

February 22, 2019

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

**RE: Winter Hydroelectric Project, FERC Project #2064
Flambeau Hydro LLC
Final Report 2018 Land & Wildlife Management Report**

**FERC License Article 404
USDA Forest Service 4(e), Condition 10
Wisconsin DNR 401 Water Quality Certification, Item Letter P, Q, R**

Dear Ms. Bose:

On behalf of Flambeau Hydro LLC, Licensee, Renewable World Energies LLC hereby submits the Licensee's 2018 Final Land and Wildlife Management Report for the Winter Hydroelectric Project FERC #2064. The Draft Report was sent to the agencies by letter attached to an e-mail dated December 12, 2018 asking for comments. Cheryl Laatsch of the WIDNR had several comments. As shown below in the correspondence, she would like to look at a few of the reports to determine if they are still appropriate or necessary. She would like us to use the DNR information with the Bald Eagle report, and would like to discuss time reducing methods for Purple Loosestrife reporting. We will be working together in the coming months to determine any changes if needed.

Background

The Federal Energy Regulatory Commission "FERC" issued a License to Flambeau on August 12, 2005. Portions of the original Certification were contested by the Licensee. The Wisconsin Department of Natural Resources (WDNR) submitted a revised Water Quality Certification, Dated at Park Falls, WI:

August 19, 2008 that replaced the original certification of June 21, 2005. Only conditions E, F, and J were modified and a footnote was added to condition D according to the Final Settlement Agreement.

The submitted report is a requirement of the License pursuant to Article 404, Forest Service (FS) Condition 10, and WDNR Water Quality Certification Item Letter P, Q, and R. The Land & Wildlife Management Plan was filed with FERC on December 19, 2008. FERC issued an Order Modifying and Approving the plan on June 3, 2011.

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2018 Results

Wood Turtle Survey

The wood turtle survey was conducted on June 7, 2018. The tailrace (9:00-9:30), the impoundment (9:30-11:30), and the bypass channel (11:30-12:00) were surveyed in succession. Conditions for the survey were sunny and breezy. No wood turtles were sighted by White Water Associates field crew, although other animal species were seen. Two painted turtles and six map turtles were observed in the impoundment. One wood duck and eight Canada geese were noticed. One map turtle was basking on a rock in the bypass reach. Numerous turtle nest diggings on the gravel road to the dam. Eight of which had been dug up and eggs eaten by raccoons or skunks. The next survey will be completed in the summer of 2019. Data sheets are attached at the end of the report.

Invasive Species Survey

The survey was conducted by White Water Associates on August 22, 2018. No aquatic or terrestrial invasive species were observed on in or adjacent to the Flambeau Hydro LLC land, adjacent to the tailrace, or adjacent to the bypass channel. The impoundment was surveyed, and purple loosestrife and Honeysuckle were found in or adjacent to the impoundment. The next formal survey to be conducted will be in 2019.

Purple Loosestrife Survey

The survey was conducted by White Water Associates on August 22, 2018 in conjunction with the Invasive Species Survey. The Tailrace, Bypass Reach, and FHLLC Property were surveyed and no purple loosestrife plants were observed. Three locations had purple loosestrife. Site WNTR PL002 had approximately 6 plants and there was no treatment due to accessibility. Site WNTR PL003 had approximately 20 plants. No treatment was used. Site WNTR PL005 had approximately 15 plants and they were all hand-pulled. Both of these locations were located on land adjacent to the impoundment and had previous occurrences of the invasive plant. No purple loosestrife was observed on Flambeau Hydro LLC land, adjacent to the tailrace, or adjacent to the bypass channel. The next formal survey to be conducted will be in 2019.



Erosion Survey

On June 14, 2017 White Water Associates, Inc. performed an erosion survey at the Winter Hydroelectric Project. The tailrace reach was surveyed on foot and no unusual erosion sites were observed. The *FHLLC owned property within the project boundary* was surveyed on foot and one (1) minor erosion site was observed. The site appears much the same as it did in past surveys. Human activity at this site appears to be what has caused this to be classed as an erosion site. It is unlikely to contribute noticeable sediment discharge to the river in its current condition. The *bypass reach* had fifteen (15) new erosion sites due to the heavy rain events in 2016. Slumping of the bank due to weathering was the cause of the erosion at these sites. The *impoundment* was surveyed by boat and one (1) erosion site was observed. It is not located on FHLLC property, is considered minor, and has been growing more grass than in previous surveys. The next formal spring inspection will be performed in 2020.

Wolf Survey

Formal surveys were conducted for the gray wolf at the Winter Hydro Project in 2016 per approved protocol and began on the first snowfall on November 13, 2015. They ended with the last snowfall on March 17, 2016. No wolves or dens were noted. However, wolf scat was observed at the end of the canoe portage trail during the wood turtle survey on June 20th, 2016. The 2016-2017 wolf survey began November 24, 2017 and ended April 11, 2017. There were no wolves, dens, or scat noted. The 2017-2018 wolf survey began November 2, 2017 and ended April 15, 2018. There were no wolves, dens, or scat noted. The next Wolf survey (2018 – 2019) will begin with the first snow fall in the fall of 2018 and end on March 31, 2019. This will be reported in the 2019 report.

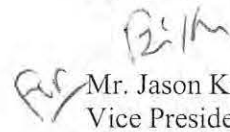
Bald Eagle Survey

No formal bald eagle surveys were conducted at the Winter Hydro Project in 2018 per approved plan which said agencies would be notified should any eagle nests be found located within the project boundary but while conducting the turtle survey in 2016 a nest was observed and in 2017 and 2018 the same nest had an eagle perched next to it. One nest was observed during the wood turtle survey on June 20, 2016. It did not appear active. It was observed on the north side of the stream in a white pine (45.93200, -90.93633). As noted in previous reports, RWE has notified the WDNR, USFS and USFWS of this eagle's nest. On June 14, 2017 an eagle's nest was found in the same location as in 2016 and there was an adult eagle perched near the nest. In 2018 a nest was located at the same location and is mentioned on the purple loosestrife form for the impoundment. RWE will continue to monitor the nest during the other surveys conducted throughout the monitoring season. It will be re-visited again during the 2019 season, but no formal survey will be conducted.



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

Sincerely,
Renewable World Energies, LLC
Agent for Licensee


Mr. Jason Kreuzscher
Vice President

Attachment: Final Report 2018 Land & Wildlife Management Report
Correspondence

Cc: RWE Corporate
Mr. Nick Utrup, USFWS
Ms. Cheryl Laatsch, WDNR
Mr. Paul Strong, Forest Supervisor, FS
Ms. Sue Reinecke, FS

2018 LAND & WILDLIFE MANAGEMENT REPORT

(Per FERC License Article 404)

**Per USDA Forest Service 4(e) Condition 10
Per WDNR Revised 401 Water Quality Certification Item Letter P, Q, R**

**Winter Hydroelectric Project
FERC Project #2064
Flambeau Hydro, LLC**

East Fork of the Chippewa River, Sawyer County, Wisconsin

Respectfully Submitted by:

Renewable World Energies
100 South State Street
Neshkoro, Wisconsin 54960

November, 2018

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Appendix 1 Agency Correspondence

I
Plan Requirements & Approval

1. The Federal Energy Regulatory Commission (FERC) issued a new license on August 12, 2005 to Flambeau Hydro LLC. The license is for the continued operation and maintenance of the 600 KW Winter Project (No. 2064), located in Sawyer County on the East Fork of the Chippewa River. As such, the Federal Energy Regulatory Commission incorporated the following requirement into the new license:

FERC License Article 404 - Land and Wildlife Management Plan

Within six months of license issuance, the licensee shall file for Commission approval a plan to manage land and wildlife at the project. The plan shall be prepared after consultation with the Wisconsin Department of Natural Resources (Wisconsin DNR), the U.S. Forest Service, and the U.S. Fish and Wildlife Service (FWS). Measures to protect threatened and endangered species (i.e., bald eagle, gray wolf) at the project, as well as other wildlife habitat of concern, shall be included in the land and wildlife management plan. In addition, the plan shall include guidelines for the managing vegetation, habitat, and ground-disturbing activities in accordance with condition 10 in appendix B of this license, and shall be consistent with the bald eagle and gray wolf management guidelines of the FWS, Forest Service, and Wisconsin DNR. The plan shall include, at a minimum, the following:

- 1. Procedures for obtaining and documenting bald eagle nesting activity and the presence of gray wolves on an annual basis, and for maintaining the information on project maps for use when planning land disturbing activities such as vegetation control or recreation facility development;*
- 2. Consultation with the Wisconsin DNR, Forest Service, and FWS prior to conducting land disturbing activities that could affect any of the threatened and endangered species using project land;*
- 3. Measures to protect Regional Forester Sensitive Species and Management Indicator Species; and*
- 4. Measures to control erosion from trails, parking lots and shoreline areas; and; annual consultation with the resource agencies to allow for periodic management plan updates and to obtain agency input regarding proposed management decisions.*

The licensee shall include with the land and wildlife management plan documentation of agency consultation, including copies of agency comments and recommendations on the draft plan, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations, before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The land and Wildlife management plan shall not be implemented until the licensee is notified that the plan is approved. Upon approval, the licensee shall implement the plan according to the approved schedule, including any changes required by the Commission.

2. Attached to the FERC License, and as Appendix B, are the USDA Forest Service Conditions. As such the USDA Forest Service incorporated the following condition into the FERC License:

USDA Forest Service Condition No. 10 – Vegetation, Habitat and Ground-disturbing Activities on National Forest System Lands

Within one year of license issuance or at least 90 days prior to vegetation, habitat, and/or ground-disturbing activity, whichever comes first the Licensee shall file with the Commission a Vegetation, Habitat, and Ground-Disturbing Management Plan (Plan) that is approved by the Forest Service. The Plan shall be site specific and be prepared in consultation with the appropriate Federal and State resource agencies for all tree or vegetation removal, habitat, and/or ground-disturbing activities on, or effecting, National Forest System lands.

The Plan shall implement measures to prevent the Spread of non-native invasive species; minimize erosion as well as sedimentation; protect, mitigate, or enhance terrestrial and fisheries habitat; and provide for adaptive management measures based on prescribed monitoring objectives over the life of the license. The Licensee shall not file any such plans with the Commission or commence any such activities without written approval from the USDA Forest Service.

At a minimum, and where relevant, the Plan shall include the following provisions:

Notification to the Chequamegon-Nicolet National Forest before the Licensee begins any vegetation or ground disturbing work;

The Licensee's plan shall comply with USDA Forest Service and Chequamegon-Nicolet National Forest sensitive species and non-native invasive species management guidelines and protocols, including prevention, control, and monitoring protocols;

Identification of methods for prevention and control of non-native invasive species. Treatment of existing infestations of highest priority non-native invasive species shall be initiated immediately upon completion of appropriate National Environmental Policy Act (NEPA) documentation and approval of the Plan by the Commission;

Notification to the Chequamegon-Nicolet National Forest upon the Licensee finding new locations for any listed non-native invasive species and/or prior to any independent actions at non-native invasive species control efforts;

Timing to establish vegetation of disturbed soils as soon as possible;

Identification and prioritization of any erosion areas to be re-vegetated or rehabilitated; Procedures for identification of additional measures that the Licensee shall implement if monitoring reveals that re-vegetation and vegetation control is not successful or does not meet intended objectives;

Disclosure of any temporary habitat and/or ground-disturbing measures the Licensee will use;

A list of species to be used, planting location, and site preparation methods.

Emphasis shall be to use native species and to follow the Forest's Land and Recourse Management Plan as well as the Wisconsin's Forestry Best Management practices for Water Quality, Identification of measures the Licensee will use to mitigate project effects on terrestrial and aquatic habitat including any identified habitat threats, as well as measures designed to enhance habitat, including restoration of wetland, riparian, and aquatic systems;

Be updated to meet standards and guidelines that are applicable to the Chequamegon-Nicolet National Forest;
Be updated as new information is obtained in consultation with the agencies and submit the updated plan to the Forest Service and Commission for approval;
A monitoring program to evaluate the effectiveness of re-vegetation, vegetation control and/or non-native invasive species control measures; and Identify a timeline for accomplishing plan objectives.

3. Attached to the FERC License, and as Appendix A, are the Wisconsin Department of Natural Resources (WDNR) 401 Revised Water Quality Certification Dated at Park Falls WI: August 19, 2008 Item Letter P, Q, and R. As such the WDNR incorporated the following conditions into the FERC License:

Wisconsin Department of Natural Resources 401 Water Quality Certification Item Letter P, Q, and R

*P. The licensee shall annually inspect the entire shoreline of the project waters for purple loosestrife (*Lythrum salicaria*) and map its distribution and relative abundance. Inspections should be scheduled in August while plants are flowering so purple loosestrife can be readily identified. The licensee should submit a report of the monitoring results to the Department by December 31 each year. If the Department deems it necessary to initiate or expand efforts to control purple loosestrife in the East Fork Chippewa River, the licensee shall provide reasonable cooperation in those efforts.*

Q. The licensee shall monitor the shoreline of the project reservoir, power canal, tailrace, and bypassed channel for erosion, and if necessary, prepare an erosion control plan in consultation with the Department. Inspections should be conducted at three-year intervals in spring before vegetation develops, so eroded areas can be readily identified. The licensee shall submit to the Department a report of monitoring results by December 31 in the year of each inspection.

R. Before engaging in any activity that may introduce zebra mussels into project waters, the licensee shall provide or demand (through contract clause or other binding agreement) evidence of effective decontamination of barges, tools, boats, construction equipment, or other items capable of transferring water containing larval or adult zebra mussels. Effective decontamination may include steam-cleaning, chemical treatment, physical treatment, or other suitable procedures.

4. FERC PLAN APPROVAL

The Land and Wildlife Management Plan was submitted to the Federal Energy Regulatory Commission December 19, 2008. It was approved by an *Order Modifying And Approving Land And Wildlife Management Plan Issued June 3, 2011.*

II Description of Winter Hydroelectric Project

Project Description

The project is located on the East Fork of the Chippewa River, near the town of Winter, in Sawyer County, Wisconsin. The Project reservoir has been determined to be approximately 30 acres at the project's normal pool elevation. The USDA Forest Service portion of the reservoir, as defined to the natural thread of the river, would amount to a very tiny area of approximately 15 acres. Additionally, there are approximately 11 tiny acres of USDA Forest Service lands below the dam, making the total acreage of Federal lands at the project to be approximately only 26 acres.

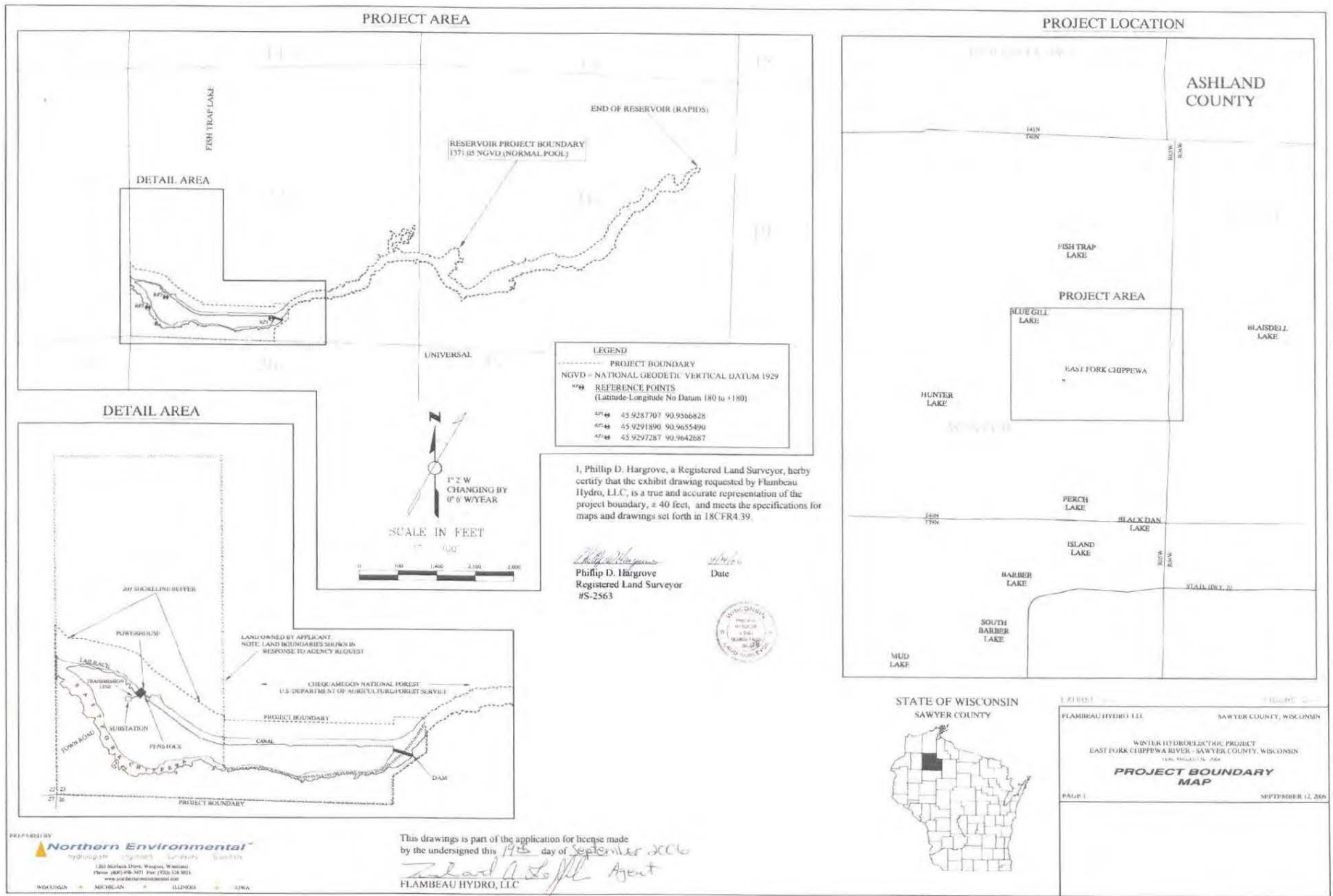
The overall configuration of the project is as follows:

- **Diversion Dam:** A 14-foot-high, 140 foot-long concrete dam section (8 bays total) with steel gates on top of wooden stop logs in 7 bays and one bay with a 6'x16' steel lift gate operated with an electric motor and mechanical ball-screw. The diversion dam allows the water to be apportioned either to the by-passed reach or down the power canal and into the hydroelectric units.
- **Power Canal:** The power canal consists of earth embankments and is approximately 2,100 feet in length. The canal is approximately 20 feet wide at the bottom and has flanked earth embankments to retain the water.
- **Intake Structure:** The intake structures consist of reinforced concrete structure housing a common intake rack that conveys water to (2) two 5 foot – 6 inch penstock tubes.
- **Powerhouse and the Tailrace:** The powerhouse is a concrete structure (with a total of 24.5 feet of head) that houses two generators coupled to vertical Francis turbines. Unit 1 has a load capacity of 200 KW, and with a 174 CFS flow capacity. Unit 2 has a load capacity of 400 KW, with a 224 CFS flow capacity. The tailrace of the powerhouse is approximately 700 feet in length.
- **USDA Forest Service Lands:** The Forest Service lands are approximately 300 feet wide by 1600 feet long, or approximately 11 acres. However, this 300 foot strip includes; ½ of the river, the Diversion Dam, the Project's power canal, the diversion dam's access road and the left and right embankments for the power canal. (please refer to the Plan's map; Forest Service Lands at the Winter Project).

III Project Drawings

1. Winter Hydroelectric Project Boundary
2. Forest Service Lands at the Winter Project

1. Winter Hydroelectric Project Boundary



PROJECT AREA

PROJECT LOCATION

ASHLAND COUNTY

LEGEND
 - - - - - PROJECT BOUNDARY
 NGVD = NATIONAL GEODETIC VERTICAL DATUM 1929
 REFERENCE POINTS
 (Latitude-Longitude No Datum 180 to +180)

4748	45 928 7707	90.9266828
4749	45 929 8990	90.9655490
4748	45 929 7287	90.9642687

I, Phillip D. Hargrove, a Registered Land Surveyor, hereby certify that the exhibit drawing requested by Flambeau Hydro, LLC, is a true and accurate representation of the project boundary, ± 40 feet, and meets the specifications for maps and drawings set forth in 18CFR4.39.

Phillip D. Hargrove
 Phillip D. Hargrove
 Registered Land Surveyor
 #S-2563

Date _____

STATE OF WISCONSIN
 SAWYER COUNTY



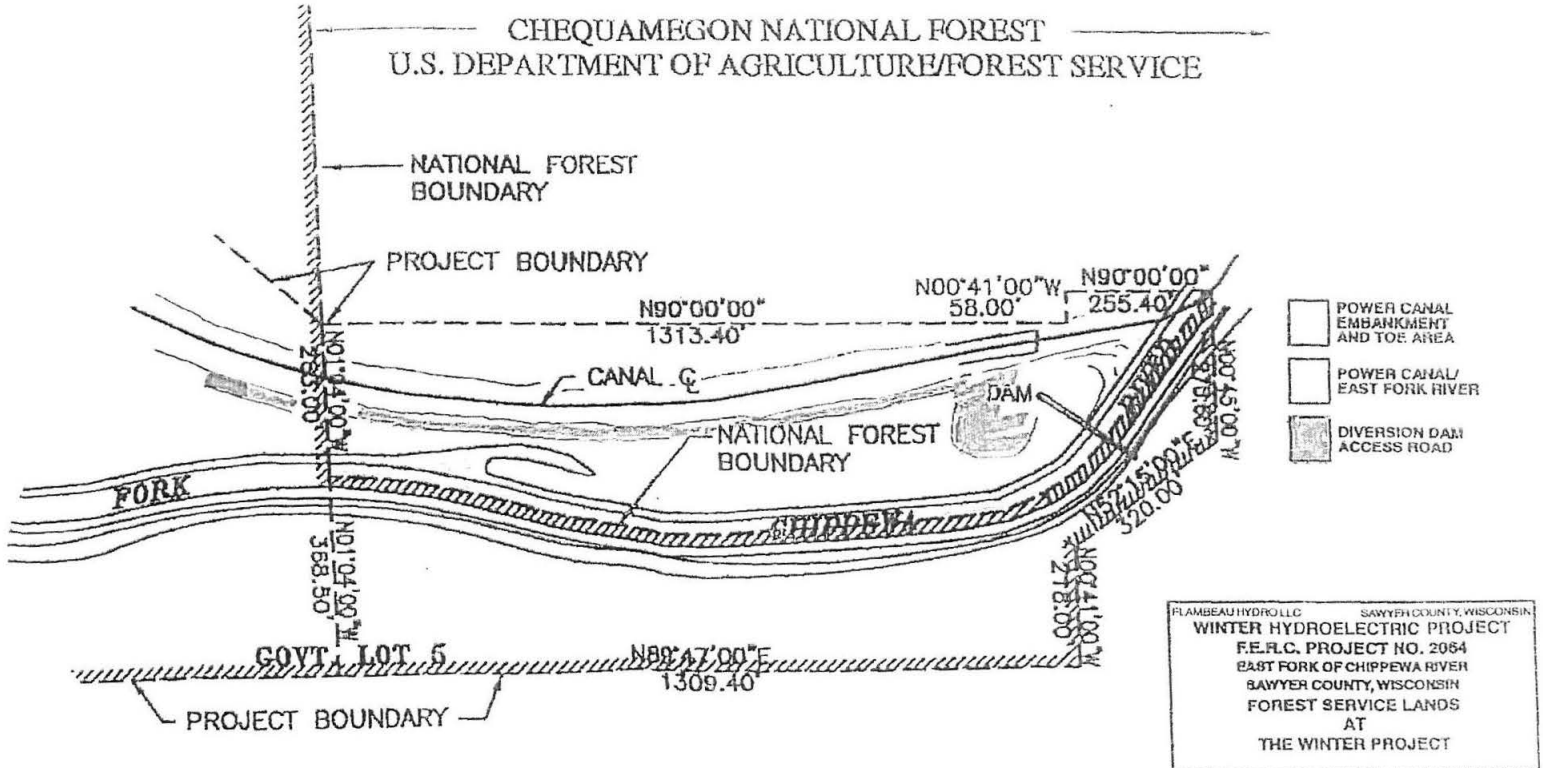
FLAMBEAU HYDRO, LLC SAWYER COUNTY, WISCONSIN
 WINTER HYDROELECTRIC PROJECT
 EAST FORK CHIPPEWA RIVER, SAWYER COUNTY, WISCONSIN
 100% REGULATED AREA
PROJECT BOUNDARY MAP
 PAGE 1 SEPTEMBER 12, 2006

PREPARED BY

 Northern Environmental
 1203 Milwaukee Street, Waubesa, WI 54601
 Phone (887) 498-1071 Fax (735) 324-9014
 www.northernenvironmental.com
 WISCONSIN MICHIGAN ILLINOIS INDIANA

This drawings is part of the application for license made by the undersigned this 19th day of September, 2006
Richard A. Löffler Agent
 FLAMBEAU HYDRO, LLC

2. Forest Service Lands at the Winter Project



IV
Land & Wildlife Survey Results

1. Bald Eagle

No formal bald eagle surveys were conducted at the Winter Hydro Project in 2018 per approved plan which said agencies would be notified should any eagle nests be found located within the project boundary but while conducting the turtle survey in 2016 a nest was observed and in 2017 and 2018 the same nest had an eagle perched next to it. One nest was observed during the wood turtle survey on June 20, 2016. It did not appear active. It was observed on the north side of the stream in a white pine (45.93200, -90.93633). As noted in previous reports, RWE has notified the WDNR, USFS and USFWS of this eagle's nest. On June, 14, 2017 an eagle's nest was found in the same location as in 2016 and there was an adult eagle perched near the nest. In 2018 a nest was located at the same location and is mentioned on the purple loosestrife form for the impoundment.

2. Gray Wolf

The gray wolf was relisted in December, 2015. The Licensee immediately began consultation with the agencies on how to conduct the survey, see correspondence. It was decided that **the survey would be conducted in the winter when the operator does daily checks at the project after fresh snowfall as a foot/vehicle survey of the accessible project property. The surveys would be conducted beginning with the first snowfall of the fall season and would continue through March 31st.** Formal surveys were conducted for the gray wolf at the Winter Hydro Project in 2016 per approved protocol and began on the first snowfall on November 13, 2015. They ended with the last snowfall on March 17, 2016. No wolves or dens were noted. However, wolf scat was observed at the end of the canoe portage trail during the wood turtle survey on June 20th, 2016. The 2016-2017 wolf survey began November 24, 2016 and ended April 11, 2017. There were no wolves, dens, or scat noted. The 2017-2018 wolf survey began November 2, 2017 and ended April 15, 2018. There were no wolves, dens, or scat noted. Data sheets are attached at the end of the report.

3. Wood Turtle

The wood turtle survey was conducted on June 7, 2018. The tailrace (9:00-9:30), the impoundment (9:30-11:30), and the bypass channel (11:30-12:00) were surveyed in succession. Conditions for the survey were sunny and breezy. No wood turtles were sighted by White Water Associates field crew, although other animal species were seen. Two painted turtles and six map turtles were observed in the impoundment. One wood duck and eight Canada geese were noticed. One map turtle was basking on a rock in the bypass reach. Numerous turtle nest diggings on the gravel road to the dam. Eight of which had been dug up and eggs eaten by raccoons or skunks. The next survey will be completed in the summer of 2019. Data sheets are attached at the end of the report.

4. Non Native Invasive Species

This section of the report includes survey results for species such as:

- Asiatic honeysuckles, *Lonicera tartarica*, *L. morrowii*, and *L. x bella*
- Buckthorns, *Rhamnus cathartica* and *R. frangula*
- Garlic mustard, *Allaria petiolata*
- Japanese knotweed, *Polygonum cuspidatum*

- Purple loosestrife, *Lythrum salicaria*
- Curly-leaf pondweed, *Potamogeton crispus*
- Eurasian water-milfoil, *Myriophyllum spicatum*

It was agreed upon during agency consultation and during the development of the Final Land & Wildlife Management Plan that these surveys could all be conducted concurrently. However, the Final Plan devoted a separate section to purple loosestrife, which will be addressed in the next section.

The non-native invasive species survey was conducted on August 22, 2018. The tailrace, bypass reach and Flambeau Hydro LLC property were surveyed on foot from 8:45 am – 9:08 am. The HWL was 1370.23, TWL 1344.61, and Project Flow was 80 cfs. No aquatic or terrestrial invasive species were observed. The impoundment was surveyed in a boat from 9:10 am to 11:15 am. Honeysuckle (Figure 1 and 2) was noted (45.93132, -90.94063) and Purple loosestrife (see description below) (Figure 2) were found in or adjacent to the impoundment. Data sheets are displayed at the end of this report.

5. Purple loosestrife

On August 22, 2018, White Water Associates performed an inventory of purple loosestrife plants at the Winter Project in conjunction with the above survey. The method of inventory was defined as follows:

While purple loosestrife is blooming in July and August, the inventory should be conducted using a boat to survey the impoundment above the dam within the Project Boundary and on foot 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 the size of plants, stand area, stem density, plant density, and location with reference to established GPS coordinates. Photos and/or videotape may be taken of the largest occurrences.

General observations:

The Winter Project Boundary was divided into three different areas: *the tailrace/bypass reach* (from the powerhouse to a point approximately 595 feet downstream, including the 3,028-foot long bypass reach area from the spillway to the downstream project boundary), *FHLLC-owned property within the project boundary* (FHLLC-owned property adjacent to the dam and powerhouse), and *the impoundment* (from the Winter powerhouse to the upstream project boundary, approximately 2.1 miles upstream).

On August 22, 2018 White Water Associates, Inc. performed an inventory of purple loosestrife at the Winter Hydroelectric Project in conjunction with the Invasive Species Survey (Table 1). Three locations had purple loosestrife. A map indicates the locations of AIS (Figure 2). Site WNTR PL002 had approximately 6 plants and there was no treatment due to accessibility. Site WNTR PL003 (45.93084, -90.94380) had approximately 20 plants. No treatment was used. Site WNTR PL005 (Figure 3) (45.93082, -90.94358) had approximately 15 plants and they were all hand-pulled. Both of these locations were located on land adjacent to the impoundment and had previous occurrences of the invasive plant. No purple loosestrife was observed on Flambeau Hydro LLC land, adjacent to the tailrace, or adjacent to the bypass channel.

6. Land Disturbance & Erosion Control

Monitoring of erosion is a requirement of Section Q of the Water Quality Certification for the Winter Project and reads as follows:

Q. The Licensee shall monitor the shoreline of the project reservoir, power canal, tailrace, and bypassed channel for erosion, and if necessary, prepare an erosion control plan in consultation with the Department. Inspections should be conducted at three-year intervals in spring before vegetation develops, so eroded areas can be readily identified. The Licensee shall submit to the Department a report of monitoring results by December 31 in the year of each inspection.

A basic rating system of Minor, Moderate, and Severe is used to give an indication of the condition of each site with the following description for each condition:

Minor – Some unusual erosion from within the recent past is noticeable. The site is either small or stable to the point that very little or no unusual sediment is entering the river. The toe of the bank is stationary and stable with material such as rocks, logs, vegetation, etc.

Moderate – Some unusual erosion from within the recent past is noticeable. This site has areas that appear to be actively eroding into the water in places. Vegetation may be slumping into the river at a slow rate. The majority of the toe of the bank is still stable with material such as rucks, logs, vegetation, etc.

Severe – Heavy unusual erosion from the recent past is evident. The site is actively eroding into the water. Little or no vegetation is present. The entire toe of the bank is unstable and eroding in to the water.

On June 14, 2017 White Water Associates, Inc. performed an erosion survey at the Winter Hydroelectric Project. Detailed information can be found in the 2017 Report.

FHLLC has been actively monitoring erosion within the Project Boundary since 2006 in order to gain an understanding of trends at potential sites. The next formal spring inspection will be performed in 2020 and will be added to the 2020 Land & Wildlife Management Report as a Tri-Annual Reporting (2015-2020).

7. Zebra Mussels

No zebra mussels were observed during the non-native invasive species survey during 2018.

8. Standards and Guidelines

Flambeau Hydro LLC realizes that during the term of the License, applicable standards and guidelines for the Chequamegon-Nicolet National Forest may change. So that the Plan can be updated and accommodate new information as it is obtained, Flambeau Hydro LLC will formally consult with the Forest Service every five (5) years to update the Plan accordingly during the term of the License. The table below shows the schedule the consultation process will follow. The first formal consultation took place in 2013.

Year	Formal Consultation
2013	Yes
2018	Yes
2023	Yes
2028	Yes
2033	Yes
2038	Yes

Under standards and guidelines (number 9) of the Land & Wildlife Management Plan, 2013 was the first year for a formal consultation between FHLLC and Chequamegon-Nicolet National Forest Service. During a phone conference call between Aneta Rietveld (RWE, Environmental Quality), Steven Spickerman (Forest Service, Plant Ecologist), and Sue Reineke (Forest Service, Fisheries Biologist), all agreed that there were no new standards and guidelines added for the Chequamegon-Nicolet National Forest during the last 5 years that RWE has not already addressed in their plan. They agreed that no changes need to be made to the Land & Wildlife Management Plan. RWE Hydro will continue to follow the plan as written unless a new environmental concern is brought to our attention before the next 5 year formal consultation.

According to Sue Reinecke (USFS), there are no new standards and guidelines that need to be added for the Forest at this time (See Appendix 1, Agency Correspondence).

V
Survey Document

Wolf

Winter Hydro Project FERC 2064 Wolf Survey Form

Year 2017-18

Date	Time	Weather	Fresh Snow Y/N	Scat Y/N	Tracks Y/N	Dens Y/N	Wolves Y/N	Den Location	Notes & Conducted By
11/2/17	10:00	Overcast/fog	Y 1.0"	N	N	N	N	N/A	J. Trench
11/4/17	15:00	Overcast	Y 2.5"	N	Y deer squirrel	N	N	N/A	J. Trench
11/9/17	9:00	Overcast	Y 1.75	N	Y deer	N	N	N/A	J. Trench
11/11/17	12:41/6	Overcast	Y 1.75	N	Y deer squirrel	N	N	N/A	J. Trench
11/18/17	9:30	Overcast	Y trace	N	Y fox bear	N	N	N/A	J. Trench
12/6/17	10:00	Overcast	Y 1.0"	N	Y deer	N	N	N/A	J. Trench
12/8/17	10:40	Overcast	Y .20"	N	Y deer	N	N	N/A	J. Trench
12/9/17	4:30	Night	Y 1.0"	N	Y deer coyote otters	N	N	N/A	J. Trench

Winter Hydro Project FERC 2064 Wolf Survey Form

Year 2017-18

Date	Time	Weather	Fresh Snow Y/N	Scat Y/N	Tracks Y/N	Dens Y/N	Wolves Y/N	Den Location	Notes & Conducted By
1/5/18	9:30	Partly overcast	Y .10"	N	Y deer	N	N	N/A	J. Tush
1/5/18	16:30	Clear	N	N	Y otter	N	N	N/A	J. Tush
1/7/18	10:00	Clear	Y .10"	N	Y deer	N	N	N/A	J. Tush
1/15/18	16:00	Overcast	Y .5"	N	Y deer	N	N	N/A	J. Tush
2/3/18	17:30	Overcast night	Y 2.5"	N	Y deer	N	N	N/A	J. Tush
2/4	9:30	Clear/sunny	Y .50"	N	Y deer muskrat	N	N	N/A	J. Tush
2/9	10:15	Clear/sunny	N	N	Y deer coyote otter	N	N	N/A	J. Tush
2/23	9:40	Overcast/flores	Y 7.0"	N	Y deer	N	N	N/A	J. Tush

Wood Turtle

Wood Turtle Survey Form
Winter Hydroelectric Project – FERC #2064

Date <i>June 7, 2018</i>	Conducted by <i>Dean Premo</i>
Time Survey Started <i>9:30 AM ET</i>	Time survey Ended <i>11:30 AM ET</i>

Weather Conditions
Sunny, warm 65 - 70°F
East wind 6 mph

Dam Conditions (WL, TWL, CFS)
1370.60 1346.39 571

Location of Survey Area (circle one): Tailrace Bypass Reach Impoundment

Time(s) of wood turtle sighting(s): *None Observed*

Location(s) of wood turtle sighting(s): *" "*

Number of wood turtles sighted: Gender of wood turtles sighted: ___ F ___ M ___ Unkn

Other species observed
6 map turtles
2 painted turtles

Other notes *No eagles observed over impoundment or at eagle nest, observed 1 wood duck*
8 canada geese

Signature of Biologist *Dean Premo*

Wood Turtle Survey Form
Winter Hydroelectric Project – FERC #2064

Date <u>June 7, 2018</u>	Conducted by <u>Dean Brento</u>
Time Survey Started <u>1130</u>	Time survey Ended <u>Noon &</u>

Weather Conditions
Sunny, warm 65-70°F
East wind 6 mph

Dam Conditions (WL, TWL, CFS)
1390.60 1346.39 571

Location of Survey Area (circle one): Tailrace Bypass Reach Impoundment

Time(s) of wood turtle sighting(s): None observed

Location(s) of wood turtle sighting(s): " "

Number of wood turtles sighted: 0 Gender of wood turtles sighted: ___ F ___ M ___ Unkn

Other species observed
1 map turtle observed basking on rock
Numerous turtle nest diggings on the gravel road to the dam
8 of which had been dug up & eaten by raccoons or skunks

Other notes

Signature of Biologist Dean Brento

Wood Turtle Survey Form
Winter Hydroelectric Project – FERC #2064

Date June 7, 2018

Conducted by Dean Brend

Time Survey Started 9⁰⁰ ~~00~~ AM

Time survey Ended 9:30 AM ET

Weather Conditions

Sunny, warm, 65-70°F
East wind 6 mph

Dam Conditions (WL, TWL, CFS)

1370.60 1346.39 571

Location of Survey Area (circle one):

Tailrace

Bypass Reach

Impoundment

Time(s) of wood turtle sighting(s):

None observed

Location(s) of wood turtle sighting(s):

" "

Number of wood turtles sighted:

Gender of wood turtles sighted: ___ F ___ M ___ Unkn

Other species observed

No other turtles or turtle sign observed

Other notes

Signature of Biologist

Dean Brend

Invasive Species



Figure 1. Honeysuckle, Winter Project 2018.

Year 2018 Invasive & Other Plants Survey

Winter Hydroelectric Project – FERC #2064


Page 1 of 2

Date 8-22-2018 Conducted By Stine Angie, Warmhoe Ryan
 HWL 1370.25 TWL 1344.61 CFS 80'
 Air Temp: 71 °F Wind Speed: WNW 6 mph Barometer: 30.1 Sky Conditions: clear
 Time Survey Started 9:10 Time Survey Ended _____ (Boat (14 ft/Canoe) or Foot
 Latitude Start BL Longitude End BL
 Location of Survey Area: Tailrace ___ Bypass Reach ___ Impoundment FHLLC Property ___
 Description of Location _____
 Historic Info: _____
 Invasive Found: Yes or No

Invasive Plant Info				
Site ID	<u>Honeysuckle</u>	<u>Purple Loosestrif</u>	<u>on other data sheets</u>	
Photo ID	<u>7224-24</u>			
Time				
Latitude	<u>N 45 93152</u>			
Longitude	<u>W 90 94063</u>			
Species Name	<u>Honey Suckle</u>			
Acreage (<1/2 acre, 1/2-1 acre, 1-10 acres, > 10 acres)				
Number of Plants				
Single or Multi-stem				
Plant height	<u>5-7'</u>			
Location type (lake/pond edge) (stream edge) (roadside) (ditch)	<u>Edge</u>			
Plant removed				

Other Species Observed: _____

* Asiatic Honeysuckles: *Lonicera tartarica*, *L. morrowii*, *L. x bella*; Buckthorns: *Rhamnus carthartica*, *R. fangula*; Curly Leaf Pondweed; Garlic Mustard; Eurasian Water Milfoil; Japanese Knotweed; Purple Loosestrife; etc.

Signature 



Year 2018 Invasive & Other Plants Survey

Winter Hydroelectric Project – FERC #2064

Page 2 of 2

Date 8-22-2018 Conducted By Stim Wambore

HWL 1370.23 TWL 1344.61 CFS 80

Air Temp: 71°F Wind Speed: www8 mph Barometer: 30.1 Sky Conditions: Clear

Time Survey Started 8:45 Time Survey Ended 9:08 Boat (14 ft/Canoe) or Foot

Latitude Start _____ Longitude End _____

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

Description of Location _____

Historic Info: _____

Invasive Found: Yes or No

Invasive Plant Info				
Site ID				
Photo ID				
Time				
Latitude				
Longitude				
Species Name				
Acreage (<1/2 acre, 1/2-1 acre, 1-10 acres, > 10 acres)				
Number of Plants				
Single or Multi-stem				
Plant height				
Location type (lake/pond edge) (stream edge) (roadside) (ditch)				
Plant removed				

Other Species Observed: _____

* Asiatic Honeysuckles: *Lonicera tartarica*, *L. morrowii*, *L. x bella*; Buckthorns: *Rhamnus carthartica*, *R. fangula*; Curly Leaf Pondweed; Garlic Mustard; Eurasian Water Milfoil; Japanese Knotweed; Purple Loosestrife; etc.

Signature [Handwritten Signature]



Purple Loosestrife



Figure 2. Purple loosestrife and Honeysuckle locations, Winter Project, 2018.



Figure 3. Purple loosestrife in wetland area, Winter Project, 2018.

Table 1. Purple Loosestrife Survey Project Winter #2064					
GPS Point	Latitude	Longitude	Plant Height	Stand Area	Comments
WNTR PL001	N45.93047	W090.9429	3'	2' x 2'	First observed in 2007. Located on the right side of the river ~4050 ft. upstream from the diversion dam. Seed heads cut in 2007. 2008-no treatment. 2009, 2010, 2011- no plants observed. 2012 – Boat was not able to get close enough for treatment. 2013 and 2014- no plants observed. Grasses were tall. 2016-6 plants. Seed heads were cut off. 2017 no plants observed.
WNTR PL002	N45 55.868	W90 56.650	4'	~120' x 200'	First observed in 2007. Located on the right side of the river ~3700 ft. upstream from the diversion dam. 2009, sites PL002 and 003 were grouped as one continuous site due to the close proximity of the sites. 2010 some old cane was visible with no new growth within it. 2011- No plants observed. 2012- Full bloom. 2013-in the middle of tall wetland grasses-could only see the flower spikes from distance. 2014-old cane observed-closer to river, not beetle damage. 2018-6 multi-stem plants approximately 10'x10'. No treatment.
WNTR PL003	N45 55.851	W90 56.628	4'	~10' x 10'	Previous years described above. 2016-6 plants observed. Some plants were removed and a few the seed heads were cut off. 2017-20 plants observed. A few plants were removed that were accessible. 2018-10 multi-stem plants observed. No treatment.
WNTR PL004	N45 55.904	W90 56.347	1-3' 4' plant	N/A	First observed in 2010. Located on the right side of the river and ~5130 ft. upstream of the diversion dam. No old cane. 2011 nothing observed or treated. 2012-no beetle damage observed and no treatment. 2013, 2014- none observed (grasses were very tall)
WNTR PLNA01	N45 56.225 est. location	W90 55.392 est. location	N/A	N/A	First observed in 2007-photos taken. Right side of the river. This site was ~240 yards. Upstream of the project boundary limits and could not be reached by boat due to rapids. 2010 only 4 areas of blooming plants were observed at this site. No treatment 2008 to 2011. 2013, 2014-None observed (grasses tall)
WNTR PL005	N45.93082	W090.94358	4'	~3' x 3'	2017-8 plants observed. Plants were removed. 2018-15 multi-stem plants. Plants were hand pulled.
WNTR PL005a	N45.93082	W090.94358	3.5'	~ 10' x 10'	2017-25 plus plants observed. No treatment due to accessibility.

Purple Loosestrife Survey

Winter

Hydroelectric Project – FERC # 2064

Page 1 of 2

Date 8-22-16 Conducted By Steve Wurmbe

HWL 1370.23 TWL 1344.61 CFS 80 Equipment Used: Binoculars, Camera, GPS

Air Temp: 71°F Wind Speed: WNW 2 mph Barometer: 30.1 Sky Conditions: 100 Clear

Time Survey Started 9:10 Time Survey Ended 11:15 Boat (14ft or Canoe) and/or Foot

Latitude Start 52 Longitude End 132

Location of Survey Area: Tailrace Bypass Reach Impoundment FHLIC Property

Description of Location _____

Historic Info: _____

Purple Loosestrife Found: Yes or No

Information					
Site	<u>PL002</u>	<u>PL003</u>	<u>PL005</u>		
Time					
Photo ID	<u>7721</u>		<u>7722</u>		
Location					
Single or Multi-stem	<u>Multi</u>	<u>Multi</u>	<u>Multi</u>		
# of Plants	<u>6</u>	<u>10</u>	<u>15</u>		
Acreage est.					
Stand Area Density	<u>10x10</u>	<u>10x10</u>	<u>10x7.5</u>		
Size Colony			<u>scattered</u>		
S=0-5, M=6-50, L=>50~	<u>M</u>				
Plant Height ~ Ft	<u>3'-4'</u>	<u>3'-4'</u>	<u>3'-4'</u>		
Flowering %	<u>70%</u>	<u>70%</u>			
Beetle Feeding?					
Plant Vigor (Very poor to good)	<u>good</u>	<u>good</u>	<u>good</u>		
Plant Removed (explain)	<u>no</u>	<u>no</u>	<u>yes</u>		

Information					
Site					
Time					
Photo ID					
Location					
Single or Multi-stem					
# of Plants					
Acreage est.					
Stand Area Density					
Size Colony					
S=0-5, M=6-50, L=>50~					
Plant Height ~ Ft					
Flowering %					
Beetle Feeding?					
Plant Vigor (Very poor to good)					
Plant Removed (explain)					

Other Species Observed:

Eagles Nest left side facing upstream Red Pine

Purple Loosestrife Survey

Winter Hydroelectric Project – FERC # 2064

Page 2 of 2

Date 8-22-18 Conducted By Steve Warmboe

HWL 1370.52 TWL 1374.41 CFS 80 Equipment Used: Brownie GPS camera

Air Temp: 71.0°F Wind Speed: WNW 8 Barometer: 30.1 Sky Conditions: Clear

Time Survey Started 11:25 Time Survey Ended 11:39 Boat (14ft or Canoe) and/or Foot

Latitude Start _____ Longitude End _____

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

Description of Location _____

Historic Info: _____

Purple Loosestrife Found: Yes or No

Information					
Site					
Time					
Photo ID					
Location					
Single or Multi-stem					
# of Plants					
Acreage est.					
Stand Area Density					
Size Colony S=0-5, M=6-50, L=>50~					
Plant Height ~ Ft					
Flowering %					
Beetle Feeding?					
Plant Vigor (Very poor to good)					
Plant Removed (explain)					

Information					
Site					
Time					
Photo ID					
Location					
Single or Multi-stem					
# of Plants					
Acreage est.					
Stand Area Density					
Size Colony S=0-5, M=6-50, L=>50~					
Plant Height ~ Ft					
Flowering %					
Beetle Feeding?					
Plant Vigor (Very poor to good)					
Plant Removed (explain)					

Other Species Observed: _____

Appendix 1

Agency Correspondence

From: Reinecke, Sue -FS <sreinecke@fs.fed.us>
Sent: Monday, December 10, 2018 9:44 AM
To: Brian Kreuzscher; Strong, Paul -FS
Subject: RE: Winter (P-2064) 5 year review of Applicable Standards

Hi Brian, thanks for sending the documents. There is no need for a conference call as there are no new standards and guidelines that need to be added for the Forest. As stated in the past please keep working with Stephen Spickerman on NNIS issues.

As always if you have any questions feel free to give me a call.

Thanks

sue

Sue Reinecke
Forest Fisheries Biologist
Forest Service
Chequamegon-Nicolet National Forest

p: 715-762-5185
sreinecke@fs.fed.us

1170 4th Ave South
Park Falls, WI 54552
www.fs.fed.us



From: Brian Kreuzscher [<mailto:bkreuscher@rwehydro.com>]
Sent: Friday, December 7, 2018 3:37 PM
To: Strong, Paul -FS <pstrong@fs.fed.us>; Reinecke, Sue -FS <sreinecke@fs.fed.us>
Subject: Winter (P-2064) 5 year review of Applicable Standards

Hello,

Attached (08-12-19...) is the Land and Wildlife Management plan for the Winter project. On page 18, it covers Standards and Guidelines. We are to consult with the Forest Service every 5 years to address any new accommodations regarding the applicable standards and guidelines that apply to the Chequamegon-Nicolet National Forest.

In 2013 during a conference call, it was agreed that there were no new standards and guidelines added for the Forest during the first 5-year period of the approved plan that RWE has not already addressed in the plan. If a conference call is desired, one can be set up. Otherwise if you feel an email statement is acceptable, that is also fine.

I have also attached last years Land and Wildlife Management report for 2017. As you will see, the Grey Wolf's relisting in 2015 is being addressed.

Thanks

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

Brian Kreuscher

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>
Sent: Wednesday, December 12, 2018 5:31 PM
To: Brian Kreuscher
Subject: RE: Winter (P-2064) Draft Land and Wildlife Management Report

General Comments:

1. Bald Eagle – We request that you contact the DNR eagle management staff as ask for the flight information for eagles. The DNR does reoutine flyovers to note active nests. This is a much more accurate tool to determine nest activity than looking from the ground. Additionally, we ask that for any land disturbance you follow the federal bald eagle guidelines. Lets work together in early 2019 to improve the reporting process.

2. Gray Wolf - Lets discuss the need to continue to complete this survey, and the relevance of information on the management of the hydro dam.

3. Wood Turtle – Lets work with our herp expert to determine if these surveys are appropriate or necessary. Also, predation can be a big concern, and we can discuss options to incorporate protection measures in areas of known predation, if appropriate.

4. Non Native Invasive Species - Lets discuss the efforts that are being used to complete the survey, and take a closer look at what species are established, and what species may be of greater concern. I think there are some options to make improvements in field work and reporting that would be beneficial to both the licensee and the agency.

5. Purple loosestrife – lets discuss using the agency fillable forms for PL. They are very easy to use, and may reduce time and workload for both the licensee and the agency. It would also be helpful to look for new species and report at the time of observation so staff can still get respond during open water.

It would be helpful to understand who completes the various surverys, and explore options to improve the overall objective and intent of the the Land and Wildlife reporting to save time and resources for both the licensee and the agency.

I look forward to working with you in late Jan or early Feb to explore options to reduce time and produce more valuable data. Thanks ☺

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 Kreuzscher <bkreuscher@rwehydro.com>

Sent: Wednesday, December 12, 2018 3:44 PM

To: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>; Nick Utrup <nick_utrup@fws.gov>; Paul Strong <pstrong@fs.fed.us>; Sue Reinecke <sreinecke@fs.fed.us>

Subject: Winter (P-2064) Draft Land and Wildlife Management Report

All,

Attached is the Draft Land and Wildlife Management Report for the Winter Project(P-2064). Please review and provide any comments to me within 30 days for FERC submittal.

Thanks

Brian Kreuzscher

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