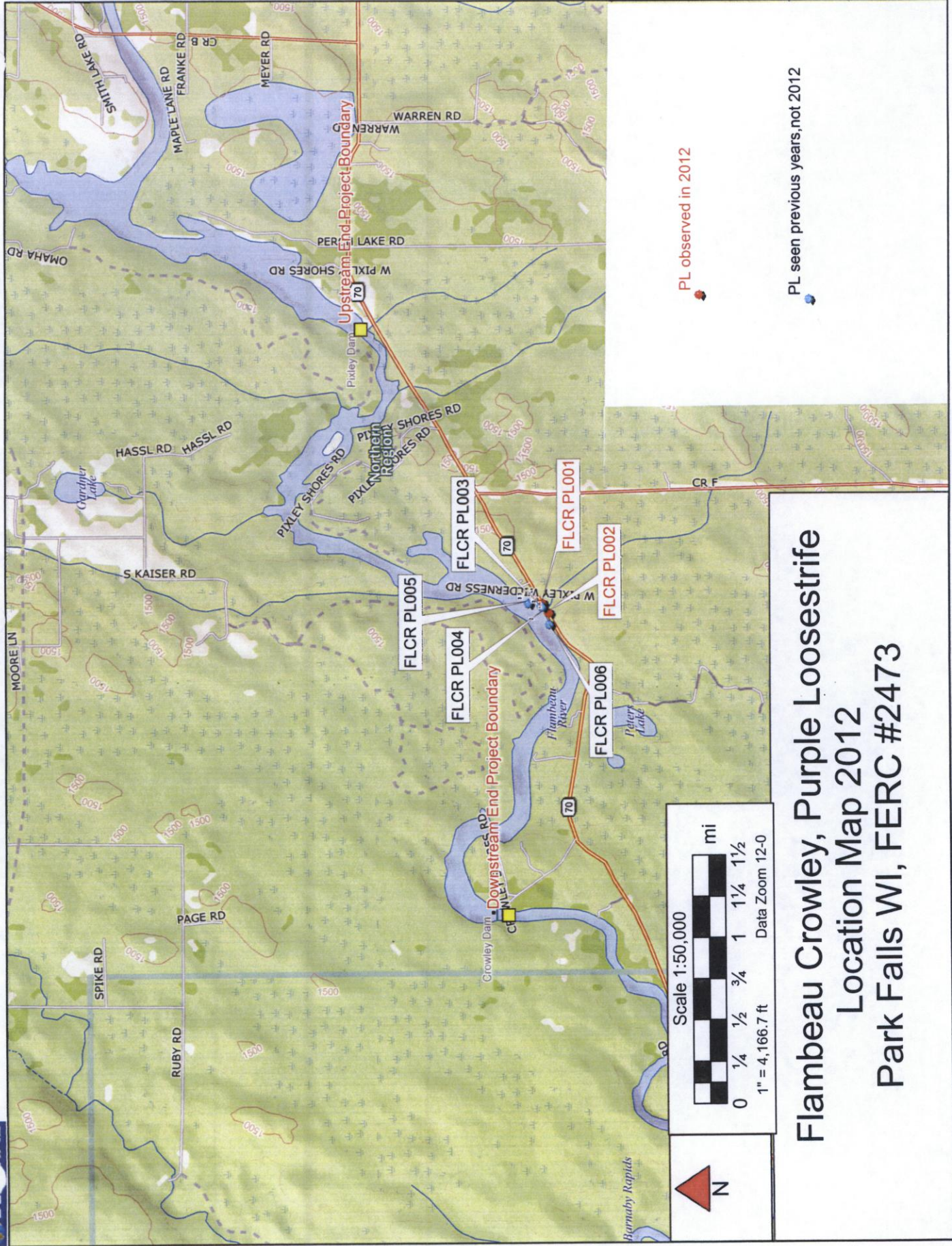
Page: 1 of 2

Crew: GGR and AKR

| Sighting # | GPS Point                            | Latitude                   | Longitude                  | Plant Height | Stand Area                             | Comments   |
|------------|--------------------------------------|----------------------------|----------------------------|--------------|--|--|
| 1          | 209-215<br>FLCR PL001<br>-FLCR PL002 | N45 51.816'<br>N45 51.850' | W90 32.859'<br>W90 32.786' | 1'-3'        | ~180' x 25'<br>11 multi-stem<br>plants | Located between GPS points 209 (FLCR PL001) and 215 (FLCR PL002) on the south side of the causeway formed by HWY 70 just east of the 6-Mile boat landing. First located in 2002 when 11 plants were observed over a 375 foot long area. All plants have been treated yearly with herbicide starting in 2003 through 2012 with the exception of 2005, when 1 immature single stem plant was pulled and the herbicide by other person(s) before the licensee survey crew arrived. The stand area had declined in size by 50% in 2009. In 2010 the stand area remained the same but experienced an increase in the number of plants growing at this site. Plants were small in size and most without blooms. In 2011 the number of plants decreased again. The 3 plants found were treated with herbicide. In 2012 the plant population went back up in number and was again treated with herbicide. This occurrence recorded on digital photos and/or video tape from 2002-2008. |

|   |                                       |                           |                            |     |     |   |
|---|---------------------------------------|---------------------------|----------------------------|-----|-----|---|
| 2 | 216-217<br>FLCR PL003<br>- FLCR PL004 | N45 51.857'<br>N45 51.853 | W90 32.806'<br>W90 32.814' | N/A | N/A | Located between GPS points 216 (FLCR PL003) and 217 (FLCR PL004) on the north side of the causeway formed by HWY 70 just east of the 6-Mile boat landing. First observed in 2002. All seed heads at this occurrence were harvested in August 2002 to prevent propagation. All plants were treated with herbicide in 2003. No purple loosestrife plants were observed at this location in 2004. The only plant found in 2005 was pulled. All plants were treated with herbicide in 2006. No plants were found at this location in 2007, 2008, and 2009. In 2010 one large plant was located at this site and treated with herbicide. The one plant found at this site in 2011 was pulled. This occurrence recorded on digital photos and/or video tape in 2002, 2003, 2005, & 2006. <b>No plants found at this site in 2012.</b> |
| 3 | 208<br>FLCR PL005                     | N45 51.926'               | W90 32.788'                | N/A | N/A | Located at GPS point on a bog in a stump field in the river east of the 6-Mile boat landing. All seed heads were harvested in August 2002 to prevent propagation. This site has not reoccurred since 2002.  |
| 4 | FLCR PL006                            | N45 51.814'               | W90 32.9445'               | N/A | N/A | Located at GPS point on the east side of the 6-Mile boat landing. First observed in 2008. All plants pulled in 2008 and 2009. No plants observed in 2010, 2011, or 2012. Photos in 2008.  |

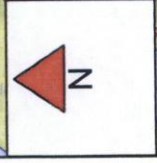
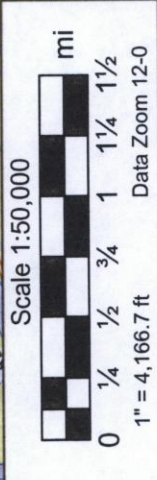
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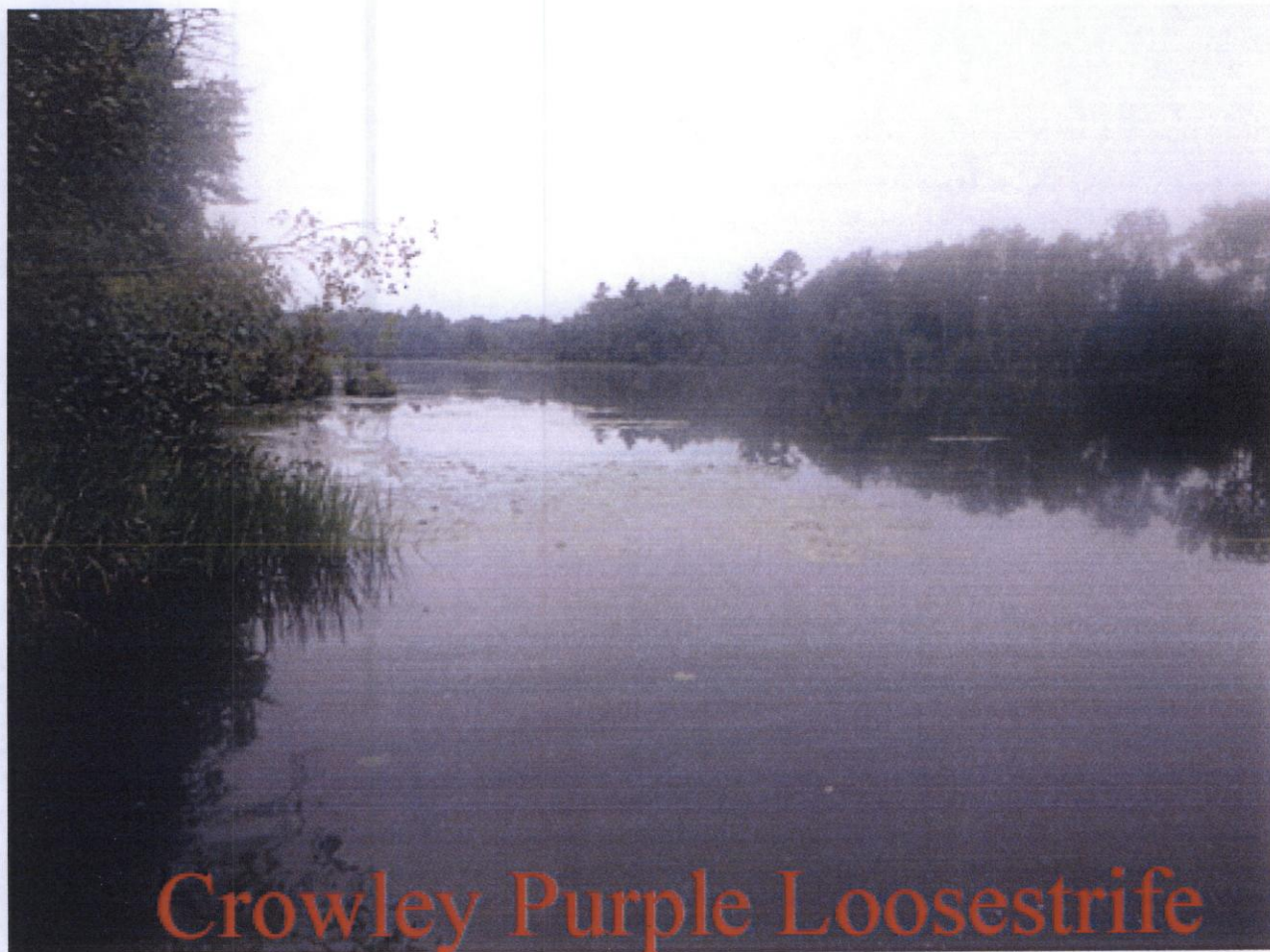
PL observed in 2012

PL seen previous years, not 2012

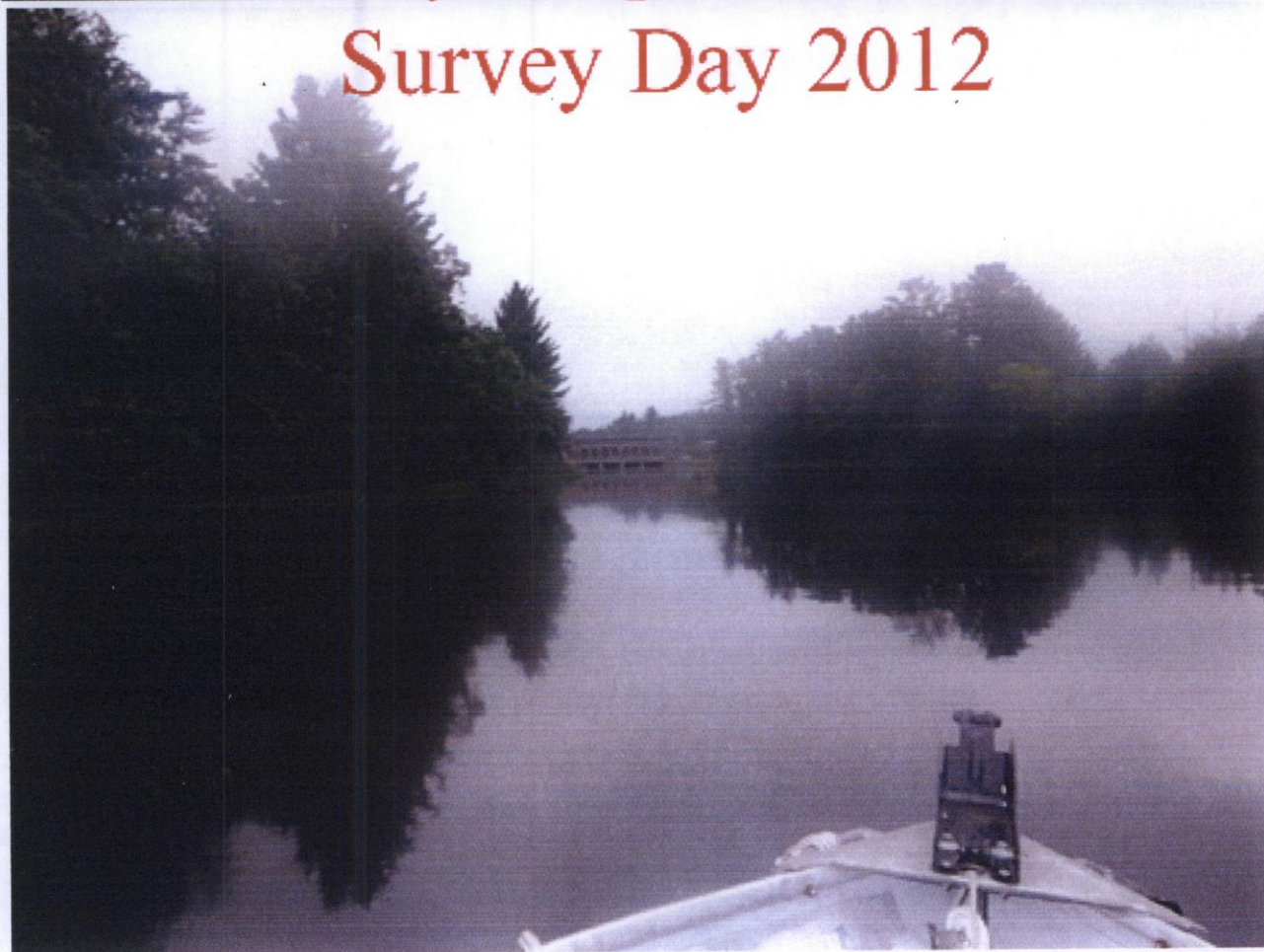
# Flambeau Crowley, Purple Loosestrife Location Map 2012 Park Falls WI, FERC #2473







# Crowley Purple Loosestrife Survey Day 2012



Year 2012 Purple Loosetrife Survey

Flambeau Crowley Hydroelectric Project - FERC # ~~2640~~

Date: 8-9-12 Conducted By: AKR GGR

HWL: 1427.15 TWL: 1405.5 418 Flow

Time Survey Started: 8:45 Time Survey Ended: 12:15

Weather Conditions: cloudy 60°

Location of Survey Area: Tailrace  Bypass Reach  Impoundment

Time of Sighting(s): \_\_\_\_\_

Location of Sighting(s) (GPS Coordinates): \_\_\_\_\_

(Attach Photos & Map if Applicable)

Purple Loosetrife:  see below

Other Species Observed: 1 eagle 1 otter 7 geese

Other Pertinent Survey Information

11 plant clumps on south side of  
causeway by 6-mile creek.  $\approx$  3' tall  
no sign of beetles.

Document Content(s)

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