

ORIGINAL



North American Hydro Holdings, Inc.

116 State Street, P.O. Box 167, Neshkoro, WI 54960 USA

Tel 920-293-4628 Fax 920-293-8087 Email nah@nahydro.com Web www.nahydro.com

December 1, 2010

The Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

FILED  
SECRETARY OF THE  
COMMISSION  
2010 DEC - 6 P 1:33  
FEDERAL ENERGY  
REGULATORY COMMISSION

**Re: Middle Appleton Dam, Project No. 7264, Neenah Paper Inc.  
and NEW Hydro LLC  
Article 405, Invasive Species Monitoring Report 2010**

Dear Secretary:

On behalf of Neenah Paper Inc. and NEW Hydro, LLC, and in accordance with the Invasive Species Monitoring Plan per license article named above, North American Hydro Holdings Inc. submits (1) original and (8) copies of the Invasive Species Monitoring Report for 2010 for the above named project. Copies of the inventory have been sent to the Wisconsin Department of Natural Resources and the US Fish & Wildlife Service.

The Licensee has felt the need to clarify portions of the original report's contents. Hence, a copy of the Invasive Species Monitoring Report has been resent to the Agencies along with a Clarification Statement, Supplemental Information Page, and USGS Graph. North American Hydro Inc. requested the Agencies to review the additional information per email dated Nov. 8, 2010 and no comments were given. A copy of the Agency correspondence is included with this filing.

If you have any questions regarding this submission, please contact Mr. Cory Mirr at 920-293-4628 (ext. 18) or email at cory.mirr@nahydro.com.



Sincerely,  
***NORTH AMERICAN HYDRO HOLDINGS, INC.***

*Charles Alsberg*

FOR Charles Alsberg  
Chief Executive Officer

**Attachments:** Invasive Species Monitoring Report for 2010.  
Clarification to a Statement made in the Draft Invasive Species Monitoring Report for 2010.  
Supplemental Information Page and USGS Graph to be included in the Invasive Species Monitoring Report for 2010.

**Cc:** FERC – CRO  
WI Dept. of Natural Resources  
US Fish and Wildlife Service  
Mr. Jim Rom, Neenah Paper Inc.  
Regional, NAHH.

**FINAL**  
**Invasive Species**

**2010 Monitoring Report**  
**(Per License Article 405)**

For the

**Middle Appleton Dam Hydroelectric Project**  
**FERC Project # 7264**

**Lower Fox River**  
**Outagamie County, Wisconsin**

**Submitted by:**

**North East Wisconsin Hydro, Inc. (N.E.W.)**  
**116 North State Street – P.O. Box 167**  
**Neshkoro, Wisconsin 54960**

**December 2010**

**Report Prepared**

**For**

**Neenah Paper, Inc. And N.E.W. Hydro, Inc.**

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## **I. Project Area Description**

The Middle Appleton Dam Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project #7264 is located on the Lower Fox River in the city of Appleton, Wisconsin within its corporate limits. The city of Appleton is located in east – central Wisconsin and specifically in south – central Outagamie County. The Lower Fox River empties into the southern end of Green Bay approximately 31 miles downstream from the project. Green Bay is a bay located along the northwest part of Lake Michigan.

The Lower Fox River has thirteen (13) dams spanning its shores, of which, the Appleton Dam is one. The impoundment of the project is 35.5 acres in size. It extends south – southwest upstream for approximately one half (.5) miles where the next dam is located between Appleton Lock # 2 and # 3. Downstream, the next dam is located approximately three quarters (.75) of a mile away. In association with the thirteen (13) dams are eighteen (18) lock structures.

The project is located within an urbanized and heavily industrialized area along the Lower Fox River known as the “flats”. Plant growth is sparse and confined to only some of the shoreline area along this stretch of river.

The 2010 survey was performed in compliance with article 405. Article 405 of the License requires annual monitoring for Purple Loosestrife, Eurasian Water-Milfoil, and Zebra Mussels thru 2008 and then alternately after 2008. The next required monitoring will be performed in 2012.

## 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 natural and as well as 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 Water-Milfoil

Eurasian Water-Milfoil (*Myriophyllum spicatum*) is a highly invasive aquatic plant that out-competes and replaces native aquatic plants, including native water-milfoils such as Northern Water-Milfoil (*Myriophyllum sibiricum*), 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 by eventually replacing other native species threaten the integrity of otherwise diverse aquatic communities. It has long spaghetti like stems, limp, feather-like leaves arranged whorls (3-5), and 12-21 leaflet pairs per leaf. The plant was accidentally 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 the North America. It was originally 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, and into 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 that deprives native fish and other aquatic life of food and habitat as well as being a very costly to boaters, the shipping industry, and the maintenance of water intake and water supply structures.

### III. Survey Results

The Middle Appleton Dam Project, FERC # 7264 was surveyed on August 10, 2010 for Purple Loosestrife and Eurasian Water – Milfoil. River conditions were dangerous. Extreme high river flows were encountered caused by high amounts of rain with more in the forecast. The USGS flow gage located just upstream from the Appleton Project showed a discharge of 9088 CFS at the time of the survey. Previous surveys were done with discharges of 1520 CFS in 2006 and 4290 CFS in 2008. However, the 2008 report indicates higher velocities and water levels than in previous surveys and very little Eurasian Water Milfoil were found. Weather conditions were very bright sunshine, hot, humid, with temperature in the mid to high 80's. Because of the river conditions, only a foot survey of project lands within the project boundaries was conducted. It should be noted that NAH personnel had planned to perform the survey during the week prior to the 10<sup>th</sup> however river conditions were bad at that time. The operator of the project advised us not to go on the river. Due to time constraints and other work to be completed, a decision was made to do the survey the following week on the 10<sup>th</sup> even if a canoe/kayak survey could not be accomplished. NAH personnel decided an attempt would be made to perform a survey of the project by canoe/kayak at a later date. To enhance identification, and documentation, a digital camera, laser rangefinder, and high quality binoculars were used during the monitoring survey.



Photo 1 – Conditions on Lower Fox River - August 10, 2010



**Photo 2 – Conditions on Lower Fox River - August 10, 2010**

The length of the survey was approximately 4 hours beginning at 11:00 a.m. The order of the survey from beginning to end was as follows:

1. NAH Power Plant
2. The shores and up stream to the train trestle and then to the southern most project boundary at the upper dam
3. Traveling north on east shoreline between the old Oneida Bridge and northern most project boundary
4. Traveling south on west shoreline to the old Oneida Bridge
5. Power Canal.

No Purple Loosestrife was observed during the monitoring event. The heavily developed shore has left little habitat for vegetation to establish itself and grow. No Eurasian Water – Milfoil was observed as no canoe/kayak survey was performed. However, it was noted in past surveys and is probable that it still exists. No Zebra Mussels were observed during the survey by the survey crew. However, the operator of the dam indicated that he observed what he thought were Zebra Mussels attached to chunks of wood and metal during the past year while fishing above the dam. These claims could not be confirmed by survey personnel during the 2010 survey due in a large



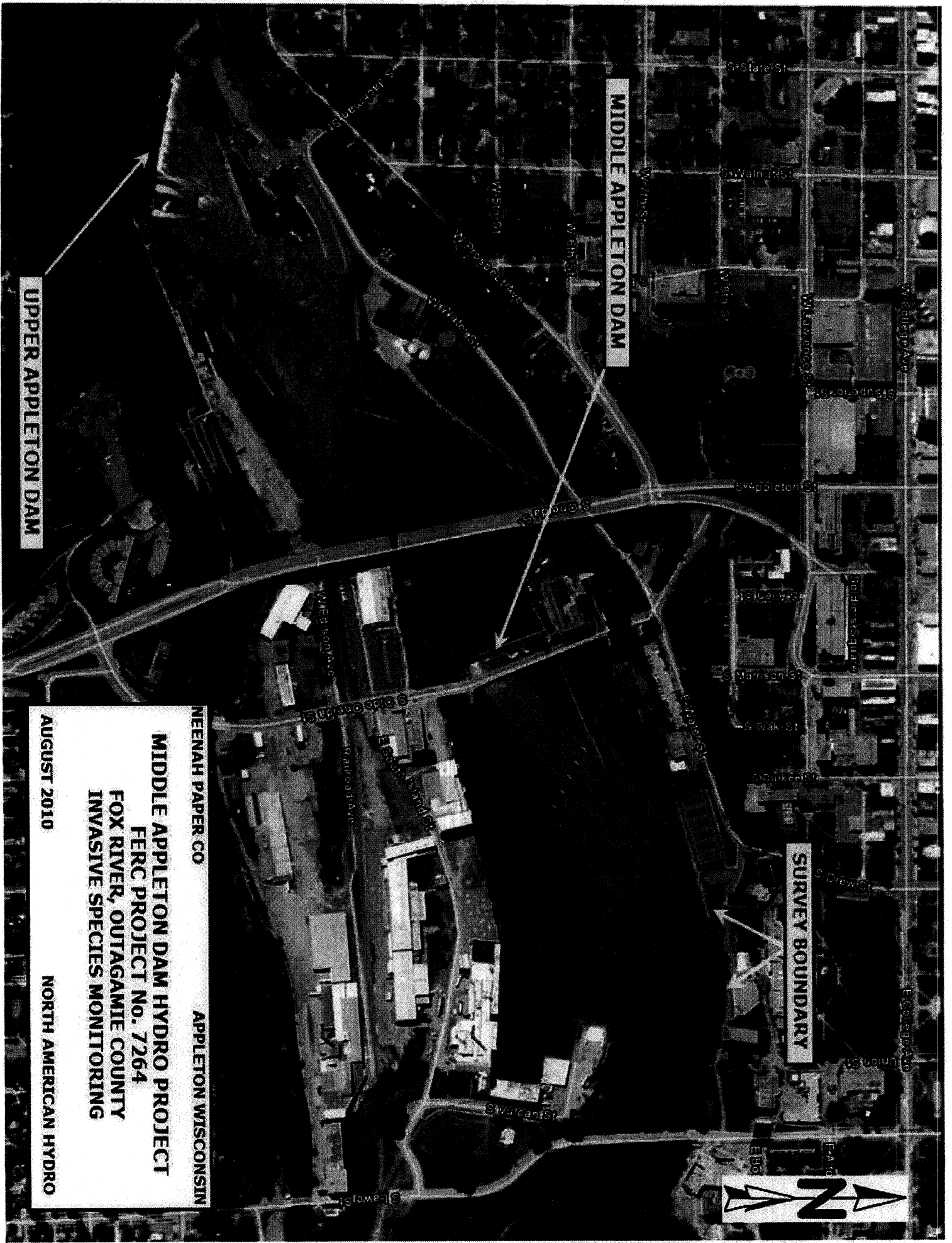
part to the high water conditions. NAH will continue to monitor for Zebra Mussels through out the coming year as well as during the formal annual survey. If at any time they are found, the Wisconsin Department of Natural Resources will be contacted and monitoring for Zebra Mussels will be discontinued.

NAH personnel evaluated the river on August 26<sup>th</sup> and found high water levels, rain, and thunderstorms were in the forecast. The river was again evaluated on September 2, 2010. At this time river flows were 4778 CFS and rising. Because of these types of conditions, no survey by canoe/kayak of the project was done during the 2010 survey.



**Photo 3 - Conducting Appleton Middle Dam Invasive Species Survey – August 10, 2010**

## IV. Invasive Species Survey Map



UPPER APPLETON DAM

MIDDLE APPLETON DAM

SURVEY BOUNDARY

NEENAH PAPER CO      APPLETON WISCONSIN

**MIDDLE APPLETON DAM HYDRO PROJECT**

FERC PROJECT NO. 7264

FOX RIVER, OUTAGAMIE COUNTY

INVASIVE SPECIES MONITORING

AUGUST 2010      NORTH AMERICAN HYDRO



## V. Clarification Statements

November 5, 2010

## Clarification Statement

North American Hydro (NAH) would like to make a clarification to a statement made in the Draft Invasive Species Monitoring Report for 2010 regarding the Middle Appleton Dam, Appleton WI. FERC Project #7264, Article 405

### Clarification

On page #7, (Survey Results) in the first full sentence, North American Hydro stated that: "*NAH will continue to monitor Zebra Mussels throughout the coming year as well as during the formal annual survey*".

This statement should have read: *NAH will continue to monitor Zebra Mussels throughout the coming year as well as during the next Invasive Species Monitoring Survey in 2012.*

November 5, 2010

## Supplemental Information Page

Supplement to the Appleton Middle Dam, Draft Invasive Species Monitoring Survey for 2010.  
FERC Project #7264

During the designated survey period for purple loosestrife and Eurasian watermilfoil (July 18 – August 7), unusually high flows persisted at the project resulting in unsafe conditions to perform an on-the-water survey. Based on actual observations and previous survey notes, it was determined that flows below 4300 cfs would be necessary in order to perform a safe and effective water survey. The survey crew monitored conditions during the entire period and afterward to determine if there would be an opportunity to conduct a survey on the water. At one time, flows dropped to as low as 5,000 cfs but then immediately increased to 11,000 cfs. It was decided to perform the purple loosestrife survey from land, and this was accomplished on August 10 while plants were still observed vigorously blooming in road ditches in the area.

On August 16, flows still hadn't abated and it was necessary for the crew to move to the Alpena, MI area to perform other scheduled surveys.

On the evening of August 26, the survey crew returned from Alpena, MI and stopped at the Appleton project to observe conditions. Flows were low and manageable and it was decided to perform a water based survey for Eurasian watermilfoil in the following week. However, on the date of the rescheduled survey, rain and thunderstorms moved into the area once again causing unsafe and high flow conditions.

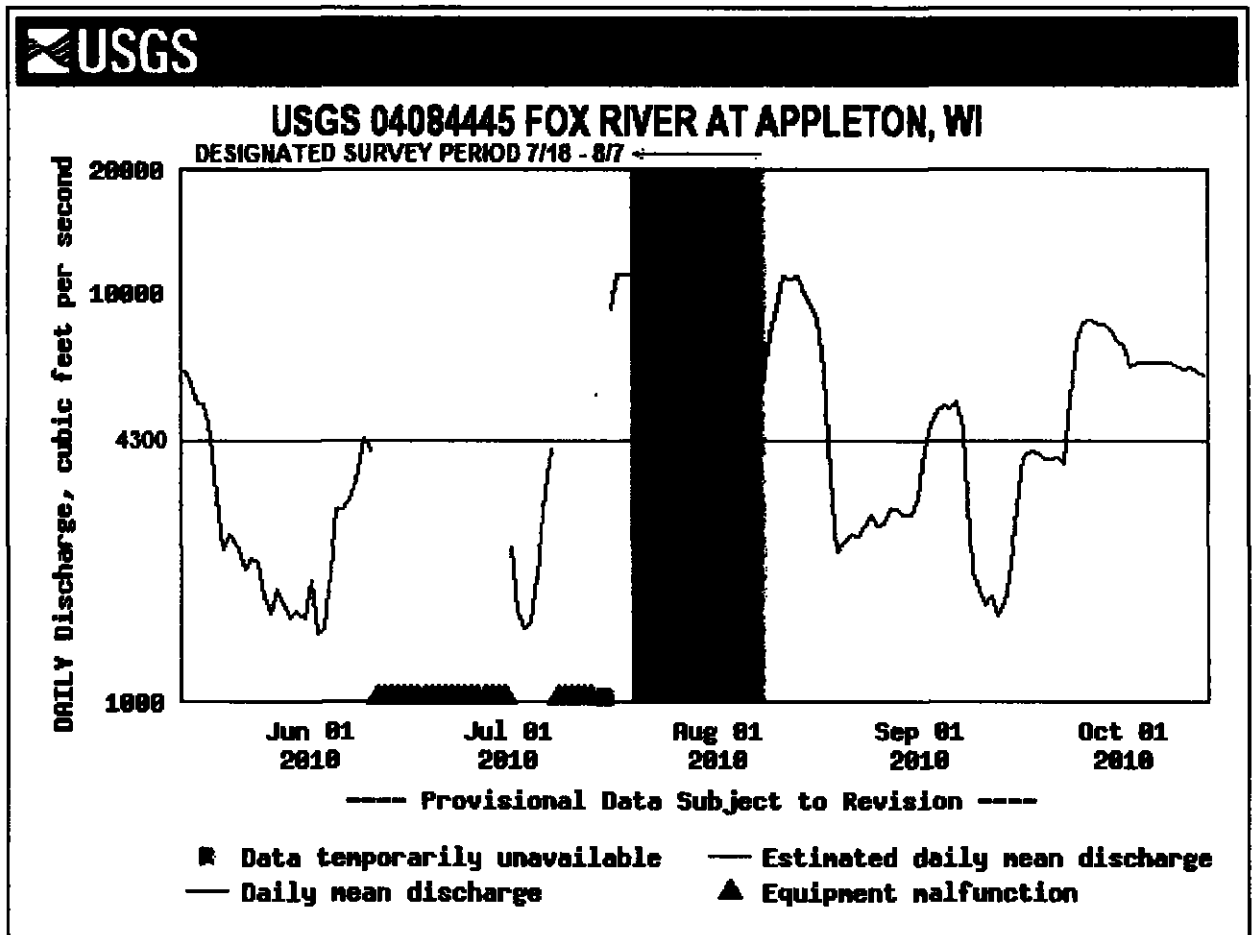
High flow conditions continued until the report was compiled and sent to the agencies for comment by the required due date. Due to these conditions, no on-the-water survey was performed in 2010.

November 5, 2010

### Supplemental Information Page

### USGS GRAPH

Supplement to the Appleton Middle Dam, Draft Invasive Species Monitoring Survey for 2010.  
FERC Project #7264



## **VI. Agency Consultation**

The attached Appendix A contains correspondence related to agency review of the Invasive Species 2010 Monitoring Report.



**Appendix A**

**Agency Consultation**

**Cory Mirr**

---

**From:** Nick\_Utrup@fws.gov  
**Sent:** Thursday, November 18, 2010 1:52 PM  
**To:** Cory Mirr  
**Cc:** Jereme Klassy; michael.donofrio@wisconsin.gov; Rick Loeffler  
**Subject:** Re: Clarification and Supplemental Information for Draft Appleton Report #7264

Hi Cory,

The USFWS has reviewed your clarification and supplemental information for the Draft Appleton Report (FERC Project No. 7264) and has no comment.

As always, I appreciate having the opportunity to respond to your inquiries.

Sincerely,

Nicholas J. Utrup

Hydropower Coordinator  
U.S. Fish and Wildlife Service  
Green Bay Ecological Services Field Office  
2661 Scott Tower Drive  
New Franken, WI 54229

Office: (920) 866-1736  
Mobile: (920) 530-9937  
FAX: (920) 866-1710  
Email: [Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)

"Cory Mirr"  
<cory.mirr@nahydro.com>

11/08/2010 09:20 AM

<[Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)>, To  
<[michael.donofrio@wisconsin.gov](mailto:michael.donofrio@wisconsin.gov)>

"Rick Loeffler"  
<[rick.loeffler@nahydro.com](mailto:rick.loeffler@nahydro.com)>, cc  
"Jereme Klassy"  
<[jklassy@nahydro.com](mailto:jklassy@nahydro.com)>

Subject  
Clarification and Supplemental  
Information for Draft Appleton  
Report #7264

Nick and Mike,

Please find attached a copy of our Appleton Middle Dam, Invasive Species Report for 2010 which you have already received back in September. Also accompanying this document is a clarification statement, a supplemental information page, and a USGS Graph of the Fox River flows for our scheduled survey dates. We would like to voluntarily submit this additional information into the report and we will need your review and comments once again before filing with FERC. We feel that we have not explained ourselves adequately in our report when it comes to the decision of not completing the Eurasian Watermilfoil portion of the survey at Appleton. The supplemental information page and graph should further explain our reasoning on not attempting to enter the water during our scheduled time at the project.

The attached Clarification Statement simply explains a mistake in the survey monitoring years that we would like to correct.

Your review and comment would be appreciated and I can follow up with a phone call in a week or two.

Thanks,  
Cory

[attachment "10-09-10 ggr APTN 2010 Invasive Species Report to Agencies .pdf" deleted by Nick Utrup/R3/FWS/DOI] [attachment "10-11-05 ctm APLT to FERC-supplemental information.docx" deleted by Nick Utrup/R3/FWS/DOI] [attachment "10-11-05 ctm USGS Graph for Appleton.docx" deleted by Nick Utrup/R3/FWS/DOI] [attachment "10-11-05 ctm APLT to FERC- clarification to a statement.docx" deleted by Nick Utrup/R3/FWS/DOI]

**Cory Mirr**

**From:** Donofrio, Michael C - DNR [Michael.Donofrio@wisconsin.gov]  
**Sent:** Thursday, November 18, 2010 4:07 PM  
**To:** Nick\_Utrup@fws.gov; Cory Mirr  
**Cc:** Jereme Klassy; Rick Loeffler  
**Subject:** RE: Clarification and Supplemental Information for Draft Appleton Report #7264

WDNR concurs with FWS and we have no comment on the related documents.

P Michael Donofrio  
Lower Fox/ Upper Green Bay Fisheries Supervisor Bureau of Fisheries Management Wisconsin  
Department of Natural Resources Peshtigo Service Center  
101 N Ogden Rd  
Peshtigo, WI 54157  
(\*) phone: (715)582-5050  
(\*) fax: (715) 582-5005  
(\*) e-mail: [Michael.Donofrio@Wisconsin.gov](mailto:Michael.Donofrio@Wisconsin.gov)

-----Original Message-----

**From:** [Nick Utrup@fws.gov](mailto:Nick_Utrup@fws.gov) [[mailto:Nick Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)]  
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Email: [Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)

"Cory Mirr"  
<cory.mirr@nahydro.com>

11/08/2010 09:20

To  
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<[michael.donofrio@wisconsin.gov](mailto:michael.donofrio@wisconsin.gov)>

AM

CC

"Rick Loeffler"  
<[rick.loeffler@nahydro.com](mailto:rick.loeffler@nahydro.com)>,  
"Jereme Klassy"  
<[jklassy@nahydro.com](mailto:jklassy@nahydro.com)>

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