

## **ABSTRACT**

The 2001-2002 quota-year was the fourth year that open-water spear and net fishing was conducted by eight Ojibwa bands in the 1837 Minnesota ceded territory. A total of 371 Band members participated in the fishery. Of the three lakes with effort, spearing occurred in three and gill-netting in one. Fish were harvested in all waterbodies that received effort. A total of 32,611 fish weighing 63,293 pounds were harvested. Walleye made up approximately 78% of the catch (25,416 fish, 49,066 pounds). Other species harvested included 2,320 northern pike (9,435 pounds), 2,789 yellow perch (2,000 pounds), 429 burbot (792 pounds), and 636 tullibee (534 pounds). Most of the harvest occurred in Mille Lacs Lake during spring, which included 24,100 walleye weighing 45,727 pounds and 2,022 northern pike weighing 7,844 pounds. Of these walleye, more were taken by gill-netting (22,354 fish at 41,732 pounds) than by spearing (1,746 fish at 3,995 pounds). For all lakes combined, average length was 18.1 inches for walleye and 25.4 inches for northern pike; average weight was 1.9 and 4.1 pounds, respectively. The tribal harvest of quota and cap regulated fish species was maintained within established limits on all lakes through an intensive harvest management system that included daily permits, complete monitoring and daily reporting of the catch, and daily adjustments to quotas.

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## **INTRODUCTION**

A U.S. Supreme Court decision issued on March 24, 1999 reaffirmed the rights of eight Chippewa tribes to hunt, fish, and gather off-reservation in the Minnesota area reserved by a treaty with the United States government signed in 1837 (Figure 1). This report presents data for harvest and effort by Chippewa spearers and gill- netters in 1837 Minnesota ceded territory waters (Figure 2) during the 2001-2002 quota year which ran from April 1, 2001 through March 31, 2002. Most of the harvest and effort occurred in Mille Lacs Lake throughout a 39 day period in the spring of 2001 (April 7 through May 15). However, additional harvest and effort occurred in Mille Lacs Lake during the fall/winter season (September through January) and in the early spring of 2002 (March).

Eight Chippewa bands participated in the 2001-2002 fishery including two Minnesota bands (Mille Lacs and Fond du Lac) and six Wisconsin bands (Bad River, Lac Courte Oreilles, Lac du Flambeau, Mole Lake, Red Cliff, and St. Croix) (Figure 1). During the previous year, a fishery by eight Chippewa bands occurred in which 58,273 pounds of fish including 47,766 pounds of walleye were taken (Milroy, et al., 2005).

## **REGULATIONS**

Harvest was strictly regulated and completely monitored under provisions of the “1837 Treaty Conservation Code for the Minnesota Ceded Territory” as amended January 27, 1997. This tribal code contains regulations that govern the use of spears and nets to harvest fish. The code was jointly developed with the State of Minnesota, approved by the federal court, and individually adopted by the Chippewa bands.

The exercise of treaty fishing rights in the 1837 Minnesota ceded territory was also subject to provisions of the “Interim Treaty Fisheries Management Plan for the 1837 Minnesota Ceded Territory for the Years 1998-2002”. This harvest management plan provided for the gradual development of treaty fisheries in the 1837 Minnesota ceded territory and established tribal walleye quotas for Mille Lacs Lake for a five year period, beginning with the 1998-1999 quota-year. Under this plan, the tribal walleye quota for Mille Lacs Lake in 1998-1999 was set at 40,000 pounds and was to increase at a rate of 15,000 pounds annually. Thus, the tribal walleye quota for 2001-2002 was set at 85,000 pounds.

In addition to the Treaty Conservation Code and Interim Treaty Fisheries Management Plan, a set of protocols were agreed to by the State of Minnesota and its Department of Natural Resources and the Chippewa bands. These protocols identified methods to calculate threshold and harvestable surplus levels for ceded territory waters, established procedures for information exchange, and provided an operational framework for the 1837 Minnesota Ceded Territory Fisheries Committee.

## **PERMIT SYSTEM AND HARVEST MONITORING**

A comprehensive harvest management system based upon daily permits, monitoring of the entire catch, daily reporting, and daily updates of quotas for quota or cap regulated species was used as follows.

Each night that a tribe intended to spear or net, a tribal representative contacted the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) office in Odanah, Wisconsin around noon to notify staff of the selected lakes, boat landings, and walleye bag limits for spearing. At the same time quotas for walleye and northern pike were updated and the number of permits (Figure 3) that could be issued was determined. For spearing, the number of issuable permits was determined by dividing the remaining tribal quota for a lake by the nightly bag limit selected for that lake. For netting, the number of issuable permits was determined by dividing the remaining tribal walleye quota by an assigned catch rate value. An assigned catch rate value of 100 pounds of walleye per net was used from ice-out until April 29. The catch rate value was adjusted to 150 pounds of walleye per net on April 30, and then reduced to 75 pounds of walleye per net on May 4. Tribal members could either pick up a permit at a registration station or at a boat-landing.

One or more creel clerk-warden teams were assigned to each lake and each designated boat landing on Mille Lacs Lake where permits had been or were scheduled to be issued. All off-reservation spearing and netting was monitored by creel teams under the supervision of GLIFWC staff or by Fond du Lac Band tribal wardens and biologists. All on-reservation spearing and netting in Mille Lacs Lake was monitored by creel teams under the supervision of Mille Lacs Band tribal wardens. Prior to the season, written instructions, equipment, data forms, and training were provided to creel clerks and others involved with harvest monitoring and reporting.

For spearing, clerk-warden monitoring teams typically arrived at the designated boat landing before dusk and stayed until spearing ended. Upon the return of each boating party, a catch report form (Appendix A) was completed by a monitoring team to include time spearing started, the time it ended, permit numbers, plus the name and tribal identification number of each spearer. When available, tribal members could be issued one or more additional spearing permits.

For netting, clerk-warden teams arrived at the designated boat landing or monitoring location prior to scheduled net-lift times. Most nets were set in the evening, fished overnight, and lifted the following morning. Some nets were lifted at night, fish removed, and then reset. Lift times and locations were scheduled in advance and written on each permit issued. Nets could be checked prior to the designated lift time only if monitoring personnel were present. A catch report form was completed for each net-lift under each permit.

All fish harvested were to be identified to species, counted, and weighed in the aggregate by species. For spearing, length and sex information were collected from the first 100 walleye plus all walleye in the last boat. Length and sex information were also collected from a sub-sample of netted walleye and for most individuals of other species. For walleye, a sample of spines was collected for aging.

Harvest and effort for each lake were totaled by harvest method and reported by around 10 A.M. the following day to administrative staff at the GLIFWC office in Odanah, Wisconsin. Catch report forms and nightly summary sheets for all spearing and netting that had occurred were also faxed to the GLIFWC office each morning and used to double-check reported totals. During spring the total harvest by lake, by band, and by species was transmitted to tribal and Minnesota Department of Natural Resources (MnDNR) representatives around 10 a.m. that same day and were used to update walleye tribal quotas. After the spring season, harvest summaries were provided monthly to MnDNR representatives during months with spearing or netting effort. For net-lift data collected after and not reported by 10 A.M., the number of net-lifts outstanding was multiplied by the assigned catch rate, and the total subtracted from a Band's quota until the actual data were reported and could be used.







Figure 3. Treaty fishing permit used during the 2001-2002 tribal quota year.

28	29	30	31	Month _____	1	2	3	4	5
27	<b>Off-Reservation Treaty Fishing Permit</b> <input type="checkbox"/> Spearing <input type="checkbox"/> Fyke Netting No <b>0250</b> <input type="checkbox"/> Seining <input type="checkbox"/> Gill Netting								6
26	Tribal ID Number _____ of _____ Reservation								7
25	Signature of Permittee: _____								8
24	Issued by: _____ of _____ Reservation								9
23	Water: _____ County: _____								10
22	Bag Limit: Walleye _____ Muskellunge _____								11
21	Other Restrictions: _____								12

**FRONT**

<b>Spearing Times:</b>		<b>Number of:</b>	
Starting _____	Ending _____	Walleye per boat _____	Musky per boat _____
<b>WALLEYE LENGTHS</b>			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**BACK**

## RESULTS AND DISCUSSION

### FISHING EFFORT

#### NUMBER OF PARTICIPANTS

A total of 371 tribal members speared, netted, or speared and netted during the 2001 spring fishery in Minnesota (Table 1, Appendix B). Of this total, 27% were Mille Lacs Band members, 25% were Fond du Lac Band members, and 48% were from six Wisconsin bands combined. Compared to 2000, the total number of participants decreased by 32 persons or by 8%.

Table 1. Number of tribal members from eight Chippewa bands who speared, netted, or speared and netted during the 2001 spring fishery.

Gear	Mille Lacs	Fond du Lac	Bad River	Lac Courte Oreilles	Lac du Flambeau	Mole Lake	Red Cliff	St. Croix	Total
Spearing only	3	35	3	0	1	1	0	0	43
Netting only	84	27	30	25	31	18	18	26	259
Spearing & Netting	15	29	7	4	8	3	0	3	69
2001 Spring Total	102	91	40	29	40	22	18	29	371
2000 Spring Total	119	99	46	34	45	15	13	32	403
1999 Spring Total	109	21	28	25	21	13	13	17	247
1998 Spring Total	69	34	13	7	15	0	4	10	152

After the 2001 spring season, five tribes had members who fished. During the fall/winter season 36 band members netted (30 from Mille Lacs, 3 from St Croix, and 1 each from Fond du Lac, Bad River, and Lac Courte Oreilles), only 1 Mille Lacs member netted during the early spring 2002 season.

## NUMBER OF PERMITS USED

For all lakes combined, a total of 1,081 permits were used during spring 2001 (Table 2, Appendix B) an increase of 12 permits from the 2000 spring season . More netting permits (786) were used than spearing permits (295). More permits were used by the Mille Lacs Band (397) and the Fond du Lac Band (274) than the individual Wisconsin bands. Of the total permits, 37% were used by Mille Lacs Band members, 25% by Fond du Lac Band members, and 38% by Wisconsin band members. Similar to 2000, Mille Lacs Band members used more permits for netting (349) while Fond du Lac Band members used more permits for spearing (207).

Table 2. Number of permits used by eight Chippewa bands during spring 2001.<sup>1</sup>

Gear	Mille Lacs	Fond du Lac	Bad River	Lac Courte Oreilles	Lac du Flambeau	Mole Lake	Red Cliff	St. Croix	Total
Spearing	48	207	12	4	17	4	0	3	295
Netting	349	67	58	62	72	61	27	90	786
2001 Total	397	274	70	66	89	65	27	93	1,081
Percent of 2001 total	37%	25%	6%	6%	8%	6%	2%	9%	
2000 Total	441	193	94	67	93	42	28	111	1,069
1999 Total	328	188	54	44	45	47	33	52	794
1998 Total	198	155	43	30	36	0	15	33	510

<sup>1</sup> 3 Bad River members netted under Red Cliff's quota; 1 Fond du Lac member netted under Mole Lake's quota.

After the spring 2001 season, a total of 184 permits were used during the fall/winter season for netting in Mille Lacs Lake (168 from Mille Lacs, 6 each from Fond du Lac and St. Croix, 3 from Lac Courte Oreilles, and 1 from Bad River). Two permits were used by the Mille Lacs band during the early spring 2002 season for netting in Mille Lacs Lake.

## NUMBER OF DAYS FISHED

Overall, spearing or netting effort occurred on 90 dates during the 2001-2002 quota year (Appendix C). During a 39 day period in spring (April 7 through May 15), spearing effort occurred in Mille Lacs Lake on 8 dates while netting occurred on 33 days. In two other lakes, spring spearing occurred on 3 dates. During the remainder of the quota year netting occurred in Mille Lacs Lake on 56 dates, there was no effort after spring on the other 2 lakes.

## NUMBER OF BOAT-HOURS

A total of 290.1 boat-hours of spearing effort occurred during the 2001-2002 quota year (Table 3), all of which occurred in the spring of 2001 (Appendix C). Fond du Lac Band spearers accounted for over half of the boat-hour effort (190.8 boat-hours or 66%). More spearing effort occurred in Mille Lacs Lake (84%) than the two other lakes that received effort (16%).

Table 3. Number of spearing boat-hours by eight Chippewa bands during the 2001-2002 quota year.

Lakes	Mille Lacs	Fond du Lac	Bad River	Lac Courte Oreilles	Lac du Flambeau	Mole Lake	Red Cliff	St. Croix	Total
Mille Lacs	53.7	145.8	15	9	11.1	8.3	0	1	243.9
Goose L	1.2	0	0	0	0	0	0	0	1.2
Green L	0	45	0	0	0	0	0	0	45
2001 Total	54.9	190.8	15	9	11.1	8.3	0	1	290.1
Percent of 2001 Total	19%	66%	5%	3%	4%	3%	0	0.3%	
2000 Total	96.8	163	6.25	0	34.55	0	0	23.5	324.1
1999 Total	106.9	233.2	8.5	0	10.4	7.8	6.4	9.6	382.8
1998 Total	56.0	156.5	15.5	23.6	23.6	0	23.1	21.6	319.9

## NUMBER OF NET-LIFTS

A total of 976 gill-net lifts occurred during the 2001-2002 quota year, of which 789 lifts occurred during spring 2001 (Table 4, Appendix D). All the spring effort occurred in Mille Lacs Lake with Mille Lacs Band members accounting for 44% of the effort and 98% of the lifts being 1.75 inch mesh. After spring a total of 187 net lifts occurred in Mille Lacs Lake. The majority of this effort (86%) occurred with the 1.75 gill-net mesh during the fall/winter season by Mille Lacs Band members.

Table 4. Number of net-lifts by eight Chippewa bands during the 2001-2002 quota year.

Season	Lake	Gill-net mesh (inches)	Mille Lacs	Fond du Lac	Bad River	Lac Courte Oreilles	Lac du Flambeau	Mole Lake	Red Cliff	St. Croix	Total
Spring 2001	Mille Lacs	1.25	3	0	0	0	0	0	0	0	3
Spring 2001	Mille Lacs	1.5	3	0	0	0	0	0	0	0	3
Spring 2001	Mille Lacs	1.75	344	67	59	62	73	61	27	90	783
Spring Sub-total			350	67	59	62	73	61	27	90	789
Fall/winter	Mille Lacs	1.5	8	0	0	0	0	0	0	0	8
Fall/winter	Mille Lacs	1.75	161	0	1	3	0	0	0	6	171
Fall/winter	Mille Lacs	*	0	6	0	0	0	0	0	0	6
Early spring 2002	Mille Lacs	1.75	2	0	0	0	0	0	0	0	2
Post Spring Sub-total			171	6	1	3	0	0	0	6	187
2001 Total			521	73	60	65	73	61	27	96	976
2000 Total			494	57	91	68	87	42	28	84	951
1999 Total			427	34	50	44	44	32	28	40	699
1998 Total			181	41	25	20	24	0	6	22	319

\* net-mesh size not recorded

## **HARVEST**

### **TOTAL HARVEST**

During the 2001-2002 quota year, a total of 32,611 fish (63,293 pounds) from 14 taxa were harvested from three lakes (Table 5). Most fish were taken from Mille Lacs Lake; including 32,431 fish or 99.5% of the total number, and 62,786 pounds or 99.2% of the total weight. Green Lake (Chisago County) had a harvest of 176 fish and 495 pounds, while Goose Lake (Chisago County) had a harvest of 4 fish and 16 pounds.

Walleye, the species sought during most spearing and netting, made up most of the harvest. Walleye harvest comprised 25,416 fish or 78% of the total number, and 49,066 pounds or 78% of the total weight (Table 5). Northern pike and yellow perch were the only other species for which harvest exceeded 1,000 pounds. Harvest exceeded 200 pounds (and 200 fish) for three other taxa: burbot, tullibee, and sucker. Harvest was below 200 pounds for the remaining taxa.

Table 5. Number and pounds of 14 fish taxa harvested from three lakes with effort during the 2001-2002 quota year.

Lake County	Goose Chisago	Green Chisago	Mille Lacs Mille Lacs	Total	Percent of Total
Area in Acres	442	1,715	132,516	134,673	
<b>Species / Taxa</b>	<b>NUMBER</b>				
Walleye	4	144	25,268	25,416	77.94%
Northern Pike		2	2,318	2,320	7.11%
Yellow Perch			2,789	2,789	8.55%
Burbot			429	429	1.32%
Tullibee			636	636	1.95%
Smallmouth Bass			61	61	0.19%
Largemouth Bass		12	3	15	0.05%
Bass sp.			1	1	0.00%
Muskellunge			13	13	0.04%
Rock Bass			265	265	0.81%
Crappie sp.		3	33	36	0.11%
Sucker sp.		13	477	490	1.50%
Bullhead sp.			127	127	0.39%
Carp		2		2	0.01%
Bowfin			8	8	0.02%
Sunfish			3	3	0.00%
<b>Total</b>	<b>4</b>	<b>176</b>	<b>32,431</b>	<b>32,611</b>	<b>100.00%</b>
<b>Percent of Total</b>	<b>0.01%</b>	<b>0.54%</b>	<b>99.45%</b>	<b>100.00%</b>	
<b>Species / Taxa</b>	<b>POUNDS</b>				
Walleye	16.0	378.4	48,671.9	49,066.3	77.52%
Northern Pike		17.6	9,417.7	9,435.3	14.91%
Yellow Perch			1,999.5	1,999.5	3.16%
Burbot			791.9	791.9	1.25%
Tullibee			534.0	534.0	0.84%
Smallmouth Bass			83.5	83.5	0.13%
Largemouth Bass		32.6	3.6	32.6	0.05%
Bass sp.			0.6	0.6	0.00%
Muskellunge			178.6	178.6	0.28%
Rock Bass			170.4	170.4	0.27%
Crappie sp.		0.8	17.1	17.9	0.03%
Sucker sp.		38.4	767.5	805.9	1.27%
Bullhead sp.			120.9	120.9	0.19%
Carp		27.6		27.6	0.04%
Bowfin			27.4	27.4	0.04%
Sunfish			0.9	0.9	0.00%
<b>Total</b>	<b>16.0</b>	<b>495.4</b>	<b>62,785.5</b>	<b>63,293.3</b>	<b>100.00%</b>
<b>Percent of Total</b>	<b>0.03%</b>	<b>0.78%</b>	<b>99.20%</b>	<b>100.01%</b>	



Harvest of five species of fish was regulated by a quota in Mille Lacs Lake (Table 6, Appendices E, F1-F9). For walleye, 57% of the 85,000 pound quota for the 2001-2002 quota year was taken. For northern pike, 82% of the 11,500 pound quota was harvested. The percent of the quota harvested for the three other species was 6% or less.

Table 6. Overall tribal quota, declaration and harvest in pounds and percent of declaration taken during the 2001-2002 quota year for five fish species in Mille Lacs Lake.

	Walleye	Northern Pike	Yellow Perch	Tullibee or Cisco	Burbot
Quota	85,000	11,500	135,000	12,000	14,000
Declaration	84,997	11,500	106,571	11,742	14,000
Harvest	48,672	9,418	2,000	534	792
Percent of Declaration Harvested	57%	82%	2%	5%	6%

Prior to the 2001-2002 quota year, four tribes declared a walleye quota for 22 lakes other than Mille Lacs Lake (Figure 2, Appendices G1-G4). Of these 22 lakes, the walleye quota was shared by two tribes on six lakes. Effort occurred in two lakes and walleye were harvested in both (Table 5). Percent of walleye quota harvested was greatest from Green Lake (Chisago County) where Fond du Lac Band members speared 378.4 pounds (37.8%) of the 1,000 pound quota. Mille Lacs Band members speared 16 pounds (13.3%) of the 120 pound quota from Goose Lake (Chisago County).

## MILLE LACS LAKE HARVEST

Fourteen taxa of fish were harvested from Mille Lacs Lake during the 2001-2002 quota year (Table 5). The majority of harvested fish were walleye, which comprised 25,268 fish or 78% of the total number, and 48,672 pounds (Appendix F1) or 78% of the overall weight. Northern pike and yellow perch were the only other species where harvest exceeded 1,000 pounds. For northern pike 9,418 pounds or 15% of the overall weight was harvested. For yellow perch 2,000 pounds or 3% of the overall weight was taken. Harvest exceeded 200 pounds for three other taxa: burbot, tullibee, and sucker.

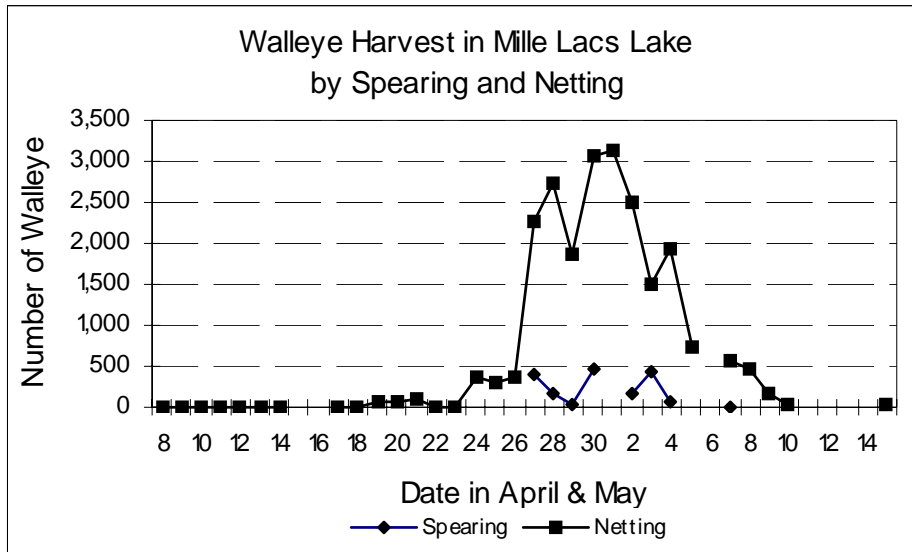
Harvest During Spring 2001. For the six fish taxa with more than 200 pounds taken a greater percent of the total weight was harvested in spring than after spring with the exception of tullibee (Table 7, Appendix F1). For walleye and northern pike, the percent of the total weight harvested in spring was 94% and 83%, respectively. For the four other species with more than 200 pounds taken, the percent harvested in spring was 98% for yellow perch, 93% for sucker, 89% for burbot, and 18% for tullibee. During spring 2001, the weight of walleye harvested was near or exceeded 1,000 pounds on most dates from April 27 to May 7 (Figure 4).

Table 7. Number and pounds of fish harvested in Mille Lacs Lake during spring 2001 and after spring.

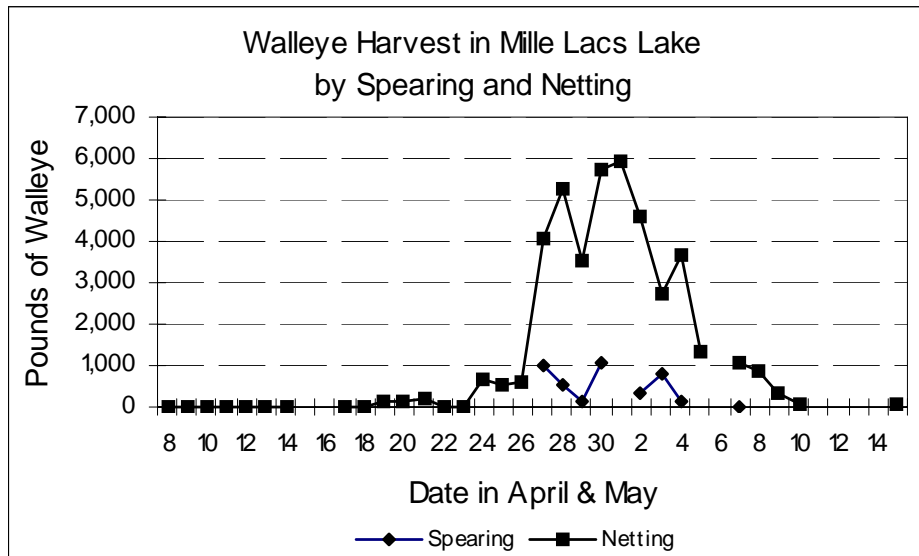
Species / Taxa	Spring		After Spring		Total		Percent of Total Pounds in Spring
	Number	Pounds	Number	Pounds	Number	Pounds	
Walleye	24,100	45,727.3	1,168	2,944.6	25,268	48,671.9	94.0%
Northern Pike	2,022	7,843.7	296	1,574.0	2,318	9,417.7	83.3%
Yellow Perch	2,702	1,958.9	87	40.6	2,789	1,999.5	98.0%
Burbot	379	703.8	50	88.1	429	791.9	88.9%
Tullibee	85	97.4	551	436.6	636	534.0	18.2%
Sucker sp.	446	716.7	31	50.8	477	767.5	93.4%
Smallmouth Bass	43	61.4	18	22.1	61	83.5	
Largemouth Bass	2	2.6	1	1.0	3	3.6	
Bass sp.			1	0.6	1	0.6	
Muskellunge	12	174.0	1	4.6	13	178.6	
Rock Bass	201	131.9	64	38.5	265	170.4	
Crappie	12	8.2	21	8.9	33	17.1	
Sunfish sp.			1	0.3	1	0.3	
Bullhead sp.	61	69.8	66	51.1	127	120.9	
Bowfin	3	11.4	5	16.0	8	27.4	
<b>Total:</b>	<b>30,068</b>	<b>57,507.1</b>	<b>2,361</b>	<b>5,277.8</b>	<b>32,429</b>	<b>62,784.9</b>	<b>91.6%</b>

Figure 4. Number (a) and pounds (b) of walleye harvested daily in Mille Lacs Lake by spearing and netting during spring 2001.

a)



b)



Harvest by Method During Spring 2001. The majority of harvest from Mille Lacs Lake during spring 2001 was with gill-nets (Appendix F1). For walleye, the weight harvested was much greater for gill-nets (41,732 pounds) than for spearing (3,995.3 pounds) (Appendix D). In addition, the percent of the spring weight harvested with gill-nets was 100% for northern pike and tullibee, 99.9% for yellow perch, 99.7% for burbot, 93.1% for sucker, and 91.3% for walleye.

### CATCH PER EFFORT

Spearing CPE During Spring 2001. During spring 2001 a total of 290.1 boat-hours of spearing was recorded in which 1,894 walleye weighing 4,390 pounds were speared (Table 8, Appendices F1, G1-G4). Overall catch per effort (total harvest / total boat-hours) for walleye during spring was 6.5 fish and 15.1 pounds per boat-hour. The highest catch rate (walleye/boat-hour) was in Mille Lacs Lake (7.2).

Table 8. Spearing CPE (catch per effort; number or pounds of walleye per boat hour) for three lakes with effort during spring 2001.

Lake	County	Area	Harvest-Walleye Number	Harvest-Walleye Pounds	Effort-Boat-Hours	CPE (Number)	CPE (Pounds)
Mille Lacs	Mille Lacs	132,516	1,746	3,995.3	243.9	7.2	16.4
Goose L	Chisago	442	4	16	1.2	3.3	13.3
Green L	Chisago	1,715	144	378.4	45	3.2	8.4
		134,673	1,894	4,389.7	290.1	6.5	15.1

Gill-Net CPE During Spring 2001. For gill-netting during spring in Mille Lacs Lake, a total of 789 net-lifts were recorded in which 22,354 walleye weighing 41,732 pounds were caught. Overall catch per effort (total harvest / total net-lifts) for walleye was 28 fish and 53 pounds per net-lift (Figures 5 and 6, Appendix D). For ¾ inch mesh gill-nets a total of 783 net-lifts were observed in which 22,105 walleye weighing 41,355 pounds were harvested. The walleye catch per effort for ¾ inch mesh gill-nets was 28 fish and 53 pounds. For ½ inch mesh gill-nets a total of 3 net-lifts were recorded in which 121 walleye weighing 172 pounds were taken. The walleye catch per effort for ½ inch mesh gill-nets was 40 fish and 57 pounds. For ¼ inch mesh gill-nets a total of 3 net-lifts were recorded in which 128 walleye weighing 205 pounds were taken. The walleye catch per effort for ¼ inch mesh gill-nets was 43 fish and 68 pounds.

Figure 5. Gill-net catch per effort (CPE) in numbers for walleye harvested from Mille Lacs Lake during spring 2001.

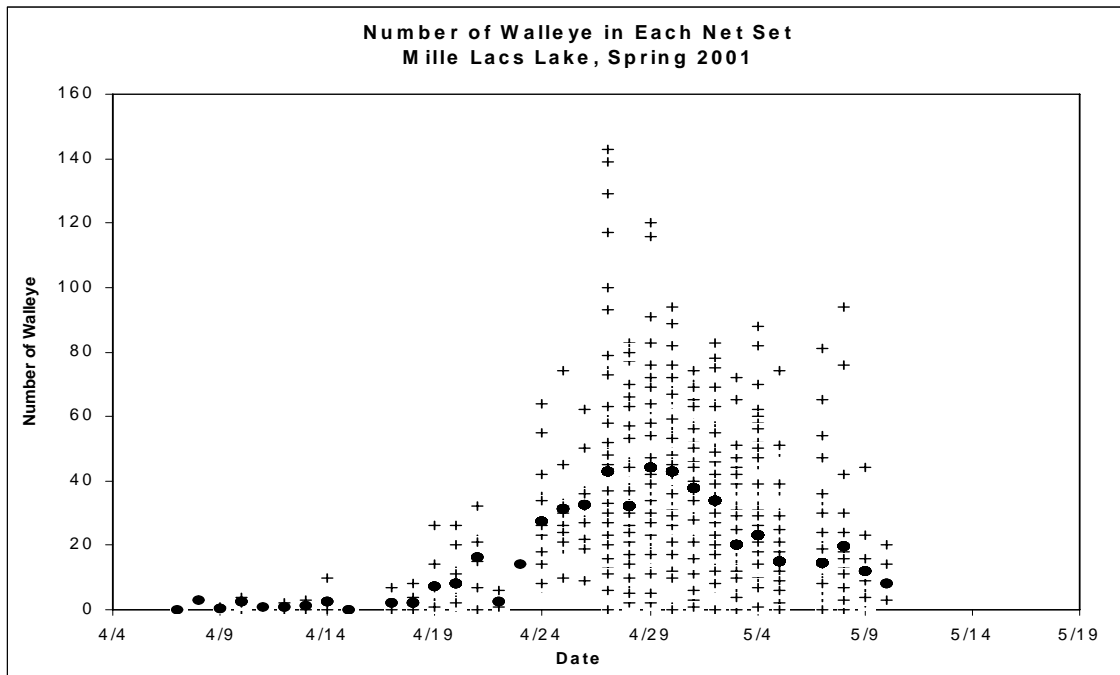
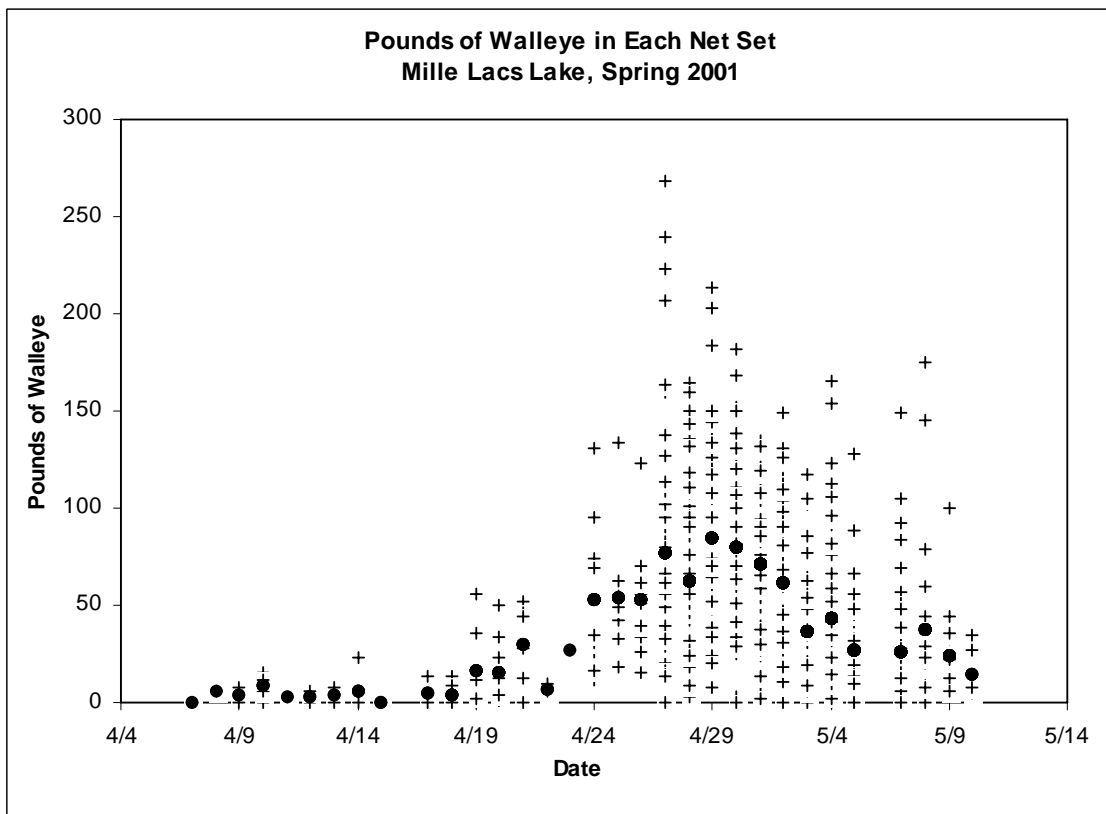


Figure 6. Gill-net catch per effort (CPE) in pounds for walleye harvested from Mille Lacs Lake during spring 2001.

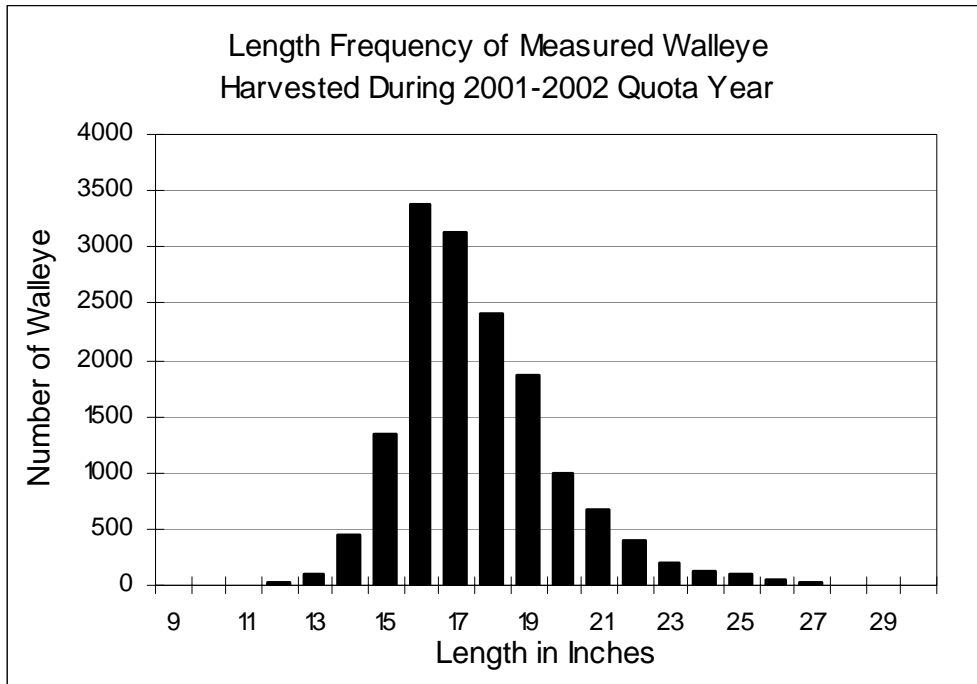


## WALLEYE MEAN LENGTH AND MEAN WEIGHT

Length was measured for a total of 15,321 walleye (60% of the catch) and aggregate weight was recorded for all 25,416 walleye harvested (Appendix H). Overall, mean length of measured walleye was 18.1 inches (Figure 7) and mean weight was 1.9 pounds. For the two lakes where at least one hundred pounds of walleye were harvested, mean length of measured walleye and mean weight were 18.8 inches and 2.6 pounds in Green Lake (Chisago County), and 18.0 inches and 2.0 pounds in Mille Lacs Lake.

For walleye harvested from Mille Lacs Lake during spring 2001, mean length and weight of measured walleye were: 17.2 inches and 1.6 pounds for 1¼ inch mesh net, 16.1 inches and 1.4 pounds for 1½ inch mesh net, 17.8 inches and 1.9 pounds for 1¾ inch mesh net, and 18.7 inches and 2.3 pounds for spearing (Appendix H). After spring, most walleye were harvested with 1¾ inch mesh net; mean length of measured walleye and mean weight were 19.9 inches and 2.5 pounds.

Figure 7. Length frequency of measured walleye during the 2001-2002 quota year.



## SEX COMPOSITION OF THE WALLEYE CATCH

During the 2001-2002 quota year, 13,788 walleye were measured and sexed. An additional 2,470 walleye were sexed but not measured. The majority of the sexable walleye were male: 14,370 of 16,258 fish or 88% (Figure 8, Appendix H). Females (1,888 fish) comprised 12% of the sexable harvest. Sex could not be determined for 884 walleye.

For walleye harvested from Mille Lacs Lake during spring 2001, sex ratios (male:female) by gear were: 13:1 in 1¼ inch mesh net, 16:1 in 1½ inch mesh net, 8:1 in 1¾ inch mesh net, and 5:1 by spearing (Appendix H). Respective mean lengths for male and female walleye captured by these gear were: 17.0 and 20.1 inches for 1¼ inch mesh net, 16.1 inches and 18.3 inches for 1½ inch mesh net, 17.5 and 19.9 inches for 1¾ inch mesh net, and 18.1 and 22.3 inches by spearing (Figure 9).

Figure 8. Estimated number of male and female walleye harvested per inch group during the 2001-2002 quota year.

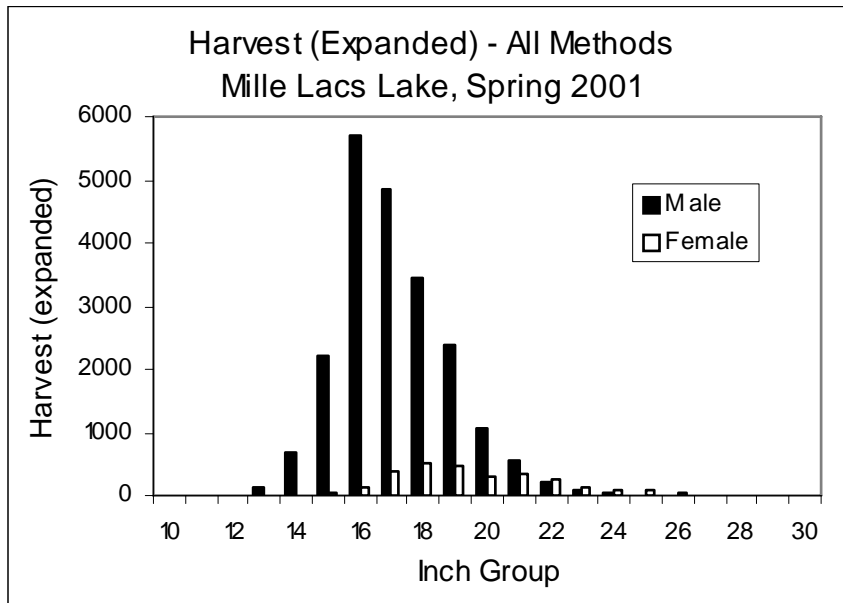
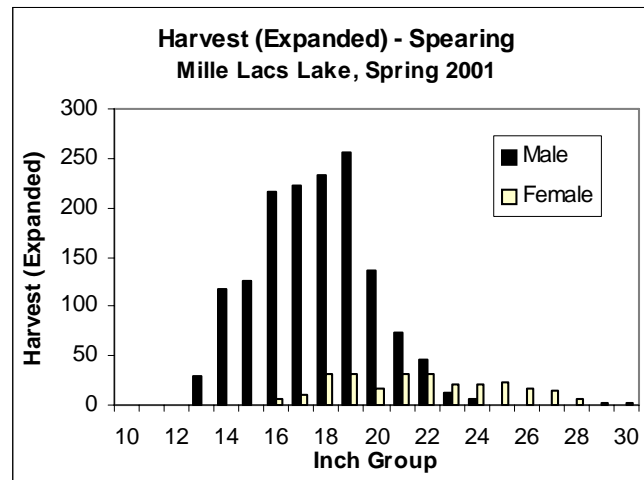
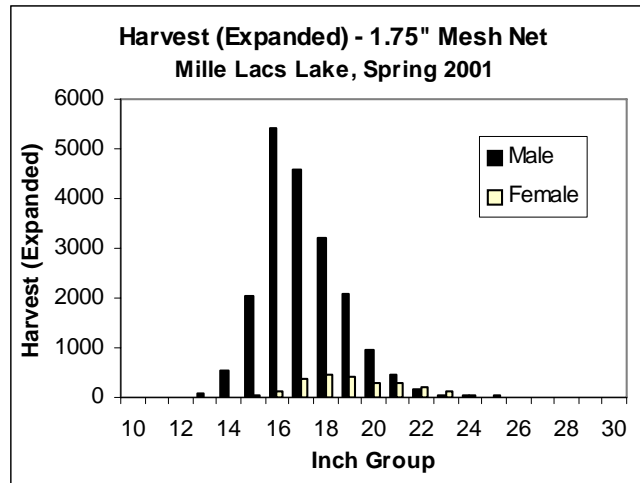
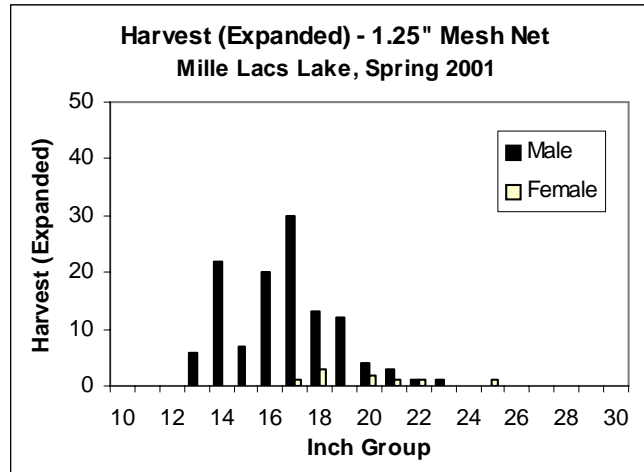


Figure 9. Estimated number of male and female walleye harvested per inch group with 1¼ inch and 1¾ inch (bar mesh) gill-nets, and spears from Mille Lacs Lake during spring 2001. Note varying scales.





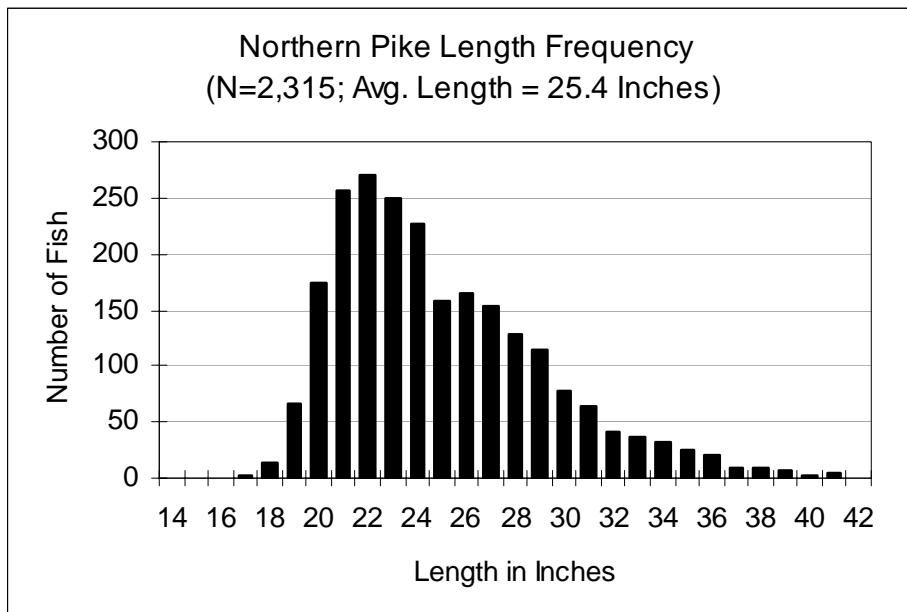
## NORTHERN PIKE HARVEST

A total of 2,320 northern pike weighing 9,435 pounds were harvested from two lakes during the 2001-2002 quota year (Table 5, Appendix I). Average weight of all northern pike harvested was 4.1 pounds. Of the 2,315 northern pike with length measured the average length was 25.4 inches (Figure 10, Appendix I). Approximately 99% of the northern pike (2,318 fish, 9,418 pounds) were harvested from Mille Lacs Lake. Two fish (17.6 pounds) were speared from Green Lake (Chisago County).

Most northern pike (2,304 fish, 9,355 pounds) in Mille Lacs Lake were harvested with 1¾ inch gill-nets and most of these were taken in spring (2,015 fish, 7,822 pounds). Overall, 81.9% of the northern pike quota in Mille Lacs Lake was harvested (Table 6, Appendices E and F1).

For the 1,645 sexable northern pike, 57% were male and 43% were female. Average length was 24.0 inches for males and 25.7 inches for females.

Figure 10. Length frequency of measured northern pike harvested during the 2001-2002 quota year.

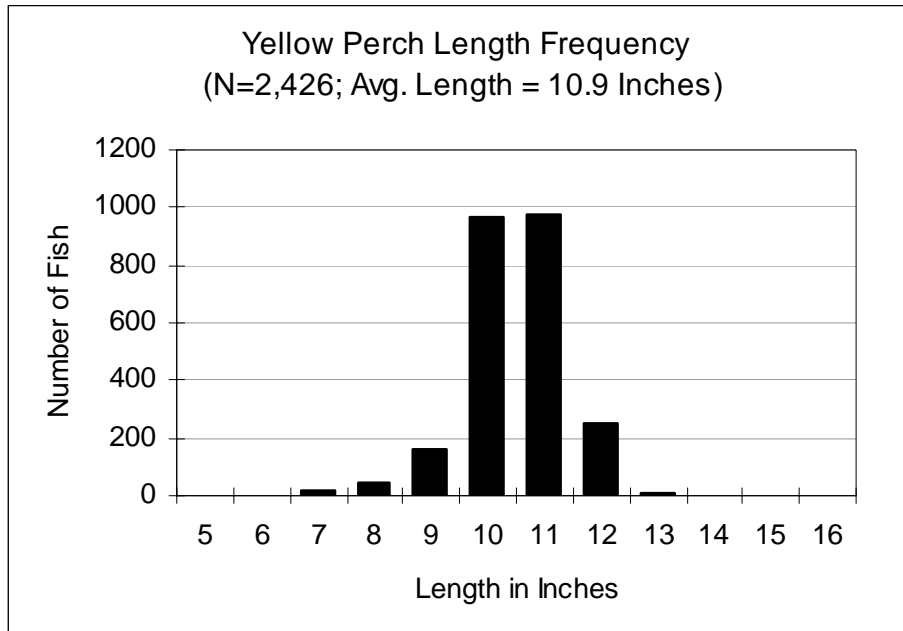


## YELLOW PERCH HARVEST

A total of 2,789 yellow perch weighing 2,000 pounds were harvested from Mille Lacs Lake, with an average weight of 0.7 pounds (Table 5, Appendix J). Yellow perch were not harvested from any of the other lakes that received effort. The majority of yellow perch (97%) were harvested during spring 2001 in gill-nets. Overall, about 1.9% of the yellow perch quota in Mille Lacs Lake (106,571 pounds) was harvested (Table 6, Appendices E and F1).

Of the 2,426 yellow perch with length measured, average length was 10.9 inches (Figure 11, Appendix J). For the 2,137 sexable yellow perch, 35% were male and 65% were female, with average length of 10.9 inches for males and 11.0 inches for females.

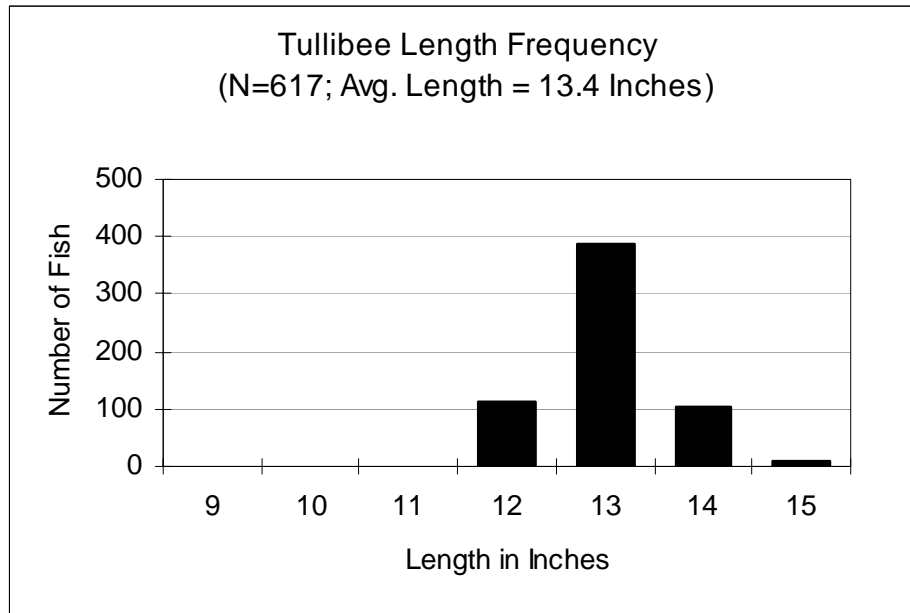
Figure 11. Length frequency of measured yellow perch harvested from Mille Lacs Lake during the 2001-2002 quota year.



## TULLIBEE HARVEST

A total of 636 tullibee (aka. cisco) weighing 534 pounds, with an average weight of 0.8 pounds, were harvested from Mille Lacs Lake during the 2001-2002 quota year (Table 5, Appendix K). Tullibee were not harvested from any of the other lakes that received effort. The majority of tullibee (87%) were taken after spring in 1¾ inch gill- nets. Overall, 4.5% of the total tullibee quota in Mille Lacs Lake (11,742 pounds) was harvested (Table 6, Appendices E and F1). Of the 617 tullibee with length measured the average length was 13.4 inches (Figure 12, Appendix K). The length of the one male sexable tullibee was 9.8 inches.

Figure 12. Length frequency of measured tullibee harvested from Mille Lacs Lake during the 2001-2002 quota year.

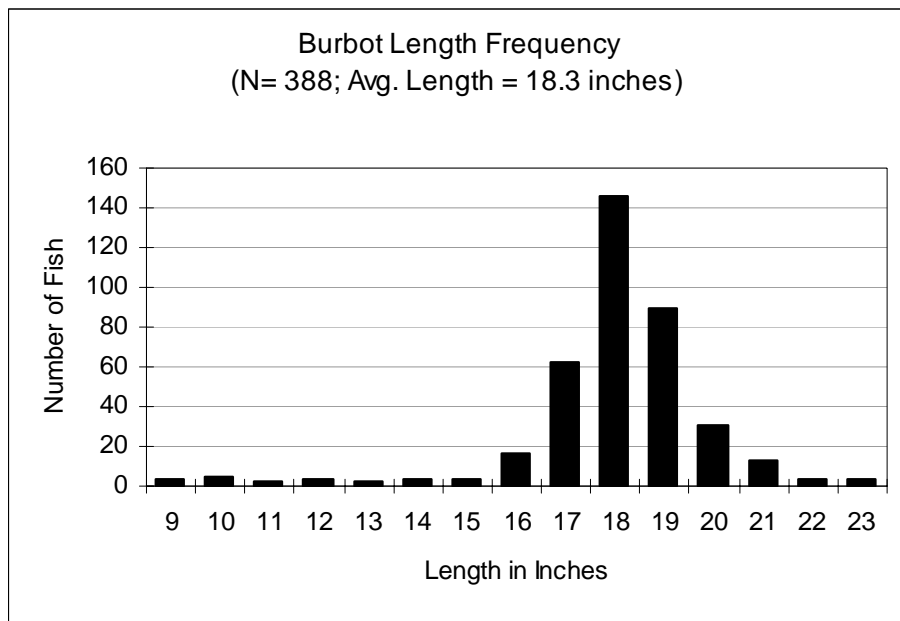


## BURBOT HARVEST

A total of 429 burbot weighing 792 pounds were harvested from Mille Lacs Lake during the 2001-2002 quota year (Table 5, Appendix L). Burbot were not harvested from any other lakes that received effort. The majority of burbot (88%) were taken during spring 2001 in gill-nets. Overall, 5.7% of the total burbot quota in Mille Lacs Lake (14,000 pounds) was harvested (Table 6, Appendices E and F1).

Of the 388 burbot with length measured, average length was 18.3 inches (Figure 13, Appendix L). Average weight of the 429 burbot was 1.8 pounds. Only four burbot were sexable, the average length for the three males was 18.5 inches and the one female was 10.6 inches.

Figure 13. Length frequency of measured burbot harvested from Mille Lacs Lake during the 2001-2002 quota year.



## **ACKNOWLEDGMENTS**

The authors extend thanks to Annie Thannum and Kim Campy for their diligence in compiling nightly harvest statistics, in providing these data to tribal and MnDNR representatives, and in updating each day the list of quotas for lakes selected for harvest, along with the adjusted quota, the bag limits, and the number of permits available for each lake. In addition, we thank tribal fisheries biologists tribal wardens, fisheries technicians, and creel clerks. Finally, we thank the tribal members who fished and patiently allowed the monitoring of the catch.

## **LITERATURE CITED**

Milroy, N, L. David, J. Krueger, R. Madsen. 2005. Open-Water Spearing and Netting in the 1837 Minnesota Ceded Territory During the 2000-2001 Quota Year. Administrative Report 2005-08. Great Lakes Indian Fish and Wildlife Commission, Odanah, WI.

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