STORAENSO

ORIGINAL

September 13, 2004

Office of the Secretary,
Federal Energy Regulatory Commission
888 1st Street, N.E.
Washington, D.C. 20426

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Little Quinnesec Falls Hydroelectric Project, FERC No. 2536 – Article 409, 2004 Exotic Species Report

In accordance with the Commission order approving the monitoring plan for Purple Loosestrife and Eurasian Milfoil within the Project boundary, we are submitting the enclosed report for 2004. No evidence of Purple Loosestrife was found within the Project however, one site, downstream of the Project, contained a small colony. This site was manually removed and disposed of.

Additionally, the surveyors did identify seven small colonies of Eurasian Milfoil. As indicated in their attached report, the six new patches are upstream of the one existing patch observed in 2003. This would seem to indicate that these new sites are the result of downstream passage of seed from above the Project or inadvertent introduction via boaters. Appropriate signage informing area users of the river are located at the boat access sites. Additionally, this information is being forwarded to the City of Niagara concurrent with this filing recommending that they treat the Purple Loosestrife in accordance with our consultant's comments.

Sincerely,

STORA ENSO NORTH AMERICA CORPORATION

Mark E. Anderson
Resources Manager

Enclosure: White Water Associates, Inc. Report

CC: File (Little Quinnesec Falls, LG-90-30 – Article 409)
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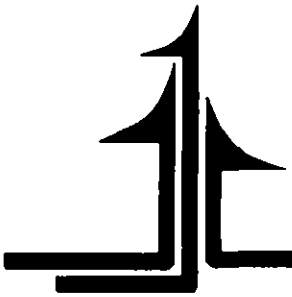
Mr. Larry Smith, U.S. Fish & Wildlife Service, New Franken, WI 54311-8331
Mr. Don Novak, Administrator, City of Niagara, 1029 Roosevelt Road, Niagara, WI 54151
Ms. Angie Tornes – National Park Service, Milwaukee, WI



WHITE WATER ASSOCIATES, INC.

PURPLE LOOSESTRIFE AND EURASIAN WATERMILFOIL MONITORING

Hydro Project No. 2536, Little Quinnesec Falls

Submitted to:

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September 2004

I. SUMMARY

Annual monitoring for purple loosestrife (*Lythrum salicaria*) and Eurasian watermilfoil (*Myriophyllum spicatum*) has been designated as part of the FERC requirements for the relicensing of the Hydro Project No. 2536, Little Quinnesec Falls, on the Menominee River by Stora Enso North America Corp., Niagara Mill, formerly known as Consolidated Papers Inc., Niagara Division. On August 2, 2001, scientists from White Water Associates, Inc. conducted visual and grab sample surveys by boat in the project area from Little Quinnesec Dam to Big Quinnesec Dam. In addition, a short distance downstream of the Little Quinnesec Dam was inspected on foot.

Purple loosestrife was found **only** downstream of the Little Quinnesec Dam, outside the project area, on the Wisconsin side in the City of Niagara approximately 100 feet downstream of the boat access site. We found about 10 small non-flowering stalks growing along the shoreline. These were pulled and placed in a trash can.

As in 2002 and 2003, Eurasian watermilfoil (*Myriophyllum spicatum*) was recorded in the project area. Identification of the species was confirmed in 2002 via genetic analysis by Michael Moody and Dr. Donald Les of the University of Connecticut. The species was recorded at 7 locations.

Informational warning signs regarding nuisance aquatic plants acquired from WDNR have been posted at public landings in the project area. Informational brochures about purple loosestrife were made available to the public in 1999.

II. INTRODUCTION

Monitoring for purple loosestrife (*Lythrum salicaria*) and Eurasian watermilfoil (*Myriophyllum spicatum*) was conducted on August 17, 2004 as required by Article 409 of the order issuing a license for Hydro Project No. 2536, Little Quinnesec Falls. There have been reports of both species within the Menominee River basin since 1990 although none from the project area prior to 2002 and 2003. Eurasian watermilfoil has been reported from the Twin Falls Flowage immediately upstream from the project area since 1995.

These two exotic species were not reported from the project area reported during surveys from the license application process (1990) and neither species was confirmed within the project area during monitoring in 1998, 1999, 2000, or 2001. Purple loosestrife was found in 1998, 1999, 2000, 2001, 2002, 2003 and 2004 growing along the Wisconsin shoreline below the Little Quinnesec Dam, outside the project area, within the city of Niagara, about 100 feet below the public boat access. There has been no increase in this patch and no blossoming stalks for the last two years.

III. METHODS

On August 17, 2004, Elizabeth Rogers and David Tiller of White Water Associates, Inc., used a small boat and motor to look at the shoreline between the two dams, including the numerous backwater wetlands. Most of the backwater wetlands are densely vegetated with a diversity of aquatic plants (submergent and emergent) making motor use impossible. Therefore, oars were used for complete access. Binoculars were used to scan the shore and less accessible backwater areas. Purple loosestrife in flower is a showy and easily identifiable plant during its peak blossoming period that extends from late July through August at this latitude, depending on the variation of the year. All wetlands and backwaters connected to the reservoir in the project area were visually inspected. As a single loosestrife plant can produce prodigious quantities of seeds and start a major "invasion," survey work, given current technology, must rely on physical surveys on-site, not remote techniques.

We surveyed for Eurasian watermilfoil by taking grab samples from aquatic plant beds using hands and a metal garden rake. We then examined the leaves, counting leaflets and taking an average of average leaves. Number of leaflets is the main morphological trait that can be used to separate the native northern watermilfoil (*Myriophyllum sibiricum*, formerly *exalbescens*) from Eurasian watermilfoil (*Myriophyllum spicatum*), although there is considerable variability within each species. Generally, the average number of leaflets for northern watermilfoil is 5-11 with a reported maximum of 13. The average number for Eurasian watermilfoil is 14-17 with a maximum of 20. Also useful later in the season is the presence of winter buds (turions) on northern watermilfoil, structures not found on Eurasian watermilfoil. In addition, Eurasian watermilfoil exhibits a different growth form than the native species, branching repeatedly at the water's surface and creating a canopy of floating stems and leaves.

IV. FINDINGS AND MANAGEMENT RECOMMENDATIONS

Purple Loosestrife

Findings. No purple loosestrife was found within the project area, lying between the two dams. Below the Little Quinnesec Dam on the Wisconsin side of the river, associated with the City of Niagara, we found one small patch of purple loosestrife growing along the shoreline approximately 100 feet downstream of the public landing (about 50 feet below the access overlook) (see map in Appendix). We found about 10 non-flowering stems of loosestrife growing in the moist soil in the same location as previous years. We carefully pulled the plants we found and removed them from the site. Pulling plants is not sufficient to eliminate the species as it can sprout from fragments of roots left in the soil, or seeds still present in the seed bank. Removal of the flowering stalks each year will limit the number of seeds produced and the species' ability to propagate via seeds. More effective control would require application of herbicide to freshly cut stems. Pulling the existing stems of loosestrife has prevented it from blooming and spreading.

Eurasian Watermilfoil

Findings. The project area continues to have a robust diversity of native aquatic plants. Native watermilfoils in the flowage include *Myriophyllum heterophyllum* and *M. sibiricum*. *Vallisneria americana* and *Potamogeton richardsonii* continue to be some of the most abundant species throughout the flowage. Other species comprising the aquatic plant community include *Elodea canadensis*, *Elodea nuttallii*, *Potamogeton spirillus*, *P. epihydrus*, *P. diversifolius*, *P. zosterformis*, *P. robbinsii*, *Zosterella dubia*, *Ceratophyllum demersum*, *Ranunculus longirostris*, and *Utricularia vulgaris*.

Eurasian watermilfoil was found at 7 locations within the project area (map in Appendix). These locations are fairly shallow backwaters with little current. In 2004, many locations were upstream of the patch present in 2003 suggesting that a new introduction of the species may have occurred by traveling downstream from another area of infestation. The next flowage upstream, Twin Falls Flowage, has had records of Eurasian watermilfoil since 1995. The site where Eurasian watermilfoil was recorded in 2002 and 2003 did not exhibit any increase in abundance. In fact, it may have bee

slightly less abundant this year than previous years. In this location, Eurasian watermilfoil is still part of a mixed community of aquatic species that included *Potamogeton foliosus*, *Utricularia vulgaris*, and *Ceratophyllum demersum.* In the other locations, most of the plants are present as individual scattered plants mixed with other species. At this point, Eurasian watermilfoil does not appear to be "taking over" the locations in which it was found.

V. CONCLUSIONS

Eurasian watermilfoil should continue to be monitored in the project area for changes in extent and dominance. At the present time it appears to be coexisting with the rest of the aquatic plant community.

The purple loosestrife just downstream from the project area could be readily controlled through repeated applications of herbicide (*Round-Up or Rodeo®*). Pulling the larger flowering plants will slow seed production, but not eliminate the species. Given the species' propensity to spread, continued control of this alien even outside the project area appears to be a very worthwhile investment in terms of preventing the establishment of this alien within the project area. In 1999, brochures on loosestrife control were made available to the public.

Warning signs form Wisconsin DNR, advocating that boaters clean their motors of any plant material from other bodies of water, were posted at boat landings in 2001 and are still present.

APPENDIX