Accession No.: 201702095185
-Submission ID: 742331
-Docket(s) No.: P-7264-000
-Filed By: North East Wisconsin Hydro, LLC, Neenah Paper Incorporated
-Signed By: Melissa Rondou
-Submission Date/Time: 2/9/2017 1:48:56 PM
-Projected Filed Date/Time: 2/9/2017 1:48:56 PM

EAGLE CREEK RENEWABLE ENERGY
— EXCELLENCE IN HYDRO —

E-File Submission January 31, 2017

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

RE: Middle Appleton Dam FERC Project No. P-7264
Neenah Paper Inc. and NEW Hydro, LLC
Article 405 – 2016 Invasive Species Monitoring Report

Dear Secretary:

On behalf of Neenah Paper Inc. and NEW Hydro, LLC (Licensees), Eagle Creek Renewable Energy (ECRE) hereby submits the 2016 Invasive Species Monitoring Report in accordance with Article 405 of the Project License. This report will be e-filed; no paper copies will be mailed to the Commission's address.

The Wisconsin Department of Natural Resources (WDNR) has requested the Licensee to identify new infestations of exotic, non-native invasive species at the project. In an effort to address the agency comments received by email on January 30, 2017 the licensee shall do the following:

- The Licensee will attempt to identify new occurrences of species specified in the handout "Invasive Species to be on the Lookout for in Wisconsin Streams" in an effort to provide more value to the survey and aid the Wisconsin Department of Natural Resources (WDNR).

- The Licensee will continue their monitoring program every other year and work with the WDNR to report observances of new infestations of invasive species promptly after detection.

The next monitoring and reporting period will be in 2018. Should you have any questions regarding this submittal, please contact Ms. Melissa Rondou with Eagle Creek Renewable Energy at 920-293-4628 ext. 347 or email at melissa.rondou@eaglecreekre.com.

Sincerely,
Eagle Creek Renewable Energy
Agent for Licensee(s)

For Melissa A Rondou
Mr. Robert A. Gates
Executive VP of Operations

Attached: Middle Appleton 2016 Invasive Species Monitoring Report

cc: Jon Rom, Neenah Paper Inc., Cheryl Laatsch, WDNR, Nick Utrup, US FWS
File: 16-12-18_LC_ECRE_APLT_Final 2016 Invasive Species Monitoring Rept

Invasive Species

2016 Monitoring Report (Final)
(Per License Article 405)

for the

Middle Appleton Dam Hydroelectric Project
FERC P-7264 NATDAM ID WI00166

Lower Fox River
Outagamie County, Wisconsin

Submitted by:

EAGLE CREEK RENEWABLE ENERGY
— EXCELLENCE IN HYDRO —

116 North State Street – P.O. Box 167
Neshkoro, WI 54960-0167

December 2016

Report Prepared
for
Neenah Paper, Inc. And NEW Hydro, LLC

Table of Contents

I. Goals and Objectives

The environmental assessment (EA) as part of the Federal Energy Regulatory Commission (FERC) licensing process, noted that surveys to document the presence of invasive species had not been conducted at the project when the license was issued to Middle Appleton Dam on April 31, 2005. However, invasive species such as Purple Loosestrife, Eurasian Milfoil, and Zebra Mussels are widely distributed in Wisconsin, and can have detrimental effects on wildlife habitat. The EA, therefore, recommended the Licensee develop an invasive species monitoring plan to document the distribution and relative abundance of such species at the project.

The bi-annual monitoring results are transmitted to the U.S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources.

The primary objectives of this monitoring are:

- To identify, map the presence, trend density, relative abundance and overall occurrence of the invasive species within the project area

II. Project Area Description

The Middle Appleton Dam Hydroelectric Project (FERC Project No. P-7264) is located on the Lower Fox River in the city of Appleton in east-central Wisconsin. Approximately 31 miles downstream from the project, the Lower Fox River empties into the south end of Green Bay located along the northwest portion of Lake Michigan.

The Middle Appleton Dam Project lies within the corporate limits of the city of Appleton in south-central Outagamie County. The project's 35.5-acre impoundment extends upstream to the south-southwest for approximately 0.5 miles, where the next dam is located. The dam is located between Appleton Lock Nos. 2 and 3.

The project's dam is one of thirteen dams on the Lower Fox River. Five dams are located upstream from the project and seven are located downstream. The next dam downstream lies about 0.75 miles away. Associated with these dams are eighteen lock structures.

The project is located within a highly urbanized area with the land near the project being predominantly industrial along this stretch of the Lower Fox River. The project is actually located in the heavily industrialized area known as the "flats." Vegetation in the project area is sparse and confined to some of the shoreline areas.

The 2016 survey was performed in compliance with Article 405. Article 405 of the License requires annual monitoring for Purple Loosestrife, Eurasian Watermilfoil, and Zebra

Mussels through 2008 and alternate years afterwards. The next required monitoring will be performed in the year 2018.

II. Identification of Invasive Species

A. Purple Loosestrife

Purple loosestrife (*Lythrum salicaria*) is a perennial plant in the loosestrife family, with a square, woody stem, opposite or whorled leaves, and grows to heights of 3-9 feet. It has a bright vibrant purple bloom that makes it easily seen and identified in late summer. Purple loosestrife easily adapts to both natural and disturbed wetlands and tolerates changes in soil moisture and temperature. It is found in wet or moist areas such as riverbanks, streams, and marshes. Purple Loosestrife is highly invasive and forms dense stands as it establishes itself and expands. It competes and eventually replaces native grasses, sedges, and other flowering plants that provide a higher quality source of nutrition and habitat for wildlife. The seeds can easily be transported by flood waters and invade areas downstream.

B. Eurasian Watermilfoil

Eurasian Watermilfoil (*Myriophyllum spicatum*) is a highly invasive aquatic plant that out-competes and replaces native aquatic plants, including native watermilfoils such as Northern Watermilfoil (*Myriophyllum sibericum*), one of seven (7) found in Wisconsin. It forms dense mats of vegetation near the surface which impede swimming, entangle themselves on boat propellers, and threaten the integrity of otherwise diverse aquatic communities by eventually replacing other native species. It has long spaghetti-like stems and limp feather-like leaves arranged in whorls (3-5) with 12-21 leaflet pairs per leaf. The plant was accidently introduced to North America from Europe and is not found in the majority of inland lakes in Wisconsin. It reproduces by producing shoot fragments and runners rather than by seeds. However, the fragments and runners can be spread and infest other areas by water currents transported by watercraft and by residual plant material left attached to boat trailers.

C. Zebra Mussels

The Zebra Mussel (*Dreissena polymorpha*) is small and non-native to North America, having originally been found in Russia. The Zebra Mussel was found to have been transported to North America in 1988 in the ballast water of a transatlantic freighter. Since 1988 and up to the present, Zebra Mussels have spread from Lake St. Clair to all five of the Great Lakes, as well as the Mississippi, Tennessee, Hudson, Colorado, St. Lawrence, Cumberland, Missouri, Arkansas, Red, and Ohio River Basins. Zebra Mussels are relatively small, usually about the size of a fingernail. However, adults can range in size from 0.25 to nearly 2 inches in length with a d-shaped shell. They get their name from a striped pattern

commonly seen on their shells. However, not all contain the striped pattern and may need closer examination to identify. Many of Wisconsin's inland waters are now infested with Zebra Mussels. It is a prolific invasive species that deprives native fish and other aquatic life of food and habitat as well as being very costly to boaters, the shipping industry, and the maintenance of water intake and water supply structures.

III. Survey Methodology

A. Purple Loosestrife and Eurasian Watermilfoil

Neenah Paper Inc. and NEW Hydro, LLC conducted monitoring to document the occurrence of Purple Loosestrife and Eurasian Watermilfoil in project waters. The project area map used during the survey is included in figure 1. The monitoring procedure for Purple Loosestrife and Eurasian Watermilfoil in project waters and shoreline areas is outlined below.

Monitoring is conducted every 2 years during even-numbered years. Monitoring is conducted between the third full week of July and the end of the first week in August. Under typical weather conditions, Purple Loosestrife plants are in full flower and easily viewed during this period, while submerged aquatic plants such as milfoil reach their maximum density. The timing of monitoring can be adjusted by bloom status in coordination with resource agencies.

The entire Middle Appleton Dam impoundment and tailwater was visually surveyed by two individuals who are familiar with the ecology and anatomy of Purple Loosestrife and Eurasian Watermilfoil. The individuals conducting the survey used kayaks and pedestrian walkways as necessary to observe any occurrences in the project area. A 16 foot-long sampling rake is used, tossed two times from the side of the kayak at various transect to collect samples not visible due to depth. Any occurrences of Purple Loosestrife and Eurasian Watermilfoil shall be marked on maps in the field using indelible markers. Any identified Eurasian Watermilfoil plants shall be examined to determine signs of weevil damage and recorded.

The area and percent cover of each Purple Loosestrife stand if identified was determined and average plant density estimated. Sampling and measurement methodology may differ according to specific stand characteristics, but will be sufficiently rigorous to document the character of each stand.

For Eurasian Watermilfoil occurrences, the following is determined: mat-perimeter, relative mat density, and average mat thickness. Where milfoil is observed, a determination is made as to species, using a dip net or rake to obtain samples, if required, for closer examination.

B. Zebra Mussels

Inspections of hard surfaces that are normally submerged are conducted during any drawdown of the impoundment and inspections of construction equipment from other infested waters of the state are required on all contractor work specifications for the project. In addition, project structures (dam, gates, trash racks, etc.) are also inspected.

Drawdowns for maintenance occur on an intermittent basis. During these periods, inspections for the presence of zebra mussels will be conducted and documented. Inspections of the project structures are done on a monthly basis. If the presence of zebra mussel colonies is not confirmed, zebra mussel monitoring at the project will be discontinued.

IV. Survey Results

The Middle Appleton Dam Project was surveyed on July 23, 2016 for Purple Loosestrife and Eurasian Watermilfoil. Small shoreline portions of the flowage around West's Canal and the backwater area were examined by pedestrian survey from the shore. Then, kayaks were used to survey the waters and shore both above (impoundment) and below (tailwater) the Middle Appleton Dam.

On July 23, 2016 river conditions were normal. Weather conditions were hot, sunny, and humid with a slight wind. The water clarity was fair (approximately two feet). The length of the survey was approximately 3.5 hours.

The order of the survey from beginning to end was as follows:

Impoundment (Upstream of the dam)

1. Put-in on the north shoreline on the impoundment, travel east towards the Tainter gate structure
2. Travel south along the east-end of the impoundment towards the west canal entrance
3. Travel east, circling back west along the west power canal
4. Travel west upstream along the impoundment under Oneida Street Bridge towards the train trestle to the southern-most project boundary near the upper dam
5. Travel north across the impoundment towards the northern-most project boundary
6. Travel north-east direction towards the eastern-most project boundary to the north power canal

Tailwater (Downstream of the dam)

1. Travel east by foot along the Fox Cities North Island Trail
2. Put-in on the southern shoreline of the tailrace, travel west upstream towards the Tainter gate structure
3. Travel north to the island/training wall, then downstream east along the training wall

4. Travel west upstream towards the old mill / powerhouse outflow
5. Travel east along the northern shoreline to the eastern-most project boundary
6. Travel south to the shoreline
7. Travel west along the southern shoreline to the take-out

Photos of the July 23, 2016 survey are included in Figure 2 of this report.

Purple Loosestrife

At the time of the survey Purple Loosestrife was easily identifiable along local highway medians. The heavily developed shore has left little habitat for vegetation to establish itself and grow. No occurrences of Purple Loosestrife were observed within the project boundary during the 2016 survey.

Eurasian Water Milfoil (EWM)

At the time of the survey Eurasian Watermilfoil was readily apparent in other community lakes. No mats or individual plants were observed at the time of the survey. However, some floating fragments were observed in the upper impoundment and tailwater below the dam while kayaking. After interviewing site operating personnel, they confirmed EWM plant fragments have been found while clearing the trash racks of debris.

Zebra Mussels

Zebra Mussels have long been identified within the project boundary. However, no Zebra Mussels were observed during the 2016 survey.

FIGURE 1

SURVEY BOUNDARY MAP


Appleton Middle Dam P-7264
Article 405 – 2016 Invasive Species Ariel Map
Survey Boundary
Observed EWM (floating fragments only)
Observed PL- None in 2016
S State St
S Jackman St
S Walnut St
W Prospect Ave
S Elm St
W 8th St
W Lawrence St
S Appleton St
Oneida St
W Edison Ave
S Alton St
Sabers Square
S Morrison St
S Oak St
E Water St
Eagle Flats Pkwy
S South Island St
S Vulcan St
S Drew St
© 2014 Google

FIGURE 2

2016 SURVEY PHOTOS

Photo 1 – towards Tainter gates

Photo 2 – water clarity

Photo 3 – looking upstream from put-in location

Photo 4 – traveling west towards train trestle

Photo 5 – looking back under Oneida Street Bridge

Photo 6 – looking towards the most-southwest point of the project boundary

Photo 6 – upstream looking at upper dam

Photo 7 – upstream looking at the northern-most shoreline

Photo 8 – looking at the upstream side of the train trestle

Photo 9 – looking downstream towards the north power canal Oneida Street Bridge

Photo 10 – impoundment takeout

Photo 11 – looking upstream towards the Tainter gate structure and training wall

Photo 12 – looking upstream towards the Tainter gate structure

Photo 13 – looking north towards the island / training wall

Photo 14 – looking downstream from the tailrace south shoreline

Photo 15 – looking upstream towards Tainter gates on the south shoreline

Photo 16 – looking upstream towards the old mill / powerhouse outflow

Photo 17 – looking upstream towards the old mill / powerhouse outflow

Photo 18 – looking downstream traveling along the northern-most shoreline

Photo 19 – looking downstream towards Lawe Street Bridge

Photo 20 – looking across river at the south shoreline towards Fox River North Island Trail

Photo 21 – looking upstream traveling west along the south tailrace shoreline

Photo 22 – looking downstream toward Lawe Street Bridge at the south shoreline

Photo 23 – looking upstream at the south shoreline

APPENDIX A

Agency Correspondence

Melissa Rondou

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>
Sent: Monday, January 30, 2017 2:35 PM
To: Melissa Rondou; Michael Scarzello
Cc: Hudak, Andrew J - DNR
Subject: FW: AIS reports and Appleton License
Attachments: 20161102103448913.pdf

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

dnr.wi.gov

From: Hudak, Andrew J - DNR
Sent: Monday, January 30, 2017 12:36 PM
To: Laatsch, Cheryl - DNR
Subject: RE: AIS reports and Appleton License

Appleton-
In 2018 when the next survey is scheduled to be done, the Department would find additional value if Eagle Creek could include monitoring for the species on the attached handout. Surveying and reporting on EWM, PLS, and Zebra mussels alone has limited value, especially if no active management is occurring, it is more critical to be looking for new occurrences of species. Early detection and rapid response allows the department to enact protocols to either engage in active management or slow the spread by increasing education and outreach measures. It is more important to report new infestations of new species than to regularly report observations of established species.

Oconto Falls-
The current monitoring plan has been established since 1999. Currently monitoring activities are completed to track the occurrence of PLS and EWM within the Oconto Falls impoundment. The Department recognizes and appreciates the efforts that have been put forward to conduct monitoring activities as demonstrated to track the trends of these 2 species in 2016 and previous years. Although PLS and EWM are species of concern and have the ability to cause significant ecological change in the landscape, the Department encourages and would support a proposal by N.E.W. Hydro to propose a renewed effort to change sampling methodology and target species to aid in efforts to monitor and identify new infestations of exotic, non-native invasive species. This monitoring would be critical so that rapid response protocols could be utilized to slow the spread or eradicate a new infestation. Sampling methodology refinement would also allow the Department to analyze plant community changes in a larger context and aid in management activities that may be pursued by the Village of Oconto in future years. The Department also recognizes and appreciates the efforts by Eagle Creek and N.E.W. Hydro to provide data in a separate format so that the data can be accessed and utilized in a larger context.

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Andrew Hudak
Phone: (920) 662-5117
Andrew.hudak@wisconsin.gov

From: Laatsch, Cheryl - DNR
Sent: Monday, January 23, 2017 10:05 AM
To: Hudak, Andrew J - DNR; Koehnke, Scott E - DNR
Subject: FW: AIS reports and Appleton License

Andy – Please see the comments about the reports.

Scott – See the comments about water rights. Got time to educate me?

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


dnr.wi.gov


From: Melissa Rondou [mailto:melissa.rondou@eaglecreekre.com]
Sent: Monday, January 23, 2017 10:04 AM
To: Laatsch, Cheryl - DNR
Subject: AIS reports and Appleton License

Hi Cheryl,
I was hoping to get back comments on the Appleton and Oconto Falls AIS Draft Reports if you have some time.
Also I have another question; where would I find who has water rights? A questions came up with Woolen Mills asking if the Licensee has water rights and who owns the bottom of the river bed?
Maybe a phone call would be in order. Please let me know if you have time to talk or simply respond to this email.
Thank you.
Sincerely,

Melissa Rondou
EAGLE CREEK RENEWABLE ENERGY
116 N. State Street
P.O. Box 167
Neshkoro, WI 54960
(920) 293-4628 x 347
(920) 279-4804 Cellular

Invasive Species to be on the Lookout for in Wisconsin Streams

To report a sighting:
send an email to: invasive.species@wi.gov or CALL 608-266-6437

Please report invasive species to the Wisconsin DNR
Provide all the following information, if possible: exact location (latitude and longitude), population size, a photo or specimen and your contact information.

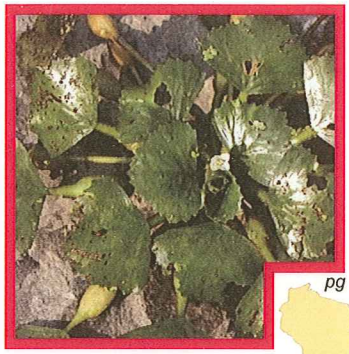
Aquatic plants and algae


pg 55

European frog-bit
Hydrocharis morsus-ranae


pg 60

Yellow floating heart
Nymphoides peltata


pg 61

Water chestnut
Trapa natans


pg 64

Brazilian waterweed
Egeria densa


pg 65

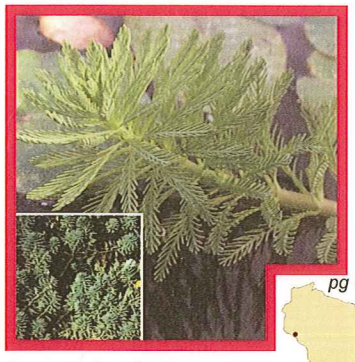
Hydrilla
Hydrilla verticillata


pg 76

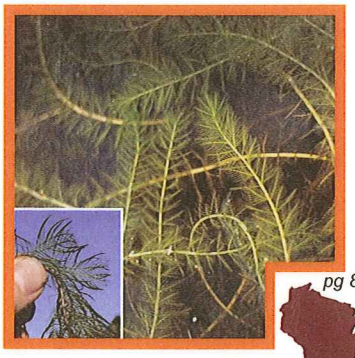
Curly-leaf pondweed
Potamogeton crispus


pg 79

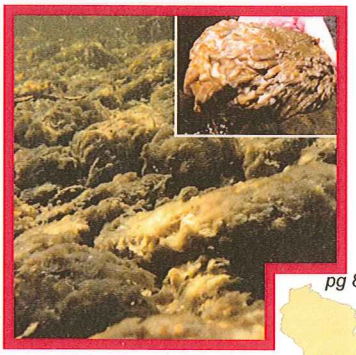
Fanwort
Cabomba caroliniana


pg 81

Parrot feather
Myriophyllum aquaticum


pg 82

Eurasian water milfoil
Myriophyllum spicatum


pg 86

Didymo or rock snot (alga)
Didymosphenia geminata

****Water hyacinth (floating or anchored)**
Eichhornia crassipes and Eichhornia azurea

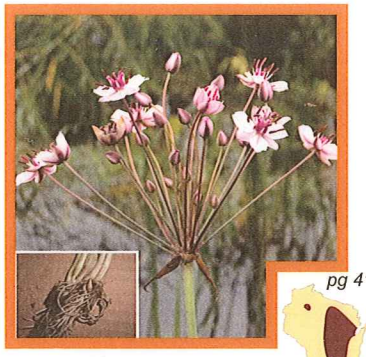
****Water lettuce**
Pistia stratiotes

** Proposed Species Restricted Species Prohibited Species Prohibited / Restricted Species

Photo credit: Sara Spaulding, USGS; Paul Skawinski; Chris Hamerla

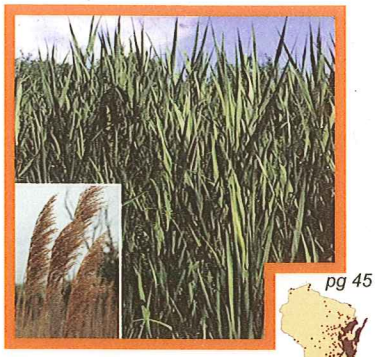
Additional information on species descriptions, "look-alikes", and habitat can be found in A Field Guide to Wisconsin Streams by Michael Miller, Katie Songer, and Ron Dolen - see appropriate page# in the corner of each picture. Each species has an approximate distribution map.

Wetland plants



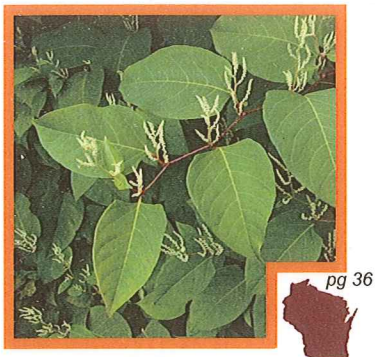
pg 41

Flowering rush
Butomus umbellatus



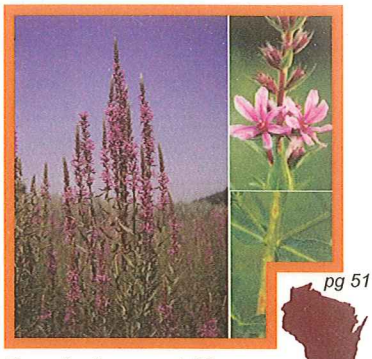
pg 45

Phragmites
Phragmites australis



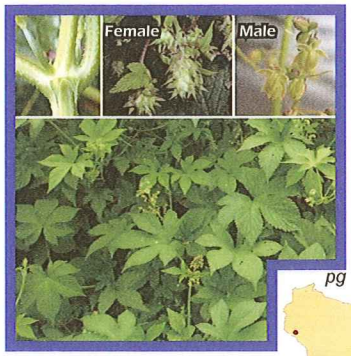
pg 36

Japanese & Giant knotweed
Polygonum cuspidatum & P. sachalinense



pg 51

Purple loosestrife
Lythrum salicaria



pg 36

Japanese hop
Humulus japonicus

pg 43

****Yellow iris**
Iris pseudacorus

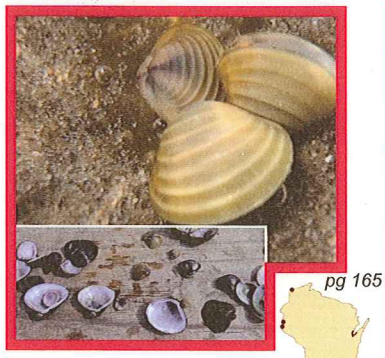
pg 163

Zebra mussels
Dreissena polymorpha

Invertebrates

pg 163

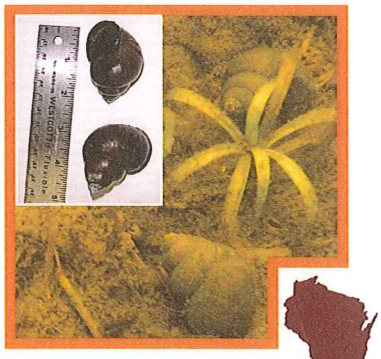
Quagga mussels
Dreissena bugensis



pg 165

Asian clam
Corbicula fluminea

Faucet snails
Bithynia tentaculata

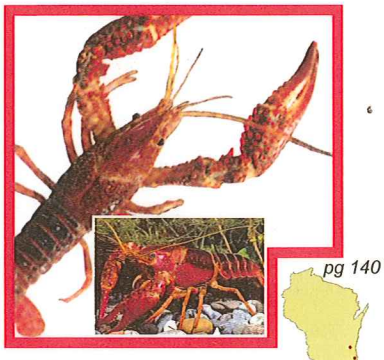


Chinese mystery snails
Cipangopaludina chinensis

****Banded mystery snails**
Viviparus georgianus

pg 130

New Zealand mudsnails
Potamopyrgus antipodarum



pg 140

Red swamp crayfish
Procambarus clarkii

pg 138

Rusty crayfish
Orconectes rusticus

For more information about Wisconsin's Invasive Species Rule, Restricted, or Prohibited species, please visit: www.dnr.wi.gov keyword: "invasives"

Bureau of Water Quality
Wisconsin Department of Natural Resources, Box 7921
Madison, WI 53707-7921

DNR PUB-WY-013 2014

Melissa Rondou

From: Utrup, Nick <nick_utrup@fws.gov>
Sent: Wednesday, October 19, 2016 4:42 PM
To: Melissa Rondou
Subject: Re: Middle Appleton Dam (P-7264) - Draft Invasive Species Monitoring Report

Follow Up Flag: Follow up
Flag Status: Flagged

No comments from me.

Thanks,

Nick

Nick Utrup
U.S. Fish and Wildlife Service
Twin Cities Field Office
4101 American Boulevard East
Bloomington, MN 55425

Note Number Change Below

Office: (952) 252-0092 Ext. 204
FAX: (952) 646-2873
Email: Nick_Utrup@fws.gov

On Wed, Oct 19, 2016 at 4:37 PM, Melissa Rondou <melissa.rondou@eaglecreekre.com> wrote:

Dear Ms. Laatsch and Mr. Utrup:

On behalf of North East Wisconsin (NEW) Hydro and Neenah Papers (Co-Licensee), Eagle Creek Renewable Energy is hereby submitting the Draft Invasive Species Monitoring Report for the Middle Appleton Dam in accordance with License Article 405 of the Federal License.

If you have comments related to the attached draft report please reply within 30 days. If you have no comments or do not wish to comment please reply “no comments”.

Thank you.

Sincerely,

Melissa Rondou

116 N. State Street

P.O. Box 167

Neshkoro, WI 54960

(920) 293-4628 x 347

(920) 279-4804 Cellular

melissa.rondou@eaglecreekre.com

Melissa Rondou

From: Melissa Rondou
Sent: Wednesday, October 19, 2016 4:38 PM
To: Cheryl Laatsch; Nick Utrup
Cc: Jane Manibusan; Evan Quille
Subject: Middle Appleton Dam (P-7264) - Draft Invasive Species Monitoring Report
Attachments: 16-08-18_LC_Appleton_DRAFT 2016 Invasive Species Monitoring Rept.pdf

Follow Up Flag: Follow up
Due By: Thursday, November 17, 2016 8:00 AM
Flag Status: Flagged

Dear Ms. Laatsch and Mr. Utrup:

On behalf of North East Wisconsin (NEW) Hydro and Neenah Papers (Co-Licensee), Eagle Creek Renewable Energy is hereby submitting the Draft Invasive Species Monitoring Report for the Middle Appleton Dam in accordance with License Article 405 of the Federal License.

If you have comments related to the attached draft report please reply within 30 days. If you have no comments or do not wish to comment please reply “no comments”.

Thank you.
Sincerely,

Melissa Rondou
EAGLE CREEK RENEWABLE ENERGY
116 N. State Street
P.O. Box 167
Neshkoro, WI 54960
(920) 293-4628 x 347
(920) 279-4804 Cellular
melissa.rondou@eaglecreekre.com