ORIGINAL

Northern States Power Company

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P.O. Box 8
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Telephone (800) 895-4999

March 30, 2000

Mr. David P. Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

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SUBJECT: **Results Of The 1998 And 1999 Monitoring For Purple Loosestrife Presence At The Big Falls Hydro Project (FERC Project No. 2390) And At The Thornapple Hydro Project (FERC Project No. 2475). Results Of The Monitoring For Bald Eagle Activity At The Big Falls Hydro Project.**

P-2390-033

Dear Secretary:

Enclosed is an original and eight copies of the reports transmitting the monitoring results of the purple loosestrife and bald eagle survey to the resource agencies at the above-mentioned projects as directed by the Federal Energy Regulatory Commission's (Commission) orders of August 28, 1997, September 9, 1997 and September 16, 1997.

Northern States Power Company – Wisconsin (Licensee) inadvertently omitted filing the results of the 1998 and 1999 field monitoring of purple loosestrife and the 1999 monitoring of bald eagle activity with the Commission due to an oversight. Several other projects owned by the Licensee have the same license article requirements but only require the filing of the results with the resource agencies. The monitoring results have been previously filed with the Wisconsin Department of Natural Resources (WDNR), the U.S. Fish and Wildlife Service (USFWS) and the National Park Service (NPS) in letters dated August 31, 1998 and December 2, 1999. The letters have been included as Attachment A.

The survey of bald eagle activity at the Big Falls Project began during the 1999 open-water season and the results were summarized in the cover letter of the December 2, 1999 submittal to the resource agencies. The active bald eagle nest, located immediately upstream from the dam, was used once again and two young eagles

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fledged from the site. No other nest sites were observed on the flowage. Sightings of bald eagles on the Big Falls Flowage and the immediate tailwater occur almost every day due to the optimal habitat provided and minimal human disturbance. The Licensee will continue to survey the Big Falls Project area for an additional four years as required by the September 9, 1997 order and then await a decision by the Commission on how to proceed for the remainder of the operating license.

If you have any questions in regards to the monitoring results or to this filing, please feel free to give me a call at (715) 839-2692 or Mr. Robert Olson of my staff at (715) 839-1353.

Very truly yours,

Lloyd Everhart

Lloyd Everhart
Administrator, Hydro Licensing

Attachments: Monitoring Reports for the 1998 and 1999 Field Seasons

c: Big Falls and Thornapple Project Files

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Attachment A

Reports for the 1998 and 1999 Monitoring of Purple Loosestrife and Bald Eagle Activity at the Big Falls and Thornapple Project Sites

FERC Project Nos. 2390 and 2475

Northern States Power Company

100 North Barstow Street
P.O. Box 8
Eau Claire, WI 54702-0008
Telephone (800) 895-4999

August 31, 1998

Jeff Scheirer
Wisconsin DNR
875 South Fourth Ave.
P.O. Box 220
Park Falls, WI 54552

Jim Fossum
Department of the Interior
U.S. Fish and Wildlife Service
1015 Challenger Court
Green Bay, WI 54301

Angie Tornes
Department of the Interior
National Park Service
310 W. Wisconsin Ave., Rm. 500
Milwaukee, WI 53202

SUBJECT: REPORT FOR PURPLE LOOSESTRIFE ASSESSMENTS ON WHITE RIVER FLOWAGE (FERC PROJECT NO. 2444), SUPERIOR FALLS FLOWAGE (FERC PROJECT NO. 2587), BIG FALLS FLOWAGE (FERC PROJECT NO. 2390), THORNAPPLE FLOWAGE (FERC PROJECT NO. 2475), AND HAYWARD FLOWAGE (FERC PROJECT NO. 2417).

Dear Jeff, Jim, and Angie:

Enclosed is a copy of the report for the purple loosestrife assessments performed on the above listed flowages. If you have any questions or need additional copies of the report, please feel free to contact me at (715) 839-1436 or Rob Olson at (715) 839-1353.

Sincerely,

Christopher J. Turner
Environmental Technician

cc: Rob Olson (NSPW)

PURPLE LOOSESTRIFE ASSESSMENT FOR WHITE RIVER FLOWAGE (FERC PROJECT NO. 2444), SUPERIOR FALLS FLOWAGE (FERC PROJECT NO. 2587), BIG FALLS FLOWAGE (FERC PROJECT NO. 2390), THORNAPPLE FLOWAGE (FERC PROJECT NO. 2475) AND HAYWARD FLOWAGE (FERC PROJECT NO. 2417)

Introduction

The operating license for White River, Superior Falls, Big Falls, Thornapple and Hayward Hydro Projects directed the Licensee to develop a purple loosestrife monitoring plan for project shorelines. The plans were developed with input from the Wisconsin Department of Natural Resources (WDNR), the U.S. Fish and Wildlife Service (USFWS) and the National Park Service (NPS). The monitoring plan involved annual monitoring of project shorelines during a period of peak purple loosestrife biomass (late July through August). The following report is a summary of the surveys that were done during the 1998 field season.

Methods

The shorelines of the White River Flowage, Superior Falls Flowage, Big Falls Flowage, Thornapple Flowage and Hayward Flowage were surveyed on August 8, 9 and 27, 1998 for the presence of purple loosestrife *(Lythrum salicaria)*. The project lands downstream from the Hayward Hydro Project were also surveyed. Project shorelines were rated to indicate whether purple loosestrife was absent, present or abundant. Present indicated a light scattering of a few plants over an area. Abundant indicated a dense growth of numerous plants over an area. Absent indicated that no purple loosestrife plants were present. Using these grades of infestation, purple loosestrife locations were mapped on bathymetric maps of the flowages.

Results

White River Flowage

Purple loosestrife was not found on the shoreline of the White River Flowage.

Superior Falls Flowage

Purple loosestrife was not found on the shoreline of the Superior Falls Flowage.

Big Falls Flowage

Purple loosestrife was not found on the shoreline of the Big Falls Flowage.

Thornapple Flowage

A number of purple loosestrife plants were found to be growing on the shores of the Thornapple Flowage (see Figure 1). The majority of plants appear largely concentrated in a few select areas. Other areas around the flowage where plants are located contain only a few individuals

Hayward Flowage

Numerous purple loosestrife plants were found on the Hayward Flowage. Several stretches of shoreline were found to have large, very dense populations (See Figure 2).

An initial survey of purple loosestrife in this area was completed in August, 1997. This survey estimated that, of the 8.64 total miles of shoreline, 0.3 miles (3.5%) were classified as present and 0.7 miles (8.1%) were classified as abundant. Upon comparison of the previous survey, it would appear that little change in the purple loosestrife infestation has taken place in the last year.

The main areas of purple loosestrife infestation on the Hayward Flowage are concentrated in the northwest section of the flowage at the mouth of Smith Lake Creek. Though this survey does not provide any direct evidence, it is highly possible that the source of the purple loosestrife is located somewhere upstream on Smith Lake Creek, not farther up the Namekagon River.

Project lands on the Namekagon River downstream from the Hayward Dam were found to contain three isolated populations of purple loosestrife. These were located immediately downstream from the spillway and powerhouse. Each of these populations appear to be slightly larger than was observed in the previous year's survey.

CONCLUSION

Purple loosestrife was not found to be present at the White River Flowage, Superior Falls Flowage or the Big Falls Flowage. The Thornapple Flowage has a fair amount of purple loosestrife plants, largely concentrated in a few areas. The Hayward Flowage has large populations of purple loosestrife, including some areas where the plant is by far the dominant species. Populations in both the Thornapple Flowage and the Hayward Flowage are large enough that they are certain to continue to spread to other portions of the lakes as well as to areas downstream from the flowages.

The Thornapple Flowage and Hayward Flowage may be good candidates for the implementation of some form of biological control measure to contain the purple loosestrife infestations. Biological controls such as the introduction of beetles and weevils are being tested at numerous sites throughout the state of Wisconsin and are proving to be effective in many of those areas. The Licensee

would like to obtain feedback from the resource agencies about whether or not they would be willing to pursue biological control options on either the Thornapple Flowage or the Hayward Flowage.

Northern States Power Company

100 North Barstow Street
P.O. Box 8
Eau Claire, WI 54702-0008
Telephone (800) 895-4999

December 2, 1999

Jim Fossum
Department of the Interior
U.S. Fish and Wildlife Service
1015 Challenger Court
Green Bay, WI 54301

Jeff Scheirer
Wisconsin DNR
875 South Fourth Ave.
P.O. Box 220
Park Falls, WI 54552

Angie Tornes
Department of the Interior
National Park Service
310 W. Wisconsin Ave., Rm. 500
Milwaukee, WI 53202

SUBJECT: **REPORT ON THE RESULTS OF THE PURPLE LOOSESTRIFE MONITORING ON THE WHITE RIVER FLOWAGE (FERC PROJECT NO. 2444), SUPERIOR FALLS FLOWAGE (FERC PROJECT NO. 2587), BIG FALLS FLOWAGE (FERC PROJECT NO. 2390), THORNAPPLE FLOWAGE (FERC PROJECT NO. 2475) AND THE HAYWARD FLOWAGE (FERC PROJECT NO. 2417).**

Dear Mr. Scheirer, Mr. Fossum and Ms. Tornes:

Attached are the results of the purple loosestrife monitoring which took place in August of 1999 for the above-referenced flowages. The monitoring results were similar to those from the 1998 field survey. Eurasian milfoil monitoring at the Superior Falls Flowage could not be conducted this year because the flowage was drawn down for the majority of the summer and fall for dam rehabilitation.

The White River hydro project lands were also surveyed in August as required by the land management plan pursuant to Article 407 of the White River license. No changes or disturbances to the project lands were noted. The bald eagle nest on the Big Falls Flowage, located on the west side of the flowage, approximately one-half mile upstream from the dam, was occupied during the 1999 season and produced two young eagles which were observed roosting at the site in July.

If you have any questions in regards to the survey results or the techniques used, please feel free to give me a call at (715) 839-1353.

Sincerely,

Robert W. Olson

Robert W. Olson
Coordinator, Licensing

Enclosure: Survey Results

c: Project Files

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Purple Loosestrife Assessment for the White River Flowage, Superior Falls Flowage, Big Falls Flowage, Thornapple Flowage and the Hayward Flowage.

1.0 Introduction

The operating licenses for the White River, Superior Falls, Big Falls, Thornapple and Hayward hydro projects directed the Licensee to develop a purple loosestrife monitoring plan for project shorelines. The plans were developed with input from the Wisconsin Department of Natural Resources (WDNR), the U.S. Fish and Wildlife Service (USFWS) and the National Park Service (NPS). The monitoring plans involve annual monitoring of project shorelines during a period of peak purple loosestrife biomass (late July through August). The following report is a summary of the surveys that were done during the 1999 field season.

2.0 Methods

The shorelines of the White River Flowage, Superior Falls Flowage, Big Falls Flowage, Thornapple Flowage and the Hayward Flowage were surveyed in August, 1999 for the presence of purple loosestrife (Lythrum salicaria). The project lands downstream from the Hayward Hydro Project were also surveyed. Project shorelines were rated to indicate whether purple loosestrife was absent, present or abundant. Present indicated a light scattering of a few plants over an area. Abundant indicated a dense growth of numerous plants over an area. Absent indicated that no purple loosestrife plants were present. Using these determinations of infestation, purple loosestrife locations were mapped on bathymetric maps of the flowages.

3.0 Results

3.1 White River Flowage. Purple loosestrife plants were not found on the shorelines of the White River Flowage. This was similar to the findings from the 1998 survey.

3.2 Superior Falls Flowage. The shorelines of the flowage was absent of any purple loosestrife plants which was similar to the findings from the 1998 survey.

3.3 Big Falls Flowage. There were no purple loosestrife plants found on the shorelines of the Big Falls Flowage. Again, this was similar to the results of the 1998 survey.

3.4 Thornapple Flowage. A number of purple loosestrife plants were found to be growing on the shorelines of the Thornapple Flowage (Figure 1). The majority of plants appear largely concentrated in the wetland area in the middle part of the flowage and in some of the small backwater areas surrounding the flowage. Otherwise, purple loosestrife was present throughout much of the flowage shoreline.

Purple loosestrife was observed to be present on 2.36 miles or 31.0 percent of the shoreline. The plant was determined to be common on 0.27 miles or 3.6 percent of the shoreline. The plant was considered abundant on 0.67 miles or 8.8 percent of the

shoreline, mainly in the wetland area in the middle portion of the flowage. Licensee is unsure of how these estimates compare to previous years estimates although the locations where the purple loosestrife was found were similar to previous surveys performed on the flowage.

3.5 Hayward Flowage. Numerous purple loosestrife plants were found on the Hayward Flowage. Several stretches of shoreline were found to have large, very dense populations (see Figure 2).

An initial survey of purple loosestrife on the flowage was completed in August, 1997. This survey estimated that, of the 8.64 miles of shoreline, 0.3 miles (3.5%) were classified as present and 0.7 miles (8.1%) were classified as abundant. The 1998 survey yielded very similar results to the 1997 survey. The 1999 survey results indicated that purple loosestrife populations that were rated as abundant were reduced to 0.25 miles and 2.9 percent of the total shoreline. Areas where purple loosestrife was present increased to 1.08 miles or 12.5 percent of the total shoreline. The density differences observed may have been the result of a varying opinion from a different surveyor or that the National Park Service (NPS) has implemented a control program on the Hayward Flowage. Licensee is aware that the NPS has implemented a control program downstream from the dam but is unsure whether such a program has been implemented on the flowage.

The main areas of purple loosestrife infestation on the Hayward Flowage are concentrated in the northwest section of the flowage at the mouth of Smith Lake Creek. Although this survey does not provide any direct evidence, it is highly possible that the source of the purple loosestrife is located somewhere upstream on Smith Lake Creek, not farther up the Namekagon River.

Project lands on the Namekagon River downstream from the Hayward Dam were found to contain three isolated population of purple loosestrife that were considered as being present. These were located immediately downstream from the spillway and powerhouse. Each of these populations appear to be about the same as those observed in the 1998 survey.

4.0 Conclusion

Purple loosestrife was not present on the White River Flowage, the Superior Falls Flowage or the Big Falls Flowage. The Thornapple Flowage has a fair amount of purple loosestrife plants, largely concentrated in a few of the wetland areas. The areas around the Thornapple Flowage that have steeper slopes at the shoreline have limited purple loosestrife concentrations. The Hayward Flowage has significant populations of purple loosestrife, including some areas where the plant is by far the dominant plant species. Populations in both the Thornapple and Hayward Flowages are significant enough that they are a good seed source for spreading to unpopulated shorelines as well as the downstream river sections.