



February 15, 2017

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 2016 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 2016 Final Land and Wildlife Management Report for the Winter Hydroelectric Project FERC #2064. The Draft Report was sent to the agencies by letter dated November 11, 2016, and attached to an e-mail dated November 30, 2016 asking for comment. The Forest Service did respond with no comment.

### **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.

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

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

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



**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Phone: 855-99HYDRO  
Fax: 920-293-4100  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

## 2016 Results

### Wood Turtle Survey

The wood turtle survey was conducted on June 20, 2016. The Impoundment (10:30-1:00), Tailrace (1:00-1:30) and Bypass Channel (1:30-2:00) were surveyed in succession. No wood turtles were sighted by the licensee although multiple other animal species were seen including (4) painted turtles, (5) map turtles, (1) spiny softshell turtle. A Bald Eagle Nest was discovered during this survey. It is discussed further in the Bald Eagle section of this letter. Evidence of snapping turtles and their eggs were observed in the tailrace. Wolf scat was seen at the end of the canoe portage trail. The next survey will be completed in the early summer of 2017.

### Invasive Species Survey

The survey was conducted by White Water Associates on August 3, 2016. No aquatic or terrestrial invasive species were observed on in or adjacent to the impoundment, 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 2017.

### Purple Loosestrife Survey

The survey was conducted by White Water Associates on August 3, 2016 in conjunction with the Invasive Species Survey. The Tailrace, Bypass Reach, and FHLLC Property were surveyed and no purple loosestrife plants were observed. Two (2) instances of Purple loosestrife were observed at WNTRPL001/WNTRPL003 in locations adjacent to the Impoundment. Both sites had approximately (6) plants which had their flowering heads clipped off, and had previous occurrences of the invasive plant. No other Purple Loosestrife was observed on the project Impoundment. The next formal survey to be conducted will be in 2017.

### Erosion Survey

The next formal spring inspection will be performed in 2017 and will be added to the 2017 Land and Wildlife Management Report as a Tri-Annual Reporting (2015-2017).





**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Phone: 855-99HYDRO  
Fax: 920-293-4100  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

Wolf Survey

Formal surveys were conducted for the Gray Wolf at the Winter Hydro Project in 2015/2016 per approved survey protocol and began on November 14, 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 20, 2016. The next Wolf survey (2016 – 2017) will begin with the first snow fall in the fall of 2016 and end on March 31, 2017. This will be reported in the 2017 report.

Bald Eagle Survey

No formal surveys were conducted for the Bald Eagle at the Winter Hydro Project in 2016 per approved plan which said agencies would be notified should any Eagle Nests be found located within the project boundary. One nest was located during the Wood Turtle Survey conducted on June 20, 2016. It did not appear active. The agencies were originally notified via e-mail dated June 26, 2015, when the nest was first located in 2015. RWE will continue to monitor the nest during the other surveys conducted throughout the monitoring season. It will be re-visited again during the 2017 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](mailto:bkreuscher@rwehydro.com).

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

A handwritten signature in black ink, appearing to read "BK", is written over the printed name.

Mr. Jason Kreuzscher  
Vice President

Handwritten initials "FJ" in black ink, located to the left of the signature block.

Attachment: Final Report 2016 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  
Mr. Dale Higgins, FS

2016 Land & Wildlife Management Report  
for  
Winter Hydroelectric Project  
FERC Project #2064  
Flambeau Hydro, LLC  
Sawyer County, Wisconsin

Submitted by:



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

### Purpose

On behalf of Flambeau Hydro LLC (Flambeau), the Licensee, Renewable World Energies and White Water Associates is submitting an electronic copy of the *2016 Land & Wildlife Management Report* for the Winter Hydroelectric Project for review and comment.

### 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.

### Wood Turtle Survey

The wood turtle survey was conducted on June 20, 2016. The impoundment (10:30-1:00), tailrace (1:00-1:30) and bypass channel (1:30-2:00) 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. Three painted turtles and three map turtles were observed in the impoundment basking on rocks. An eagle's nest 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, FS and USFWS of this eagle's nest. Snapping turtle eggs, and evidence of snapping turtles were observed in the tailrace. Wolf scat was seen at the end of the canoe portage trail. Two map turtles, one painted turtle and one spiny softshell turtle were observed in the power canal as the field crew drove to the upper end of the bypass channel. The next survey will be completed in the summer of 2017.

### Invasive Species Survey

On August 3, 2016 White Water Associates, Inc. performed an inventory of invasive species at the Winter Hydroelectric Project in conjunction with the Purple Loosestrife Survey. No aquatic or terrestrial invasive species were observed on in or adjacent to the impoundment, on Flambeau Hydro LLC land, adjacent to the tailrace, or adjacent to the bypass channel.

### Purple loosestrife Survey

On August 3, 2016 White Water Associates, Inc. performed an inventory of purple loosestrife at the Winter Hydroelectric Project in conjunction with the Invasive Species Survey. Three locations had purple loosestrife. Site WNTR PL001 (45.93047, -90.94286) had approximately

six plants which had their flowering heads clipped off. Site WNTR PL003 (45.93084, -90.94380) had approximately six plants which had their flowering heads clipped off. 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.

### Wolf Survey

It was decided that the gray wolf survey would be conducted after fresh snowfall in the winter when the dam operator does daily checks at the project as a foot/vehicle survey of the accessible project property. 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 20<sup>th</sup>, 2016. The 2016-2017 wolf survey will begin with the first snowfall in 2015 and end on March 31<sup>st</sup>, 2016. This will be reported in the 2017 report.

### Erosion Survey

The next formal erosion survey will be conducted in the spring of 2017 and the results will be added to the *2017 Land & Wildlife Report*.

### Conclusion

The Federal Energy Regulatory Commission's regulations allow for a 30 day formal review and comment period. Thank you in advance for providing your responses in a timely manner so we can include your comments and recommendations, as appropriate, into our report which the Licensee must file by March 1, 2017 with FERC.

If you have questions concerning this report, please contact Dean Premo at White Water Associates, (906)822-7889 or [dean\\_premo@white-water-associates.com](mailto:dean_premo@white-water-associates.com).

# Draft

## 2016 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

Draft – November 29, 2016

# Table of Contents

<b>Section</b>	<b>Description</b>	<b>Page No.</b>
<b>I</b>	<b>Plan Requirements &amp; Approval</b> .....	3
	1. Federal Energy Regulatory Commission License Article 404	4
	2. USDA Forest Service 4 (e) Condition 10.....	5
	3. WDNR 401 Certification Item Letter P, Q, R.....	6
	4. FERC Plan Approval.....	6
<b>II</b>	<b>Description of Winter Project</b> .....	7
	Project Description.....	8
<b>III</b>	<b>Project Drawings</b> .....	9
	Winter Hydroelectric Project Boundary .....	10
	Forest Service Lands at the Winter Project.....	12
<b>IV</b>	<b>Land &amp; Wildlife Survey Results</b> .....	14
	1. Bald Eagle.....	15
	2. Gray Wolf.....	15
	3. Wood Turtle.....	15
	4. Non Native Invasive Species .....	15
	5. Purple Loosestrife.....	16
	6. Land Disturbance & Erosion Control.....	17
	7. Zebra Mussels.....	17
	8. Standards and Guidelines.....	17
<b>V</b>	<b>Survey Documents</b> .....	19
	Wood Turtle	
	Invasive Species	
	Purple Loosestrife	

## Appendices

### 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:

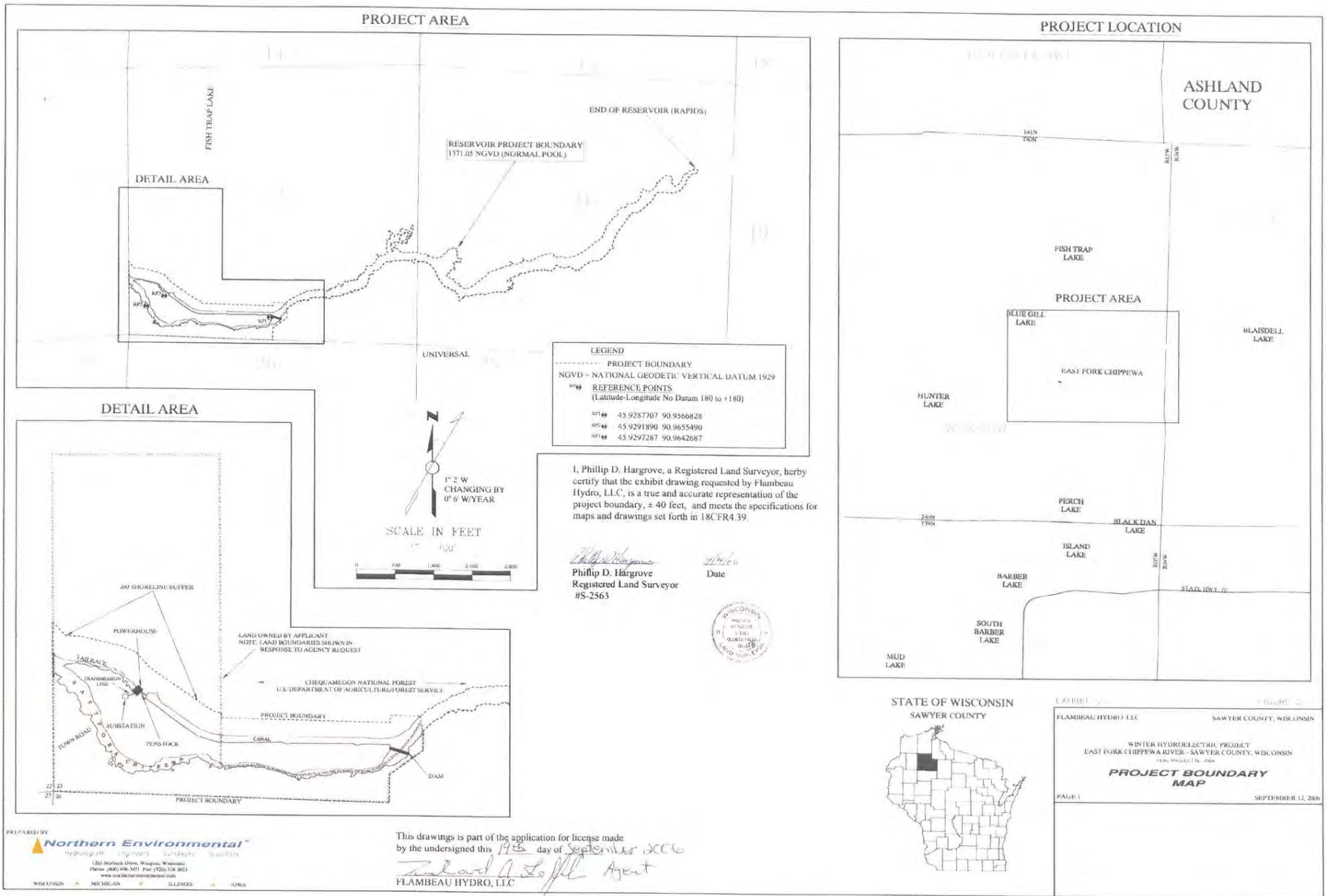
- **Diversion Dam:** A 14-foot-high, 140 foot-long concrete dam section (8 bays total) with steel gates on top of wooden stop logs in 7 bays and one bay with a 6'x16' steel lift gate operated with an electric motor and mechanical ball-screw. The diversion dam allows the water to be apportioned either 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).



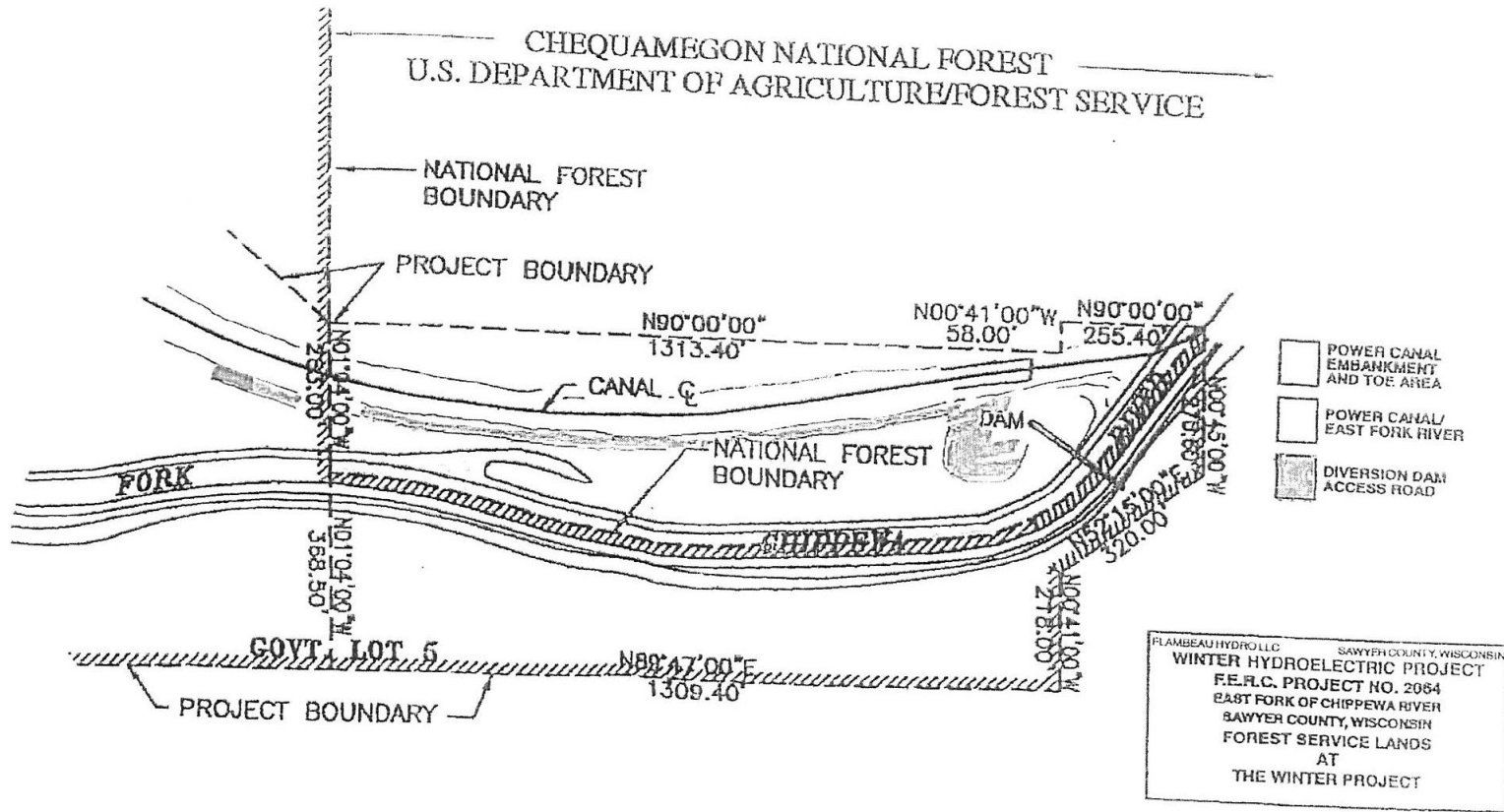
### **III Project Drawings**

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

## 1. Winter Hydroelectric Project Boundary



## 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 2016 per approved plan which said agencies would be notified should any eagle nests be found located within the project boundary. 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. RWE will continue to monitor the nest during the other surveys conducted throughout the monitoring season. It will be revisited again in the 2017 season.

## 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 31<sup>st</sup>.** 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 20<sup>th</sup>, 2016. The 2016-2017 wolf survey will begin with the first snowfall in 2015 and end on March 31<sup>st</sup>, 2016. This will be reported in the 2017 report.

## 3. Wood Turtle

The wood turtle survey was conducted on June 20, 2016. The impoundment (10:30-1:00), tailrace (1:00-1:30) and bypass channel (1:30-2:00) 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. Three painted turtles and three map turtles were observed in the impoundment basking on rocks. An eagle's nest 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. Snapping turtle eggs and evidence of snapping turtles were observed in the tailrace. Wolf scat was seen at the end of the canoe portage trail. Two map turtles, one painted turtle and one spiny softshell turtle were observed in the power canal as the field crew drove to the upper end of the bypass channel. The next survey will be completed in the summer of 2017.

## 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 3, 2016. The tailrace, bypass reach and Flambeau Hydro LLC property were surveyed on foot from 9:45 am – 1:00 pm. The HWL was 1370.64, TWL 1345.52, and Project Flow was 231 cfs. No aquatic or terrestrial non-native invasive species were observed.

## 5. Purple loosestrife

On August 3, 2016, 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).

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

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

The *impoundment* was surveyed by boat. Two sites had purple loosestrife observed.

Site WNTR PL001 had six plants observed and the flowering heads were clipped off. This site was approximately 2'x2' and plants were multi-stemmed. Site WNTR PL003 had six plants observed and the flowering heads were clipped off. This site was approximately 2'x2' and plants were multi-stemmed. Sites WNTR PL002 and WNTR PL004, which were recorded in previous surveys, did not have any purple loosestrife plants observed in 2016.

## **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.

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 2017 and will be added to the 2017 Land & Wildlife Management Report as a Tri-Annual Reporting (2015-2017).

## **7. Zebra Mussels**

No zebra mussels were observed during the non-native invasive species survey during 2016.

## **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.*

**V**  
**Survey Documents**

**Wolf**



Wolf Survey Forms

Winter East Fork Dam

Attn: Jason

Note: No evidence of wolves/activity

Jim Tesch

Winter Hydro Project FERC 2064 Wolf Survey Form

Year 2015-16

Date	Time	Weather	Fresh Snow Y/N	Scat Y/N	Tracks Y/N	Dens Y/N	Wolves Y/N	Den Location	Notes & Conducted By
11/19/15	2:22	Windy/sunny	Y 30' last night	N	N	N	N	N/A	J. Trach
11/20	9:22	Breezy P/c/sun	N Blowing snow	N	Y otter deer	N	N	N/A	J. Trach
11/21									
11/29	8:00	P/c	N	N	Y Coyote deer	N	N	N/A	J. Trach
12/3	9:10	P/c	N	N	Y Beaver Turkey	N	N	N/A	J. Trach
12/15	9:15	Overcast	Y .30"	N	Y Coyote Rabbit	N	N	NA	J. Trach
12/16	10:00	Overcast	Y .30"	N	Y Rabbit Squirrel	N	N	NA	J. Trach
12/18	9:30	Overcast/ snowing	Y 1.0"	N	Y Deer	N	N	NA	J. Trach

Winter Hydro Project FERC 2064 Wolf Survey Form

Year 2015-16

Date	Time	Weather	Fresh Snow Y/N	Scat Y/N	Tracks Y/N	Dens Y/N	Wolves Y/N	Den Location	Notes & Conducted By
12/19	17:30	Overcast/night	N	N	Y deer	N	N	N/A	J. Trench
12/20	16:35	Overcast	N	N	Y Deer Rabbit mammal Deer	N	N	N/A	J. Trench
12/23	16:00	Overcast/snow	Y	N	Y deer	N	N	N/A	J. Trench
12/25	11:35	Overcast	N	N	Y deer	N	N	N/A	J. Trench
12/27	10:45	Partly Cloudy	N	N	Y deer dog humans	N	N	N/A	J. Trench
12/30	10:00	Overcast	N	N	Y deer coyote	N	N	N/A	J. Trench
1/4/16	10:00	Sunny	Y 1.50"	N	Y deer	N	N	N/A	J. Trench
1/6/16	9:00	Overcast	N	N	Y deer otters	N	N	N/A	J. Trench

3.

## Winter Hydro Project FERC 2064 Wolf Survey Form

Year 2015-16

Date	Time	Weather	Fresh Snow Y/N	Scat Y/N	Tracks Y/N	Dens Y/N	Wolves Y/N	Den Location	Notes & Conducted By	Amount \$
1/15/16	15:00	snowing	Y	N	Y fox otter	N	N	N/A	J. Tuck	
1/23/16	14:45	clear	N	N	Y otter coyote deer	N	N	N/A	J. Tuck	
1/25/16	10:00	Overcast	N	N	Y deer otter	N	N	N/A	J. Tuck	
1/26/16	9:00	Overcast	N	N	Y dog otter	N	N	N/A	J. Tuck	
1/30	10:15	Partly cloudy	Y .15	N	Y deer coyote	N	N	N/A	J. Tuck	
2/3	10:00	Partly cloudy	Y 11.0"	N	Y otter	N	N	NA	J. Tuck	
2/16	16:59	clear	Y 6.5"	N	Y deer	N	N	NA	J. Tuck	
2/24	8:35	Overcast	Y .70"	N	Y Coyote	N	N	NA	J. Tuck	



## **Wood Turtle**

## Wood Turtle Survey Form

### Winter Hydroelectric Project – FERC #2064

Date June 20, 2016

Conducted by PREMO

Time Survey Started 1030 hrs

Time survey Ended ~~1245~~<sup>op</sup> 1300h

Weather Conditions  
70°, cloudless, Breezy

Dam Conditions (W/L, TWL, CFS) → 1346.50 TWL  
1370.68      624

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

Time(s) of wood turtle sighting(s): No wood turtles sighted

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

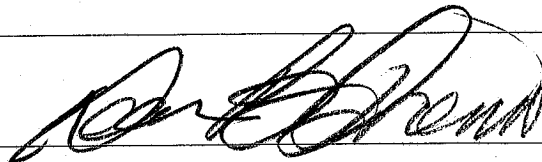
Number of wood turtles sighted: 0

Gender of wood turtles sighted: \_\_\_\_ F \_\_\_\_ M \_\_\_\_ Unkn

Other species observed  
Painted Turtles (3)  
Map Turtles (3)

Other notes Saw painted turtle basking on Rock, just U/S of Bay on North side (1107)  
1106 - eagles nest on North side of stream, in white pine, No eagles spotted  
1119 Two painted turtles basking  
I saved point 001 on Eagle Nest 45.93260; -090.93633  
Between 1230 & 1300 we hiked the north dike of the power canal. Saw 3 map turtles basking on rocks

Signature of Biologist



## Wood Turtle Survey Form

### Winter Hydroelectric Project – FERC #2064

Date <u>June 20, 2016</u>	Conducted by <u>Plummer &amp; Premo</u>
Time Survey Started <u>1300h</u>	Time survey Ended <u>1330</u>
Weather Conditions <u>Sunny, Breezy, 75° F</u>	
Dam Conditions (WL, TWL, CFS) <u>1370.68</u> ← <u>1346.50</u> → <u>629</u>	
Location of Survey Area (circle one): <input checked="" type="radio"/> Tailrace <input type="radio"/> Bypass Reach <input type="radio"/> Impoundment	
Time(s) of wood turtle sighting(s): <u>No wood turtles sighted</u>	
Location(s) of wood turtle sighting(s): _____	
Number of wood turtles sighted: <u>0</u>	Gender of wood turtles sighted: ___ F ___ M ___ Unkn
Other species observed <u>snapping turtle eggs at the point between tailrace &amp; bypass channel — lots of evidence of snapper, resins</u> <u>Wolf scat at end of the canal portage trail</u>	
Other notes	
Signature of Biologist <u>[Signature]</u>	



## Wood Turtle Survey Form

### Winter Hydroelectric Project – FERC #2064

Date <u>June 20, 2016</u>	Conducted by <u>Plummer / Premo</u>
Time Survey Started <u>1330</u>	Time survey Ended <u>1400</u>
Weather Conditions <u>Sunny Breezy, 80°F</u>	
Dam Conditions (WL, TWL, CFS) <u>1370.68</u> <u>1346.50</u> <u>624</u>	
Location of Survey Area (circle one): Tailrace <input type="checkbox"/> <u>Bypass Reach</u> <input checked="" type="checkbox"/> Impoundment <input type="checkbox"/>	
Time(s) of wood turtle sighting(s): <u>No wood turtles sighted</u>	
Location(s) of wood turtle sighting(s): <u>_____</u>	
Number of wood turtles sighted: <u>0</u>	Gender of wood turtles sighted: ___ F ___ M ___ Unkn
Other species observed <u>Saw two Map turtles &amp; 1 painted turtle and 1 spiny soft shell down in power canal as we drove up to upper end of the bypass channel</u>	
Other notes	
Signature of Biologist <u>Ram B. Premo</u>	

Winter Hydroelectric Project - FERC 2014

USGS Map with project features and field notes of observations (see map)

from

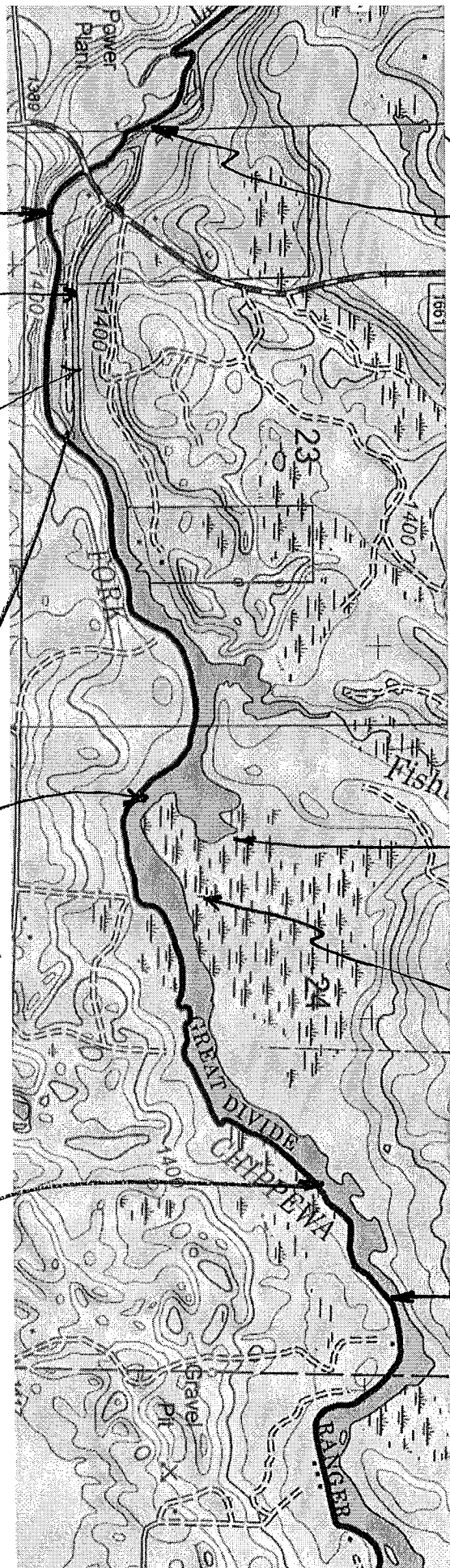
June 20,

2016

Survey

Power and of  
road near  
cassidy

1/3 of power house



Reservoir Project Boundary

Approx. location of 2015 Eagle  
in "Pine" (45.93183; -90.94019)  
(coordinates from map)

End of Rapids  
(45.93680; -90.92527)  
(coordinates from map)

Power Canal

Bypass Channel 1/2 mile long  
(about 1/2 mile long)

observed  
3 painted turtles

observed  
spiny head  
saw the  
turtle

observed  
painted turtle

observed  
2 painted turtles

Boisguit

Ken [Signature]

## **Purple Loosestrife/Non-native Invasive**

### Purple Loosestrife Survey

Winter Hydroelectric Project – FERC # 2064 Page 1 of 2

Date 8-3-14 Conducted By Stine Plummer

HWL \_\_\_\_\_ TWL \_\_\_\_\_ CFS \_\_\_\_\_ Equipment Used: \_\_\_\_\_

Air Temp: \_\_\_\_\_ °C Wind Speed: \_\_\_\_\_ Barometer: \_\_\_\_\_ Sky Conditions: \_\_\_\_\_

Time Survey Started 12:10 Time Survey Ended 1:00 Boat (14ft or Canoe) and/or Foot

Latitude Start \_\_\_\_\_ Longitude End \_\_\_\_\_

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

Description of Location Powerhouse to a point ~ 595 ft downstream including 3028 ft long bypass reach area from the spillway to the downstream project boundary.

Purple Loosestrife Found: Yes or No Historic Info: Foot 2014 - no PL 20 min

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 1/2 acre 1/2-1 acre 1-10 acres 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 (#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 ~ _____ 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			
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 1/2 acre 1/2-1 acre 1-10 acres 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 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			
Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good			
Plant Removed: Yes or No		Description:	



*Handwritten mark*

## Year 2016 Invasive & Other Plants Survey

### Winter Hydroelectric Project – FERC #2064

Date 8-3-16 Conducted By Stine Plummer

HWL \_\_\_\_\_ TWL \_\_\_\_\_ CFS \_\_\_\_\_

Air Temp: \_\_\_\_\_ °C Wind Speed: \_\_\_\_\_ Barometer: \_\_\_\_\_ Sky Conditions: \_\_\_\_\_

Time Survey Started \_\_\_\_\_ Time Survey Ended \_\_\_\_\_ Boat (14 ft/Canoe) or Foot

Latitude Start \_\_\_\_\_ Longitude End \_\_\_\_\_

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

Description of Location Powerhouse to apt ~545 ft downstream including 3,028 ft long by bypass reach area from the sp. way to ds project boundary  
 Invasive Found: Yes or No Historic Info: NO INVASIVES FOUND

Site:	Time:	Latitude:	Longitude:
Photo ID:		Description of location:	
Species Name:			
Acreage of Infestation (circle one) less than ½ acre ½-1 acre 1-10 acres more than 10 acres			
Number of Plants (on small sites – circle one): 1-10 11-49 50+			
Single Plant or Multi-stem		Plant Height:	
Coverage by plant (on larger sites – circle one): 0-25% 26-50% 51-75% 76-100%			
Location type (circle all that apply): lake/pond edge stream edge roadside wooded area ditch field other			
Plant Removed: Yes No			
Description:			

Site:	Time:	Latitude:	Longitude:
Photo ID:		Description of location:	
Species Name:			
Acreage of Infestation (circle one) less than ½ acre ½-1 acre 1-10 acres more than 10 acres			
Number of Plants (on small sites – circle one): 1-10 11-49 50+			
Single Plant or Multi-stem		Plant Height:	
Coverage by plant (on larger sites – circle one): 0-25% 26-50% 51-75% 76-100%			
Location type (circle all that apply): lake/pond edge stream edge roadside wooded area ditch field other			
Plant Removed: Yes No			
Description:			

### Purple Loosestrife Survey

Winter Hydroelectric Project – FERC # 2064 Page 1 of 2

Date 8-3-16 Conducted By Stine Plummer

HWL \_\_\_\_\_ TWL \_\_\_\_\_ CFS \_\_\_\_\_ Equipment Used: \_\_\_\_\_

Air Temp: \_\_\_\_\_ °C Wind Speed: \_\_\_\_\_ Barometer: \_\_\_\_\_ Sky Conditions: \_\_\_\_\_

Time Survey Started 12:10 Time Survey Ended 1:00 Boat (14ft or Canoe) and/or Foot

Latitude Start \_\_\_\_\_ Longitude End \_\_\_\_\_

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

Description of Location adjacent to dam and powerhouse

Purple Loosestrife Found: Yes or No Historic Info: 40 min 2014 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 1/2 acre 1/2-1 acre 1-10 acres 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 (#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 ~ _____ 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			
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 1/2 acre 1/2-1 acre 1-10 acres 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 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			
Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good			
Plant Removed: Yes or No		Description:	



*Handwritten signature*

# Year 2016 Invasive & Other Plants Survey

## Winter Hydroelectric Project – FERC #2064

Page 2 of 2

Date 8-3-16 Conducted By Stine Plummer

HWL \_\_\_\_\_ TWL \_\_\_\_\_ CFS \_\_\_\_\_

Air Temp: \_\_\_\_\_ °C Wind Speed: \_\_\_\_\_ Barometer: \_\_\_\_\_ Sky Conditions: \_\_\_\_\_

Time Survey Started \_\_\_\_\_ Time Survey Ended \_\_\_\_\_ Boat (14 ft/Canoe) or Foot

Latitude Start \_\_\_\_\_ Longitude End \_\_\_\_\_

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

Description of Location \_\_\_\_\_

Invasive Found: Yes or No Historic Info: No invasives found

Site:	Time:	Latitude:	Longitude:
Photo ID:		Description of location:	
Species Name:			
Acreage of Infestation (circle one) less than ½ acre ½-1 acre 1-10 acres more than 10 acres			
Number of Plants (on small sites – circle one): 1-10 11-49 50+			
Single Plant or Multi-stem		Plant Height:	
Coverage by plant (on larger sites – circle one): 0-25% 26-50% 51-75% 76-100%			
Location type (circle all that apply): lake/pond edge stream edge roadside wooded area ditch field other			
Plant Removed: Yes No			
Description:			

Site:	Time:	Latitude:	Longitude:
Photo ID:		Description of location:	
Species Name:			
Acreage of Infestation (circle one) less than ½ acre ½-1 acre 1-10 acres more than 10 acres			
Number of Plants (on small sites – circle one): 1-10 11-49 50+			
Single Plant or Multi-stem		Plant Height:	
Coverage by plant (on larger sites – circle one): 0-25% 26-50% 51-75% 76-100%			
Location type (circle all that apply): lake/pond edge stream edge roadside wooded area ditch field other			
Plant Removed: Yes No			
Description:			

### Purple Loosestrife Survey

Winter Hydroelectric Project – FERC # 2064 Page 1 of 2

Date 8-3-16 Conducted By Stine Plummer

HWL 1370.6' TWL 1345.52' CFS 231 Equipment Used: \_\_\_\_\_

Air Temp: 72°F Wind Speed: 3 mph Barometer: 30.10 Sky Conditions: Clear

Time Survey Started 9:45 Time Survey Ended 12:10 Boat (14ft or Canoe) and/or Foot \_\_\_\_\_

Latitude Start BL Longitude End BL

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

Description of Location Winter powerhouse to upstream boundary 2.10 miles upstream

Purple Loosestrife Found: Yes or No \_\_\_\_\_ Historic Info: 2014 spot 3.5 hrs WNR PL 002-3 7 clumps ~ 240 yards upstream project boundary #02.00

Site: <u>WNR PL 003</u>	Time: <u>10:37</u>	Latitude: _____	Longitude: _____
Photo ID: <u>3439-41</u>	Description of location: <u>Peninsula</u>		
Species Name: <u>PL</u>	Single Plant or <u>Multi-stem</u>	Actual # of Plants: <u>6</u>	
Acreage of Infestation (circle one) less than 1/2 acre <u>1/2-1 acre</u> 1-10 acres more than 10 acres			
Location type (circle all that apply): <u>impoundment/pond edge</u> stream edge roadside wooded area ditch field other			
Stand Area Density (feet x feet): <u>2x2</u>	Size Colony (#plants): S = 0-5 <u>M = 6-50</u> L = >50 ~ _____		
Plant Height: 1 = <1 ft 2 = 1-2 ft 3 = <u>2-4 ft</u> 4 = >4 ft ~ <u>3.5</u> feet			
Plant Flowering: 1 = <25% of plants 2 = 26-50% of plants 3 = 51-99% of plants 4 = <u>100% of plants</u>			
Beetle Feeding: 1 = 76-100% feeding 2 = 51-75% feeding 3 = 25-50% feeding 4 = <u>0-25% feeding</u> <u>None</u>			
Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair <u>10-12 = good</u>			
Plant Removed: <u>Yes</u> No	Description: <u>dry a few more but inland hard to get</u>		

Site: <u>WNR PL 001</u>	Time: <u>11:03</u>	Latitude: _____	Longitude: _____
Photo ID: _____	Description of location: _____		
Species Name: _____	Single Plant or <u>Multi-stem</u>	Actual # of Plants: <u>1</u>	
Acreage of Infestation (circle one) less than 1/2 acre <u>1/2-1 acre</u> 1-10 acres more than 10 acres			
Location type (circle all that apply): <u>impoundment/pond edge</u> stream edge roadside wooded area ditch field other			
Stand Area Density (feet x feet): <u>2x2</u>	Size Colony: S = 0-5 <u>M = 6-50</u> L = >50 ~ _____		
Plant Height: 1 = <1 ft 2 = 1-2 ft 3 = <u>2-4 ft</u> 4 = >4 ft ~ _____ feet			
Plant Flowering: 1 = <25% of plants 2 = 26-50% of plants 3 = 51-99% of plants 4 = <u>100% of plants</u>			
Beetle Feeding: 1 = 76-100% feeding 2 = 51-75% feeding 3 = 25-50% feeding 4 = <u>0-25% feeding</u>			
Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair <u>10-12 = good</u>			
Plant Removed: <u>Yes</u> or No	Description: <u>top of</u>		





WATER AHSI - correction → native *Viburnum* sp. Page \_\_\_\_ of \_\_\_\_

Site:	Time: 11:11	Latitude:	Longitude:
Photo ID: 3483-49	Description of location: W 45, 23704 N 060, 941.35		
Species Name:	Single Plant or Multi-stem	Actual # of Plants:	
Acreage of Infestation (circle one) <u>less than 1/2 acre</u> 1/2-1 acre 1-10 acres more than 10 acres			
Location type (circle all that apply): <u>impoundment / pond edge</u> stream edge roadside wooded area ditch field other <u>WPLD</u>			
Stand Area Density (feet x feet): 300*	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 ~ 12 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			
Total plant vigor: 0-3 = very poor 4-6 = poor 7-9 = fair 10-12 = good <u>Orange Red berries</u>			
Plant Removed: Yes	<u>No</u>	Description: <u>Eg Cluster</u>	

P L004 - none

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 1/2 acre 1/2-1 acre 1-10 acres 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 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			
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: 1 wood duck, Eagles Nest  
Hooded Merganser

Other Pertinent Survey Information: No Zebra mussels or any other AD I could see.  
We took pictures of Erosion in power canal.

Historic Purple Loosestrife: \_\_\_\_\_  
 Signature [Signature] Signature \_\_\_\_\_

\* 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.



# Year 2016 Invasive & Other Plants Survey

## Winter Hydroelectric Project – FERC #2064

Date 8-3-16 Conducted By Stina Plummer

HWL \_\_\_\_\_ TWL \_\_\_\_\_ CFS \_\_\_\_\_

Air Temp: \_\_\_\_\_ °C Wind Speed: \_\_\_\_\_ Barometer: \_\_\_\_\_ Sky Conditions: \_\_\_\_\_

Time Survey Started 12:10 Time Survey Ended 1:00 ~~Boat (14 ft/Canoe) or Foot~~ Foot

Latitude Start \_\_\_\_\_ Longitude End \_\_\_\_\_

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

Description of Location Winter purchase to upstream boundary 2.10 miles upstream

Invasive Found: Yes or No Historic Info: WATR Honey Syc. WATR (P1001)-4 PLNA01 - out bank  
WATR B Thorn

Site:	Time:	Latitude:	Longitude:
Photo ID:	Description of location:		
Species Name:			
Acreage of Infestation (circle one) less than 1/2 acre 1/2-1 acre 1-10 acres more than 10 acres			
Number of Plants (on small sites – circle one): 1-10 11-49 50+			
Single Plant or Multi-stem		Plant Height:	
Coverage by plant (on larger sites – circle one): 0-25% 26-50% 51-75% 76-100%			
Location type (circle all that apply): lake/pond edge stream edge roadside wooded area ditch field other			
Plant Removed: Yes No			
Description:			

Site:	Time:	Latitude:	Longitude:
Photo ID:	Description of location:		
Species Name:			
Acreage of Infestation (circle one) less than 1/2 acre 1/2-1 acre 1-10 acres more than 10 acres			
Number of Plants (on small sites – circle one): 1-10 11-49 50+			
Single Plant or Multi-stem		Plant Height:	
Coverage by plant (on larger sites – circle one): 0-25% 26-50% 51-75% 76-100%			
Location type (circle all that apply): lake/pond edge stream edge roadside wooded area ditch field other			
Plant Removed: Yes No			
Description:			

None



Purple loosestrife locations, Winter Project, 2016.





Purple loosestrife in wetland area, Winter Project, 2016.

**Appendix 1**  
**Agency Correspondence**

## Brian Kreuscher

---

**From:** Jason Kreuscher  
**Sent:** Wednesday, February 15, 2017 9:58 AM  
**To:** Brian Kreuscher  
**Subject:** FW: Winter (P-2064) Draft Land and Wildlife Management Report

Jason Kreuscher  
Vice President  
Renewable World Energies, LLC  
100 State St.  
PO Box 264  
Neshkoro WI 54960  
Phone: 855-99HYDRO ext 102  
Cell 715-572-7602  
[jason@rwehydro.com](mailto:jason@rwehydro.com)

---

**From:** Reinecke, Sue -FS [mailto:sreinecke@fs.fed.us]  
**Sent:** Thursday, December 1, 2016 7:26 AM  
**To:** Jason Kreuscher <jason@rwehydro.com>  
**Subject:** RE: Winter (P-2064) Draft Land and Wildlife Management Report

Hi Jason, the Forest Service has no comments on the draft plan. Please continue to work with Steven Spickerman on any NNIS issues that may come up at the site.

Thanks  
sue

*Is this format ok or do you need more of a formal response?*



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

p: 715-762-5185

f: 715-762-5179

[sreinecke@fs.fed.us](mailto:sreinecke@fs.fed.us)

1170 4th Ave South  
Park Falls, WI 54552

[www.fs.fed.us](http://www.fs.fed.us)



**Caring for the land and serving people**

---

**From:** Jason Kreuscher [mailto:jason@rwehydro.com]  
**Sent:** Wednesday, November 30, 2016 11:21 AM  
**To:** Laatsch, Cheryl - DNR ([Cheryl.Laatsch@wisconsin.gov](mailto:Cheryl.Laatsch@wisconsin.gov)) <[Cheryl.Laatsch@wisconsin.gov](mailto:Cheryl.Laatsch@wisconsin.gov)>; Reinecke, Sue -FS

<[sreinecke@fs.fed.us](mailto:sreinecke@fs.fed.us)>; 'Nick\_Utrup@fws.gov' <[Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)>

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

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,

Jason P Kreuzscher  
Vice President  
Renewable World Energies, LLC  
100 S. State St.  
PO Box 264  
Neshkoro, WI 54960  
Phone 855-99HYDRO ext 102  
Cell 715-572-7602  
[Jason@rwehydro.com](mailto:Jason@rwehydro.com)

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

Document Content(s)

17-02-15 BRK WNTR F 2016 L W MNGT RPT Letter All.PDF.....1-49