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Designing the future

December 2, 2008

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2008 Dec 5

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
ATTN: OEP/DHAC
888 First Street, NE
Washington, DC 20426

Subject: Article 405, *Order Issuing Subsequent License –
Minor Project Issued August 31, 2005*
Middle Appleton Dam Hydroelectric Project
FERC Project No. 7264
Lower Fox River; Outagamie County, Wisconsin

Dear Secretary Bose:

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On behalf of the Fox River Paper Company and N.E.W. Hydro, Inc., we are hereby filing one original and eight copies of the *Invasive Species Monitoring Report* for the Middle Appleton Dam Hydroelectric Project. The plan is being submitted in accordance with Article 405 of the above-mentioned subsequent license.

Copies have been sent to those entities that were consulted on matters related to this filing. Proof of service is also included.

Thank you for your time and consideration in this matter. If you have any questions, please contact me.

Respectfully submitted,

MEAD & HUNT, Inc.

Arie DeWaal
Senior Project Manager

Enclosures

cc: See attached list

Certificate of Service

I hereby certify that I, on behalf of the Fox River Paper Company and N.E.W. Hydro, Inc., have this day served the foregoing documents upon each person designated on the attached distribution list.

Dated this 2nd day of December, 2008.



Arie DeWaal
MEAD & HUNT, Inc.

Distribution List

Middle Appleton Dam Hydroelectric Licensing FERC Project No. 7264

Article 405

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Invasive Species Monitoring Report

**Middle Appleton Dam
Hydroelectric Project
FERC Project No. 7264**

**Lower Fox River
Outagamie County, Wisconsin**

Report prepared for



and

N.E.W. Hydro, Inc.

Report prepared by



November 2008

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Appendix – Agency Consultation

1. Project Area Description

The Middle Appleton Dam Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project No. 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, a large 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 .5 miles, where the next dam is located. The dam is located between Appleton Lock Nos. 2 and 3. A project area map is included in Figure 1.

The project's dam is one of 13 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 .75 miles away. Associated with these dams are 18 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.

This study was performed in compliance with License Article 405, which dictates annual monitoring for purple loosestrife, Eurasian water-milfoil, and zebra mussels through 2008 and alternate years afterwards.

LARGE-FORMAT IMAGES

One or more large-format images (over 8 1/2" x 11") go here.
These images are available in e-Library at:

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2. Identification of Invasive Species

A. Purple loosestrife

Purple loosestrife (*Lythrum salicaria*) is a perennial wetland plant found in wet and moist habitats such as marshes, streams, and riverbanks. Its vivid purple bloom makes it readily seen in late summer. It tolerates changes in soil moisture and temperature, and once established, tends to predominate over other plant life. As a result, its presence can significantly reduce diversity of native vegetation and associated wetland species. This plant usually invades wetlands by germinating in riparian mud flats or wet soil areas and can persist in seed banks for many years after invasion. The seeds can be easily transported on flood waters and invade downstream areas.

B. Eurasian water-milfoil

Eurasian water-milfoil (*Myriophyllum spicatum*) is an invasive plant that tends to out-compete native aquatic plants, including native water-milfoils. Accidentally introduced to North America from Europe, it is not found in the majority of inland lakes in Wisconsin. Unlike many other plants, Eurasian water-milfoil reproduces vegetatively by producing shoot fragments and runners, rather than relying on seed for reproduction. Plant fragments and runners, which may remain viable for weeks if kept moist, can be carried downstream by water currents or inadvertently picked up and transported by boaters.

Eurasian water-milfoil can be difficult to differentiate from native water-milfoil species, as both have slender stems with feathery leaves. However, a Eurasian water-milfoil typically has 12 to 21 pairs of leaflets, while the native northern water-milfoil usually has five to nine pairs. Another identifying characteristic of the Eurasian variety is its tendency to form dense mats of vegetation that crowd out other species. These dense stands threaten the integrity of diverse aquatic communities.

C. Zebra mussels

The zebra mussel (*Dreissena polymorpha*) is a small, non-native mussel originally found in Russia. In 1988, this animal was transported to North America in the ballast water of a transatlantic freighter and colonized parts of Lake St. Clair. In less than 10 years, zebra mussels have spread to all five Great Lakes and into the Mississippi, Tennessee, Hudson, and Ohio River Basins. Many inland waters in Wisconsin are now infested with zebra mussels. Zebra mussels are very successful invaders because they live and feed in many different aquatic habitats, breed prolifically (each female produces 1 million eggs per year), and have both a planktonic larval stage and an attached adult stage. Young zebra mussels are planktonic. They can seriously impair the diversity of benthic aquatic habitats and also impose high maintenance costs on intake and water supply structures.

3. Survey Results

The Middle Appleton Dam Project was inspected for purple loosestrife and Eurasian water-milfoil on July 25, 2008. Small shoreline portions of the flowage around West's Canal and the backwater area around Vulcan Street were examined by pedestrian survey from the shore. A canoe was then used to survey the waters and shore both above and below the Middle Appleton Dam. The industrialized nature of the shore has left very little habitat for terrestrial wetland vegetation to take root. No occurrences of purple loosestrife were observed.

The waters above and below the Middle Appleton Dam were at significantly higher levels and velocities than encountered during last year's survey, when the waters were low from drought. The higher water levels this year were probably due to long-term drainage from the large June precipitation amounts and flooding experienced within the Fox River watershed. The water also appeared more turbid than in 2007. Aquatic vegetation was limited to a narrow strand of Eurasian water milfoil along the north shore of the impoundment, as shown in Figure 1. Several small, drifting fragments were also seen in the mid-channel area below the dam. No other aquatic plants were found in project waters either above or below the Middle Appleton Dam. The June flood apparently had an adverse effect on the growth of aquatic vegetation this year, as the cluster of plants observed in the mid-stream shallows in 2007 was absent this year.

Neenah Paper FR, LLC personnel have been monitoring for zebra mussels as outlined in the Project's *Invasive Species Monitoring Plan*. To date, there have been no observed occurrences of zebra mussels associated with project structures. If zebra mussels are observed in the future, zebra mussel monitoring at the project will be discontinued and the Wisconsin Department of Natural Resources will be contacted.

Section 4
Agency Consultation

4. Agency Consultation

The attached Appendix presents correspondence related to agency review. No comments were received as of the date of this filing.

Appendix
Agency Consultation

MEAD HUNT

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September 25, 2008

Ms. Louise Clemency
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Subject: Article 405, *Order Issuing Subsequent License – Minor Project*, Issued August 31, 2005
Middle Appleton Dam Hydroelectric Project
FERC Project No. 7264
Lower Fox River; Outagamie County, Wisconsin

In accordance with Article 405 of the *Subsequent License – Minor Project* for the Middle Appleton Dam Hydroelectric Project, we are hereby submitting a "draft" copy of the *Invasive Species Monitoring Report*. We would appreciate receiving your comments on this report within 30 days.

Thank you very much for your time and cooperation in this matter. If you have any questions, please contact me.

Sincerely,

MEAD & HUNT, Inc.



Arie DeWaal
Senior Project Manager

Enclosure

cc: Mr. John Rom, Neenah Paper FR, LLC
Mr. Chuck Alsberg, N.E.W. Hydro, Inc.