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OFFICE OF THE SECRETARY

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FEDERAL ENERGY  
REGULATORY  
COMMISSION

February 17, 1999



ORIGINAL

Northern States Power Company

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

The Secretary  
Federal Energy Regulatory Commission  
888 First Street, N E  
Washington, D. C. 20426

RE: Big Falls Hydroelectric Project - FERC No. 2390 - 026  
Thornapple Hydroelectric Project - FERC No. 2475 - 030  
Results of 1998 Purple Loosestrife Monitoring Assessments

Dear Secretary:

Attached for filing are an original and eight copies of the results of the annual purple loosestrife monitoring assessments that were performed on licensee's Big Falls and Thornapple reservoirs during August 1998. This information is filed pursuant to license **article 408** and **article 410** for the respective projects. You will note that the attached monitoring results represent a consolidated report for five of licensee's hydro projects, as filed with regional agencies in accordance with compliance plan requirements. Even though information is presented for five projects, only the information for the Big Falls and Thornapple Projects is required to be reported to the Commission.

Licensee requests clarification of an inconsistency that we recently identified between the purple loosestrife monitoring plans that we filed and the FERC approval orders that were issued for articles 408 and 410 of the Big Falls and Thornapple Project licenses. The licensee's plans, that were approved by the Commission without modification, stipulate that annual monitoring results are to be filed with the Wisconsin Department of Natural Resources and the U. S. Fish & Wildlife Service. On the other hand, the Commission approval orders contain an added reporting requirement: that annual reports are to be filed with the Commission (as well as with the two agencies). It should be noted that Licensee has received FERC approval orders for three other purple loosestrife monitoring plans (as identified in the attached report) that are nearly identical to those for the Thornapple and Big Falls Projects, and none of those orders include a requirement for filing annual reports with the FERC. This makes licensee question whether the annual reporting provision for the Thornapple and Big Falls Projects was inadvertently added to the orders. Licensee requests that this matter be reviewed, and if appropriate, that the requirement for filing annual

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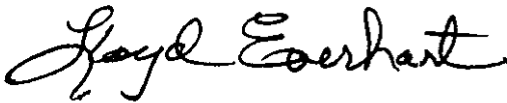
The Secretary, FERC  
February 17, 1999  
Page 2

Northern States Power Company

reports with the FERC be deleted from the approval orders for the subject purple loosestrife monitoring plans. In licensee's view, the present filing requirements are duplicative and unnecessary.

Should there be any questions about this filing, please direct them to me at 715/839-2692.

Very truly yours,

A handwritten signature in black ink, reading "Lloyd Everhart". The signature is fluid and cursive, with the first name "Lloyd" and last name "Everhart" clearly distinguishable.

Lloyd Everhart, Administrator  
Hydro Licensing

c: Diane Murray, FERC (FAX)

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FEDERAL ENERGY  
REGULATORY  
COMMISSION



**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.

LAKE Thornapple Flow  
 SECTION 18, 19, 22, 23, 24  
 RANGE 6, 7 W  
 TOWN Thornapple  
 TOWNSHIP 34 N

This is the only hydrographic map of the area  
 produced from original charts of Department of  
 sources — Madison

A U. S. Geological Survey Map is available  
 showing the area (approx. 12 square miles) and

To order specify Thornapple










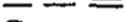













**FIGURE 1**  
**PURPLE LOOSESTRIFE**  
**ASSESSMENT**  
**THORNAPPLE FLOWAGE**  
 8/22/98

PRESENT   
 ABUNDANT 



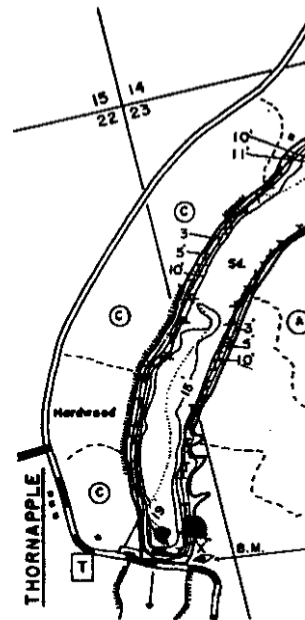
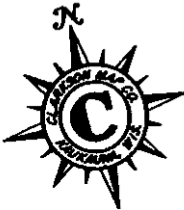
**LEGEND**

**TOPOGRAPHIC SYMBOLS**

BRUSH REFUGE	
SAPLING TANGLE	
SPAWNING BOX	
MINNOW SPAWNER	
WEED BED	
ROCKY SHOAL	
DWELLING	
ABANDONED DWELLING	
RESORT	
STEEP SLOPE	
SPRING	
INTERMITTENT INLET	
BRUSH	
WOODED	
PASTURED	
CULTIVATED	
ENCROACH. SHORE	
PERMANENT INLET	
PERMANENT OUTLET	
MARSH	
PARTIALLY WOODED	
CLEARED	
BENCH MARK	

**LAKE BOTTOM SYMBOLS**

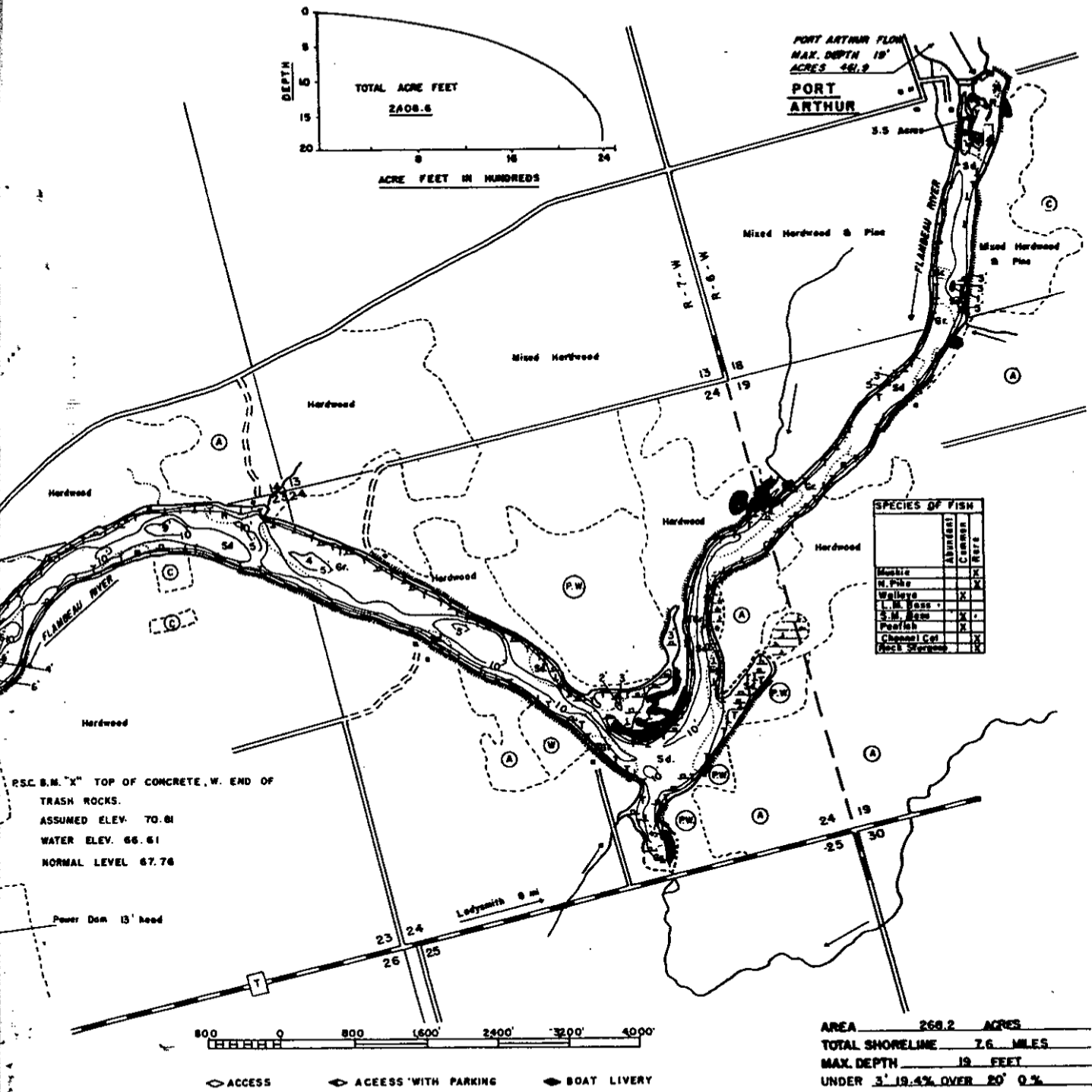
PULPY PEAT	P
MUCK	K
CLAY	C
SAND	S
RUBBLE	R
EMERGENT VEGET.	J
FIBROUS PEAT	F
DETRITUS	D
MARL	M
GRAVEL	G
BEDROCK	Br.
SUBMERGENT VEGET.	T



lake available,  
of Natural Re-  
e from us show-  
tent to this lake.

RUSK COUNTY  
MAP NO.  
5129

Quadrangle



R.S.C. B.M. "X" TOP OF CONCRETE, W. END OF  
TRASH ROCKS.  
ASSUMED ELEV. 70.81  
WATER ELEV. 66.61  
NORMAL LEVEL 67.76

SPECIES OF FISH			
	ADULT	JUVENILE	REMARKS
Muskie			
N. Pike			
Walleye			
L. M. Bass			
S. M. Bass			
Perch			
Channel Cat			
Rock Bass			

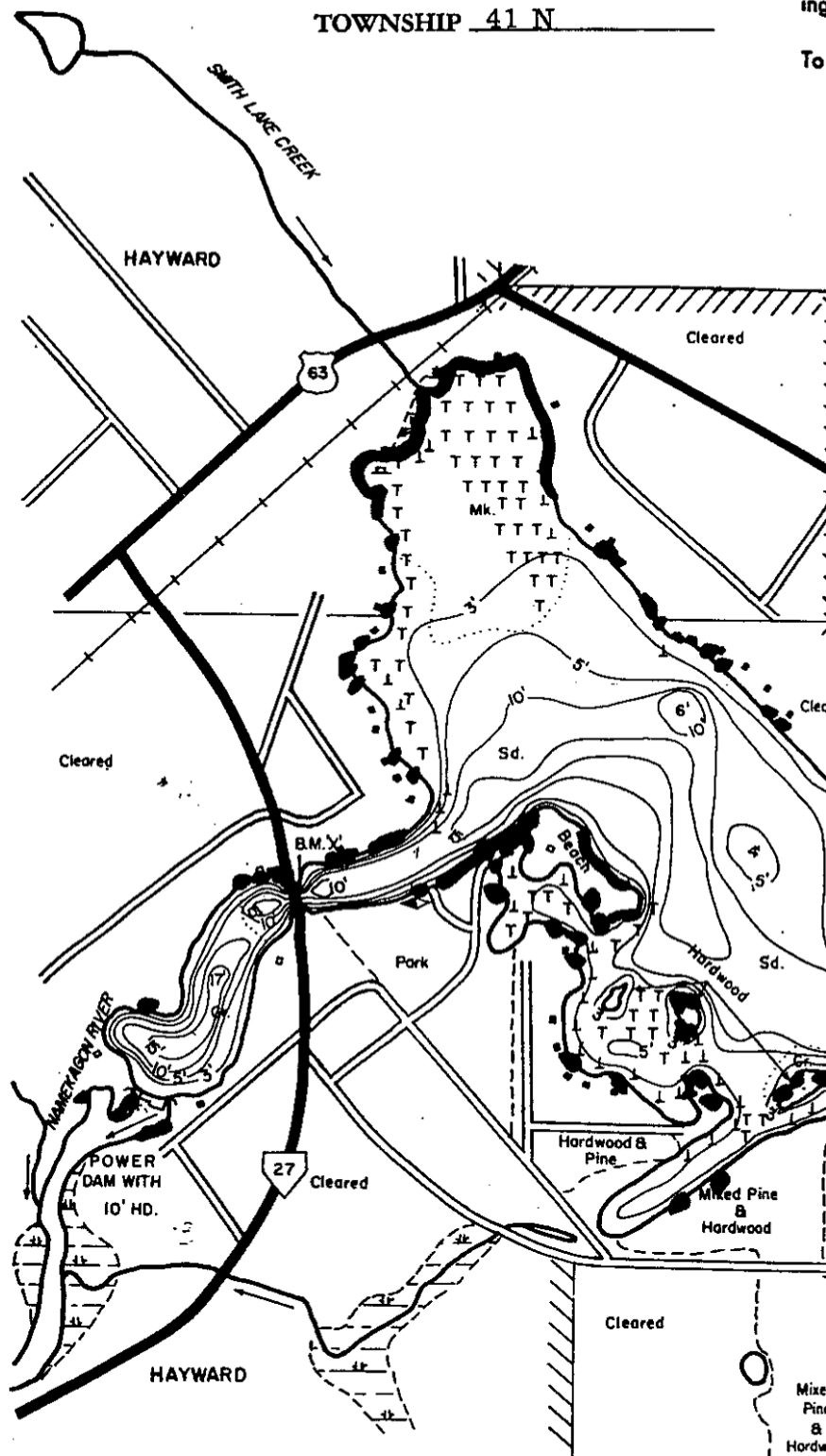
AREA 268.2 ACRES  
TOTAL SHORELINE 7.6 MILES  
MAX. DEPTH 19 FEET  
UNDER 3' 19.4% OVER 20' 0.0%

CLARKSON MAP CO.  
724 DESNOYER STREET  
Kaukauna, Wisconsin 54130

LAKE Hayward Flowage  
 SECTION 26.27  
 RANGE 9 W  
 TOWN Hayward  
 TOWNSHIP 41 N

**FIGURE 2**  
**PURPLE LOOSESTRIFE**  
**ASSESSMENT**  
**HAYWARD FLOWAGE**  
**8/8/98**

PRESENT  
 ABUNDANT



**TOPOGRAPHIC SYMBOLS**

- |                       |                            |
|-----------------------|----------------------------|
| (B) Brush             | (     ) Steep slope        |
| (PW) Partially wooded | (---) Indefinite shoreline |
| (W) Wooded            | (---) Marsh                |
| (C) Cleared           | (o) Spring                 |
| (P) Pastured          | (---) Intermittent stream  |
| (A) Agricultural      | (---) Permanent inlet      |
| B.M. Bench Mark       | (---) Permanent outlet     |
| (d) Dwelling          | (---) Dam                  |
| (R) Resort            |                            |

**LAKE BOTTOM SYMBOLS**

- |          |                         |
|----------|-------------------------|
| P. Peat  | Gr. Gravel              |
| Mk. Muck | R. Rubble               |
| C. Clay  | Br. Bedrock             |
| M. Marl  | T Submergent vegetation |
| Sd. Sand | I Emergent vegetation   |
| St. Silt | F Floating vegetation   |

is the only hydrographic map of this lake available,  
 reduced from original charts of Dept. of Natural Re-  
 sources — Madison

U. S. Geological Survey Map is available from us  
 the area (approx. 12 square miles) adjacent to this lake

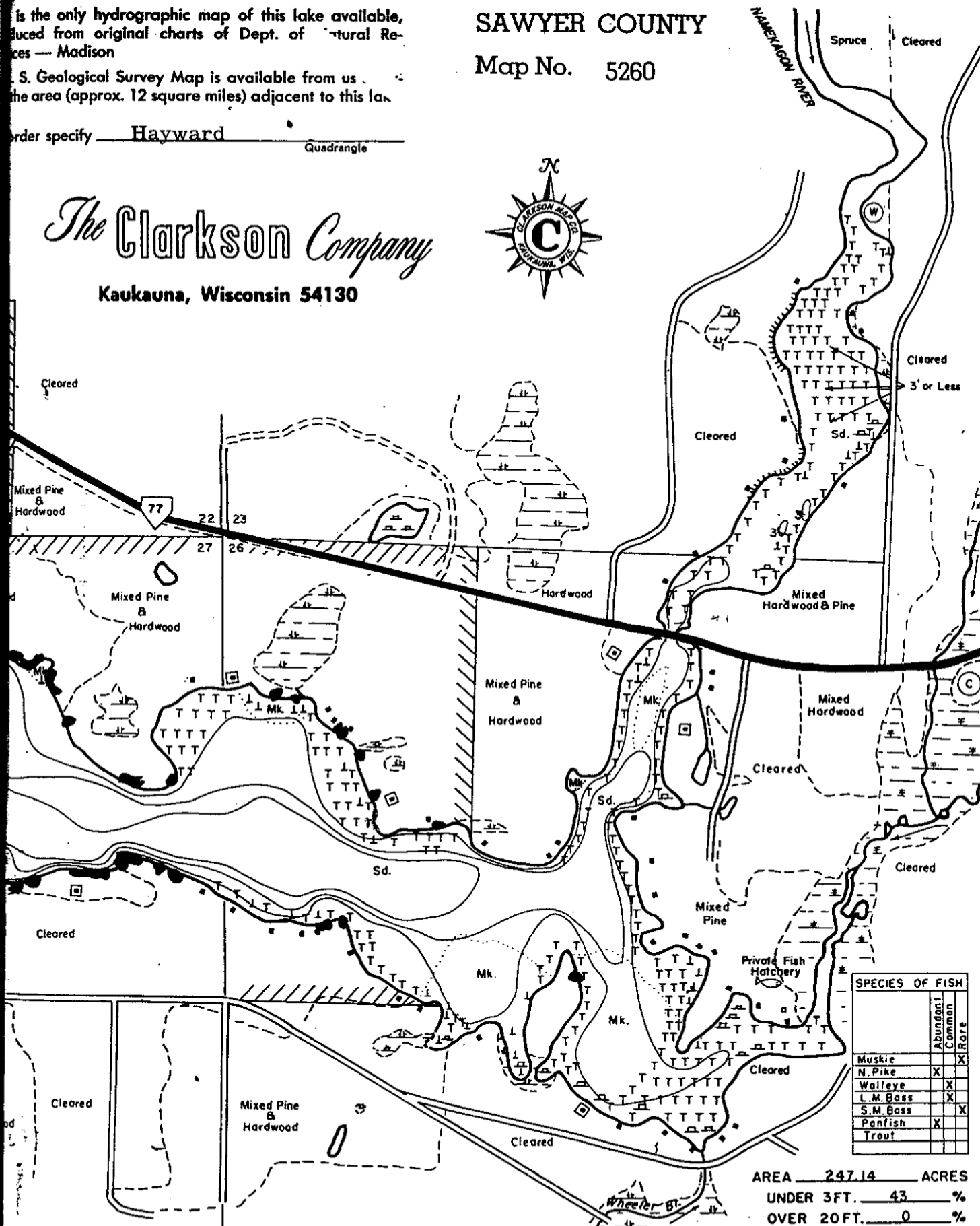
Order specify Hayward Quadrangle

*The Clarkson Company*

Kaukauna, Wisconsin 54130

SAWYER COUNTY

Map No. 5260



SPECIES OF FISH		
	Abundant	Rare
Muskie		X
N. Pike	X	
Walleye	X	
L. M. Bass	X	
S. M. Bass	X	
Panfish	X	
Trout		

AREA 247.14 ACRES  
 UNDER 3 FT. 43 %  
 OVER 20 FT. 0 %  
 VOLUME 1235.34 ACRE FT.  
 TOTAL ALK. 69 P.P.M.  
 SHORELINE 8.64 MILES  
 MAX. DEPTH 17 FEET

◇ Access

◈ Access with Parking

◆ Boat Livery