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FEDERAL ENERGY
REGULATORY
COMMISSION

NIAGARA DIVISION
1101 MILL STREET, NIAGARA, WI 54151-1432
PHONE: (715) 251-3151 FAX: (715) 251-1730

October 20, 1999

The Honorable David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street NE-11G-1
Washington, DC 20426

Re: Little Quinnesec Project - FERC Project No. 2536 - 042
Compliance with Article 409 of Order Issuing License for Little Quinnesec Project

Dear Mr. Boergers:

On March 13, 1998, FERC issued an order approving a Purple Loosestrife and Eurasian Milfoil Monitoring plan for Little Quinnesec Project (FERC No. 2536) operated by Niagara Division of Consolidated Papers, Inc.


In August of 1999, White Water Associates conducted the annual survey for Purple Loosestrife and Eurasian Milfoil in the project area. The report on this survey is enclosed and hereby submitted to FERC and the Resource Agencies. Copies of the cover letters to the Resource Agencies are included as part of this submittal.

Also included in this submittal are 8 copies of the report for FERC internal distribution.

Please direct questions or comments to Dave Schmutzler (715) 251-8253.

Yours truly,

CONSOLIDATED PAPERS, INC.



David W. Schmutzler
Environmental Superintendent

DWS:ad
enclosure

cc: MDNR
WDNR
US Fish & Wildlife

Paul Penkivech (N)
Craig Paulson (N)
Roger Chapman (N)

Mark Anderson (PS)
FERC (File 5000-0200)

AJ
FERO DOCUMENT
OCT 25 1999

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October 20, 1999

Jim Fossum
US Fish & Wildlife
1015 Challenger Ct.
Green Bay, WI 54311

Dear Mr. Fossum:

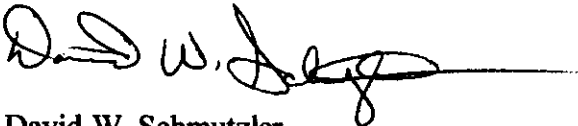
Enclosed is a copy of the 1999 Purple Loosestrife and Eurasian Milfoil Monitoring for the Little Quinnesec Falls Hydroelectric Project, FERC No. 2536 operated by the Niagara Division of Consolidated Papers, Inc.

The Purple Loosestrife and Eurasian Milfoil Monitoring is required by Article 409 of our license and the compliance plan was approved by FERC in an order dated March 13, 1998. The plan required filing the survey report with FERC by October 31.

Please review the information provided and comment as needed. If you have any questions, please contact Dave Schmutzler (715) 251-8253 or Paul Penkivech (715) 251-8387 at the Niagara Division.

Yours truly,

CONSOLIDATED PAPERS, INC.



David W. Schmutzler
Environmental Superintendent

DWS:sd(mp)
enclosures

cc: MDNR P. Penkivech - N
USF&WL M. Anderson - N
G. Maule - N

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October 20, 1999

Ms. Janice Fenske
MDNR Fisheries Division
P.O. Box 30446
530 W. Alleghan St.
Lansing, MI 48909-7946

Dear Ms. Fenske:

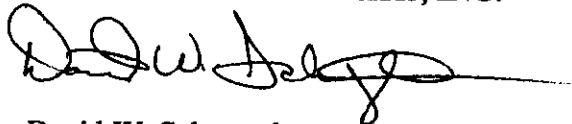
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October 20, 1999

Tom Thuemler
WDNR
P.O. Box 127 - 101 N. Ogden
Peshtigo, WI 54157

Dear Mr. Thuemler:

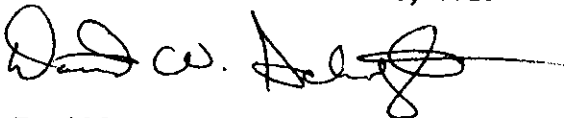
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Yours truly,

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David W. Schmutzler
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October 20, 1999

Dear Niagara Resident:

As a landowner along the Menominee River below the Little Quinnesec Dam you may have noticed a showy flower with a purple to magenta spike of blossoms growing along the shoreline. If you have seen such a plant on your property, you may have a beginning infestation of the aggressive weed, purple loosestrife. Although it is beautiful to look at, it has become a terrible nuisance species in many Wisconsin and Michigan wetlands, crowding out native plant species that provide valuable habitat for waterfowl, songbirds, and other animals and choking waterways.

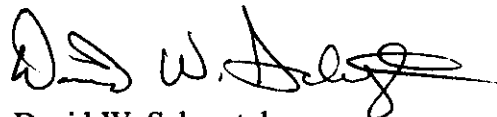
Currently, there are only a few plants growing along the river. They can still be relatively easily controlled before their population increases and spreads along the river, and potentially into the impoundment backwaters. Consolidated Paper is asking your help in keeping this aggressive weed under control on your own property.

To assist you with identification and control of this plant, we have enclosed an informative brochure describing identification, control methods, and non-harmful similar-appearing garden plants. The best time to look for this plant is the flowering period from late July to mid-August. If you need further information, a Wisconsin Department of Natural Resources contact person is listed on page 7 of the brochure.

Thank you for your assistance in helping keep the Menominee River and its wetlands healthy and diverse for future generations.

Sincerely,

CONSOLIDATED PAPERS, INC.



David W. Schmutzler
Environmental Superintendent

DWS:sd(mp)
enclosures

Purple Loosestrife . . .

- displaces native wetland vegetation
- degrades wildlife habitat
- displaces rare plants and animals
- chokes waterways

Identification

Growth: Upright, semi-woody, hardy perennial with a dense bushy growth of 1 to 50 stems. The green to purple stems grow three to seven feet tall and die back each year.

Flowers: Purple to magenta, and numerous on long spikes. Individual flowers are 1/2 to 3/4 across, with five or six petals.

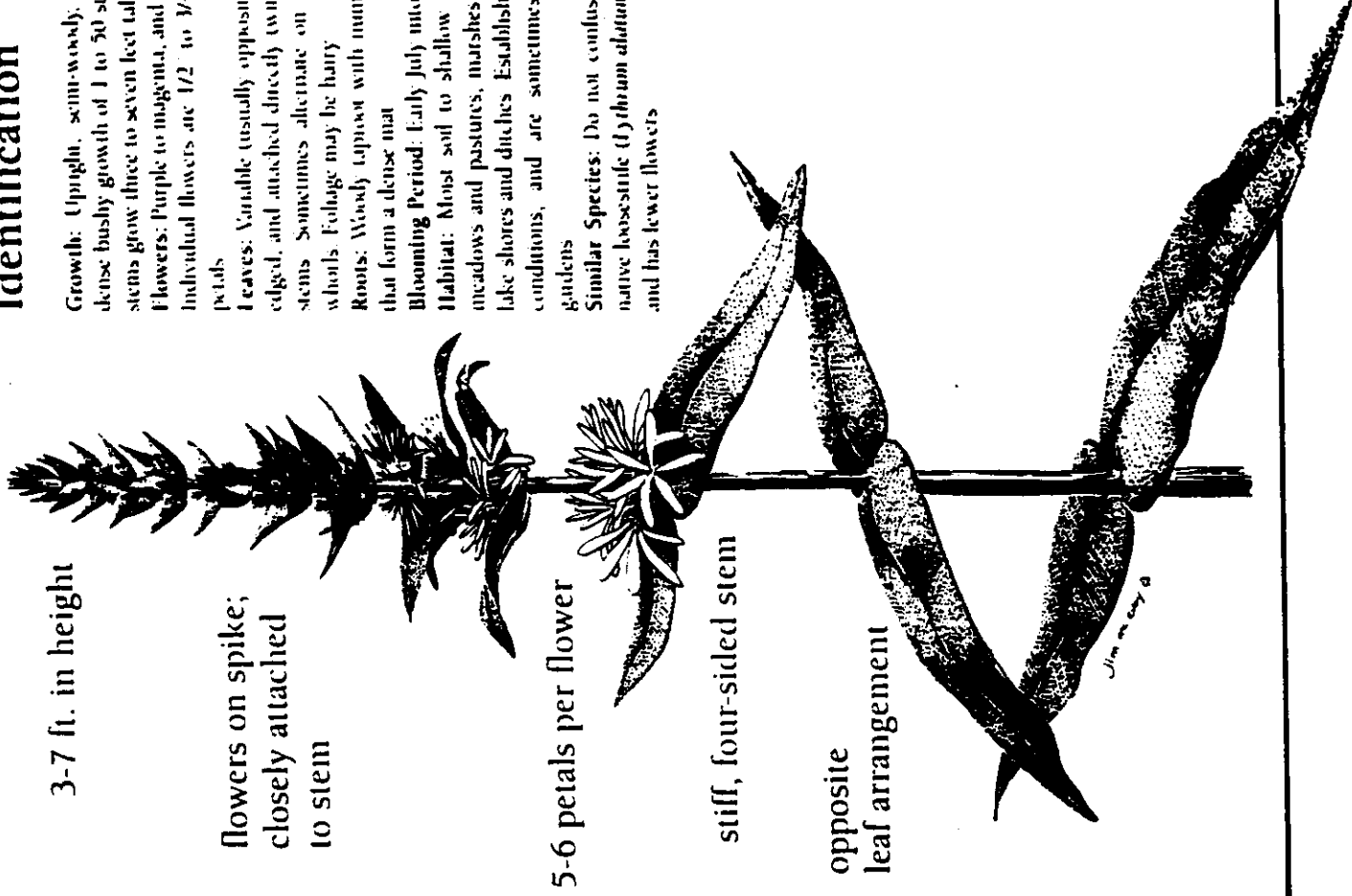
Leaves: Variable (usually opposite), linear shaped, smooth edged, and attached directly (without stalks) to four sided stems. Sometimes alternate on the stem or bunched in whorls. Foliage may be hairy.

Roots: Woody taproot with numerous fibrous side shoots that form a dense mat.

Blooming Period: Early July into early September.

Habitat: Moist soil to shallow water sites, such as wet meadows and pastures, marshes, stream and river banks, lake shores and ditches. Established plants can tolerate dry conditions, and are sometimes planted in lawns and gardens.

Similar Species: Do not confuse with the less common, native loosestrife (*Lythrum alatum*) which is smaller in size and has fewer flowers.



3-7 ft. in height

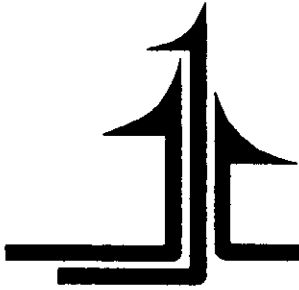
flowers on spike;
closely attached
to stem

5-6 petals per flower

stiff, four-sided stem

opposite
leaf arrangement

ORIGINAL



WHITE WATER ASSOCIATES, INC.

**PURPLE LOOSESTRIFE AND
EURASIAN MILFOIL MONITORING**

Hydro Project No. 2536, Little Quinnesec Falls

Submitted to:

Consolidated Papers, Niagara Division
1101 Mill Street
Niagara, WI 54141
Attention: Dave Schmutzler

Prepared by:

David Tiller, B.S.
Elizabeth Rogers, Ph.D.
White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone: (906) 822-7373
Fax: (906) 822-7977
e-mail: whitewtr@up.net

Field Data Collection:

David Tiller, B.S.
Elizabeth Rogers, Ph.D.

August 1999

I. SUMMARY

Annual monitoring for purple loosestrife (*Lythrum salicaria*) and Eurasian milfoil (*Myriophyllum spicatum*) has been designated as part of the FERC requirements for Consolidated Papers' relicensing of the Hydro Project No. 2536, Little Quinnesec Falls, on the Menominee River. One long day (July 29,1999) was spent on the project area with visual and grab sample surveys conducted by boat 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. No plants were found that could definitively be called Eurasian milfoil.

II. INTRODUCTION

Monitoring for purple loosestrife (*Lythrum salicaria*) and Eurasian milfoil (*Myriophyllum spicatum*) was conducted on July 29,1999 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. There were no reports of these alien species within the project area reported from surveys during the license application process (1990) and neither species was found within the project area during monitoring in 1998. Purple loosestrife was found in 1998 growing along the Wisconsin shoreline below the Little Quinnesec Dam, outside the project area, within the City of Niagara.

III. METHODS

On July 29, 1999 Elizabeth Rogers and David Tiller of White Water Associates, Inc. used a small boat and motor to look at most of 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. Oars were used for complete access. In 1998, low water necessitated a monitoring bout by canoe to access backwaters. This year there was ample water to access backwaters with a boat. 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 milfoil by taking grab samples from beds of milfoil using hands, a grapple, 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 water milfoil (*Myriophyllum sibiricum*, formerly *exalbescens*) from Eurasian milfoil (*Myriophyllum spicatum*), although there is considerable variability within each species. Generally, the average number of leaflets for northern water milfoil is 5-11 with a reported maximum of 13. The average number for Eurasian milfoil is 14-17 with a maximum of 20. Also useful later in the season is the presence of winter buds (turions) on northern water milfoil, structures not found on Eurasian milfoil.

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 several patches of purple loosestrife composed of scattered individuals and small groups of 2-5 plants (see map in Appendix). Several large plants that were seen last year are gone, perhaps pulled by someone. A number of young plants without flower heads were seen in the same

general area. A plant, in flower, was seen in a yard bordering the river within several hundred feet of the new downstream access site. Purple loosestrife is a prodigious producer of seeds and with each season more loosestrife seed is generated and spread. Disturbed wet areas are readily invaded and taken over by this aggressive alien species. If action to control loosestrife is taken soon, it will be relatively easy to control loosestrife. If one waits until the species becomes well established, the task of elimination and control will be daunting.

Management Recommendations. The boat access site below the Little Quinnesec Falls Dam is surrounded by wet riparian edges. Between the boat landing and the Consolidated Paper complex is a small, wet woods that recently has had the underbrush removed. Disturbed areas such as these need to be watched carefully for newly established loosestrife plants. Boat landings are particularly vulnerable as the seeds can be transported unwittingly by people and there is always ample disturbed soil in the vicinity. Purple loosestrife can establish itself in anything from pure muck to pure gravel.

Given its present low level of occurrence near the project area, purple loosestrife could easily be controlled with repeated applications of herbicide (*Round-Up*® on upland, or *Rodeo*® in wetlands). Application of herbicide in the wetlands may require permits from Wisconsin and Michigan. This will have to be done for several years until all the seeds in the soil seed bank have germinated and all the plants killed. Thereafter, monitoring should continue with control implemented as needed. Ideally, spraying should be done prior to seed development. Young plants without flowers are not as easily identified but certainly can be identified by persons familiar with the species. Control early in the season will prevent plants from flowering and setting seed.

Recent research has shown that pulling out loosestrife plants is not only ineffectual, but that it actually assists the plant in spreading. The species has many fine roots, all of which can potentially become propagules for a new plant if left behind in the soil. We have tried pulling out loosestrife and found that even if extreme care is taken, smaller roots invariably break off and remain in the soil. In addition, pulling out a plant creates soil disturbance on which the seeds thrive. Broad-scale spraying is not encouraged in sites where the loosestrife grows intermixed with a healthy native plant community as it hits non-target species, leaving a vacuum in the community that can then be easily colonized by loosestrife. Instead, individual plants should be sprayed by hand. If patches of bare earth are created by spraying, these should be planted with native species so as to

leave no room for the exotic loosestrife to spread. The most extensive research on effective control of purple loosestrife has been occurring in the Bad River Sloughs (WI) under the direction of the Great Lakes Indian Fish and Wildlife Commission and the Bad River Chippewa Band. We have been consulting with them regarding their state-of-the-art findings.

Eurasian Milfoil

Findings. Eurasian Milfoil is an exotic submergent aquatic species capable of forming dense canopies of branching, floating plants to the detriment of native species. Most of the milfoil we found fell well within the range of number of leaflets that would identify it as northern water milfoil. In 1998, we found some plants with a borderline number of leaflets that could identify them as Eurasian and sent them to two experts. The professional opinions were inconclusive. Later season specimens obtained in 1998 exhibited winter buds or turions, strongly suggesting that the milfoil we were observing was the native species. In 1999, we also retrieved some specimens with a borderline number of leaflets. At this juncture it appears to us that some of the individuals of the highly variable native milfoil in the reservoir simply exhibit a slightly higher number of leaflets than average.

Management Recommendations. Once established, currently little can be done to control this submergent species without having a deleterious impact on the rest of the submergent community. Prevention is the best option. All boat landing should have posted literature warning boaters to clean their boats, motors and boat trailers of all weeds and invertebrates before entering another body of water.

IV. CONCLUSION

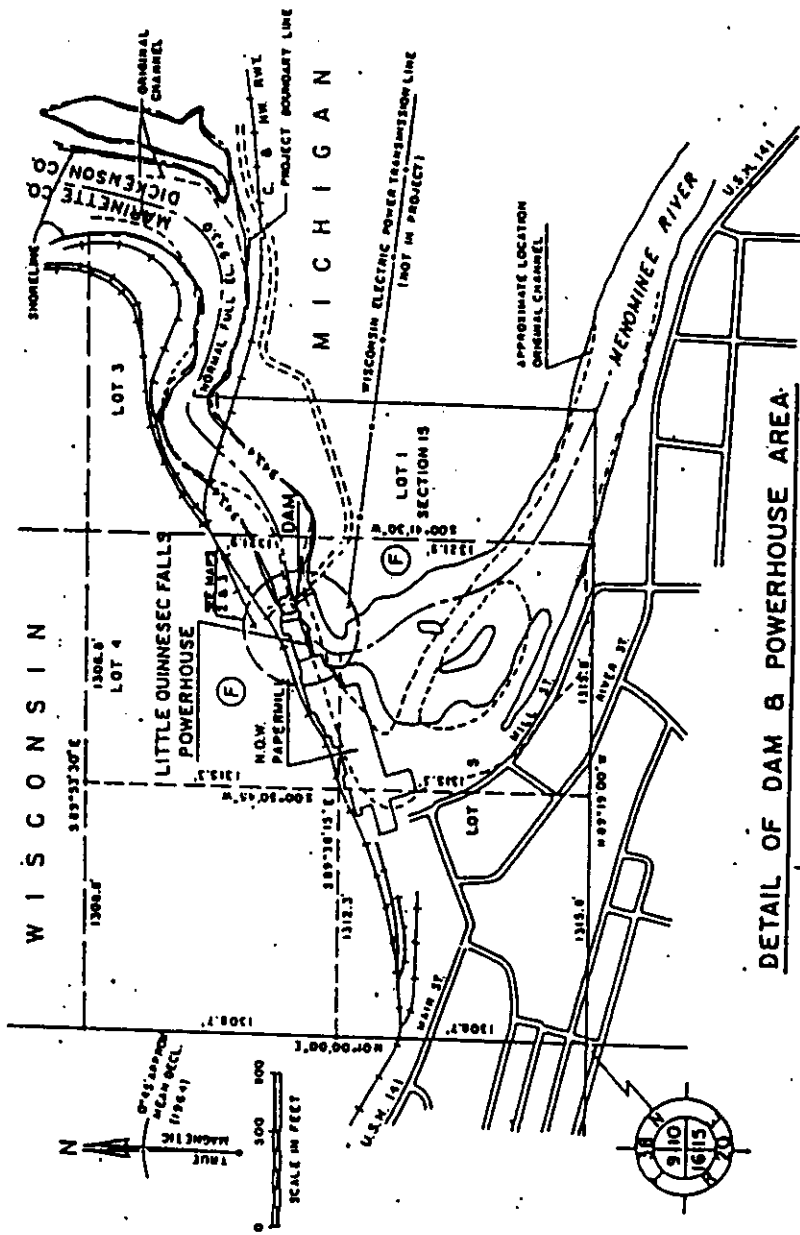
The purple loosestrife just downstream from the project area could be readily controlled through repeated applications of herbicide (*Round-Up or Rodeo*®). Given the species' propensity to spread, control of this alien even outside the project area appears to be a very worthwhile investment in terms of preventing the establishment of this alien within the project area. Another possible action is informing the city residents with pictures of the plant and the reasons why it should be eradicated, and the best means of removal. Attached is a copy of a cover letter to the city

residents notifying them that their properties have or may have purple loosestrife and providing suggested means of removal. The non-flowering stems we saw in 1999 will likely flower and produce seeds in 2000. Instigating control will help curb the spread of this species.

Eurasian milfoil does not appear to be present at this time within the project area. Presently, the submergent, emergent, and shoreline wetland plant communities are diverse and composed primarily of native species. Control of purple loosestrife would ensure that this healthy and diverse reservoir plant community persists into the future, providing wildlife habitat and other natural values. Posting of educational and warning signs telling boat owners about the importance of cleaning all aquatic vegetation and invertebrates off their boat motors should be implemented at all access sites in the project area.

APPENDIX

Map



Purple Loosestrife Near Hydroelectric Project No. 2536, Little Quinnesec Falls, July 1999
(outside project area)