

February 6, 2017

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

RE:

Flambeau Crowley FERC Project Number 2473

Flambeau Hydro LLC

Final Report 2016 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 2016 Purple Loosestrife Inventory Report* for the Flambeau Crowley Hydroelectric Project. The report is a requirement of Flambeau's Federal license pursuant to article 410.

Monitoring was conducted on August 9, 2016. No out of the ordinary issues were encountered. Purple Loosestrife was observed on the Impoundment at 3 sites. The first two sites were FLCR PL001 and FLCR PL002 which are located along the south side of HWY 70 at 6 Mile Creek. 14 plants were observed, pulled and disposed of in an approved manner. The 3<sup>rd</sup> site is directly across from the above sites and is labeled FLCR PL008. It had approximately 55 plants and could not be accessed because it is separated from the other sites by water; therefore no action was taken at this site. The draft report was sent to the agencies by an attachment to an e-mail dated January 5th, 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 2017.

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

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



Corporate Office

P.O. Box 264 100 S. State Street Neshkoro, WI 54960

Phone: 855-99HYDRO Fax: 920-293-4100

www.renewableworldenergies.com

Sincerely,

Renewable World Energies, LLC Agent for Licensee

Bist

E08

Mr. Jason Kreuscher Vice President

Attachment: Flambeau Crowley Final Purple Loosestrife Inventory Report

Cc:

Ms. Cheryl Laatsch, WDNR Mr. Nick Utrup, USFWS

RWE, Corporate

for
Flambeau Crowley Hydroelectric Project
FERC Project #2473
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 Crowley Hydroelectric Project, FERC #2473

On August 9, 2016, White Water Associates, Inc. performed an inventory of purple loosestrife at the Flambeau Crowley 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.

#### 2016 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 impoundment was surveyed by boat and three sites had purple loosestrife plants.

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

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

Site FLCR001 and FLCR002 had 14 plants observed and pulled. Site FLCR008 (new in 2016), had approximately 55 purple loosestrife plants observed. This site was inaccessible so no treatment was conducted.

A map of purple loosestrife locations observed in 2016 is available in Appendix A. Appendix B provides tables of historical purple loosestrife data as well as observations made in 2016. Appendix C provides scans of field data sheets. Appendix D provides photos taken at the project area.

# Appendix A Maps



Map 1. Locations of purple loosestrife at Flambeau Crowley in 2016.

# Appendix B Tables

	7	1
	>	4
۰	-	=
•	τ	7
	c	٦
	7	7
	4	•
	2	2
	7	5
	~	4

Table 1.	GPS poin	ts for purp	ole loose	strife inver	Table 1. GPS points for purple loosestrife inventory at Flambeau Crowley, FERC#2473.
GPS Point	Latitude	Longitude	Plant Height	Stand Area	Comments
FLCRPL001	45.86360	45.86360 -90.54765	1'-3'	~180'x25'	2002-first observed. 11 plants observed. 2003-2008-treated with herbicide. 2009-are of purple loosestrife had declined by 50% 2010-area of purple loosestrife similar, but number of plants increased. Treated with herbicide. 2011-number of plants decreased. Treated with herbicide. 2012-number of plants increased. Treated with herbicide. 2012-number of plants were hand pulled. 2013, 2014, & 2015-plants were hand pulled. 2016-14 plants observed and pulled.
FLCRPL002	45.86417	-90.54643	1'-3'	~180'x25'	

## Appendix B

## **Appendix C Scans of Datasheets**

### Purple Loosestrife Survey

<u>Crowley</u> Hydr	roelectric Project – FERC # 2473 Page of			
Date 8.4.1 Conducted By _	Stine Itaag			
HWLICIXT 27 TWL 14 Month CFS 9	Equipment Used:			
	Barometer:Sky Conditions: Danty Claraly			
Time Survey Started 10.15	Fime Survey Ended 10.32 Boat (14ft or Canoe) and/or Foot			
Latitude Start	Longitude End			
Location of Survey Area: Tailrace	Bypass ReachImpoundment FHLLC Property			
Description of Location adjacent to dan and power house				
Purple Loosestrife Found: Yes or I	No Historic Info: FOOK 2015 NOPL			
Site: Time:	Latitude: Longitude:			
Photo ID:	Description of location:			
Species Name:	Single Plant or Multi-stem Actual # of Plants:			
Acreage of Infestation (circle one)	less than ½ acre ½-1 acre 1-10 acres more than 10 acres			
	): impoundment/pond edge stream edge roadside wooded area			
ditch field other				
Stand Area Density (feet x feet):	Size Colony (#plants): S = 0-5 M = 6-50 L = >50 ~			
Plant Height: 1= <1 ft 2 = 1-2 ft 3				
Plant Flowering: 1 = <25% of plan	ts $2 = 26-50\%$ of plants $3 = 51-99\%$ of plants $4 = 100\%$ of plants			
Beetle Feeding: 1 = 76-100% feed	ing 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding			
Total plant vigor: 0-3 = very poor	4-6 = poor 7-9 = fair 10-12 = good			
Plant Removed: Yes No Description:				
Site: Time:	Latitude: Longitude:			
Photo ID:	Description of location:			
Species Name:	Single Plant or Multi-stem Actual # of Plants:			
Acreage of Infestation (circle one)	less than ½ acre ½-1 acre 1-10 acres more than 10 acres			
	): impoundment /pond edge stream edge roadside wooded area			
ditch field other				
Stand Area Density (feet x feet):	Size Colony: S = 0-5 M = 6-50 L = >50 ~			
Plant Height: 1= <1 ft 2 = 1-2 ft 3				
	ts $2 = 26-50\%$ of plants $3 = 51-99\%$ of plants $4 = 100\%$ of plants			
Beetle Feeding: 1 = 76-100% feed	ling 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding			
Total plant vigor: 0-3 = very poor	4-6 = poor 7-9 = fair 10-12 = good			
Plant Removed: Yes or No De	escription:			



					Page _	of
Site:	Time:	Latitude:			Longitude:	
Photo ID: Descrip		Descriptio	n of location:			
Species Name:		Single Plan	it or Multi-stem		Actual # of Plants:	
Acreage of Infe	station (circle o	one) less than ½	acre ½-1 acre	1-10 ac	cres more than 10 ac	cres
Location type (	circle all that a	oply): impoundm	ent /pond edge	stream	nedge roadside woo	ded area
ditch field other	er	•				
Stand Area Den	sity (feet x fee	t):	Size Colony: S =	0-5 M	1 = 6-50 L = >50	~
Plant Height: 1	= <1 ft 2 = 1-2	ft 3 = 2-4 ft 4 =	>4 ft	~	feet	8
Plant Flowering: $1 = \langle 25\% \text{ of plants } 2 = 26-50\% \text{ of plants } 3 = 51-99\% \text{ of plants } 4 = 100\% \text{ of plants}$						
Beetle Feeding: 1 = 76-100% feeding 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding						
Total plant vigo	r: 0-3 = very p	oor 4-6 = poor 7	7-9 = fair 10-12 =	good		
Plant Removed	: Yes No	Description:				
			3			
			*			

Site:	Time:	Latitude:			Longitude:	
Photo ID:		Description o	f location:			
Species Name:		Single Plant o	r Multi-stem		Actual # of Plants	S <b>:</b>
Acreage of Infest	tation (circle one)	less than 1/2 ac	cre ½-1 acre	1-10 ac	res more than 10 a	acres
Location type (ci	rcle all that apply)	: impoundmer	it/pond edge	stream	edge roadside wo	oded area
ditch field other						
Stand Area Dens	ity (feet x feet):	S	ize Colony: S	= 0-5 M	= 6-50 L = >50	~
Plant Height: 1=	<1 ft 2 = 1~2 ft 3	= 2-4  ft  4 = >4	ft	~	feet	
Plant Flowering:	1 = <25% of plant	2 = 26-50%	of plants 3 =	51-99%	of plants 4 = 100%	of plants
Beetle Feeding:	1 = 76-100% feedi	ng 2 = 51-75%	feeding 3 =	25-50% 1	feeding $4 = 0-25\%$ f	feeding
Total plant vigor	: 0-3 = very poor	1-6 = poor 7-9	= fair 10-12 =	good =		
Plant Removed:	Yes or No	Description:				
Other Species Ol	oserved:	2				4
Other Pertinent	Survey Informatio	n:	1)()	?		
Historic Purple L	oosestrife:	174)	Pa			

Signature



<sup>\*</sup> If colonies less than 20 plants are located on lands owned by RWE within the Project Boundary, RWE will take appropriate steps to eliminate plants at time of detection. For stands larger than 20 plants located on lands owned by RWE within the Project boundary, RWE will consult with the WDNR and USFWS to determine control methods.

## Purple Loosestrife Survey

+ lambean	oelectric Project – FERC # 2973 Page of
Date 8-9 Conducted By	Stin Itaas
HWL 1427. TWL 1406 / CFS 9	Equipment Used:
Air Temp: 15 K Wind Speed: _	Barometer: Sky Conditions:Only Condy
Time Survey Started 10:15	Fime Survey Ended 10132 Boat (14ft or Canoe) and/or(Foot)
Latitude Start	Longitude End
	Bypass ReachImpoundment FHLLC Property
Description of Location <u>Dam</u>	and proverhouse to approx. 500 ft downswamped
Purple Loosestrife Found: Yes or I	No Historic Info: book 2015 no PL
Site: Time:	Latitude: Longitude:
Photo ID:	Description of location:
Species Name:	Single Plant or Multi-stem Actual # of Plants:
Acreage of Infestation (circle one)	less than ½ acre ½-1 acre 1-10 acres more than 10 acres
The state of the s	): impoundment/pond edge stream edge roadside wooded area
ditch field other	N 10 M 10
Stand Area Density (feet x feet):	Size Colony (#plants): S = 0-5 M = 6-50 L = >50 ~
Plant Height: 1= <1 ft 2 = 1-2 ft 3	
Plant Flowering: 1 = <25% of plan	ts 2 = 26-50% of plants 3 = 51-99% of plants 4 = 100% of plants
Beetle Feeding: 1 = 76-100% feed	ling 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding
Total plant vigor: 0-3 = very poor	4-6 = poor 7-9 = fair 10-12 = good
Plant Removed: Yes No	Description:
Site: Time:	Latitude: Longitude:
Photo ID:	Description of location:
Species Name:	Single Plant or Multi-stem Actual # of Plants:
	less than ½ acre ½-1 acre 1-10 acres more than 10 acres
	): impoundment /pond edge stream edge roadside wooded area
ditch field other	-
Stand Area Density (feet x feet):	Size Colony: S = 0-5 M = 6-50 L = >50 ~
Plant Height: 1= <1 ft 2 = 1-2 ft 3	
	its $2 = 26-50\%$ of plants $3 = 51-99\%$ of plants $4 = 100\%$ of plants
The state of the s	ling 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding
	4-6 = poor 7-9 = fair 10-12 = good
Plant Removed: Yes or No Do	



* a a		Page of
Site: / Time:	Latitude:	Longitude:
Photo ID:	Description of location:	
Species Name:	Single Plant or Multi-stem	Actual # of Plants:
Acreage of Infestation (circle one)	less than ½ acre ½-1 acre 1-10 acr	res more than 10 acres
Location type (circle all that apply)	: impoundment /pond edge stream	edge roadside wooded area
ditch field other		
Stand Area Density (feet x feet):	Size Colony: S = 0-5 M	= 6-50 L = >50 ~
Plant Height: 1= <1 ft 2 = 1-2 ft 3	= 2-4 ft 4 = >4 ft ~	feet
Plant Flowering: 1 = <25% of plant	s 2 = 26-50% of plants 3 = 51-99% of	of plants 4 = 100% of plants
Beetle Feeding: 1 = 76-100% feed	ng 2 = 51-75% feeding 3 = 25-50% f	eeding 4 = 0-25% feeding
Total plant vigor: 0-3 = very poor	1-6 = poor 7-9 = fair 10-12 = good	
Plant Removed: Yes No Des	cription:	
19		
Site: Time:	Latitude:	Longitude:
Photo ID:	Description of location:	15.
Species Name:	Single Plant or Multi-stem	Actual # of Plants:
Acreage of Infestation (circle one)	less than 1/2 acre 1/2-1 acre 1-10 ac	res more than 10 acres
Location type (circle all that apply)	: impoundment / pond edge stream	edge roadside wooded area
ditch field other		
Stand Area Density (feet x feet):	Size Colony: S = 0-5 M	= 6-50 L = >50 ~
Plant Height: 1= <1 ft 2 = 1-2 ft 3	= 2-4 ft 4 = >4 ft ~	feet
Plant Flowering: 1 = <25% of plan	ts $2 = 26-50\%$ of plants $3 = 51-99\%$	of plants 4 = 100% of plants
Beetle Feeding: 1 = 76-100% feed	ing $2 = 51-75\%$ feeding $3 = 25-50\%$	feeding 4 = 0-25% feeding
Total plant vigor: 0-3 = very poor	4-6 = poor 7-9 = fair 10-12 = good	
Plant Removed: Yes or No	Description:	
Other Species Observed:		
	73.1	
Other Pertinent Survey Information	n: MO VL	
other retainent ourvey information	···	
	Was Ot	
Historic Purple Loosestrife:	1111 1 1	
n 1		
Signature Andrews	Signature	
- S		

<sup>\*</sup> If colonies less than 20 plants are located on lands owned by RWE within the Project Boundary, RWE will take appropriate steps to eliminate plants at time of detection. For stands larger than 20 plants located on lands owned by RWE within the Project boundary, RWE will consult with the WDNR and USFWS to determine control methods.



Time Survey Started Time Survey Ended 14.02 Boat (14ft or Canoe) and/or Foot attitude Start	Flambeau Pulple Loosestine Survey
Conducted By Full Equipment Used:  Sky Conditions: Full Conducted By Full Equipment Used:  Sky Conditions: Full Equipment Used:  Sky Conditions: Full Conducted By Full Equipment Used:  Sky Conditions: Full Conducted By Full Equipment Used:  Sky Conditions: Full Conducted By Full Equipment Used:  Sky Conditions: Full Equipment Used:  Sky Conditions: Full Conducted By Full Equipment Used:  Sky Conditions: Full Equipment Used:  Full Equipment Used:  Sky Conditions: Full Equipment Used:  Sky Conditions: Full Equipment Used:  Full Equipment Used:  Sky Conditions: Full Equipment Used:  Full Equipment Used:  Sky Conditions: Full Equipment Used:  Sky Conditions: Full Equipment Used:  Sky Conditions: Full Equipment Used:  Full Equipment Used:  Sky Conditions: Ful	Couly Hydroelectric Project – FERC # 2473 Pageof
Sky Conditions: Sky Conditions	Date 89 Conducted By Stine Harry
Time Survey Started Time Survey Ended 14.02 Boat (14ft or Canoe) and/or Foot attitude Start	HWLM TWL TWL CFS A TEquipment Used:
Longitude End	Air Temp:°C Wind Speed:Barometer: Sky Conditions:
Description of Location Goorges, 500 feet down stream of the fixed dam to Crossical Conference of the Crossical Conference of the Crossical Conference of the Crossical Conference of Crossical Crossical Crossical Crossical Conference of Crossical C	Time Survey Started 11.0 % Time Survey Ended 14.02 Boat (14ft or Canoe) and/or Foot
Purple Loosestrife Found: Yes or No Historic Info: Do A 2015 2 Occurrence of the fixed dam to Crowning Control Purple Loosestrife Found: Yes or No Historic Info: Do A 2015 2 Occurrence of the fixed dam to Crowning Control Purple Loosestrife Found: Yes or No Historic Info: Do A 2015 2 Occurrence of the fixed dam to Crowning Could be found for the fixed dam to Crowning Could be fo	Latitude Start Longitude End
Purple Loosestrife Found: Yes or No Historic Info: Dock 2015 2 occurrence 12 pleads for FL C R PL 001 - 062 007 (Not Ps form) Look of the Site: Time: 14:3 Latitude: Longitude: Description of location: Occurs for Actual # of Plants: 2.  Acreage of Infestation (circle one) less than 2 acre 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area ditch field other Occurrence 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area ditch field other Occurrence 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area ditch field other Occurrence 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area ditch field other Occurrence 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area ditch field other Occurrence 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area ditch field other Occurrence 12-10 acres more than 10 acres ocation type (circle all that apply): impoundment/poind edge stream edge roadside wooded area	Location of Survey Area: TailraceBypass ReachImpoundmentX FHLLC Property
Description of location: Actual # of Plants: Acreage of Infestation (circle one) less than 2 acre 2/3-1 acre 1-10 acres more than 10 acres ditch field other  Claim Height: 1=<1 ft 2=1-2 ft 3=2-4 ft 4=>4 ft 3=5 feet  Claim Height: 1=<25% of plants 2=26-50% of plants 3=51-99% of plants 4=100% of plants 3=51-99% of plants 4=00% of plants 3=51-90% feeding 4=0-25% feeding 3=25-50% f	Description of Location approx. 500 feet downstream of the Price dam to Crowning dans
Description of location: Actual # of Plants: Acreage of Infestation (circle one) less than 2 acre 2/3-1 acre 1-10 acres more than 10 acres ditch field other  Claim Height: 1=<1 ft 2=1-2 ft 3=2-4 ft 4=>4 ft 3=5 feet  Claim Height: 1=<25% of plants 2=26-50% of plants 3=51-99% of plants 4=100% of plants 3=51-99% of plants 4=00% of plants 3=51-90% feeding 4=0-25% feeding 3=25-50% f	Purple Loosestrife Found: Yes or No Historic Info: Do at 2015 2 occurrence & PL 12 plants por FLCR PLOOL-062 007 (NOCPS Point) Leader of file
Single Plant or Multi-Stem Actual # of Plants: 2 Acreage of Infestation (circle one) less than 1/2 acre 1-10 acres more than 10 acres Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area	Site: Time: 14; 3 Latitude: Longitude:
Single Plant or Multi-Stem Actual # of Plants: 2 Acreage of Infestation (circle one) less than 1/2 acre 1-10 acres more than 10 acres Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area	Photo ID: 7453 Description of location: CLCVOSS COS J
Cocation type (circle all that apply): impoundment/pond edge stream edge roadside wooded area ditch field other  Caro Scale  Size Colony (#plants): S = 0-5 M = 6-50 L = >50 ~  Plant Height: 1 = <1 ft 2 = 1-2 ft 3 = 2-4 ft 4 = >4 ft ~ 3.5 feet  Plant Flowering: 1 = <25% of plants 2 = 26-50% of plants 3 = 51-99% of plants 4 = 100% of plants  Beetle Feeding: 1 = 76-100% feeding 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding  Fotal plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good  Plant Removed: (Fees No Description: By Crook  Site: Time: Latitude: Longitude:  Photo ID: 3 / 5 Description of location: Caro Single Plant or Multi-stem Actual # of Plants:  Acreage of Infestation (circle one) less than % acres 2-1 acre 1-10 acres more than 10 acres  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area	
Sitch field other  Stand Area Density (feet x feet): 3x2   Size Colony (#plants): S = 0-5 M = 6-50 L = >50 ~ Plant Height: 1 = <1 ft 2 = 1-2 ft 3 = 2.4 ft 4 = >4 ft	Acreage of Infestation (circle one) less than 1/2 acre 1/2-1 acre 1-10 acres more than 10 acres
Stand Area Density (feet x feet): 3x2   Size Colony (#plants): S = 0-5   M = 6-50   = >50 \(^{-1}\)   Plant Height: 1 = <1 ft 2 = 1-2 ft 3 = 2-4 ft 4 = >4 ft   \(^{-1}\)   3.5   feet   Plant Flowering: 1 = <25% of plants 2 = 26-50% of plants 3 = 51-99% of plants 4 = 100% of plants 3 = 25-50% feeding 3 = 25-50% feeding 4 = 0-25% feeding 4 = 0-25% feeding 4 = 0-25% feeding 5   Plant Vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good   Plant Removed: (Yes)   No   Description:	Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area
Plant Height: 1= <1 ft 2 = 1-2 ft 3 = 2-4 ft 4 = >4 ft	ditch field other across raced
Plant Height: 1= <1 ft 2 = 1-2 ft 3 = 2-4 ft 4 = >4 ft	Stand Area Density (feet x feet): 3x2 Size Colony (#plants): S = 0-5 M = 6-50 L = >50 ~
Beetle Feeding: 1 = 76-100% feeding 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding  Fotal plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good  Plant Removed: (ves No Description: 6	Plant Height: 1= <1 ft 2 = 1-2 ft 3 = 2-4 ft 4 = >4 ft ~ 3.5 feet
Fotal plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good  Plant Removed: (es No Description: 6, 700)  Site: Time: Latitude: Longitude: Photo ID: 3 4 5 1 Description of location: 6 7 7 9 6 Plants: 6 Plants: 6 Plant or Multi-stem Actual # of Plants: 6 Plants: 6 Plants: 6 Plants: 6 Plants: 6 Plants: 6 Plants: 7 Pla	Plant Flowering: $1 = \langle 25\% \text{ of plants } 2 = 26-50\% \text{ of plants } 3 = 51-99\% \text{ of plants } 4 = 100\% \text{ of plants}$
Plant Removed: (Yes No Description: By Cool Plant Removed: (Yes No Description:	Beetle Feeding: 1 = 76-100% feeding 2 = 51-75% feeding 3 = 25-50% feeding 4 = 0-25% feeding
Site: Time: Latitude: Longitude:  Photo ID: 345   Description of location: General Control of Plants: The Control	Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good
Time: Latitude: Longitude:   Description of location: (2 / 2 )   Description of location: (2 / 2 )   Description of location: (3 / 4 )   Description of location: (4 / 4 )   Description of location: (4 / 4 )   Description of location: (5 / 4 )   Description of location: (6 / 4 )   Description of location: (6 / 4 )   Description of location: (7 / 4 )	Plant Removed: (Yes ) No Description: By Control
Time: Latitude: Longitude:   Description of location: (2 / 2 )   Description of location: (2 / 2 )   Description of location: (3 / 4 )   Description of location: (4 / 4 )   Description of location: (4 / 4 )   Description of location: (5 / 4 )   Description of location: (6 / 4 )   Description of location: (6 / 4 )   Description of location: (7 / 4 )	near then
Species Name: Single Plant or Multi-stem Actual # of Plants: 4 / Acreage of Infestation (circle one) less than ½ acre ½-1 acre 1-10 acres more than 10 acres  Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area	
Acreage of Infestation (circle one) less than ½ acre ½-1 acre 1-10 acres more than 10 acres ocation type (circle all that apply): impoundment/pond edge stream edge roadside wooded area	
ocation type (circle all that apply): impoundment/pond edge stream edge roadside wooded area	
	Acreage of Infestation (circle one) less than 1/2 acres 1/2-1 acres 1-10 acres more than 10 acres
	Location type (circle all that apply): impoundment/pond edge stream edge roadside wooded area
	ditch field other
the state of the s	Plant Flowering: $1 = \langle 25\% \text{ of plants } 2 = 26-50\% \text{ of plants } 3 = 51-99\% \text{ of plants } 4 = 100\% \text{ of plants}$
	Beetle Feeding: $1 = 76-100\%$ feeding $2 = 51-75\%$ feeding $3 = 25-50\%$ feeding $4 = 0-25\%$ feeding
	Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good
Plant Removed: (Yes) or No Description:	Plant Removed: (Yes) or No Description:



		Page of
Site: Time:	Latitude:	Longitude:
Photo ID:	Description of location:	2.1.1
Species Name:	Single Plant or Multi-stem	Actual # of Plants:
Acreage of Infestation (circle one)	less than ½ acre ½-1 acre 1-10 a	cres more than 10 acres
Location type (circle all that apply)	: impoundment / pond edge stream	n edge roadside wooded area
ditch field other		
Stand Area Density (feet x feet):	Size Colony: S = 0-5 N	1 = 6-50 L =. >50 ~
Plant Height: $1 = < 1 \text{ ft } 2 = 1 - 2 \text{ ft } 3$	= 2-4 ft 4 = >4 ft ~	feet
Plant Flowering: $1 = <25\%$ of plant	ts $2 = 26-50\%$ of plants $3 = 51-99\%$	of plants 4 = 100% of plants
Beetle Feeding: 1 = 76-100% feed	ing 2 = 51-75% feeding 3 = 25-50%	feeding 4 = 0-25% feeding
Total plant vigor: 0-3 = very poor		,
Plant Removed: Yes (No Des	scription: ロルッパラッチベンス	½~,
	show we couldn't as	
Site: Time:	Latitude:	Longitude:
Photo ID: 375%	Description of location:	2.
Species Name:	Single Plant or Multi-stem	Actual # of Plants:
Acreage of Infestation (circle one)	less than 1/2 acre 1/2-1 acre 1-10 a	
Location type (circle all that apply)	: impoundment /pond edge strear	n edge roadside wooded area
ditch field other		
Stand Area Density (feet x feet):	, Size Colony: S = 0-5 N	/I = 6-50 L = >50 ~
Plant Height: 1= <1 ft 2 = 1-2 ft 3	The state of the s	feet
Plant Flowering: 1 = <25% of plan	ts $2 = 26-50\%$ of plants $3 = 51-99\%$	of plants 4 \(\delta\) 100% of plants
Beetle Feeding: 1 = 76-100% feed	ing 2 = 51-75% feeding 3 = 25-50%	feeding 4 = 0-25% feeding
Total plant vigor: 0-3 = very poor	4-6 = poor 7-9 = fair 10-12 = good	
Plant Removed: Yes or No	Description: Cocdd:	reach
Other Species Observed: 2  3449-50 Fage Pool	King Sisher, pa	intrá tantleo
Other Pertinent Survey Informatio	on:	
Historic Purple Loosestrife:  Signature	Signature  lands owned by RWE within the Project Boundar	y PW5 will take appropriate store to eliminate
ii colonies less than 20 plants are located on	iands owned by type within the Project Ronnaar	y, nive will take appropriate steps to eliminate

<sup>\*</sup> If colonies less than 20 plants are located on lands owned by RWE within the Project Boundary, RWE will take appropriate steps to eliminate plants at time of detection. For stands larger than 20 plants located on lands owned by RWE within the Project boundary, RWE will consult with the WDNR and USFWS to determine control methods.



# Appendix D Photos

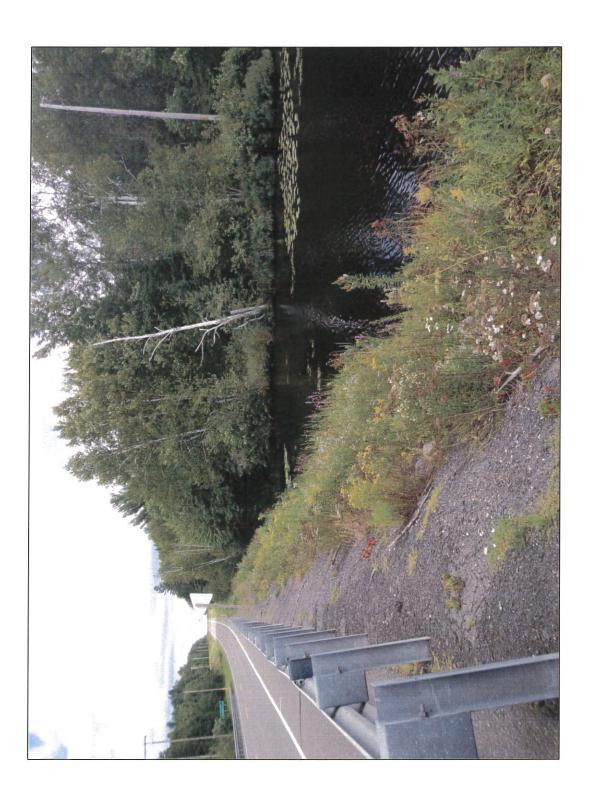


Photo 1. Purple loosestrife growing along roadside.

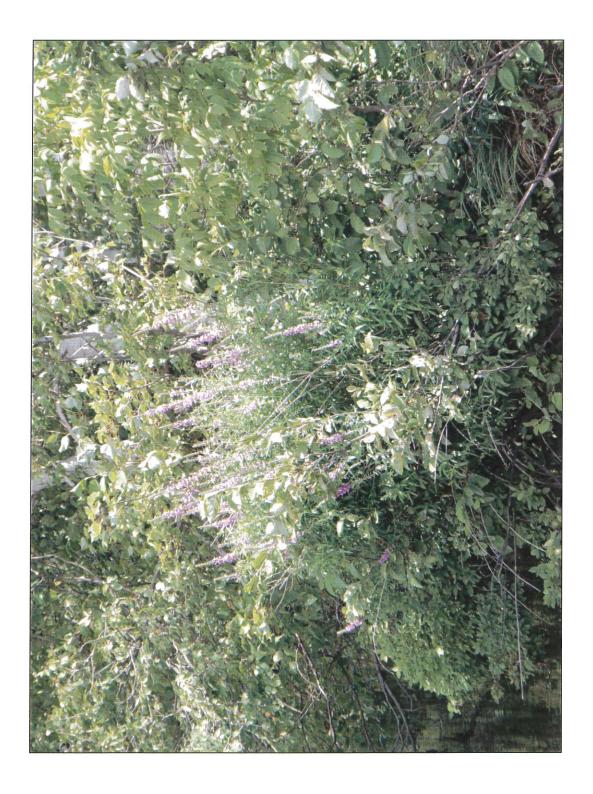


Photo 2. Purple loosestrife growing on wooded bank.

Photo 3. Purple loosestrife grown on water's edge.

20170210-5183 FERC PDF (Unofficial) 2/10/2017 4:53:08 PM
Document Content(s)
17-02-06 BRK CRLY Final P L Rpt To FERC.PDF1-21