



**Off-Reservation Fishing Permit Survey for the 1998-99 Season
for the 1837 Minnesota Ceded Territory**

by

**Eric Madsen
Data Analyst**

**Joseph D. Rose
Inland Fisheries Section Leader**

and

**Jennifer Krueger
Database Manager**

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**Great Lakes Indian Fish
& Wildlife Commission
P. O. Box 9
Odanah, WI 54861
(715) 682 - 6619**

Background

As required in the “*Treaty Fisheries Management Plan for the 1837 Minnesota Ceded Territory for the Years 1998-2002*”, a survey was conducted to assess tribal effort and harvest during the 1998-99 tribal fishing year. This fishing year ran from April 1, 1998 through March 31, 1999. Fishing methods included in the survey were open-water angling, winter tip-up fishing, and winter spearing. Tribal members intending to fish with these methods were required to obtain a fishing permit (Appendix 1). Fishing methods excluded from the survey were open-water spearing and netting.

Following the 1998-99 tribal fishing year, a survey (Appendix 2) was mailed to each permittee. The survey was designed so that harvest and effort could be estimated for fishing in Mille Lacs lake, in lakes other than Mille Lacs, and in rivers. Persons not responding to the mail survey were contacted by phone whenever possible.

Results

Response. A total of 249 tribal members were issued permits to fish in the Minnesota ceded territory. A total of 132 persons responded to the survey, including those contacted by phone, for a response rate of 53%. However, four surveys were not used in the summaries because the information reported was unclear and could not be verified. Thus, a total of 128 survey responses were used in the summaries presented here. Of these, 80 were the result of phone calls, and 48 were returned in the mail.

A total of 38 respondents (30%) reported having fished off-reservation in the 1837 Minnesota ceded territory during the 1998-99 fishing year (Table 1). Of these respondents, 28 persons (74%) reported fishing on Mille Lacs, 12 persons (32%) fished in other lakes, and 6 members (16%) fished in rivers. In addition, nearly all respondents (36 of 38) reported fishing during the open-water season. Fewer persons reported fishing during winter (9) or spearing during winter (3).

Table 1. Summary of 128 responses to Minnesota 1837 ceded territory fishing survey.

	YES		NO	
	Number	Percentage	Number	Percentage
Fished in ceded territory in 1998-99	38	30%	90	70%
For those reported having fished:				
Fished in Mille Lacs Lake	28	74%	10	26%
Fished in Other Lakes	12	32%	26	68%
Fished in Rivers	6	16%	32	84%
Fished by Open-Water Fishing	36	95%	2	5%
Fished by Winter Fishing	9	24%	29	76%
Fished by Winter Spearing	3	8%	35	92%

Effort. For the 38 persons reporting fishing, the mean number of fishing trips and the mean length of a fishing trip were similar among Mille Lacs Lake, other lakes, and rivers (Table 2). Since some persons fished in more than one waterbody category, the sum of the three categories does not equal the overall number of respondents. For the 38 respondents combined, the mean number of fishing trips was 4.2 while the mean length of a fishing trip was 3.5 hours.

Table 2. Reported tribal effort for fishing in three waterbody categories and overall during the 1998-99 fishing year.

	Respondents reporting having fished	Respondents reporting harvest or effort	Mean number of trips	Mean length of fishing trip (hours)
Mille Lacs Lake	28	26	4.5	3.6
Other Lakes	12	10	4.0	3.6
Rivers	6	5	4.8	2.9
Overall	38	37	4.2	3.5

Estimated Harvest. Projected tribal harvest was calculated by multiplying the total harvest for each respondent by 249/128, which is the number of permittees divided by the number of returned surveys used. In doing this, the survey sample is being treated as a simple random sample. Since some surveys were returned by mail, and since some permittees could not be contacted by phone, the survey sample is not a simple random sample. However, there is no obvious source of bias inherent in treating this survey sample as a simple random sample.

Most or all of the estimated harvest of walleye, yellow perch, bullhead, burbot, and carp in the ceded territory was harvested from Mille Lacs Lake (Table 3). On Mille Lacs Lake, yellow perch was the species harvested most (263 fish), followed by burbot (163) and walleye (136). Most or all of the estimated harvest of bass, sunfish, and crappie in the ceded territory was harvested from other lakes. For this set of lakes, estimated harvest was highest for sunfish (407 fish), followed by crappie (230), bass (29), and northern pike (29). All of the estimated harvest of catfish occurred in rivers.

Table 3. Estimated tribal harvest for 11 taxa of fish in three waterbody categories and overall during the 1998-99 fishing year

	Mille Laes Lake	Other Lakes	Rivers	Overall*
Walleye	136	0	18	154
Northern Pike	23	29	19	72
Yellow Perch	263	0	0	263
Bass	0	29	18	39
Sunfish	0	407	0	407
Crappie	0	230	0	230
Catfish	0	0	39	39
Bullhead	19	0	0	19
Burbot	163	0	0	163
Carp	19	0	0	19
Sucker	0	0	2	2

*The sum for this column is not necessarily equal to the sum of the other three columns, since some respondents fished in more than one kind of waterbody.

Eight lakes other than Mille Laes and two rivers were reported to have been fished (Table 4). Five respondents reported having fished on Razor Lake (Pine Co.), and five respondents reported having fished on the St. Croix River. Only one or two respondents reported fishing on the remaining lakes and rivers listed.

According to the "*Treaty Fisheries Management Plan for the 1837 Minnesota Ceded Territory for the Years 1998-2002*", another survey of permit holders is required if the number of permits in any year exceeds the number in year 1 by more than 100%. Thus, since 249 permits were issued in year 1, a follow-up survey should be conducted when more than 498 permits are issued.

Table 4. Reported and estimated harvest for waterbodies in the Minnesota 1837 ceded territory fished during the 1998-99 tribal fishing year.

Lake or River	Walleye						Northern Pike					
	Respondents reporting having fished	Respondents reporting harvest or effort	Mean number of trips	Mean length of fishing trip (hours)	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest
Mille Lacs Lake	28	26	4.5	3.6	11	70	2.7	136	2	12	0.5	23
Camp Lake (Crow Wing Co.)		2	6.0	4.5	0				2	4	2.0	
Captive Lake (Mille Lacs Co.)		1	3.0	4.0	0				1	3	3.0	
Graces Lake (Pine Co.)		1	2.0	3.0	0				0			
Hay Creek Flowage (Pine Co.)		1	2.0	2.5	0				1	2	2.0	
Little Pine Lake (Pine Co.)		1	1.0	1.5	0				0			
McGowan Lake (Pine Co.)		2	3.0	2.0	0				1	2	1.0	
Razor Lake (Pine Co.)		5	2.5	4.3	0				1	4	0.8	
Tamarack Lakes (Pine Co.)		1	---	2.5	0				0			
Other Lakes - Overall	12	10	4.0	3.6	0			0	6	15	1.5	29
Kettle River (Pine Co.)		1	5.0	2.5	0				1	4	4.0	
St. Croix River (Pine Co.)		5	3.4	2.8	1	9	1.8		2	6	1.2	
Rivers - Overall	6	5	4.8	2.9	1	9	1.8	18	2	10	2.0	19
Total - Overall	38	37	4.2	3.5	12	79	2.13	154	8	37	1.0	72

The average harvest is the reported harvest divided by the number of unique respondents reporting harvest or effort.

Results for the "Other Lakes - Overall", "Rivers - Overall", and "Total - Overall" rows were obtained via datasets with one record per respondent. This implies that the "Other Lakes - Overall" and "Rivers - Overall" rows are not necessarily equal to the sums and means of the values for the individual lakes or rivers, and the "Total - Overall" row is not necessarily equal to the sums and means of the values of the "Mille Lacs Lake", "Other Lakes - Overall", and "Rivers - Overall" rows (with the exception of the "Reported harvest" columns).

Projected tribal harvest is the reported harvest x (249/128), which is the number of permittees divided by the number of respondents returning clear and unambiguous data.

Table 4, continued

Lake or River	Yellow Perch				Bass				Sunfish			
	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest
Millie Lacs Lake	3	135	5.2	263	0			0	0			0
Camp Lake (Crow Wing Co.)	0				1	5	2.5		1	15	7.5	
Captive Lake (Millie Lacs Co.)	0				0				0			
Graces Lake (Pine Co.)	0				0				1	15	15.0	
Hay Creek Flowage (Pine Co.)	0				0				1	15	15.0	
Little Pine Lake (Pine Co.)	0				0				0			
McGowan Lake (Pine Co.)	0				0				2	19	9.5	
Razor Lake (Pine Co.)	0				2	10	2.0		5	128	25.6	
Tamarack Lakes (Pine Co.)	0				0				1	17	17.0	
Other Lakes Subtotal	0			0	3	15	1.5	29	7	209	20.9	407
Kettle River (Pine Co.)	0				0				0			
St. Croix River (Pine Co.)	0				2	9	1.8		0			
Rivers Subtotal	0				2	9	1.8	18	0			0
Total - Overall	3	135	3.6	263	4	20	0.5	39	7	209	5.6	407

Table 4, continued

Lake or River	Crappie				Catfish				Bullhead			
	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest
Mille Lacs Lake	0			0	0			0	1	10	0.4	19
Camp Lake (Crow Wing Co.)	0				0				0			
Captive Lake (Mille Lacs Co.)	0				0				0			
Graces Lake (Pine Co.)	0				0				0			
Hay Creek Flowage (Pine Co.)	1	10	10.0		0				0			
Little Pine Lake (Pine Co.)	0				0				0			
McGowan Lake (Pine Co.)	1	10	5.0		0				0			
Razor Lake (Pine Co.)	4	86	17.2		0				0			
Tamarack Lakes (Pine Co.)	1	12	12.0		0				0			
Other Lakes Subtotal	5	118	11.8	230	0			0	0			0
Kettle River (Pine Co.)	0				1	10	10.0		0			
St. Croix River (Pine Co.)	0				3	10	2.0		0			
Rivers Subtotal	0			0	3	20	4.0	39	0			0
Total - Overall	5	118	3.2	230	3	20	0.5	39	1	10	0.3	19

Table 4, concluded

Lake or River	Burbot				Carp				Sucker			
	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest	Respondents reporting harvest	Reported harvest	Average harvest	Projected tribal harvest
Mille Lacs Lake	1	84	3.2	163	1	10	0.4	19	0			0
Camp Lake (Crow Wing Co.)	0				0				0			
Captive Lake (Mille Lacs Co.)	0				0				0			
Graces Lake (Pine Co.)	0				0				0			
Hay Creek Flowage (Pine Co.)	0				0				0			
Little Pine Lake (Pine Co.)	0				0				0			
McGowan Lake (Pine Co.)	0				0				0			
Razor Lake (Pine Co.)	0				0				0			
Tamarack Lakes (Pine Co.)	0				0				0			
Other Lakes Subtotal	0			0	0			0	0			0
Kettle River (Pine Co.)	0				0				0			
St. Croix River (Pine Co.)	0				0				1	1	0.2	
Rivers Subtotal	0			0	0			0	1	1	0.2	2
Total - Overall	1	84	2.3	163	1	10	0.3	19	1	1	0.03	2

Appendix 1. Minnesota 1837 Ceded Territory Annual Off-Reservation Treaty Fishing Permit

Minnesota 1837 Ceded Territory Annual Off-Reservation Treaty Fishing Permit	
<input type="checkbox"/> Open Water Angling	
<input type="checkbox"/> Winter Angling <input type="checkbox"/> Winter Spearing	1900
Tribal ID Number _____ of _____ Reservation	
Signature of Permittee: _____	
Mailing Address: _____	

Issued by: _____ of _____ Reservation	
Date Issued: _____ Date Expired _____	

**1998/99 OFF-RESERVATION TREATY FISHING PERMIT SURVEY
FOR THE 1837 MINNESOTA CEDED TERRITORY**
During the Fishing Year April 1, 1998 - March 31, 1999

1) NAME: _____ TRIBE: _____

2) DID YOU FISH OFF-RESERVATION IN THE 1837 MINNESOTA CEDED TERRITORY DURING THE 1998/99 FISHING YEAR?

(please circle) YES NO

IF "NO", PLEASE RETURN THE SURVEY IN THE ENVELOPE PROVIDED. NO POSTAGE IS NECESSARY. **MIIGWETCH FOR YOUR HELP!!**

3) IF "YES": PLEASE -

A.) CIRCLE WHETHER YOU FISHED IN MILLE LACS LAKE, IN OTHER LAKES, OR IN RIVERS:

(please circle all that apply) MILLE LACS LAKE OTHER LAKES RIVERS

B.) CIRCLE EACH FISHING METHOD YOU USED:

(please circle all that apply) OPEN-WATER FISHING WINTER FISHING WINTER SPEARING

C.) THEN FILL IN THE FOLLOWING INFORMATION FOR EACH LAKE OR RIVER FISHED USING ALL OF THE METHODS YOU CIRCLED ABOVE AS BEST YOU CAN RECALL. **PLEASE REPORT ALL THE HARVEST WHICH OCCURRED UNDER YOUR PERMIT.**

LAKE OR RIVER: _____ COUNTY: _____

NUMBER OF FISHING TRIPS: _____ AVERAGE LENGTH (HOURS) PER FISHING TRIP: _____

	SPECIES OF FISH HARVESTED	NUMBER OF FISH HARVESTED	NUMBER OF FISH RELEASED
EXAMPLE:	WALLEYE	10	5
EXAMPLE:	N. PIKE	2	1

(Over)

LAKE OR RIVER: _____ COUNTY: _____

NUMBER OF FISHING TRIPS: _____ AVERAGE LENGTH (HOURS) PER FISHING TRIP: _____

SPECIES OF FISH HARVESTED	NUMBER OF FISH HARVESTED	NUMBER OF FISH RELEASED

LAKE OR RIVER: _____ COUNTY: _____

NUMBER OF FISHING TRIPS: _____ AVERAGE LENGTH (HOURS) PER FISHING TRIP: _____

SPECIES OF FISH HARVESTED	NUMBER OF FISH HARVESTED	NUMBER OF FISH RELEASED

LAKE OR RIVER: _____ COUNTY: _____

NUMBER OF FISHING TRIPS: _____ AVERAGE LENGTH (HOURS) PER FISHING TRIP: _____

SPECIES OF FISH HARVESTED	NUMBER OF FISH HARVESTED	NUMBER OF FISH RELEASED

4.) COMMENTS:

5.) PLEASE RETURN THE SURVEY IN THE ENVELOPE PROVIDED. NO POSTAGE IS NECESSARY.

MIIGWETCH FOR YOUR HELP!