

March 1, 2021

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

Re:

Clam River Hydroelectric Project FERC #9185

Flambeau Hydro, LLC

Article 401 (b) (M) - Final 2020 Purple Loosestrife Inventory Report

Dear Ms. Bose:

On behalf of Flambeau Hydro, LLC (Licensee), Renewable World Energies LLC is submitting the <u>Final 2020 Purple Loosestrife Inventory Report</u> for the Clam River Hydroelectric Project. It is a requirement of Article 401 (b) (M) amended April 23, 2013 of the License issued to Flambeau Hydro LLC by the Federal Energy Regulatory Commission on July 24, 2006 which was amended May 12, 2014. The 401 (b) (M) amendment changes the monitoring schedule from every year to every other year as well as Galerucella Beetles being placed at documented Purple Loosestrife sites in the non-survey year.

The report was sent to the agencies as an attachment to an e-mail on December 29, 2020. The letter and e-mail asked for comment if they had any to offer. The DNR did respond that they have no comments. The survey was conducted on August 11, 2020. The Impoundment Survey noted (15) sites with observed Purple Loosestrife. Three (3) of the sites observed with Purple Loosestrife for the first time. The FHLLC – Owned Property, Bypass Reach, and Tailrace Surveys were conducted but no Purple Loosestrife was observed during this survey. Galerucella Beetles are scheduled to be released in 2021. The next survey and report will be due in 2022.

The consultant that did the survey and report did notice some errors on the Draft report. The attached report was corrected after receiving comments and added context for why attempts to remove plants at certain sites were not made. The details of the survey remain unchanged. This report will be concurrently sent to the agencies, and any comments received will be refiled if they are received.

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

Corporate Office

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Norway, MI 49870 Fax: 906-563-9344



Sincerely,

Renewable World Energies, LLC **Agent for Licensee**

For Mr. Jason Kreuscher Vice President, Operation

Attachment:

Final Clam River 2020 Purple Loosestrife Inventory Report

Draft Clam River 2020 Purple Loosestrife Inventory Report

Agency Correspondence

Cc:

Cheryl Laatsch, WDNR Nick Utrup, USFWS

Paul Cook, Burnett County

RWE

for
Clam River Hydroelectric Project
FERC Project #9185
Flambeau Hydro, LLC
Burnett County, Wisconsin

Submitted by:



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

Summary of Purple Loosestrife Inventory for Clam River Hydroelectric Project, FERC #9185

On August 11, 2020, White Water Associates, Inc. performed an inventory of purple loosestrife at the Clam River Hydroelectric Project. This is a requirement of Article 401 (b) (M) amended April 23, 2013 of the License issued to Flambeau Hydro LLC by the Federal Energy Regulatory Commission (FERC) (July 24, 2006; amended May 12, 2014). This amendment changes the monitoring schedule from every year to every other year as well as *Galerucella* beetles being placed at documented purple loosestrife sites in the non-survey year.

2020 Observations

The Clam River Hydroelectric Project boundary was divided into four different areas; *the impoundment* (from approximately 3.1 miles upstream of the Clam River powerhouse downstream to the Clam River powerhouse), *FHLLC-owned property within the project boundary* (FHLLC-owned property adjacent to the dam and powerhouse), *the tailrace* (from the powerhouse to a point approximately 900 feet downstream), and *the bypass reach* (from the spillway to a point approximately 800 feet downstream).

The impoundment was surveyed by boat and fifteen sites had purple loosestrife plants. More description of these sites is provided below.

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

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

The bypass reach was surveyed on foot and no purple loosestrife plants were observed.

Fifteen sites within the project area had purple loosestrife plants present in 2020.

Site CLRVPL003 had 8+ plants with no treatment because of accessibility. Site CLRVPL004 had 5 plants with no treatment because accessibility. Site CLRVPL005 had 2-6 plants and no treatment because they were hard to reach. Site CLRVPL006 had 20 plus plants and no treatment. Site CLRVPL007 had 20 plus plants observed and no treatment. CLRVPL009 had 3 multi-stem plants and no treatment due to accessibility. Site CLRVPL8B had 20+ plants observed and only one plant was pulled near the edge. Site CLRVPL013 had 10 multi-stemmed plants with no treatment because they were hard to reach. Site CLRVPL017 had 10-12 plants and no treatment due to accessibility. Site CLRVPL018 had 20 plus plants and no treatment. Site CLRVPL022 had 20+ plants observed and were not treated. Site CLRVPL023 had 20+ plants and no treatment.

Three sites were first observed in 2020. Site CLRVPL025 had 20+ plants and no treatment. Site CLRVPL026 had 15+ plants with no treatment due to accessibility. CLRV027 two plants pulled.

Beatles Released

Renewable World Energies has been working with the Grantsberg High school biology teacher, Mathew S. Berg, and students to release *Galerucella* beetles at the Clam River Flowage. In 2017, 3,000 beetles were released at one location and another 3,000 beetles were released in a different location. In 2019, there were no beetles released because they could not find good stock to start raising them.

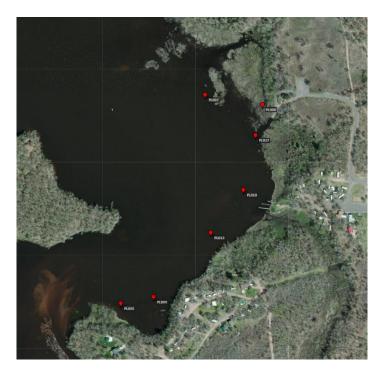
A map of purple loosestrife locations observed in 2020 is available in Appendix A. Appendix B provides tables of historical purple loosestrife data as well as observations made in 2020. Appendix C provides scans of field data sheets. Appendix D provides photos taken at the project area.

Appendix A Maps



Map 1. Locations of purple loosestrife at Clam River in 2020 zoomed out.

Map 2. Locations of purple loosestrife at Clam River in 2020 zoomed in.



Map 3. Locations of purple loosestrife at Clam River in 2020 zoomed in.



Appendix A

Appendix B Tables

Т	Table 1. GPS points for purple loosestrife inventory at Clam River, FERC#2640. 2020									
GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments				
CLRVPL001	45.90821	-92.51880	5'-6'	12'x3'	2014-no damage	2007-first observed. All plants pulled. 2008 & 2009-no plants observed. 2010, 2011 & 2012-site inaccessible due to silting. 2013-no plants observed. 2014-2 plants observed and pulled. 2016-no plants observed.				
CLRVPL002	45.91354	-92.51691	3'	1'x1'	N/A	2007-first observed. No treatment. 2008-no plants observed. 2009-some plants observed. No beetle damage. No treatment. 2010 & 2011-no plants observed. 2012-site inaccessible. 2013 & 2014-no plants observed. 2016-no plants observed.				
CLRVPL003	45.91664	-92.51582	3'	~1/2 acre	2014-beetle damage in 10% of plants	2007-first observed. No treatment. 2009 & 2010-fewer plants observed. No treatment. 2011-considerable increase in plants observed. No beetle damage. No treatment. 2012-site inaccessible. 2013 & 2014-plants observed. 2016-no plants observed. 2018-20 plus plants observed. No treatment. 2020-8+ plants no treatment hard to reach.				
CLRVPL004	45.92067	-92.51714	3'-4'	10'x10'	2014-beetle damage in 10% of plants	2007-first observed. No treatment. 2009 & 2010-fewer plants observed. No treatment. 2011-considerable increase in plants observed. No beetle damage. No treatment. 2012-site inaccessible. 2013 & 2014-plants observed. 2016-1 plant observed. No treatment. 2018-50 plus multi-stem plants observed. 1 plant removed. 2020-5 plants couldn't reach.				

GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL005	45.92141	-92.51259	4'	10'x15'	N/A	2012-no beetle damage. Plants blooming. No treatment. 2013-no beetle damage. 2014-no plants observed. 2016-no plants observed. 2018-4 plants observed and pulled. 2020-no treatment hard to reach.
CLRVPL006	45.92549	-92.50841	3' to 4'	20'x 20'	2013-no damage 2014-no damage 2018-no damage	2007-first observed. No beetle damage. All plants pulled. 2008-no beetle damage. All plants pulled. 2009-seed heads clipped.2010-no treatment. 2011-same number of plants as previous years. 2012-no plants observed. 2013-1 plant observed. No treatment. 2014-22 plants observed. 2016-25 plants observed and pulled. 2018-20 plus plants observed. No treatment. 2020 -20 plus not treatment.
CLRVPL007	45.92569	-92.51010	3'-4'	10'x10'	2013-no damage	2007-first observed. No beetle damage. No treatment. 2008 & 2009-same as 2007. No treatment. 2010, 2011 & 2012- no plants observed. 2013-1 plant observed. No beetle damage. 2014-no plants observed. 2016-2 plants observed. No treatment. 2018-3 plants observed. No treatment.2020-20+ plants no treatment.
CLRVPL008	45.91955	-92.51429	4'	10'x10'	2013-some plants are damaged 2014-20% of plants with damage	2008-first observed. No treatment. 2009 & 2010-plants observed. No treatment. 2011-number of plants increased. No treatment. 2012-site inaccessible. 2013-beetles released. 2014-similar number of plants as 2013. 2016-20 plants observed. Flowering heads clipped off. 2018-20 plus. No treatment.

GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL009	45.92154	-92.51162	3'-4'	2'x1'	N/A	2009-first observed. No treatment. 2010 through 2014-no plants observed. 2016-20 plants observed. No treatment. 2018-3 multi-stem plants observed. No treatment. 2020-1-3 plants but could not reach.
CLRVPL010	45.92055	-92.51439	N/A	N/A	N/A	2009-first observed. No beetle damage. No treatment. 2010-plants observed. No treatment.2011-3 plants observed.2012, 2013 & 2014-no plants observed. 2016-10 plants observed. No treatment.
CLRVPL011	45.92613	-92.50824	3'-4'	N/A	No	2010-first observed. No treatment. 2011-50 plants observed. No treatment. 2012-No plants observed. 2013-2 plants observed. 2014- no plants observed. 2016-no plants observed.
CLRVPL012	45.92808	-92.51457	N/A	N/A	N/A	2010-first observed. 2011-3 plants observed. No treatment. 2012 and 2013-site inaccessible. 2014-no plants observed. 2016-2 plants observed. No treatment.
CLRVPL013	45.91452	-92.51613	4'	10'x 10'	N/A	2010-first observed. 2011-1 plant observed. No beetle damage. No treatment. 2012-site inaccessible.2013 & 2014-no plants observed. 2016-no plants observed. 2018-10 plus multi-stem plants. No treatment. 2020-5-10 plants but couldn't reach.
CLRVPL014	45.92286	-92.50993	2'-4'	2'x2'	N/A	2012-first observed. No treatment. 2013 & 2014-no plants observed. 2016-2 plants observed. No treatment. 2018-1 plant observed. Pulled.
CLRVPL015	45.93168	-92.5261	3'	1'x1'	2014-no damage	2014-first observed. 1 plant pulled.2016-no plants

GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL016	45.88423	-92.50117	4'	2'x2'	2014-no damage	2014-first observed. 2016-no plants observed.
CLRVPL017	45.92486	-92.50861	4'	10'x10'	N/A	2018-first observed. 2 plants observed. No treatment.2020-10-12 plants no treatment. Hard to reach.
CLRVPL018	45.92374	-92.50897	3'-4'	0.5 acre	N/A	2018-first observed. 3 plants observed. No treatment.2020-20+ no treatment.
CLRVPL021	45.91943	-92.51471	4'	2'x6'	N/A	2018-first observed. 8 multi-stem plants. No treatment.
CLRVPL022	45.91798	-92.51588	4'	~1acre	N/A	2018-first observed.20+ plants observed. No treatment. 2020-20+ no treatment.
CLRVPL023	45.91903	-92.51642	4'	~1/2 acre	N/A	2018-first observed. 50+ plants. No treatment. 2020-20+ no treatment.
CLRVPL024	45.91822	-92.51496	3'	2'x2'	N/A	2018-first observed. 3 multi-stem plants. No treatment.
CLRVPL4A	45.92041	-92.51787	4'	2'x10'	N/A	2016-first observed. 15 plants observed. Heads clipped. 2017-10+ plants observed. No treatment.
CLRVPL4B	45.91872	-92.51866	3'	4'x4'	N/A	2016-first observed. 3 plants observed. Heads clipped off. 2017-8 plants observed. No treatment.
CLRVPL5A	45.92251	-92.51325	4'	2'x2'	N/A	2016-first observed. 1 plant observed. No treatment. 2018-1 plant observed. No treatment. Hard to reach.
CLRVPL5B	45.92212	-92.51618	3'	1'x1'	N/A	2016-first observed. 1 plant observed. No treatment. 2018-3 multi-stem plants. No treatment. Hard to reach.
CLRVPL8A	45.91866	-92.51450	4'	10'x20' 2'x2'	N/A	2016-first observed. 1 plant observed. No treatment. 2018-3 multi-stem plants observed. No treatment.
CLRVPL8B	45.91754	-92.51584	3'	10'x10'	N/A	2016-first observed. 20 plants observed. No treatment. 2020-15-20 plants pulled one on edge.
CLRVPL10A	45.92126	-92.51410	4'	20'x20' 1'x1'	N/A	2016-first observed 21pulled. 2018-1 multi-stem. No treatment.
CLRVPL16A	45.93745	-92.52584	4'	2'x2'	N/A	2016-first observed. 15 plants observed and pulled.
CLRVPL025	45.91951	-92.5168	3'-4'	~.5 acre	N/A	2020- first observed. 20+ No treatment.
CLRVPL026	45.9192	-92.5144	3'-4'	~.5acre	N/A	2020- first observed. 15-20 + No treatment.
CLRVPL027	45.91994	-92.5168	3'-4'	2'x2'	N/A	2020 first observed. Pulled 2 plants.

	Table 2. GPS points for Galerucella beetle release at Clam River, FERC#2640.									
GPS Point	Latitude	Longitude	Number of beetles released	Comments						
CLRVGC001	45.93193	-92.50852	2000-3000	2013-released in July.						
	45.92033	-92.51709	3,000	2017-released in July						
	45.91969	-92.51687	3,000	2017-released in July						
				2019-no beetle release.						

Appendix C Scans of Datasheets

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Appendix D Photos

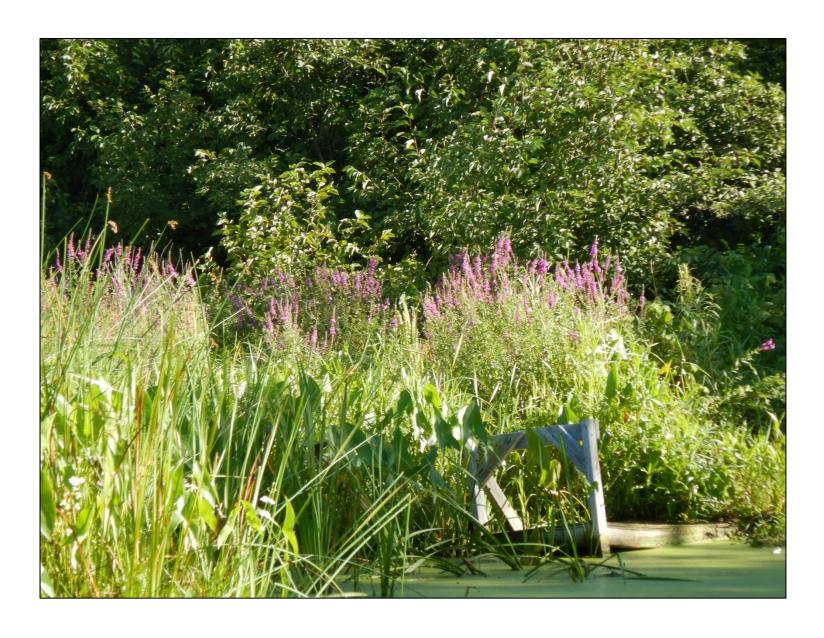


Photo 1. Purple loosestrife growing near boat landing.



Photo 2. Purple loosestrife growing along the shoreline.



Photo 3. Purple loosestrife along wooded shoreline.

for
Clam River Hydroelectric Project
FERC Project #9185
Flambeau Hydro, LLC
Burnett County, Wisconsin

Submitted by:



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

Summary of Purple Loosestrife Inventory for Clam River Hydroelectric Project, FERC #9185

On August 11, 2020, White Water Associates, Inc. performed an inventory of purple loosestrife at the Clam River Hydroelectric Project. This is a requirement of Article 401 (b) (M) amended April 23, 2013 of the License issued to Flambeau Hydro LLC by the Federal Energy Regulatory Commission (FERC) (July 24, 2006; amended May 12, 2014). This amendment changes the monitoring schedule from every year to every other year as well as *Galerucella* beetles being placed at documented purple loosestrife sites in the non-survey year.

2020 Observations

The Clam River Hydroelectric Project boundary was divided into four different areas; *the impoundment* (from approximately 3.1 miles upstream of the Clam River powerhouse downstream to the Clam River powerhouse), *FHLLC-owned property within the project boundary* (FHLLC-owned property adjacent to the dam and powerhouse), *the tailrace* (from the powerhouse to a point approximately 900 feet downstream), and *the bypass reach* (from the spillway to a point approximately 800 feet downstream).

The impoundment was surveyed by boat and twenty-one sites had purple loosestrife plants. More description of these sites is provided below.

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

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

The bypass reach was surveyed on foot and no purple loosestrife plants were observed.

Fifteen sites within the project area had purple loosestrife plants present in 2020.

Site CLRVPL003 had 8+ plants with no treatment. Site CLRVPL004 had 5 plants with no treatment because accessibility. Site CLRVPL005 had 2-6 plants and no treatment. Site CLRVPL006 had 20 plus plants and no treatment. Site CLRVPL007 had 10-12 multi-stemmed plants observed and no treatment. CLRVPL009 had 3 multi-stem plants and no treatment. Site CLRVPL5A had 1 plant and no treatment. CLRVPL5B had 3 plants and no treatment. Site CLRVPL8B had 20+ plants observed and only one plant was pulled near the edge. Site CLRVPL013 had 10 multi-stemmed plants with no treatment. Site CLRVPL017 had 2 plants and no treatment. Site CLRVPL018 had 3 multi-stemmed plants and no treatment. Site CLRVPL022 had 20+ plants observed and were not treated. Site CLRVPL023 had 20+ plants and no treatment.

Three sites were first observed in 2020. Site CLRVPL025 had 20+ plants and no treatment. Site CLRVPL026 had 15+ plants with no treatment. CLRV027 two plants pulled.

Beatles Released

Renewable World Energies has been working with the Grantsberg High school biology teacher, Mathew S. Berg, and students to release *Galerucella* beetles at the Clam River Flowage. In 2017, 3,000 beetles were released at one location and another 3,000 beetles were released in a different location. In 2019, there were no beetles released because they could not find good stock to start raising them.

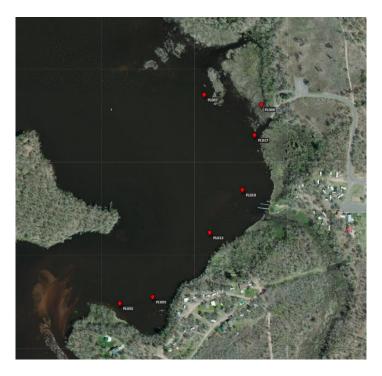
A map of purple loosestrife locations observed in 2020 is available in Appendix A. Appendix B provides tables of historical purple loosestrife data as well as observations made in 2020. Appendix C provides scans of field data sheets. Appendix D provides photos taken at the project area.

Appendix A Maps

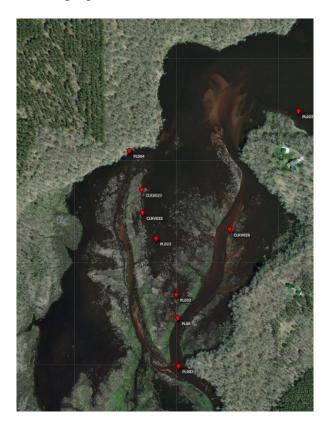


Map 1. Locations of purple loosestrife at Clam River in 2020 zoomed out.

Map 2. Locations of purple loosestrife at Clam River in 2020 zoomed in.



Map 3. Locations of purple loosestrife at Clam River in 2020 zoomed in.



Appendix A

Appendix B Tables

Т	able 1. G	PS points f	or purp	le loose	strife inventory	at Clam River, FERC#2640. 2020
GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL001	45.90821	-92.51880	5'-6'	12'x3'	2014-no damage	2007-first observed. All plants pulled. 2008 & 2009-no plants observed. 2010, 2011 & 2012-site inaccessible due to silting. 2013-no plants observed. 2014-2 plants observed and pulled. 2016-no plants observed.
CLRVPL002	45.91354	-92.51691	3'	1'x1'	N/A	2007-first observed. No treatment. 2008-no plants observed. 2009-some plants observed. No beetle damage. No treatment. 2010 & 2011-no plants observed. 2012-site inaccessible. 2013 & 2014-no plants observed. 2016-no plants observed.
CLRVPL003	45.91664	-92.51582	3'	~1/2 acre	2014-beetle damage in 10% of plants	2007-first observed. No treatment. 2009 & 2010-fewer plants observed. No treatment. 2011-considerable increase in plants observed. No beetle damage. No treatment. 2012-site inaccessible. 2013 & 2014-plants observed. 2016-no plants observed. 2018-20 plus plants observed. No treatment. 2020-8+ plants no treatment hard to reach.
CLRVPL004	45.92067	-92.51714	3'-4'	10'x10'	2014-beetle damage in 10% of plants	2007-first observed. No treatment. 2009 & 2010-fewer plants observed. No treatment. 2011-considerable increase in plants observed. No beetle damage. No treatment. 2012-site inaccessible. 2013 & 2014-plants observed. 2016-1 plant observed. No treatment. 2018-50 plus multi-stem plants observed. 1 plant removed. 2020-5 plants couldn't reach.

GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL005	45.92141	-92.51259	4'	10'x15'	N/A	2012-no beetle damage. Plants blooming. No treatment. 2013-no beetle damage. 2014-no plants observed. 2016-no plants observed. 2018-4 plants observed and pulled. 2020-no treatment hard to reach.
CLRVPL006	45.92549	-92.50841	3' to 4'	20'x 20'	2013-no damage 2014-no damage 2018-no damage	2007-first observed. No beetle damage. All plants pulled. 2008-no beetle damage. All plants pulled. 2009-seed heads clipped.2010-no treatment. 2011-same number of plants as previous years. 2012-no plants observed. 2013-1 plant observed. No treatment. 2014-22 plants observed. 2016-25 plants observed and pulled. 2018-20 plus plants observed. No treatment. 2020 -20 plus not treatment.
CLRVPL007	45.92569	-92.51010	3'-4'	10'x10'	2013-no damage	2007-first observed. No beetle damage. No treatment. 2008 & 2009-same as 2007. No treatment. 2010, 2011 & 2012- no plants observed. 2013-1 plant observed. No beetle damage. 2014-no plants observed. 2016-2 plants observed. No treatment. 2018-3 plants observed. No treatment.2020-20+ plants no treatment.
CLRVPL008	45.91955	-92.51429	4'	10'x10'	2013-some plants are damaged 2014-20% of plants with damage	2008-first observed. No treatment. 2009 & 2010-plants observed. No treatment. 2011-number of plants increased. No treatment. 2012-site inaccessible. 2013-beetles released. 2014-similar number of plants as 2013. 2016-20 plants observed. Flowering heads clipped off. 2018-20 plus. No treatment.

GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL009	45.92154	-92.51162	3'-4'	2'x1'	N/A	2009-first observed. No treatment. 2010 through 2014-no plants observed. 2016-20 plants observed. No treatment. 2018-3 multi-stem plants observed. No treatment. 2020-1-3 plants but could not reach.
CLRVPL010	45.92055	-92.51439	N/A	N/A	N/A	2009-first observed. No beetle damage. No treatment. 2010-plants observed. No treatment.2011-3 plants observed.2012, 2013 & 2014-no plants observed. 2016-10 plants observed. No treatment.
CLRVPL011	45.92613	-92.50824	3'-4'	N/A	No	2010-first observed. No treatment. 2011-50 plants observed. No treatment. 2012-No plants observed. 2013-2 plants observed. 2014- no plants observed. 2016-no plants observed.
CLRVPL012	45.92808	-92.51457	N/A	N/A	N/A	2010-first observed. 2011-3 plants observed. No treatment. 2012 and 2013-site inaccessible. 2014-no plants observed. 2016-2 plants observed. No treatment.
CLRVPL013	45.91452	-92.51613	4'	10'x 10'	N/A	2010-first observed. 2011-1 plant observed. No beetle damage. No treatment. 2012-site inaccessible.2013 & 2014-no plants observed. 2016-no plants observed. 2018-10 plus multi-stem plants. No treatment. 2020-5-10 plants but couldn't reach.
CLRVPL014	45.92286	-92.50993	2'-4'	2'x2'	N/A	2012-first observed. No treatment. 2013 & 2014-no plants observed. 2016-2 plants observed. No treatment. 2018-1 plant observed. Pulled.
CLRVPL015	45.93168	-92.5261	3'	1'x1'	2014-no damage	2014-first observed. 1 plant pulled.2016-no plants

GPS Point	Latitude	Longitude	Plant Height	Stand Area	Beetle Activity	Comments
CLRVPL016	45.88423	-92.50117	4'	2'x2'	2014-no damage	2014-first observed. 2016-no plants observed.
CLRVPL017	45.92486	-92.50861	4'	10'x10'	N/A	2018-first observed. 2 plants observed. No treatment.2020-10-12 plants no treatment.
CLRVPL018	45.92374	-92.50897	3'-4'	0.5 acre	N/A	2018-first observed. 3 plants observed. No treatment.2020-20+ no treatment.
CLRVPL021	45.91943	-92.51471	4'	2'x6'	N/A	2018-first observed. 8 multi-stem plants. No treatment.
CLRVPL022	45.91798	-92.51588	4'	~1acre	N/A	2018-first observed.20+ plants observed. No treatment. 2020-20+ no treatment.
CLRVPL023	45.91903	-92.51642	4'	~1/2 acre	N/A	2018-first observed. 50+ plants. No treatment. 2020-20+ no treatment.
CLRVPL024	45.91822	-92.51496	3'	2'x2'	N/A	2018-first observed. 3 multi-stem plants. No treatment.
CLRVPL4A	45.92041	-92.51787	4'	2'x10'	N/A	2016-first observed. 15 plants observed. Heads clipped. 2017-10+ plants observed. No treatment.
CLRVPL4B	45.91872	-92.51866	3'	4'x4'	N/A	2016-first observed. 3 plants observed. Heads clipped off. 2017-8 plants observed. No treatment.
CLRVPL5A	45.92251	-92.51325	4'	2'x2'	N/A	2016-first observed. 1 plant observed. No treatment. 2018-1 plant observed. No treatment.
CLRVPL5B	45.92212	-92.51618	3'	1'x1'	N/A	2016-first observed. 1 plant observed. No treatment. 2018-3 multi-stem plants. No treatment.
CLRVPL8A	45.91866	-92.51450	4'	10'x20' 2'x2'	N/A	2016-first observed. 1 plant observed. No treatment. 2018-3 multi-stem plants observed. No treatment.
CLRVPL8B	45.91754	-92.51584	3'	10'x10'	N/A	2016-first observed. 20 plants observed. No treatment. 2020-15-20 plants pulled one on edge.
CLRVPL10A	45.92126	-92.51410	4'	20'x20' 1'x1'	N/A	2016-first observed 21pulled. 2018-1 multi-stem. No treatment.
CLRVPL16A	45.93745	-92.52584	4'	2'x2'	N/A	2016-first observed. 15 plants observed and pulled.
CLRVPL025	45.91951	-92.5168	3'-4'	~.5 acre	N/A	2020- first observed. No treatment.
CLRVPL026	45.9192	-92.5144	3'-4'	~.5acre	N/A	2020- first observed. No treatment.
CLRVPL027	45.91994	-92.5168	3'-4'	2'x2'	N/A	2020 first observed. Pulled 2 plants.

Table 2. GPS points for Galerucella beetle release at Clam River, FERC#2640.								
GPS Point	Latitude	Longitude	Number of beetles released	Comments				
CLRVGC001	45.93193	-92.50852	2000-3000	2013-released in July.				
	45.92033	-92.51709	3,000	2017-released in July				
	45.91969	-92.51687	3,000	2017-released in July				
				2019-no beetle release.				

Appendix C Scans of Datasheets

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Appendix D Photos



Photo 1. Purple loosestrife growing near boat landing.



Photo 2. Purple loosestrife growing along the shoreline.



Photo 3. Purple loosestrife along wooded shoreline.

RE: Danbury (P-9184), Clam River (P-9185) Draft Purple Loosestrife Reports

Haller, Macaulay G - DNR <macaulay.haller@wisconsin.gov>

Mon 1/25/2021 10:07 AM

To: Brian Kreuscher < bkreuscher@rwehydro.com>

Cc: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>; Haller, Macaulay G - DNR <macaulay.haller@wisconsin.gov>;

Nick Utrup < nick_utrup@fws.gov>

Hi Brian,

Thank you for the opportunity to comment on RWE's draft 2020 Purple Loosestrife Reports for Danbury (P-9184) and Clam River (P-9185). The department does not have any comments.

Have a good week,

Macaulay Haller

Wisconsin Department of Natural Resources Macaulay. Haller@wisconsin.gov

From: Brian Kreuscher < bkreuscher@rwehydro.com >

Sent: Tuesday, December 29, 2020 10:53 AM

To: Laatsch, Cheryl - DNR < Cheryl.Laatsch@wisconsin.gov>; Nick Utrup < nick utrup@fws.gov>

Subject: Danbury (P-9184), Clam River (P-9185) Draft Purple Loosestrife Reports

Cheryl and Nick,

Attached are copies of the Purple Loosestrife Reports for the surveys conducted at Danbury (P-9184) and Clam River (P-9185). 2020 was a survey year, while 2019 was set to be a beetle release year in the Clam Flowage but good root stock could not be located to raise the beetles in 2019 and thus no beetles were released. The issue of finding root stock was communicated to agencies in 2019 and that correspondence will be included in the final report to FERC.

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

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

Re: Danbury(P-9184) Purple Loosestrife Beetle Rearing Problems

Brian Kreuscher < bkreuscher@rwehydro.com>

Wed 7/31/2019 1:19 PM

To: Laatsch, Cheryl - DNR < Cheryl.Laatsch@wisconsin.gov>

I am free this week, and next Monday. Middle of next week is booked.

Thanks

Brian Kreuscher

From: Laatsch, Cheryl - DNR < Cheryl. Laatsch@wisconsin.gov>

Sent: Wednesday, July 31, 2019 12:13 PM

To: Brian Kreuscher < bkreuscher@rwehydro.com>

Subject: RE: Danbury(P-9184) Purple Loosestrife Beetle Rearing Problems

Why don't we set up a call with our regional staff, and figure out what makes sense and then determine if/what changes we might want to do to the plan and PL mgt.

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Cheryl Laatsch
Statewide FERC Coordinator
Bureau of Environmental Analysis and Sustainability
Wisconsin Dept of Natural Resources
N7725 Hwy 28
Horicon WI 53032
(T) 920-387-7869 (Fax) 920-387-7888
Cheryl.laatsch@wisconsin.gov



From: Brian Kreuscher < bkreuscher@rwehydro.com>

Sent: Tuesday, July 23, 2019 3:22 PM

To: Laatsch, Cheryl - DNR < Cheryl. Laatsch@wisconsin.gov>

Subject: Danbury (P-9184) Purple Loosestrife Beetle Rearing Problems

Chery,

Our PL plan calls to release beetles every odd year and do a survey every even year at Danbury. With the spring season being so cold and wet in the North, we were not able to get the PL root balls to raise the beetles on in time. We have had a local Science Teacher raise and release the beetles and they weren't able to find the root balls before school ended in June.

Due to this difficulty, we were wondering if we could preform the survey for this 2019 year, and then

release Beatles both in 2020 and 2021, and getting back on the schedule of every other year?

I remember you mentioned some PL changes to our reporting you would like to see, that we haven't been able to discuss yet also.

Thanks
Brian Kreuscher
Renewable World Energies
Regulatory Compliance
855-994-9376 x230

Re: Fw: Galerucella Beetles

Matt Berg <mberg@gk12.net>

Fri 5/31/2019 11:48 AM

To: Brian Kreuscher < bkreuscher@rwehydro.com>

Sorry - I missed the string below that. We also wouldn't have any place to release beetles to because the plants are just starting to grow. The few plants I saw were about 3 inches tall last Sunday. I know this is a compliance issue for you, but hopefully you have some wiggle room with this historically wet/cold/late spring.

Matt

On Thu, May 30, 2019 at 4:01 PM Brian Kreuscher < bkreuscher@rwehydro.com wrote:

Matt,

It sounds like this place would be able to mail out the beetles. Are the beetles all you need, or is a living purple loosestrife plant needed for them to feed on in the mean time also?

Thanks

Brian Kreuscher

From: Cyndi Crayton, IWC < iwc@integratedweedcontrol.com >

Sent: Thursday, May 30, 2019 3:42 PM

To: Brian Kreuscher

Subject: Re: Galerucella Beetles

Hi, Brian,

We are just now shipping the Galerucella beetles. They are still gravid and ready to lay eggs on site. You should easily get another generation this year, and possibly two, depending on the weather in the fall. We should have as many as you need, but would need to get them out to you next week.

Let me know if you need any more information.

Thanks,

Cyndi

Cyndi Crayton
Integrated Weed Control
4027 Bridger Canyon
Bozeman MT 59715-8433
888-319-1632 toll free
406-587-1989 FAX

iwc@integratedweedcontrol.com

on the web at www.integratedweedcontrol.com

On 2019-05-30 15:37, Brian Kreuscher wrote:

Hello,

We have a license for a power producing project with a stipulation to release Galerucella Beetles every other year. Our process had been to collect Purple Loosestrife root-stock in May to raise more beetles for release in August. This year everything is flooded, and we cannot procure any root-stocks.

I see your availability for the beetles is "May". Is it too late to order them this year? And if so, would we be able to raise more beetles with the 105 quantity, or has their insect matting season(if such a thing exists) passed?

The location is in Grantsburg, WI.

Thanks

Brian Kreuscher

Renewable World Energies

Regulatory Compliance

855-994-9376 x230

Matthew S. Berg

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Grantsburg High School

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Biology Department

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480 East James Avenue

Grantsburg, WI 54840

(715) 463-5165 ext. 112

(715) 338-7502 (cell)

RE: Galerucella Beetles/Purple Loosestrife

Matt Berg - Endangered Resource Services, LLC <saintcroixdfly@gmail.com> Mon 6/3/2019 2:39 PM

To: Brian Kreuscher < bkreuscher@rwehydro.com>

Hey Brian – school is over, and, even if the water goes down I can't do the physical work of 30 teens to dig roots. It's a big loss for us – we were hoping have that money to fund our spring field trips. Hopefully you'll still consider us in the future.

Sorry,

Matt

Matthew S. Berg - Research Biologist Endangered Resource Services, LLC 572 North Day Road Saint Croix Falls, WI 54024 (715) 338-7502 saintcroixdfly@gmail.com

From: Brian Kreuscher [mailto:bkreuscher@rwehydro.com]

Sent: Friday, May 31, 2019 4:10 PM

To: Endangered Resource Services, LLC Matthew Berg **Subject:** Fw: Galerucella Beetles/Purple Loosestrife

Matt,

I'm not real familiar with the process. But below, Brock of the DNR says to just wait and see if they root stocks start growing. Is that doable for you?

Regardless it sounds like if they can't be reared, it is what it is.

Thanks Brian Kreuscher

From: Woods, Brock - DNR <Brock.Woods@wisconsin.gov>

Sent: Friday, May 31, 2019 3:22 PM

To: Brian Kreuscher **Cc:** Laatsch, Cheryl - DNR

Subject: RE: Galerucella Beetles/Purple Loosestrife

Brian,

Conditions are tough this year! If you cannot rear beetles, we are working with McNaughton Correctional Facility in Oneida Co. to see if they can get lots reared. I have not yet seen their plants yet (usually I take the guys out to get them, but could not this spring),so I don't know what the prognosis is for their success. I will try to stop and see them very soon and can let you know if they will likely have beetles you could pick up.

Otherwise, hang tight and maybe the northern plants will come along faster than you think. Local beetles will often wait for them. I will be searching for northern beetles in the next week or two to see if I can get them for others in your boat. With weather so iffy lately, we are telling northern folks they have to be ready to get local propagation stock from now on, rather than from us in the South. This doesn't apply to you, so again, maybe just wait...

Businesses in Montana and here in Madison sell spring beetles as long as buyers can be ready when field collected. I actually have quite a few on hand now, but they won't last long as it gets much warmer. Maybe Montana can go longer, but I doubt it.

It may also just turn out to be a bust year. Let me know what you do. Thanks!

Brock

Brock Woods

Wisconsin Purple Loosestrife Biocontrol & Wetland Invasive Plant Programs 608-266-2554

From: Laatsch, Cheryl - DNR

Sent: Friday, May 31, 2019 3:04 PM

To: Brian Kreuscher

 bkreuscher@rwehydro.com>; Woods, Brock - DNR

<Brock.Woods@wisconsin.gov>

Subject: RE: Galerucella Beetles/Purple Loosestrife

Hi Brock – See the inquiry from Brain below. Can you assist him?

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Cheryl Laatsch
Statewide FERC Coordinator
Bureau of Environmental Analysis and Sustainability
Wisconsin Dept of Natural Resources
N7725 Hwy 28
Horicon WI 53032
(T) 920-387-7869 (Fax) 920-387-7888
Cheryl.laatsch@wisconsin.gov



From: Brian Kreuscher < bkreuscher@rwehydro.com >

Sent: Friday, May 31, 2019 2:43 PM

To: Laatsch, Cheryl - DNR < Cheryl. Laatsch@wisconsin.gov>

Subject: Fw: Galerucella Beetles/Purple Loosestrife

Cheryl,

We are supposed to be releasing Galerucella beetles at Danbury this summer. A survey on even years and beetles on odd years. Matt Berg who is the science teacher at a near by high school has been raising and releasing them for us. He cannot procure any Purple Loosestrife root-stocks to rear the beetles. The whole area is flooded, and the Purple Loosestrife plants are either dead or not growing yet. We could purchase beetles online, but without the root stocks for the beetles to feed on, they won't live long enough.

What is the process under these conditions?

Thanks
Brian Kreuscher
Renewable World Energies
Regulatory Compliance
855-994-9376 x230

From: Matt Berg - Endangered Resource Services, LLC <saintcroixdfly@gmail.com>

Sent: Tuesday, May 28, 2019 3:54 PM

To: Brian Kreuscher

Subject: RE: Galerucella Beetles/Purple Loosestrife

If you hear of anyone that has rootstock we'll still raise them, but I can't find anyone who has any ideas. We're all in the same flooded boat.....

Matt

Matthew S. Berg - Research Biologist Endangered Resource Services, LLC 572 North Day Road Saint Croix Falls, WI 54024 (715) 338-7502 saintcroixdfly@gmail.com

From: Brian Kreuscher [mailto:bkreuscher@rwehydro.com]

Sent: Tuesday, May 28, 2019 3:34 PM

To: Matt Berg - Endangered Resource Services, LLC; 'Soderbeck, Gene (MPCA)'

Subject: Re: Galerucella Beetles/Purple Loosestrife

Matt,

Thank you for the notice. I will look into what our options are at this point.

Thanks

Brian Kreuscher

From: Matt Berg - Endangered Resource Services, LLC < saintcroixdfly@gmail.com>

Sent: Monday, May 27, 2019 11:27 AM

To: Brian Kreuscher; 'Soderbeck, Gene (MPCA)'

Subject: RE: Galerucella Beetles/Purple Loosestrife

Hi Brian and Gene — as I'm sure you're aware, this has been a historically wet, cold, and late spring. As such, I am afraid I have to drop plans to raise beetles for you this year. I've been trying since Easter to find a location that can provide us with the root stock that we need to feed beetles, and have tried to access six different locations including two on Big Wood Lake yesterday that we have gathered root stock at or released beetles at in the past. All of these sites are either underwater (Big Wood Lake) meaning the purple loosestrife plants aren't growing/beetles are potentially dead; can't be safely access due to deep water (Yellow River/Poquettes Lake/Holmes Lake); or the roads leading to the sites have been washed out/are impassible (Danbury). I have also contacted Brad Morris at Burnett County Land/Water looking for suggestions — he's in the same boat we're in/can't find what he was hoping to have either.

I apologize for this late notice, but I wanted to exhaust every possibility before I gave up. Perhaps you'll consider having us raise beetles for you again next year.

With much regret and sincerest apologies,

Matt

Matthew S. Berg - Research Biologist Endangered Resource Services, LLC 572 North Day Road Saint Croix Falls, WI 54024 (715) 338-7502 saintcroixdfly@gmail.com (715) 338-7502 (cell)