



# **Open Water Spearing in Northern Wisconsin by Chippewa Indians During 1997**

by

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## ABSTRACT

Nineteen ninety-seven (1997) marked the thirteenth consecutive spring that spear fishing was conducted by Chippewa tribes in off-reservation waters of northern Wisconsin. A total of 455 tribal members participated in this traditional fishery. Spearing occurred on 153 lakes and walleye were harvested from all except 3. A total of 24,633 fish were taken with 97.4% of the catch (24,002 fish) being walleye. Numbers of other gamefish harvested were 333 muskellunge, 145 bass, and 37 northern pike. Average lengths were 15.3 inches for walleye and 37.6 inches for muskellunge. The tribal walleye quota was exceeded by 22 fish on 2 lakes. Except for these 2 instances, harvest of walleye and muskellunge was maintained within the established limits by a nightly permit system and by complete monitoring of the catch.

Fall spearing occurred on one night in September and one night in November. A total of 42 walleye were harvested from 2 lakes. No other species were taken. Average length for walleye was 13.3 inches.

## TABLE OF CONTENTS

	PAGE
LIST OF TABLES .....	iii
LIST OF FIGURES .....	iv
INTRODUCTION .....	1
Regulations .....	1
Permit System and Monitoring .....	1
RESULTS AND DISCUSSION .....	4
Fishing Effort .....	4
Number of Spearers.....	4
Number of Spearer-nights or Permits Used .....	6
Number of Boat-hours .....	8
Total Harvest .....	10
Walleye Harvest .....	11
Mean Length .....	12
Sex Composition of Catch .....	13
Catch Per Effort (CPE) .....	15
Muskellunge Harvest .....	16
Bass Harvest .....	18
Northern Pike Harvest .....	20
Fall Spearing .....	20
ACKNOWLEDGMENTS .....	22
LITERATURE CITED .....	23
LIST OF APPENDICES .....	24

## LIST OF TABLES

TABLE		PAGE
1	Number of spearers on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997 .....	4
2	Number of spearer-nights on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997 .....	6
3	Number of spearer boat-hours on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997 .....	8
4	Number of interviews and average length of spearing trip (in boat-hours) during spring spearing from 1989-1997 .....	9
5	Number of various fish species harvested during spring spearing seasons from 1993-1997 .....	10
6	Number and percent of walleye that were sexed and were male, female, or unknown sex during spring spearing seasons from 1985-1997 .....	13

## LIST OF FIGURES

FIGURE		PAGE
1	Map depicting the ceded territory in northern Wisconsin .....	2
2	Off-reservation Treaty Fishing Permit used during spring 1997 .....	3
3	Number of spearers during spring spearing seasons from 1986-1997 .....	5
4	Number of spearer-nights during spring spearing seasons from 1986-1997 .....	7
5	Number of boat-hours of effort during spring spearing seasons from 1986-1997 .....	9
6	Number of walleye and percent of quota harvested during spring spearing seasons from 1989-1997 .....	11
7	Length frequency of walleye speared during 1997 and during the thirteen year period 1985-1997 .....	12
8	Sex composition of the walleye harvest during spring spearing seasons from 1985-1997 .....	14
9	Walleye CPE (number per boat-hour) by lake during the 1997 spring spearing season .....	15
10	Number of muskellunge harvested during spring spearing seasons from 1985-1997 .....	17
11	Length frequency of muskellunge speared during 1997 and during the thirteen year period 1985-1997 .....	17
12	Number of bass harvested during spring spearing seasons from 1985-1997 .....	19
13	Length frequency of bass speared during 1997 and during the thirteen year period 1985-1997 .....	19
14	Number of northern pike harvested during spring spearing seasons from 1985-1997 .....	21
15	Length frequency of northern pike speared during 1997 and during the thirteen year period 1985-1997 .....	21

## INTRODUCTION

This report presents data for harvest and effort by Chippewa spearers in ceded territory waters of northern Wisconsin (Figure 1) during spring 1997. Since 1989 two other seasonal fisheries have sometimes occurred in off-reservation waters: fall spearing and summer gill netting. During 1997, the only other fishery that occurred was fall spearing.

## REGULATIONS

Regulations governing the use of spears and nets for harvesting walleye and muskellunge were adopted by each of the six Wisconsin tribes and became permanent in 1989. A listing of the major differences between permanent regulations and negotiated interim rules that governed tribal harvest in 1988 can be found in Kmiecik and Shively (1990).

## PERMIT SYSTEM AND MONITORING

The permit system has operated the same since 1988. Permits (Figure 2) were issued at a tribal office during the day or at the designated boat landing at night. The number of permits that could be issued was determined daily by dividing the remaining tribal quota (TQ) for a lake by the nightly bag limit selected for that lake. Lakes were closed to further spearing of walleye and to all netting once the walleye TQ was reached. However, spearing permits could be issued for harvest of other species.

All spearing was monitored by tribal creel clerks under the supervision of GLIFWC wardens and biologists. A set of instructions for collecting biological data was provided to creel clerks at a training meeting about two weeks prior to the season.

During spearing, teams of creel clerks and wardens were assigned to each lake in some areas and only to lakes where permits had been issued in other areas. These teams arrived at the designated boat landing before dark and prepared a work area. Upon return of each boating party, a catch report form was completed. For species other than walleye, all fish were identified, counted, sex determined, and measured. For walleye, all fish were counted. Also, the first 100 walleye plus all those in the last boat were measured and sex determined. In addition, permits were collected and a record made of each person's tribal ID number, the time spearing started and the time it ended.

Harvest and effort for each lake were totaled and reported by 9 a.m. the following day to administrative staff at the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) office in Odanah. These data were then transmitted to tribal and WDNR representatives by 10 a.m. and used to update walleye and muskellunge TQ's. Starting in 1993 all catch report forms were also faxed in daily. Before noon, tribal representatives notified GLIFWC of the lakes and bag limits selected for spearing that night. In turn, these data were transmitted to the WDNR.

Figure 1. Map depicting the ceded territory and tribal lands in northern Wisconsin.

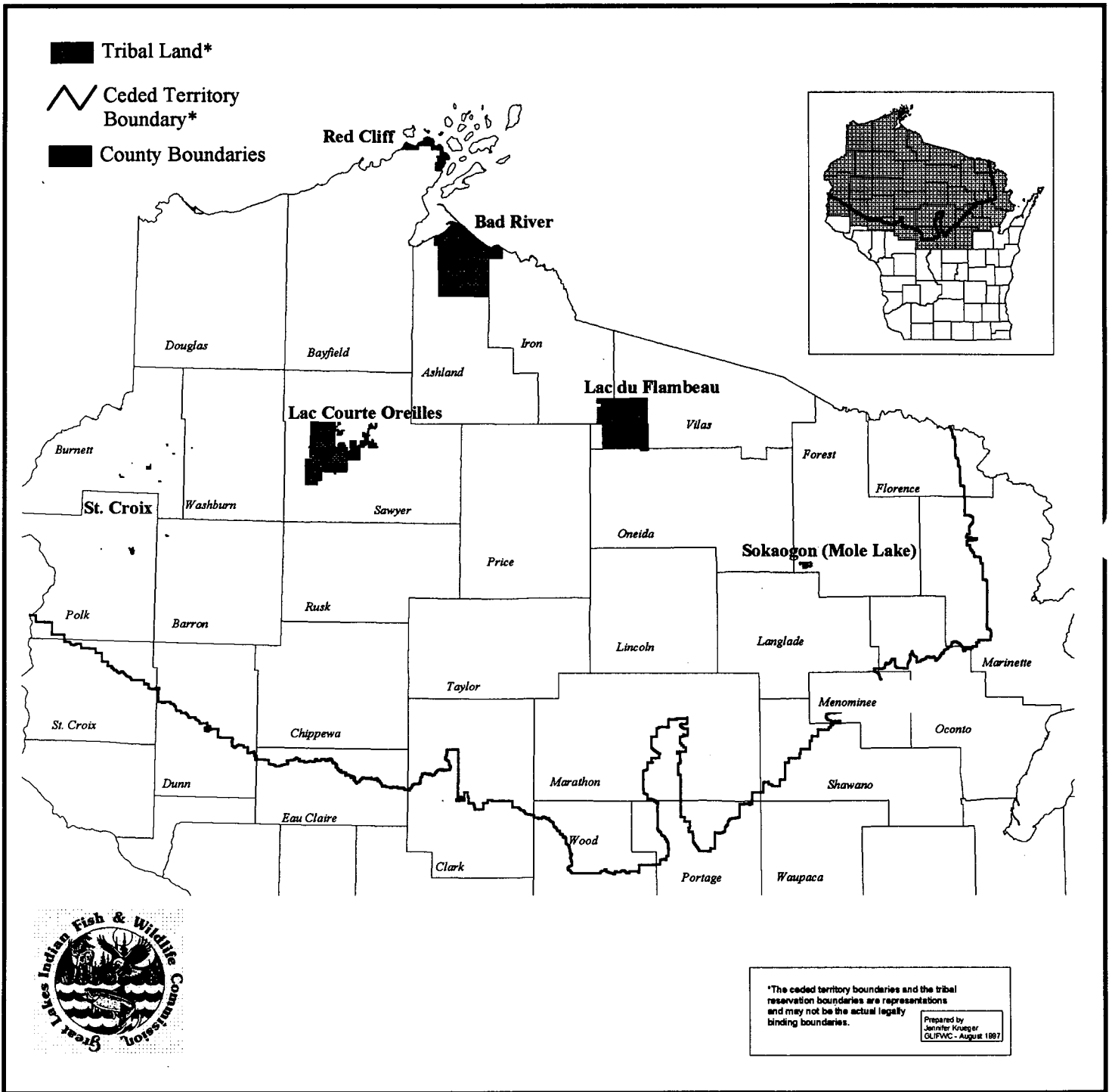




Figure 2

Off-Reservation Treaty Fishing Permit used during the 1997 open-water season.

28	29	30	31	Month	_____	1	2	3	4	5	
27	<b>Off-Reservation Treaty Fishing Permit</b>									6	
	<input type="checkbox"/>	Spearing	<input type="checkbox"/>	Fyke Netting	No	0250					7
26	<input type="checkbox"/>	Seining	<input type="checkbox"/>	Gill Netting							8
25	Tribal ID Number _____ of _____ Reservation										9
	Signature of Permittee: _____										10
24	Issued by: _____ of _____ Reservation										11
	Water: _____ County: _____										12
23	Bag Limit: Walleye _____ Muskellunge _____										13
22	Other Restrictions: _____										14
21	20	19	18	17	16	15	14	13	12	11	

FRONT

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

BACK

## RESULTS AND DISCUSSION

### Fishing Effort

As in previous years, effort in the spring spear fishery was measured in three ways: by the number of spearkers, the number of spearker-nights, and the number of boat-hours.

**Number of spearkers.** All tribal members spearing under permits issued by each tribe were counted as an individual spearker for that tribe regardless of whether the spearker was an enrolled member of the tribe issuing permits. A total of 455 tribal members participated in the 1997 spring spear fishery (Table 1, Figure 3, Appendix A). Compared to 1996 the total number of spearkers increased by 70 persons or 18%. Part of this increase was likely due to an Administration for Native Americans (ANA) grant aimed at providing spearing instruction and opportunity to youths.

**Table 1.** Number of spearkers on lakes selected by six Wisconsin Chippewa bands during spring spearing 1986-1997<sup>1</sup>.

YEAR	BRV	LCO <sup>2</sup>	LDF	MLK	RCF	STC <sup>3</sup>	TOTAL:
1986	2	26	119	32		15	194
1987	22	58	206	70		63	419
1988	35	48	200	63	14	66	426
1989	27	30	118	31	23	42	271
1990	46	43	142	46	40	64	381
1991	38	56	137	50	47	65	393
1992	36	41	112	40	52	64	345
1993	34	72	111	55	36	51	359
1994	31	87	134	66	31	70	419
1995	39	68	150	53	44	67	421
1996	25	50	153	54	42	61	385
1997	57	74	139	64	59	62	455
<b>PERCENT CHANGE: 1996-1997</b>	+128%	+48%	-9%	+19%	+41%	+2%	+18%

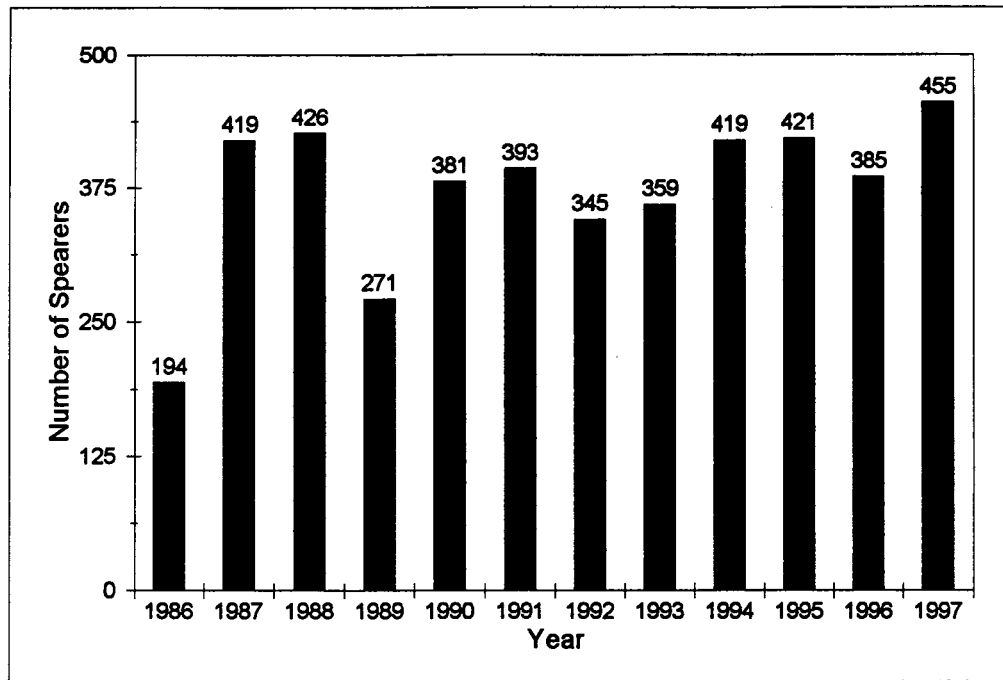
<sup>1</sup> Abbreviations for the various bands are: BRV = Bad River, LCO = Lac Courtes Oreilles, LDF = Lac du Flambeau, MLK = Mole Lake, RCF = Red Cliff, and STC = St. Croix.

<sup>2</sup> Includes members from Mille Lacs tribe: 1 in 1990, 2 in 1991, 0 in 1992, 1 in 1993, 3 in 1994, 0 in 1995, and 0 in 1996.

<sup>3</sup> Includes members from Mille Lacs tribe: 7 in 1988, 8 in 1989, 11 in 1990, 15 in 1991, 13 in 1992, 4 in 1993, 14 in 1994, 15 in 1995, 16 in 1996, and 18 in 1997.

All persons spearing on lakes selected by Bad River, Lac Courte Oreilles, Lac du Flambeau, Mole Lake, and Red Cliff were members of that tribe (57, 74, 139, 64, and 59 persons, respectively). Of the 62 members spearing on lakes selected by St. Croix, 26 were members of another tribe (1 from Lac Courte Oreilles, 3 from Lac du Flambeau, 4 from Bad River, and 18 from Mille Lacs).

**Figure 3.** Number of spearers during spring spearing seasons from 1986-1997.



**Number of Spearer-nights or Permits Used.** In a previous report (Kmiecik 1991), special clarification was given to the definition of "spearer-nights". It should be understood that the total number of "spearer-nights" is not simply the total number of nights that all tribal members speared, because some individuals speared under more than one permit on a single night. Additional permits have been issued at night at a boat landing on a "first come, first served" basis and only when enough fish remained in the tribal quota for a lake so that other permits could be issued. Persons receiving a second, third, or fourth permit may have speared on the same lake, a different lake, or both the same and a different lake. With this clarification in mind, this effort statistic will continue to be referred to as spearer-nights, but it can also be viewed as a count of the total number of permits used.

A total of 1,740 spearer-nights were recorded during spring 1997 (Table 2, Figure 4, Appendix B). Nearly 32% of this effort (554 spearer-nights) occurred on lakes selected by Lac du Flambeau. Spearer-nights on lakes selected by the other five tribes ranged from 144 at Bad River to 301 at Lac Courte Oreilles. Compared to 1996, effort decreased by 71 spearer-nights or 4%.

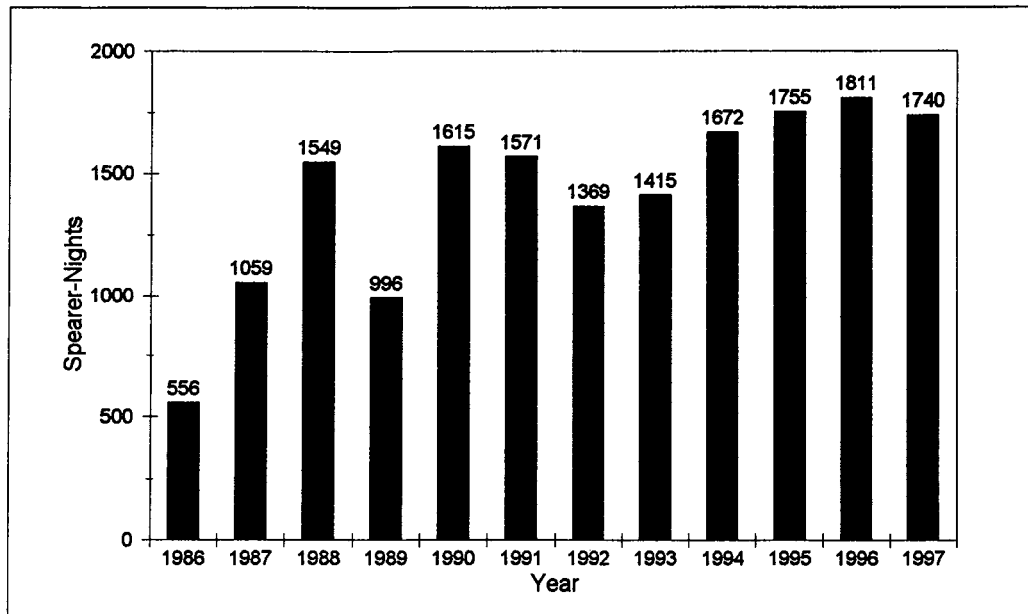
**Table 2.** Number of spearer-nights on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997.

YEAR	BRV	LCO <sup>1</sup>	LDF	MLK	RCF	STC <sup>2</sup>	TOTAL:
1986	2	50	382	72		50	556
1987	43	140	695	205		181	1,264
1988	64	165	788	249	37	246	1,549
1989	70	109	429	120	100	168	996
1990	174	116	751	221	124	229	1,615
1991	151	216	605	201	160	238	1,571
1992	140	140	512	177	168	232	1,369
1993	172	218	469	241	144	171	1,415
1994	129	255	700	167	132	289	1,672
1995	164	215	677	241	135	323	1,755
1996	120	215	712	294	119	351	1,811
1997	144	301	554	299	167	275	1,740
<b>PERCENT CHANGE: 1995-1997</b>	2%	4%	-22%	2%	40%	-22%	-4%

<sup>1</sup> Includes spearer-nights for Mille Lacs tribe: 2 in 1990, 3 in 1991, 0 in 1992, 1 in 1993, 6 in 1994, and 0 in 1995.

<sup>2</sup> Includes spearer-nights for Mille Lacs tribe: 22 in 1988, 29 in 1989, 35 in 1990, 45 in 1991, 53 in 1992, 9 in 1993, 34 in 1994, 59 in 1995, 74 in 1996, and 82 in 1997.

**Figure 4.** Number of spearer-nights during spring spearing season from 1986-1997.



**Number of Boat-Hours.** A total of 1,736 boat-hours of effort was recorded in 1997 (Table 3, Figure 5, Appendix B). Compared to 1996, the number of boat-hours increased by 6% (97 boat-hours). About one-fourth of the effort (472 boat-hours or 27%) occurred on lakes selected by Lac du Flambeau. Boat-hours on lakes selected by the other five tribes ranged from 138 at Bad River to 414 at Lac Courte Oreilles.

**Table 3.** Number of spearer boat-hours on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997.

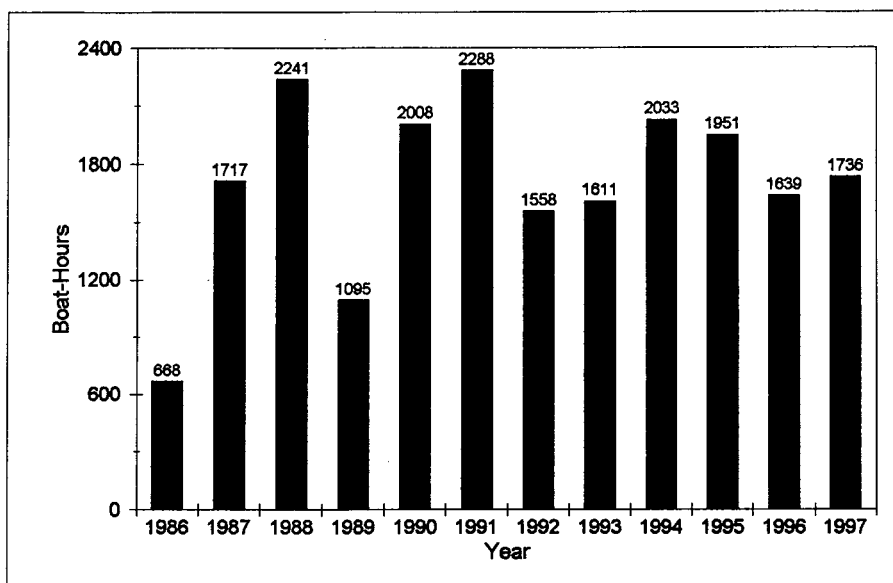
Year	BRV <sup>1</sup>	LCO <sup>2</sup>	LDF	MLK	RCF	STC <sup>3</sup>	Total:
1986	2	53	440	95		78	668
1987	46	163	976	252		280	1,717
1988	173	247	1094	393		334	3,341
1989	135	122	364	155	109	210	1,095
1990	254	151	787	298	181	338	2,008
1991	288	283	704	344	226	444	2,288
1992	206	221	453	218	178	281	1,558
1993	201	290	459	297	164	200	1,611
1994	172	356	743	247	133	381	2,033
1995	163	359	618	298	144	369	1,951
1996	131	304	641	156	105	302	1,639
1997	138	414	472	236	178	298	1,736
<b>PERCENT CHANGE: 1996-1997</b>	+5%	+27%	-36%	+34%	+41%	-1%	+6%

<sup>1</sup>Includes Red Cliff boat-hours in 1988.

<sup>2</sup>Includes effort for Mille Lacs tribe in 1990, 1991, 1993, and 1994.

<sup>3</sup>Includes effort for Mille Lacs tribe from 1988-1997.

**Figure 5.** Number of boat-hours of effort during spring spearing seasons from 1986-1997.



For all tribes combined, a total of 692 interviews were conducted and effort (boat-hours) was determined for all. Average length of a trip was 2.5 boat-hours (Table 4).

**Table 4.** Number of interviews and average length of spearing trip (in boat-hours) during spring spearing from 1989-1997.

YEAR	AVERAGE LENGTH OF TRIP:						TOTAL
	BRV	LCO <sup>1</sup>	LDF	MLK	RCF	STC <sup>1</sup>	
1989	4.1	2.4	2.5	2.6	2.5	2.7	2.7
1990	3.3	2.8	2.7	3.1	3.5	3.1	3.1
1991	3.9	3.0	2.8	3.9	2.8	3.5	3.3
1992	3.0	3.2	2	2.8	2.4	2.4	2.5
1993	2.7	3.0	2.2	2.3	2.6	2.4	2.6
1994	3.2	3.0	2.9	3.5	2.3	3.0	3.0
1995	2.1	3.5	2.0	2.8	2.7	2.5	2.5
1996	2.4	2.9	2.2	1.3	2.0	2.2	2.2
1997	2.7	3.0	2.2	2.3	2.6	2.4	2.5
1997 Boat-hours:	138	414	472	236	178	298	1736
1997 interviews with effort:	52	139	213	103	68	117	692
1997 interviews without effort:	0	0	0	0	0	0	0

<sup>1</sup>Includes effort for Mille Lacs tribe.

## Total Harvest

Ten taxa of fish were harvested during the 1997 spring spear fishery (Table 5). Of the 24,633 fish taken, 97.4% were walleye. Percentages of the total catch for other game fish species were 1.35% for muskellunge, 0.6% for bass, and 0.15% for northern pike. Other species combined (panfish and rough fish) totaled 116 fish and made up the remaining 0.5% of the harvest.

**Table 5.** Number of various fish species harvested during spring spearing seasons from 1993-1997.

Species:	1993	1994	1995	1996	1997
Walleye	24,532	25,922	30,249	28,327	24,002
Muskellunge	188	244	299	319	333
Bass Species	79	37	11	6	
Largemouth Bass	100	174	121	103	114
Smallmouth Bass	21	50	55	51	31
Northern Pike	19	30	32	30	37
Lake Sturgeon			3		
Rock Bass			1	4	12
Crappie	43	40	109	63	55
Bluegill	6	9	5	18	9
Yellow Perch	10	8	8	13	8
Bullhead	1			3	
Sucker	31	40	55	22	32
Carp	2	1	3	4	
Burbot		8	1		
<b>TOTAL:</b>	<b>25,032</b>	<b>26,563</b>	<b>30,952</b>	<b>28,963</b>	<b>24,633</b>



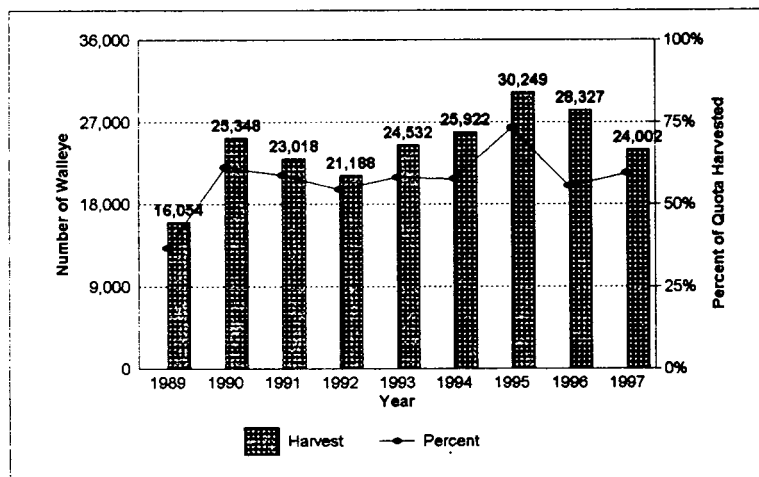
## Walleye Harvest

Tribal quotas (TQ) for walleye were selected for 245 lakes and totaled 40,301 walleye. The percent of the "safe harvest" selected as tribal quotas for lakes in 1997 ranged from 19.9% (Lac Vieux Desert Lake, Vilas County) to 93.33% (Windfall Lake, Sawyer County). Two tribes selected the same lake in 9 instances and agreed on various inter-tribal allocation formulas to keep the TQ within the selected percentage. No lakes were selected by more than two Wisconsin tribes.

Tribal spearers harvested a total of 24,002 walleye from 152 lakes (Table 5, Figure 6, Appendix B). Spearfishing also occurred in another 3 lakes [Pine Lake (Forest County), Spirit River Flowage (Lincoln County), and Manson Lake (Oneida County)] but no walleye were harvested. The percent of the total walleye quota harvested was 60%. Values for the tribal walleye quota and percent of this quota harvested from 1989-1997 were as follows:

Year	Tribal Walleye Quota	Number of Lakes with Quotas	Number of Walleye Harvested	Number of Lakes with Effort	Number of Lakes with Harvest	Percent of Quota Harvested
1989	43,801	254	16,054	102	98	37%
1990	41,373	178	25,348	119	117	61%
1991	39,090	204	23,018	159	147	59%
1992	38,863	222	21,188	153	146	55%
1993	42,112	220	24,532	134	130	58%
1994	44,821	218	25,922	147	145	58%
1995	41,283	222	30,249	153	149	73%
1996	50,897	248	28,327	167	157	56%
1997	40,301	245	24,002	155	152	60%

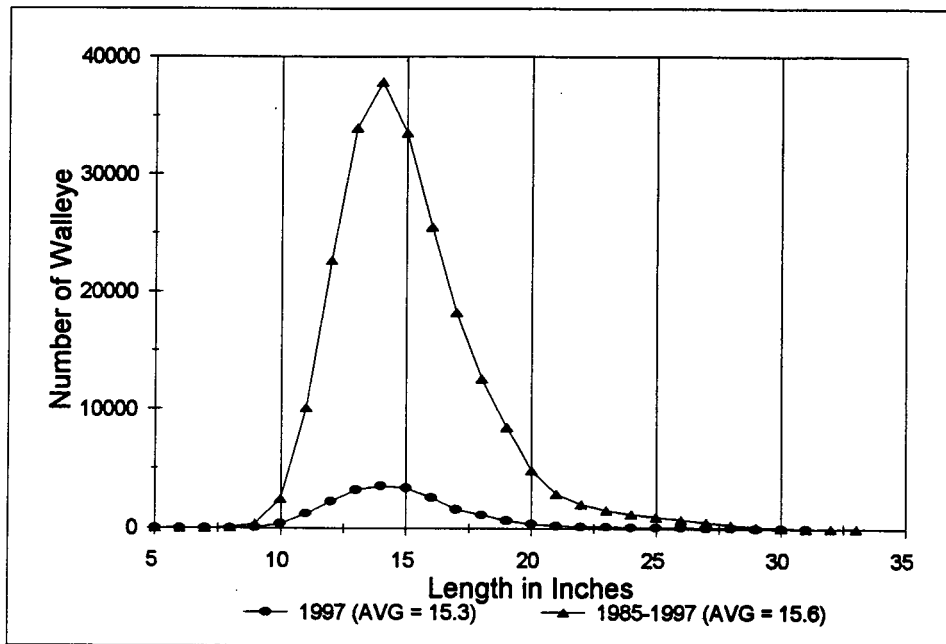
Figure 6. Number of walleye and percent of quota harvested during spring spearing seasons from 1989-1997.



**Mean Length.** A total of 21,399 walleye (89% of the catch) was measured in 1997 (Appendices C and D). The mean length was 15.3 inches, slightly less than the average length during 1987-1991 (range: 15.7-16.0 inches) but similar to the average length during 1992-1996 (range: 15.1 - 15.4 inches). Size restrictions were identical during each of these ten years; all walleye were to be under 20 inches except that each permit authorized the harvest of one walleye of 20-24 inches and one of any size.

For the 13 spring spearing seasons combined, 80.0% of the walleye harvest has been measured (221,465 of 275,631 fish) (Figure 7; Appendix D). Average length for this 13 year sample was 15.6 inches. Also, 7% of the walleye (15,516 fish) were 20 inches or larger and 1.3% (2,926 fish) were 25 inches or larger.

**Figure 7.** Length frequency of walleye speared during 1997 and during the thirteen year period from 1985-1997.



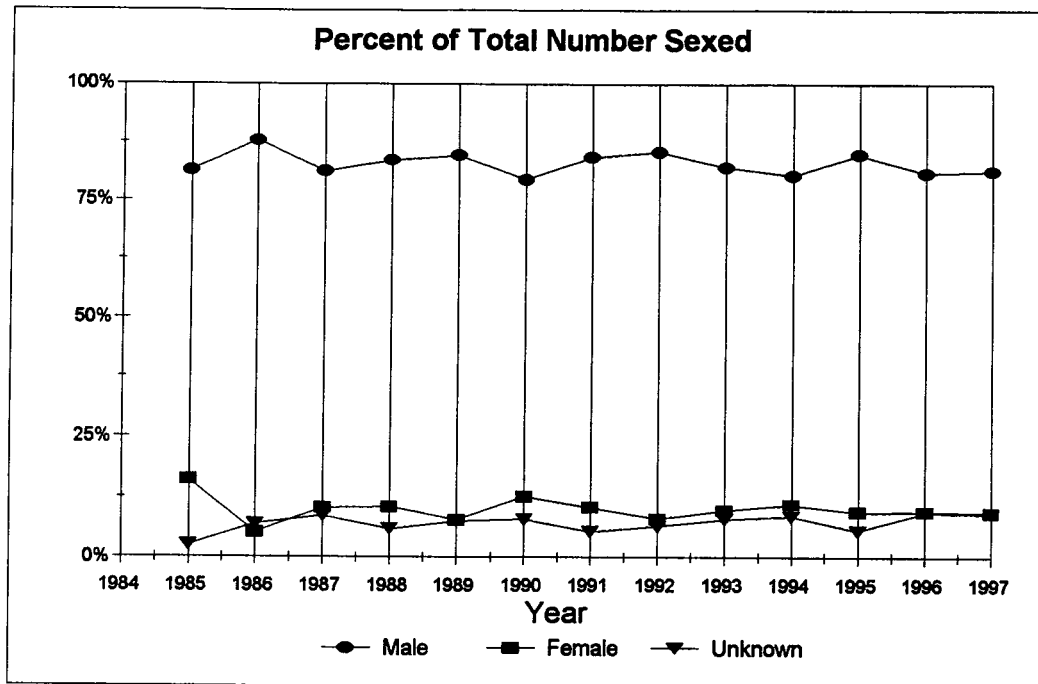
**Sex Composition of Catch.** The majority of walleye measured in 1997 were male: 17,541 of 21,550 fish or 81% (Table 6). Females (2,031 fish) comprised 9.4% of the measured harvest and those whose sex could not be determined (1,978 fish) made up 9.2%. Males made up 90% of sexable fish.

For the 13 spring spearing seasons combined, a total of 220,539 walleye have been sexed (Table 6, Figure 8). Of these, 83% were male, 10% were female, and 7% were of undetermined or unknown sex. Factors which influence the number of males and females speared were described by Kmiecik and Shively (1990). Some of the factors include bag and size restrictions, differences in behavior between the sexes during spawning season, and spearer preference.

**Table 6.** Number and percent of walleye that were sexed and were male, female, or unknown sex during spring spearing seasons from 1985-1997.

Year	Total Harvest	Male		Female		Unknown		Total Sexed:	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1985	2,761	696	81%	138	16%	22	3%	856	31%
1986	6,940	6,013	88%	356	5%	473	7%	6,842	99%
1987	21,321	11,539	81%	1,456	10%	1,229	9%	14,224	67%
1988	25,969	16,193	84%	2,033	10%	1,142	6%	19,368	75%
1989	16,054	11,222	85%	1,030	8%	1,002	8%	13,254	83%
1990	25,348	14,693	79%	2,342	13%	1,465	8%	18,500	73%
1991	23,018	15,626	84%	1,926	10%	999	5%	18,551	81%
1992	21,188	15,563	85%	1,473	8%	1,190	7%	18,226	86%
1993	24,532	16,357	82%	1,958	10%	1,588	8%	19,903	81%
1994	25,922	17,467	80%	2,407	11%	1,852	9%	21,726	84%
1995	30,249	20,897	85%	2,339	10%	1,369	5%	24,605	81%
1996	28,327	18,562	81%	2,191	9.5%	2,181	9.5%	22,934	81%
1997	24,002	17,541	81.4%	2,031	9.4%	1,978	9.2%	21,550	90%
<b>Total:</b>	<b>275,631</b>	<b>182,369</b>	<b>83%</b>	<b>21,680</b>	<b>10%</b>	<b>16,490</b>	<b>7%</b>	<b>220,539</b>	<b>80%</b>

**Figure 8.** Sex composition of the walleye harvest during spring spearing seasons from 1985-1997.



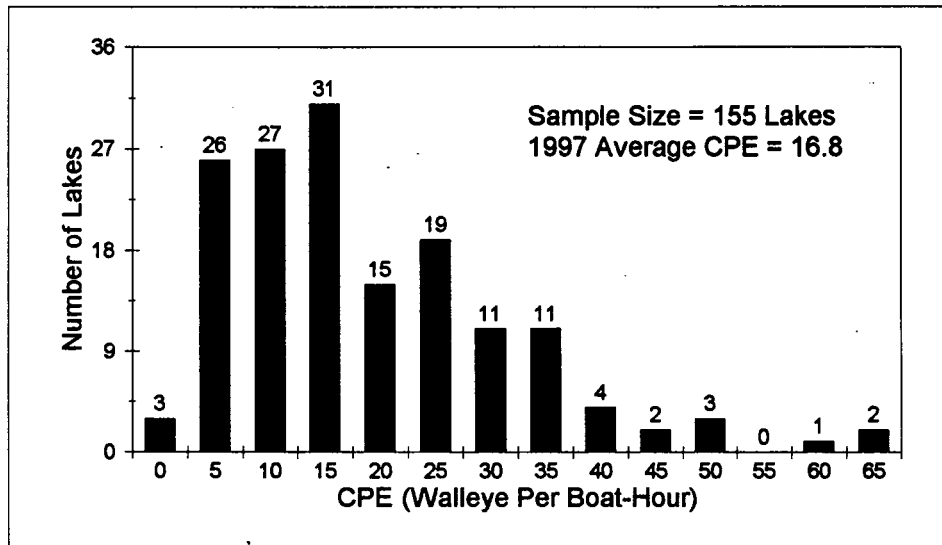
**Catch per effort (CPE).** In 1997 a total of 1,736 boat-hours of spearing was recorded in which 24,002 walleye were caught. Overall catch per effort was 13.8 walleye per boat-hour (Appendix B).

Catch rates for the 155 lakes speared in 1997 ranged from 0.0 to 62.7 and averaged 16.8 (Appendix B, Figure 9). Boat-hour effort was recorded for all lakes during spring 1997. Similar statistics for the years 1987-1997 were as follows:

Year	Number of Lakes	Range: CPE	Average: CPE
1987	66	0.0 - 46.4	12.2
1988	91	0.0 - 84.1	14.2
1989	98	0.0 - 63.9	18.5
1990	117	0.0 - 45.1	14.3
1991	159	0.0 - 46.5	11.3
1992	153	0.0 - 68.0	16.1
1993	134	0.0 - 123.5	15.2
1994	137	0.0 - 95.2	16.7
1995	153	0.0 - 91.1	19.5
1996	167	0.0 - 52.9	17.4
1997	155	0.0 - 62.7	16.8

(Biological Issues Group 1988, Kmiecik and Shively 1990, Kmiecik 1991, Kmiecik and Ngu 1992, Ngu and Kmiecik 1993, Ngu 1993, Ngu 1994, Ngu 1995, Krueger 1996).

**Figure 9.** Walleye CPE (number per boat-hour) by lake during the 1997 spring spearing season.



## Muskellunge Harvest

A total of 333 muskellunge were taken from 66 lakes during spring 1997 (Figure 10, Appendix E). This harvest represented 22.3% of the combined tribal muskellunge quota of 1,489 fish selected for 169 lakes. Similar muskellunge quota statistics for the years 1990 to 1996 were as follows:

Year	Tribal Muskellunge Quota	Number of Lakes with Quota	Number of Lakes with Harvest	Number Harvested	Percent of Quota Harvested
1990	1,148	117	57	303	26.4%
1991	1,240	155	54	185	14.9%
1992	1,240	155	52	165	13.3%
1993	1,223	134	49	188	15.5%
1994	1,326	158	49	244	18.4%
1995	1,364	153	59	299	21.9%
1996	1,555	171	68	319	20.5%
1997	1,489	169	66	333	22.3%

The number of muskellunge harvested from each of these 66 lakes ranged from 1 to 35 fish (Appendix E). Ten or more muskellunge were harvested from 11 lakes, 6-9 muskellunge were taken from 5 lakes, and 1-5 fish were speared in 50 lakes. No muskellunge were speared from the other 103 lakes.

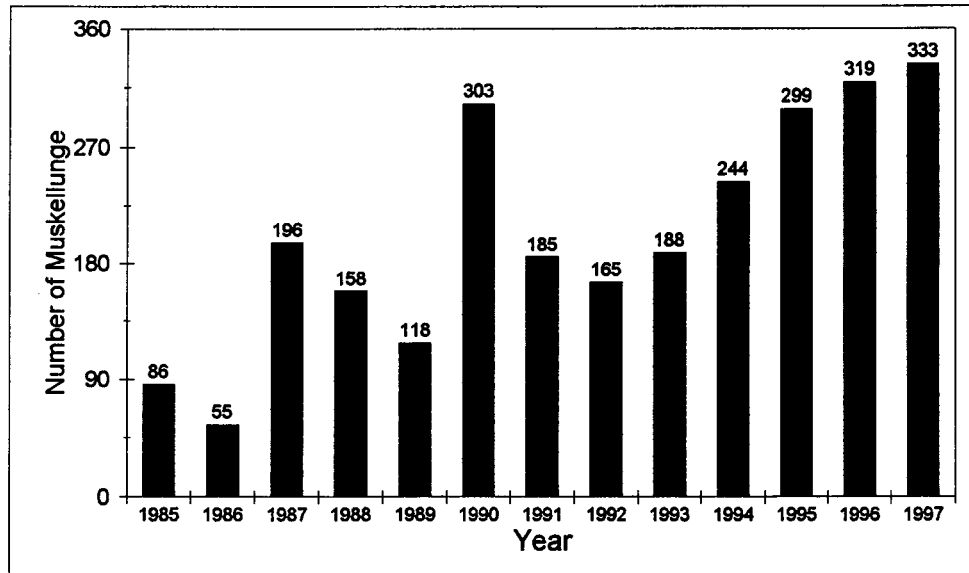
Lengths of the 333 measured muskellunge averaged 37.6 inches and ranged from 22.5 to 50.5 inches (Appendix F, Figure 11). During the thirteen spring seasons combined, 2,601 of 2,649 speared muskellunge have been measured. Average length for this sample of fish was 36.8 inches (range: 13.5-53.0 inches).

Of the measured catch in 1997, 15.3% (51 of 333 muskellunge) were 32 inches and smaller, while 8.1% (27 fish) were 45 inches and larger. For the 2,601 muskellunge measured from 1985-1997, 540 fish or 20.7% of the sample were less than or equal to 32 inches; 175 fish or 6.7% were 45 inches and larger (Appendix F).

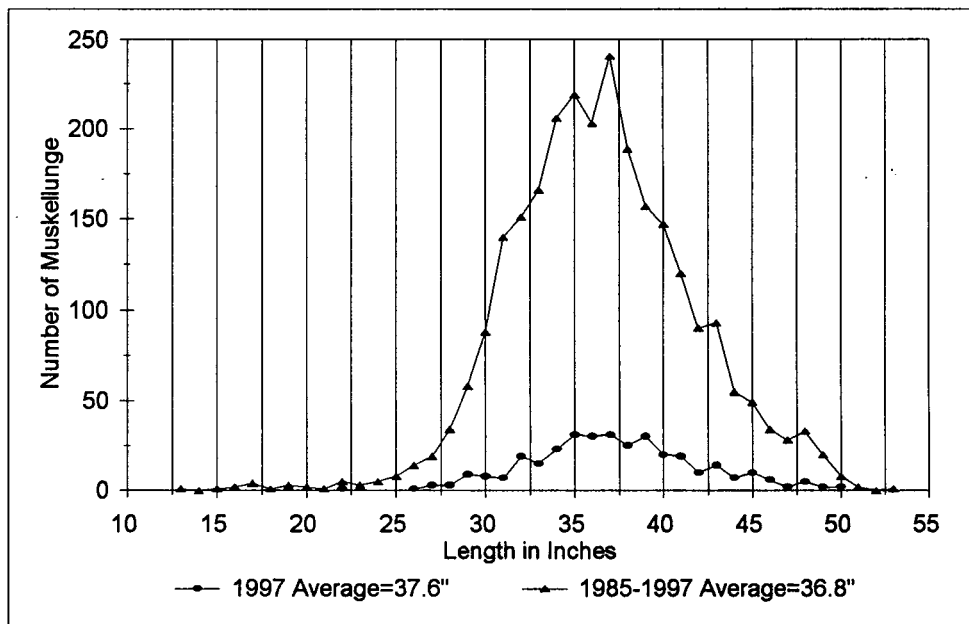
The number of muskellunge per spearer averaged 0.73 for all tribes combined. In other words, 73 muskellunge were taken for every 100 spearers. From 1987-1996 the number per spearer ranged from 0.16 to 1.19. For individual tribes in 1997, the number per spearer was highest for St. Croix members (1.37) compared to the other 5 tribes (range: 0.02-1.01).

Catch per boat-hour in 1996 and 1997 averaged 0.2 muskellunge and was greater than the CPE from 1987-1995 (0.07-0.15).

**Figure 10.** Number of muskellunge harvested during spring spearing seasons from 1985-1997.



**Figure 11.** Length-frequency of muskellunge speared during spring 1997 and during the thirteen year period 1985-1997.



## **Bass Harvest**

A total of 145 bass were harvested from 38 lakes in 15 counties (Appendix G). Species was recorded for all bass. A total of 114 largemouth bass were taken from 30 lakes in 12 counties and averaged 15.5 inches. Ten or more largemouth were speared from 4 lakes, 6-9 from 2 lakes, and 5 or less were taken from 26 lakes. The number harvested per surface acre of water averaged 0.0048 largemouth bass (range: 0.0005-0.0311).

A total of 31 smallmouth bass were speared from 14 lakes in 11 counties. Average length was 15.5 inches. Five or fewer fish were taken from all but one lakes; 10 smallmouth were taken from Round Lake (Sawyer County). The number harvested per surface acre averaged 0.0035 smallmouth bass (range: 0.0003-0.0149).

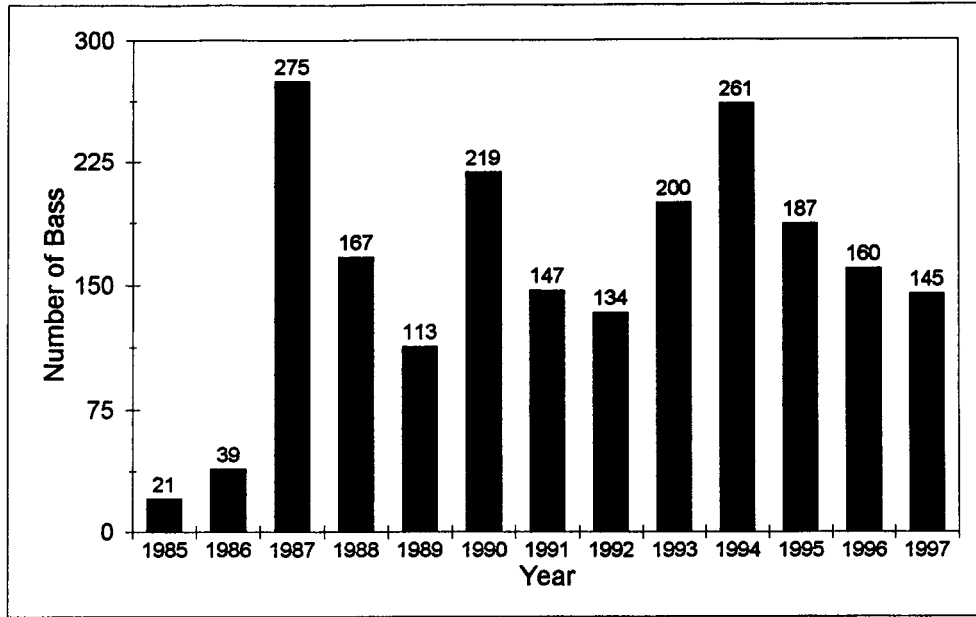
Lengths of 145 measured bass ranged from 10.5-21.2 inches (Figure 13) and averaged 15.5 inches (Appendix H). Of the 2,071 bass speared during the thirteen spearing seasons combined, 1,928 have been measured. Average length for this sample was 15.3 inches (annual range: 15.0-15.8 inches).

For all tribes combined the number of bass per spearer (CPE) was 0.32. CPE ranged from 0.37 to 0.66 from 1987-1996. For individual tribes, CPE (bass per spearer) was highest for St. Croix (1.21) as was the case during the previous 9 seasons (range: 1.14 - 3.33). Catch per spearer for the other five tribes ranged from 0.01 to 0.45 bass.

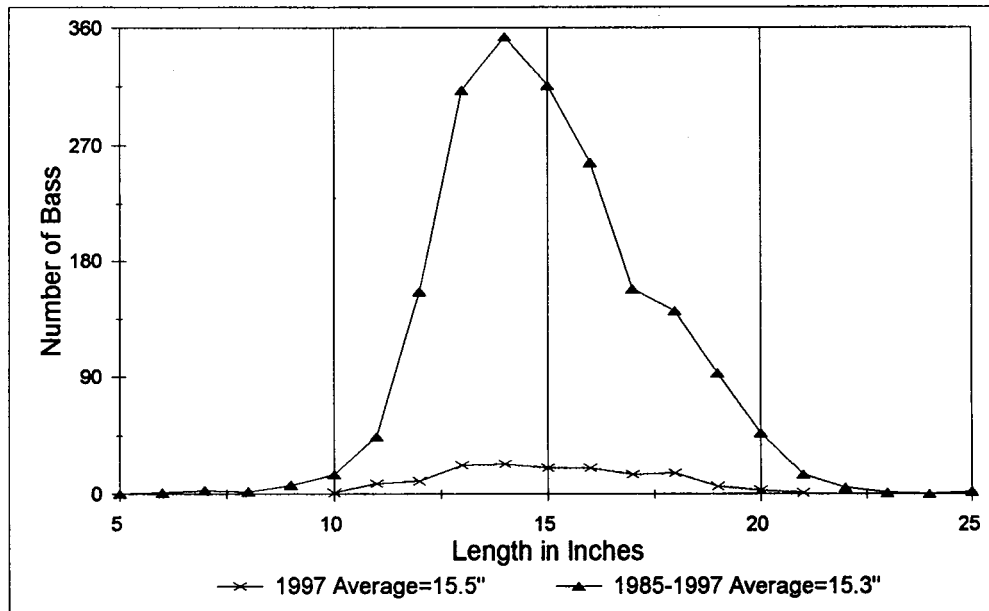
The combined tribal catch rate for bass in 1997 was 0.08 bass per boat-hour which was within the range of CPE's from 1987-1996 (0.06 to 0.14). Bass per boat-hour for St. Croix spearers was 0.27 in 1997.



**Figure 12.** Number of bass harvested during spring spearing seasons from 1985-1997.



**Figure 13.** Length-frequency for bass taken during 1997 and during the thirteen year period 1985-1997.



## **Northern Pike Harvest**

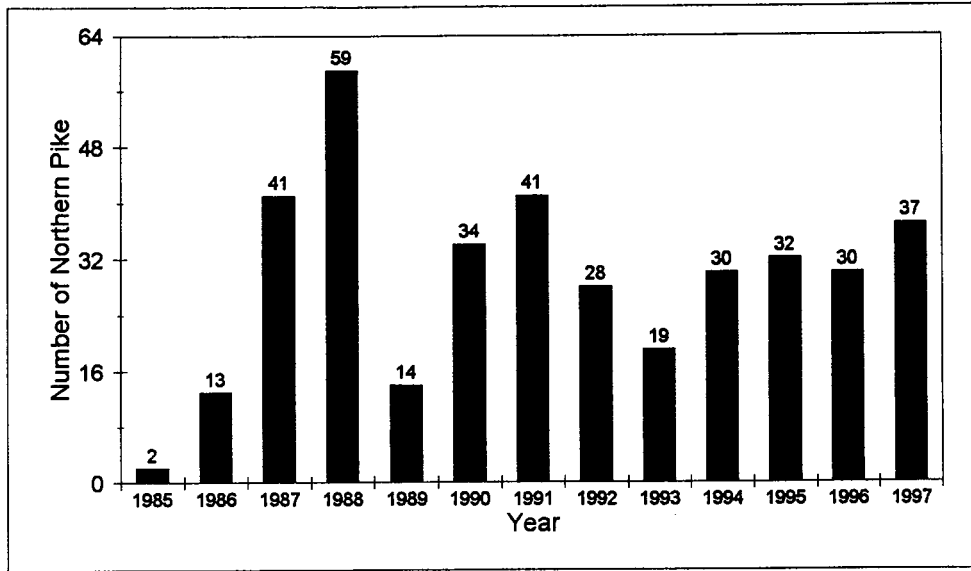
A total of 37 northern pike were harvested from 18 lakes in 10 counties (Appendix G). The number speared per lake never exceeded 4 fish except for Round Lake (Sawyer County) where 10 northern pike were taken. Catch per surface acre of water averaged 0.0023 (range: 0.0002-0.0099).

Lengths of 35 measured northern pike ranged from 18.3 to 38.3 inches and averaged 28.2 inches (Appendix I, Figure 15). During the thirteen spring seasons combined a total of 382 northern pike have been speared (Appendix I). Of these, 326 were measured and length averaged 26.0 inches. Harvest of pike continues to be incidental and an insignificant component of the fishery.

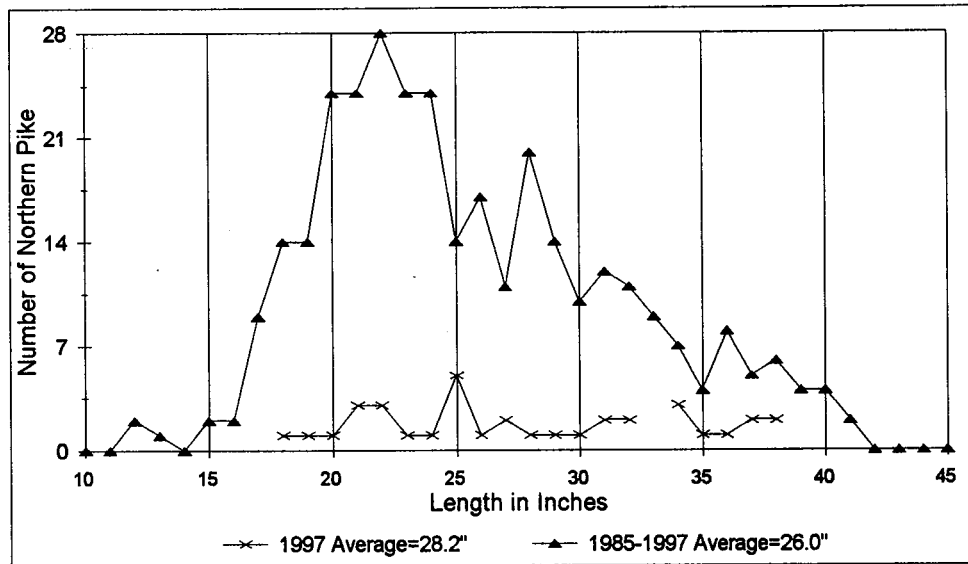
## **Fall Spearing**

Fall spearing occurred on two dates and only walleye were taken. On September 26, two Bad River tribal members harvested 36 walleye (average length = 12.2) from the Turtle-Flambeau Flowage in Iron County. Effort was 4.6 boat-hours and the number of walleye caught per boat-hour was 7.8. On November 8 two Lac Courte Oreilles tribal members speared 6 walleye (average length = 14.3 inches) from the Chippewa Flowage in Sawyer County. Effort was 1.4 boat-hours and the number of walleye caught per boat-hour was 4.3.

**Figure 14.** Number of northern pike taken during spring spearing seasons from 1985-1997.



**Figure 15.** Length frequency of northern pike speared during 1997 and during the thirteen year period from 1986-1997.



## ACKNOWLEDGMENTS

The author extends a "Meegwitch" to the following workers who assisted with monitoring the fishery (either as creel clerk or seasonal warden) or who issued permits and helped to update and compile harvest data each day:

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Lac Courte Oreilles (LCO) - Randall Alexander, Brenda Beaudin, Matthew Crow, Donald Gokey, Jr., Christopher Kessinich, Sheila Krzebetkowski, Dennis Miller, Douglas Quagon, Monica Ramczyk, Michelle Taylor, and Jose Valentin.

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The patience and humor of tribal members during the nightly counting and measuring of fish continues to be recognized and appreciated.

Thanks also go to Annie Thannum and Kim Campy for their diligence in compiling nightly harvest statistics, in providing these data to tribal and WDNR representatives, and in updating each day the list of lakes selected for harvest, along with the adjusted quota, the bag limits, and the number of permits available for each lake. Finally, I would like to thank Neil Kmiecik and Rick Madsen for help in editing this report.

## LITERATURE CITED

Biological Issues Group. 1988. Report on Biological Issues. Plaintiff's Exhibit 106, Lac Courte Oreilles Band, et al. v. State of Wisconsin, et. al., W.D. Wis. No. 74-c-313.

Kmiecik, N. and J. D. Shively. 1989. Spear Fishery of the Lake Superior Tribes of Chippewa Indians, Spring 1988. Great Lakes Indian Fish and Wildlife Commission Administrative Report 89-2. 43 pp.

Kmiecik, N. and J. D. Shively. 1990. Open Water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1989. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 90-1. 40 pp.

Kmiecik, N. 1991. Spear Fishery of the Lake Superior Tribes of Chippewa Indians, Spring 1990. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 91-4. 42 pp.

Kmiecik, N. and H. H. Ngu. 1992. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1991. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 92-8. 46 pp.

Ngu, H. and N. Kmiecik. 1993. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1992. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 93-4. 45 pp.

Ngu, H. 1994. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1993. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 94-1. 46 pp.

Ngu, H. 1995. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1994. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 95-03. 45 pp.

Ngu, H. 1996. Open water Spearing in Northern Wisconsin by Chippewa Indians During 1995. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 96-01. 43 pp.

Krueger, J. 1997. Open water Spearing in Northern Wisconsin by Chippewa Indians During 1996. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 97-02. 51 pp.

## LIST OF APPENDICES

APPENDIX	PAGE
A    Number of tribal members that speared one or more nights on lakes selected by six Wisconsin Chippewa bands during the 1997 spring spear fishery .....	25
B    Number of walleye harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours and catch per effort (CPE = walleye per boat-hour) per lake .....	26
C    Total number of walleye measured by per inch group and sexed during spring spearing 1997. Data arranged alphabetically by tribe, county, and lake .....	36
D    Number of walleye per inch group taken during spring spearing seasons from 1985-1997 .....	43
E    Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring 1997. Also average length and harvest per acre .....	44
F    Number of muskellunge per inch group taken during spring spearing seasons from 1985-1997 .....	51
G    Number, average length, and harvest per acre of bass (largemouth and smallmouth), and northern pike from various lakes during spring spearing in 1997 .....	52
H    Number of bass (largemouth and smallmouth combined) taken during spring spearing seasons from 1985-1997 .....	53
I    Number of northern pike per inch group taken during spring spearing seasons from 1985-1997 .....	54

Appendix A. Number of tribal members that speared one or more nights on lakes selected by six Wisconsin Chippewa bands during the 1997 spring spear fishery.

Number of Nights	BRV	LCO	LDF	MLK	RCF	STC <sup>1</sup>	Total:	Percent of Total:	Cumulative Percent:
1	33	30	38	12	24	19	156	34.3%	34.3%
2	12	16	32	19	16	11	106	23.3%	57.6%
3	4	4	15	8	6	7	44	9.7%	67.3%
4	4	3	13	4	8	3	35	7.7%	74.9%
5	0	6	12	6	4	5	33	7.3%	82.2%
6	2	6	11	7	1	4	31	6.8%	89.0%
7	0	1	6	5	0	2	14	3.1%	92.1%
8	1	0	4	2	0	2	9	2.0%	94.1%
9	1	2	3	1	0	1	8	1.8%	95.8%
10	0	4	2	0	0	1	7	1.5%	97.4%
11	0	0	0	0	0	2	2	0.4%	97.8%
12	0	0	1	0	0	3	4	0.9%	98.7%
13	0	0	0	0	0	0	0	0.0%	98.7%
14	0	0	1	0	0	0	1	0.2%	98.9%
15	0	0	1	0	0	1	2	0.4%	99.3%
16	0	0	0	0	0	1	1	0.2%	99.6%
17	0	0	0	0	0	0	0	0.0%	99.6%
18	0	0	0	0	0	0	0	0.0%	99.6%
19	0	1	0	0	0	0	1	0.2%	99.8%
20	0	0	0	0	0	0	0	0.0%	99.8%
21	0	0	0	0	0	0	0	0.0%	99.8%
22	0	1	0	0	0	0	1	0.2%	100.0%
23	0	0	0	0	0	0	0	0.0%	100.0%
24	0	0	0	0	0	0	0	0.0%	100.0%
25	0	0	0	0	0	0	0	0.0%	100.0%
Total:	57	74	139	64	59	62	455	100%	100%

<sup>1</sup> Includes 18 members from Milles Lacs, 4 from Bad River, 3 from Lac du Flambeau, and 1 from Lac Courte Oreilles.

Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of speaker-nights, number of interviews with effort, and number of interviews without effort.

County	Bad River Lake	Area	Walleye Safe Harvest	Tribal Quota	Apr	19	20	21	22	23	24	25	26	27	28	29	30	May	1	2	3	4	5	6	7	8	9	10	11	Total Harvest	Quota Balance	Boat- Hour	CPE
ASHLAND	BEAR L	204	86	51																									51	0	4.2	36.0	
BAYFIELD	L OWEN	1323	505	150										**	150														0	4.2	36.0		
BAYFIELD	NAMEKAGON L	3227	1163	485									154	250	81														485	0	16.0	30.3	
BAYFIELD	SISKAWIT L	330	156	93																									0	93	0	0	
BURNETT	CLAM R FL	473	192	115																									0	115	0	0	
CHIPPewa	L WISSOTA	6300	1284	513	168	**		**	**	**		158																168	345	10.0	16.8		
CHIPPewa	LONG L	1052	687	412	**	129	**	**	125	**																		412	0	13.0	31.7		
DOUGLAS	ANNICON L	426	174	104																								0	104	0	0		
DOUGLAS	BOND L	292	121	72																								0	72	0	0		
DOUGLAS	DOWLING L	154	66	39																								0	39	0	0		
DOUGLAS	L MINNESUNG	432	64	38																								0	38	0	0		
DOUGLAS	WHITEFISH L	832	326	195											130													195	2	9.5	20.3		
DUNN	TAINTER L	1752	697	393				**	**	**																		0	393	0	0		
IRON	ECHO L	220	93	55																								0	55	0	0		
IRON	FISHER L	452	54	32																								0	32	0	0		
IRON	L OF THE FALLS	338	139	83																								0	83	0	0		
IRON	LONG L	396	76	45																								0	45	0	0		
IRON	PINE L	312	129	77																								0	77	0	0		
IRON	SPIDER L	352	145	86																								0	86	0	0		
IRON	TRUDE L	781	307	184												182												182	2	6.0	30.3		
IRON	TURTLE-FLAMBEAU FL	13545	4414	427											37	167	**											204	223	13.6	15.1		
ONEIDA	RAINBOW FL	2035	756	200																								0	200	0	0		
PRICE	DUROY L	379	155	92																								0	92	0	0		
PRICE	LONG L (T37N-R1W-S14)	418	170	101																								0	101	0	0		
PRICE	SOLBERG L	859	336	201					71	**																		0	201	0	0		
RUSK	CHAIN L	468	186	111																								0	111	0	0		
RUSK	DAIRYLAND RESERVOIR	1745	654	359																								71	40	4.0	22.3		
RUSK	ISLAND L	526	100	59									**	**	85													0	59	0	1.3	47.2	
SAWYER	CONNORS L	429	285	158																								0	158	73	3.8	22.7	
SAWYER	NELSON L	2503	1119	425						**		174	45															247	178	26.8	9.2		
SAWYER	TEAL L	1049	406	243									198															186	45	9.0	22.0		
TAYLOR	RIB L	320	132	79																								0	79	0	0		
VILAS	ANABELLE L	213	38	22																								0	22	0	0		
VILAS	BLACK OAK L	584	68	40																								0	40	0	0		
VILAS	CRAB L	949	369	220																						**	9	211	9	2.5	3.6		
VILAS	FOREST L	466	189	113																						**	113	113	0	3.0	37.7		
VILAS	HARRIS L	507	205	122											89													89	33	2.0	44.5		
VILAS	HIGH L	734	290	173																						63	**	63	110	4.5	14.0		
VILAS	LOST CANOE L	249	96	57																								0	57	0	0		
VILAS	MAMIE L	400	157	94																								0	94	0	0		
VILAS	N TURTLE L	369	151	90																								0	90	0	0		
VILAS	PRESQUE ISLE CHAIN (3 Lakes)*	1571	614	187																						**	177	10	8.0	22.1			
VILAS	S TURTLE L	454	184	110																						**	4	106	4	1.8	2.2		
VILAS	TENDERFOOT L	437	250	149												**										**	0	149	0	0			
	Number of lakes:	44				2	2	3	5	5	0	4	5	3	3	1	0	1	4	4	1	1	1	0	0	0	0	3	5	2			
	Area in acres:	50857				168	129	0	196	0	0	391	397	250	316	63	0	0	396	247	167	0	0	0	0	0	0	63	122	4	2,908	4,145	
	Number of walleye:	17728	7054			5	4	0	7	0	0	13	42	10	12	3	0	0	17	13	6	0	0	0	0	0	3	7	2	144			
	Number of speaker-nights:					2	2	0	2	0	0	4	13	3	4	1	0	0	6	8	2	0	0	0	0	0	0	1	2	1	82		
	Number of interviews with effort:					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Number of interviews without effort:					10.0	3.5	0.0	9.2	0.0	0.0	12.3	24.8	9.0	9.4	3.3	0.0	0.0	16.3	19.8	8.8	0.0	0.0	0.0	0.0	0.0	0.0	4.5	5.5	1.8			
	Number of boat-hours:					16.8	36.9	0.0	21.4	0.0	0.0	31.9	16.0	27.8	0.0	19.4	0.0	0.0	24.4	12.5	19.1	0.0	0.0	0.0	0.0	0.0	14.0	22.2	2.2				
	Catch-per-effort:																													138.0			

\* Lakes not opened during spring 1997.  
\*\* Lakes open for speaking but no effort.



Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, bait (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

County	Lac Courte Oreilles		Walleye		April												May												Total Harvest	Quota Balance	Boat-Hour	CPE			
	Lake	Area	Harvest	Tribat Quota	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11					12		
CHIPPEWA	OTTER L	661	75	63	80																											60	3	3.0	20.0
EAU CLAIRE	L EAU CLAIRE	860	168	142	29																										28	113	17.8	1.6	
RUSK	FIRSIDE LAKES	302	125	108		5																									5	101	3.8	1.3	
RUSK	LADYSMITH FL	288	120	101																										0	101	.	.		
SAWYER	GRINDSTONE L	3111	551	468											328	102	**	38												468	2	28.0	17.9		
SAWYER	L CHETEK	1920	182	154					94	40					69	**	72	280	4	29	**	**	**	**	**	**	**	**	**	154	0	24.3	6.4		
SAWYER	L CHIPPEWA	15300	3266	1807																										895	812	95.8	9.3		
SAWYER	L OF THE PINES	273	114	96										22																22	74	6.6	3.3		
SAWYER	LAC COURTE OREILLES	5039	802	312											150	22	125		**	**	3								300	12	30.3	9.9			
SAWYER	LOST LAND L	1304	468	273					8	4																			12	281	9.8	1.2			
SAWYER	LOWER CLAM L	229	96	81											3														3	78	2.3	1.3			
SAWYER	MASON L	190	81	68																									0	68	.	.			
SAWYER	ROUND L	3054	1105	576													419	141		**	4				**	**	**	**	575	1	68.6	8.4			
SAWYER	SAND L	928	362	307					84	58	11	22	3		3				**	**	6								184	123	61.1	3.0			
SAWYER	SMITH L	323	134	113											98														98	15	8.7	11.3			
SAWYER	WHITEFISH L	766	87	73						70										3									73	0	10.3	7.1			
SAWYER	WINDFALL L	102	45	42					42																				42	0	3.4	12.3			
WASHBURN	LONG L	3290	1184	503					117	**	252	132																	501	2	42.5	11.8			
Number of lakes:					1	1	1	1	1	1	3	4	4	4	4	4	4	4	3	3	3	2	2	3	2	2	2	2	1						
Area in acres:					18																														
Number of walleye:					8015	5285	29	60	5	42	94	241	183	339	165	324	498	255	441	374	300	7	35	0	7	0	0	11	0	0	9	3,419	1,868		
Number of spearer-nights:							8	10	2	7	11	24	22	19	16	20	31	29	25	24	12	4	9	0	7	0	0	12	3	2	4	301			
Number of interviews with effort:							4	4	1	4	8	12	10	8	6	9	16	14	11	6	2	4	0	2	0	0	5	1	2	139					
Number of interviews without effort:							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Number of boat-hours:					17.8	3.0	3.8	3.4	16.5	31.8	29.8	28.3	23.3	36.5	36.6	20.4	26.5	36.3	23.0	4.0	12.1	0.0	7.3	0.0	0.0	0.0	12.8	3.0	3.5	4.8					
Catch-per-effort:					1.6	20.0	1.3	12.3	5.7	7.8	6.2	12.0	7.1	8.4	12.9	12.5	16.7	9.8	13.0	1.8	2.9	0.0	1.0	0.0	0.0	0.9	0.0	0.0	1.9						

\* Lakes not speared during spring 1997.  
 \*\* Lakes open for spearing but no effort.

Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

County	Lac du Flambeau										Walleye Safe Harvest	Tribal Quota	April 29	May 30	May 1	May 2	3	4	5	6	7	8	9	10	11	12	13	14	May 21	22	23	Total Harvest	Quota Balance	Boat- Hour	CPE
	Lake	Area																																	
IRON	GILE FL	3384	1216	668	**	25	381	574	163	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	25	643	2.8	9.1				
IRON	TURTLE-FLAMBEAU FL	13545	4414	2000	819	381	574	163	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	1968	32	90.5	21.7					
LINCOLN	L MOHAWK SIN	1910	540	215	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	215		*					
LINCOLN	RICE R FL CHAIN (3 Lakes)*	3916	1420	780	**	**	**	213	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	250	530	10.5	23.8					
ONEIDA	BEARSKIN L	400	389	155	91	**	**	64	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	155	0	5.0	31.0					
ONEIDA	BOOTH L	207	28	15	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	15		*					
ONEIDA	BUCKSKIN L	634	659	263	167	**	**	**	**	96	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	263	0	5.5	47.8					
ONEIDA	CARROLL L	335	42	23	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	5	18	1.5	3.3					
ONEIDA	CLEAR L	846	379	151	141	**	**	**	**	141	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	141	10	8.8	16.0					
ONEIDA	CRESCENT L	612	244	134	117	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	117	17	4.5	26.0					
ONEIDA	DAM L	744	294	161	**	**	**	66	**	91	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	157	4	8.0	19.6					
ONEIDA	GEORGE L	435	120	47	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	47		*					
ONEIDA	GILMORE L	301	38	20	**	**	**	**	**	68	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	20		*					
ONEIDA	HASBROOK L	302	125	68	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	68	0	2.0	34.0					
ONEIDA	INDIAN L	397	49	26	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	26		*					
ONEIDA	JULIA L	401	14	7	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	7		*					
ONEIDA	KATHERINE L	590	236	129	36	**	**	**	**	108	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	127	2	8.0	15.9					
ONEIDA	KAWAGUESAGA L	670	266	146	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	142	4	5.8	24.7					
ONEIDA	L THOMPSON	382	47	18	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	18		*					
ONEIDA	MADLINE L	159	22	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	1	11	1.0	1.0					
ONEIDA	MANSON L	236	99	54	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	54	2.5	0.0					
ONEIDA	MEDICINE L	372	153	84	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	84		*					
ONEIDA	MINOQUA L	1360	518	284	125	**	**	**	**	120	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	269	15	18.3	14.7					
ONEIDA	MOEN L	460	167	102	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	102		*					
ONEIDA	MUSKELLUNGE L	284	118	64	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	63	1	3.0	21.0					
ONEIDA	N NOKOMIS L	468	57	31	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	31		*					
ONEIDA	PICKEREL L	736	82	45	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	5	40	0.8	6.3					
ONEIDA	RAINBOW FL	2035	756	215	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	13	202	6.9	1.9					
ONEIDA	RHINELANDER FL	1326	506	278	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	0	278		*					
ONEIDA	SAND L	540	217	119	**	**	**	**	**	20	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	39	80	4.8	8.1				
ONEIDA	SQUASH L	392	160	87	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	41	46	3.5	11.7					
ONEIDA	SQUIRREL L	1317	1044	417	349	**	**	**	**	64	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	413	4	15.3	27.1					
ONEIDA	TOMAHAWK CHAIN (2 Lakes)*	3552	1287	707	310	**	**	**	**	387	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	707	0	26.1	27.1					
ONEIDA	TWO SISTERS L	719	81	44	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	43	1	2.0	21.5					
ONEIDA	WILLOW FL	5135	1794	493	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	48	445	11.8	4.1					
PRICE	BUTTERNUT L	1006	510	203	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	39	164	3.0	13.0					

Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

County	Lac du Flambeau		Area	Walleye Safe Harvest	Tribal Quota	April 30	May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	May 21	22	23	Total Harvest	Quota Balance	Boat-Hour	CPE
	Lake	Walleys																									
PRICE	PIKE L	806	317	174	**	**				0			**			23							23	151	8.8	2.6	
PRICE	ROUND L	726	287	157	60					18			4			5								87	70	9.0	9.7
PRICE	TURNER L	149	64	35	**					**			**											0	35	*	*
VILAS	ALDER L	274	114	62	**	57				**			81											57	5	3.0	19.0
VILAS	ANMIL L	380	156	85	**					**			**											81	4	1.3	62.3
VILAS	BALLARD L	505	60	32								27												20	12	0.5	40.0
VILAS	BIG ARBOR VITAE L	1090	710	283	256																			283	0	9.5	29.8
VILAS	BIG L T42N-R6E-S4	835	353	141		132							13			81					**			132	9	4.5	29.3
VILAS	BIG L T44N-R41W-S16	771	241	132																				94	38	2.8	33.6
VILAS	BIG MUSKELLUNGE L	930	567	226					225							51					**			225	1	4.0	56.3
VILAS	BIG PORTAGE L	638	254	139						88			**											139	0	4.3	32.7
VILAS	BIG SAND L	1408	141	77						77														77	0	2.3	33.5
VILAS	BIG ST GERMAIN L	1617	608	334		185				46		84		0			1				**	10		326	8	19.4	16.8
VILAS	BIRCH L	528	213	117							16													16	101	2.7	5.9
VILAS	BOULDER L	524	240	95		79						42												79	16	2.5	31.6
VILAS	CATFISH L	1012	392	215		120			94		**													136	79	11.5	11.8
VILAS	CLEAR L	555	223	122								62												120	2	3.5	34.8
VILAS	CRANBERRY L	956	372	204					139		**													201	3	8.3	24.4
VILAS	EAGLE L	572	229	125						77	**	73		**			**							73	52	2.5	29.2
VILAS	FISHTRAP L	329	136	74								**		**			**							0	74	*	*
VILAS	ISLAND L	1023	396	217		95			47		75													217	0	14.6	14.9
VILAS	JAG L	158	68	37		**								4										4	33	0.5	8.0
VILAS	L LAURA	599	371	148							22													148	0	6.8	21.8
VILAS	LAC VIEUX DESERT	4300	1005	100						28	**	**		**										28	72	3.8	7.4
VILAS	LITTLE ARBOR VITAE L	534	493	197	197									**										197	0	4.3	45.8
VILAS	LITTLE JOHN L	166	71	39									**	**			**							0	39	*	*
VILAS	LITTLE ST GERMAIN L	980	104	57		**					3	**	4			1								8	49	6.0	1.3
VILAS	LITTLE STAR L	244	102	56		16					**	**	**	**		**								16	40	1.4	11.9
VILAS	LITTLE TROUT L	978	114	62						**		**	**	**		**								0	62	*	*
VILAS	LONG L	872	341	187							177		**	**										177	10	6.3	28.3
VILAS	MANITOWISH L	506	204	112		57				**		**	**	**		**								57	55	5.5	10.4
VILAS	OXBOW L	511	206	113							90	**												113	0	5.5	20.5
VILAS	PAPOOSE L	428	174	95						61	**	**	34											95	0	3.8	25.3
VILAS	PICKEREL L	293	36	20						**	**	**	**	**		**								0	20	*	*
VILAS	PLUM L	1033	416	166						158		150					**	**				8		166	0	5.0	33.5
VILAS	PRESQUE ISLE CHAIN (3 Lakes)	1571	614	150													**	**						150	0	3.0	50.0

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County	Lac du Flambeau Lake	Area	Walleye Safe Harvest	Tribal Quota	April 29	May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	May 21	22	23	Total Harvest	Quota Balance	Boat- Hour	CPE
VILAS	REST L	608	243	133			131																131	2	9.0	14.6
VILAS	SNIPER L	239	41	16									**										0	16	*	*
VILAS	SPARKLING L	154	49	19									4										4	15	0.5	8.0
VILAS	SPIDER L	272	113	62			33						4				**	**	**				33	29	2.3	14.7
VILAS	SQUAW L	785	383	153			195						4				**	**	**				4	149	1.5	2.7
VILAS	STAR L	1206	499	199												**	**	**	**	3			195	4	6.5	30.0
VILAS	TROUT L	3816	319	175				96			75					**	**	**	**				174	1	8.5	20.5
VILAS	TWIN LAKES CHAIN (2 Lakes)*	3430	1986	794					395	315	38		38				**	46				794	0	24.8	32.1	
VILAS	WHITE SAND L	728	81	44					43								**	**	**				43	1	1.0	43.0
VILAS	WILD RICE L	379	124	68					**	**	**	**	**	**	**	**	**	**	**				0	68	*	*
	Number of lakes:	82			11	15	14	14	14	20	21	17	22	16	19	11	10	10	9	3	3	1				
	Area in acres:	90526																								
	Number of walleye:		32344	14513	1194	830	1608	1481	1344	961	959	154	111	130	231	2	0	46	0	3	18	0	10,022	4,491		
	Number of spearer-nights:				54	52	69	69	77	50	48	25	17	13	22	6	3	3	0	3	4	0	554			
	Number of interviews with effort:				22	21	29	24	26	18	17	10	8	6	9	2	1	1	0	1	2	0	213			
	Number of interviews without effort:				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Number of boat-hours:				52.7	39.7	53.9	61.4	62.4	46.1	41.2	29.5	18.2	10.0	17.2	24.3	4.6	2.5	2.3	0.0	3.8	2.8	0.0	472.2		
	Catch-per-effort:				22.7	20.9	29.8	24.1	21.5	20.9	23.3	32.2	8.5	11.1	7.6	9.5	0.4	0.0	20.4	0.0	0.8	6.5	0.0			21.2

\* Lakes not speared during spring 1997.

\*\* Lakes open for spearing but no effort.

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County	Sokaogon (Mole Lake)		Waiyie		April																Boat-Hour	CPE							
	Lake	Area	Safe Harvest	Tribal Quota	18	19	20	21	22	23	24	25	26	27	28	29	30	May 1	2	3			4	5	6	7	8	May 21 Harvest	Quota Balance
FLORENCE	EMILY L	191	26	22														**	**	**	**					0	22	*	
FLORENCE	FAY L	247	32	27														**	**	**	**					0	27	*	
FLORENCE	HALSEY L	512	20	11														**	**	**	**				**	0	11	*	
FLORENCE	KEYES L	202	86	73														**	**	62	**					62	11	15.5	
FLORENCE	PATTEN L	255	107	64														64								64	0	25.6	
FLORENCE	PINE R FL	127	55	46										**												0	46	*	
FOREST	ARBUTUS L	161	22	18																						0	18	*	
FOREST	BIRCH L	468	190	161																						0	181	*	
FOREST	BUTTERNUT L	1292	418	295												**	159	103	7	**		26			295	0	15.8	18.7	
FOREST	CRANE L	337	42	35										**												0	35	*	
FOREST	FRANKLIN L	892	348	208										**		197				**	11				208	0	11.8	17.6	
FOREST	GROUND HEMLOCK L	88	13	11																					0	11	*		
FOREST	HOWELL L	177	8	6																					0	6	*		
FOREST	JUNGLE L	182	78	46												47									47	-1	0.8	62.7	
FOREST	KING L	33	15	12																					0	12	*		
FOREST	L LUCERNE	1026	108	64												4	60								64	0	10.0	6.4	
FOREST	L METONGA	1991	740	443										100	137	7	178	21							443	0	46.5	9.5	
FOREST	LILY L	211	89	53									**	48											48	5	3.0	16.0	
FOREST	PINE L	1670	162	137												0	**								0	137	2.4	0.0	0.0
FOREST	RANGE LINE L	82	12	10																					0	10	*		
FOREST	ROBERTS L	414	220	131												72	0	**	59						131	0	8.9	14.7	
FOREST	STEVENS L	297	38	22														**	**	**	22				22	0	1.5	14.7	14.7
FOREST	TRUMP L	172	24	20																					0	20	*		
LANGLADE	BIG TWIN L	60	9	7																					0	7	*		
LANGLADE	ENTERPRISE L	502	203	121										72	49										121	0	8.8	13.7	13.7
LANGLADE	JESSIE L	35	6	5																					0	5	*		
LANGLADE	LAWRENCE L	50	8	6																					0	6	*		
LANGLADE	LOWER POST L	377	47	39																					0	39	*		
LANGLADE	MOCCASIN L	110	16	13																					0	13	*		
LANGLADE	MUELLER L	88	13	11																					0	11	*		
LANGLADE	OTTER L	90	14	11																					0	11	*		
LANGLADE	ROLLING STONE L	672	76	64									6	**	**										6	58	2.0	3.0	3.0
LANGLADE	ROSE L	112	16	13										**	**										0	13	*		
LANGLADE	SAWYER L	149	21	12																					0	12	*		
LANGLADE	UPPER POST L	757	84	71																					0	71	*		
LANGLADE	WHITE L	168	23	19										**	**										0	19	*		

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County	Lake	Area	Walleye Safe Harvest	Tribal Quota	April 18	19	20	21	22	23	24	25	26	27	28	29	30	May 1	2	3	4	5	6	7	8	May 21	Total Harvest	Quota Balance	Boat-Hour	CPE			
LANGLADE	WOLF RIVER	677	269	228	**	**																										*	
LINCOLN	ALEXANDER L	1369	138	117	**	4	**																									0.6	
LINCOLN	L ALICE	1663	162	137	**	0	**																								*		
LINCOLN	SPIRIT R FL	1498	567	481					10				**																		0.0		
MARINETTE	HIGH FALLS RESERVOIR																														1.4		
OCONTO	ARCHIBALD L	430	15	12																	**	**									*		
OCONTO	BASS L	149	64	38								**																			*		
OCONTO	BOOT L	235	67	51								**																			*		
OCONTO	BOULDER L	362	14	11																											*		
OCONTO	MAIDEN L	290	121	72									41																		13.7		
OCONTO	WHEELER L	293	122	73								60											**								34.3		
ONEIDA	BIG FORK L	690	274	164									201																		*		
ONEIDA	BIG L	865	338	202									110							**	**										28.7		
ONEIDA	BIG STONE L	548	220	186									110	**	**										0						12.9		
ONEIDA	COLUMBUS L	670	266	226																**	**										*		
ONEIDA	HAT RAPIDS FL	650	259	220				**																							*		
ONEIDA	LONG L	620	247	209			**													**	**										*		
ONEIDA	LOWER NINE MILE L	646	74	62										68	**	**							**								13.6		
ONEIDA	PELICAN L	3585	915	704												636	3	**	**	26	**			1							17.3		
ONEIDA	PLANTING GROUND L	1012	392	235										160	**	0	**	8	**	60	**		28								14.6		
ONEIDA	SEVEN MILE L	503	203	121											**				113	**	**										21.9		
ONEIDA	THUNDER L	1768	170	144											**					**	1										0.5		
ONEIDA	THUNDER L	172	73	62											**					**											*		
ONEIDA	WILLOW FL	5135	1794	493											**					**	**	26									8.0		
VILAS	KENTUCK L	957	77	59											**						**										11.3		
VILAS	LAC VIEUX DESERT	4300	1005	100													**	47	100												36.4		
	Number of lakes:	61			2	4	4	0	0	1	0	0	8	10	8	10	10	19	10	12	12	5	4	1	1	1							
	Area in acres:	43282																															
	Number of walleye:		11235	6714	0	4	0	0	0	10	0	0	317	377	808	343	22	713	396	155	34	26	55	0	0	0	3260	3454					
	Number of spearer-nights:				0	7	2	0	0	11	0	0	23	21	52	30	21	85	21	11	5	1	7	2	0	0	299						
	Number of interviews with effort:				0	3	1	0	0	4	0	0	9	8	17	13	9	20	8	4	3	0	3	1	0	0	103						
	Number of interviews without effort:				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
	Number of boat-hours:				0.0	7.0	1.0	0.0	0.0	7.0	0.0	0.0	16.0	21.5	50.6	33.0	14.3	43.4	16.1	10.8	5.0	3.3	5.8	1.5	0.0	0.0	0.0	236.0					
	Catch-per-effort:				0.0	0.6	0.0	0.0	0.0	1.4	0.0	0.0	19.8	17.5	16.0	10.4	1.5	16.4	24.6	14.4	16.8	8.0	9.6	10.0	0.0	0.0	0.0	13.8					

\* Lakes not speared during spring 1997.  
 \*\* Lakes open for spearing but no effort.

Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

County	Red Cliff Lake	Area	Walleye Safe Harvest	Tribal Quota	April							May			Total Harvest	Quota Balance	Boat-Hour	CPE					
					20	21	22	23	24	25	26	27	28	29					30	1	2	3	
BAYFIELD	DIAMOND L	341	137	105											**	79	**	8	87	18	11.0	7.9	
BAYFIELD	PIKE L CHAIN (4 Lakes)*	714	303	181											58	123			181	0	11.9	15.2	
BAYFIELD	L OWEN	1323	505	150												45			150	0	12.7	11.8	
BAYFIELD	MIDDLE EAU CLAIRE L	902	644	495	**		**	**	247	150					90				487	8	36.8	13.3	
BAYFIELD	NAMEKAGON L	3227	1163	485							229	256							485	0	23.3	20.9	
BAYFIELD	UPPER EAU CLAIRE L	1030	399	239			91	105	43										239	0	19.3	12.4	
DOUGLAS	L NEBAGAMON	914	98	58						28									28	30	3.8	7.5	
DOUGLAS	LOWER EAU CLAIRE L	802	214	128	1		39	71	17									**	128	0	12.8	10.0	
DOUGLAS	UPPER ST CROIX L	855	335	200						138	60								198	2	11.5	17.2	
SAWYER	NELSON L	2503	1119	425						108	167	42			**			12	329	96	31.3	10.5	
SAWYER	SISSABAGAMA L	719	284	238				88	**	**									88	150	4.0	22.0	
	Number of lakes:	11			2	0	3	3	4	3	3	2	3	3	2	3	3	2	3				
	Area in acres:	13330																					
	Number of walleye:		5201	2704	1	0	130	176	148	355	317	208	289	301	307	148	0	20	2400	304			
	Number of spearer-nights:				6	0	8	11	7	24	18	14	17	16	29	12	0	5	167				
	Number of interviews with effort:				2	0	5	5	4	8	7	5	7	7	11	5	0	2	68				
	Number of interviews without effort:				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	Number of boat-hours:				2.5	0.0	8.0	16.8	8.8	27.5	20.0	19.5	9.5	20.4	26.4	11.8	0.0	7.0		178.1			
	Catch-per-effort:				0.4	0.0	16.3	10.5	16.8	12.9	15.9	10.7	30.4	14.7	11.6	12.6	0.0	2.9					13.5

\* Lakes not speared during spring 1997.

\*\* Lakes open for spearing but no effort.

Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

St. Croix		Area	Safe Harvest	Tribal Quota	April	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	Total Harvest	Quota Balance	Boat-Hour	CPE		
BARRON	BEAR L	1358	255	101										12	89							101	0	6.8	14.9		
BARRON	BEAVER DAM L	1112	116	63									5	**	30	28					**	63	0	6.5	9.7		
BARRON	DUCK L	100	44	24							16											0	24		*		
BARRON	HORSESHOE L	119	41	16																		16	0	1.5	10.7		
BARRON	L CHETEK	770	85	46																		0	46		*		
BARRON	LOWER DEVILS L	162	69	37																		0	37		*		
BARRON	LOWER TURTLE L	276	115	63																		60	3	4.0	15.0		
BARRON	POKAGAMA L	506	60	32																		0	32		*		
BARRON	PRAIRIE L	1534	151	83									44	**								44	39	3.8	11.7		
BARRON	RED CEDAR L	1841	698	378								35	32		107	155				**		377	1	35.0	10.8		
BARRON	SAND L	322	41	22																		22	0	3.5	6.3		
BARRON	STAPLES L	305	39	21																		1	20	1.8	0.6		
BARRON	UPPER TURTLE L	438	53	29																		28	1	2.0	14.0		
BURNETT	BIG MCKENZIE L	1185	285	113									8									113	0	21.4	5.3		
BURNETT	DEVILS L	1001	105	41					**					0								25	16	5.6	4.5		
BURNETT	LITTLE YELLOW L	348	143	78					**					1								26	52	11.3	2.3		
BURNETT	ROONEY L	322	41	22										4								9	13	5.4	1.7		
BURNETT	SAND L	962	103	56									55									55	1	8.5	6.5		
BURNETT	YELLOW L	2287	1023	409					**					9								20	389	4.5	4.4		
POLK	BALSAM L	2054	192	105										24								102	3	21.8	4.7		
POLK	BEAR L	155	67	36										69								0	36		*		
POLK	BIG BUTTERNUT L	378	155	85										31								53	32	13.8	3.9		
POLK	BIG ROUND L	1015	107	58						1				13								1	57	6.0	0.2		
POLK	HALF MOON L	579	232	127										24								126	1	21.7	5.8		
POLK	INDIANHEAD FL	776	306	168																		0	168		*		
POLK	MAGNOR L	224	94	51																		50	1	2.0	25.0		
POLK	WAPOGASSET L	1186	122	67																		65	2	2.6	25.2		
POLK	WARD L	91	40	21																		0	21		*		
WASHBURN	BALSAM L	295	123	67									**									43	24	5.5	7.8		
WASHBURN	BASS L T40N-R10W-S17	188	247	98												**						41	57	5.3	7.8		
WASHBURN	BIG BASS L	203	27	14																		0	14		*		
WASHBURN	BIRCH L	368	46	25																		0	25		*		
WASHBURN	L NANCY	772	85	46																		0	46		*		
WASHBURN	LONG L	3290	1184	503										119	92	34	3	46	**		**	443	60	63.4	7.0		
WASHBURN	MIDDLE MCKENZIE L	530	62	34									13	14								34	0	3.5	9.7		
WASHBURN	MINONG FL	1564	591	325																		0	325		*		
WASHBURN	SHELL L	2580	944	519																		28	491	19.3	1.4		
WASHBURN	SPRING L	211	89	48																		0	48		*		
	Number of lakes:	38																									
	Area in acres:	31407																									
	Number of walleye:		8170	4031																			1992	2039			
	Number of spearer-nights:																						6	275			
	Number of interviews with effort:																						3	117			
	Number of interviews without effort:																						0	0			
	Number of boat-hours:																						0	28	491	19.3	1.4
	Catch-per-effort:																						0	48		6.7	

\* Lakes not speared during spring 1997.  
 \*\* Lakes open for spearing but no effort.



Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997.  
 Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

<b>Six Tribal Bands Combined:</b>		Safe	Tribal	April	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	May	2	3	4	5	6	7	8	9
Area	Harvest	Quota	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	30	1	2	3	4	5	6	7	8	9	
Number of lakes:	254			5	9	12	15	10	14	16	15	16	23	24	22	34	33	45	37	36	30	28	27	21	25	21		
Area in acres:	230,433																											
Number of walleye:	71,139	40,301	140	136	376	307	141	521	624	489	1228	1407	1328	2165	2225	1627	2843	2574	1773	1197	985	1012	154	111	204			
Number of spearer-nights:			20	33	46	35	22	37	64	56	79	120	80	140	143	137	190	125	110	70	40	62	27	17	28			
Number of interviews with effort:			10	17	21	16	11	17	29	24	28	43	30	55	62	55	65	47	43	27	16	22	11	8	12			
Number of interviews without effort:			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Number of boat-hours:	23.6	38.4	44.3	39.2	23.1	41.5	85.7	68.1	94.2	101.8	107.5	140.0	139.5	113.6	147.3	121.5	104.0	71.9	44.5	42.5	19.7	10.0	34.5					
Catch-per-effort:	5.9	3.5	8.5	7.8	6.1	12.6	7.3	7.2	13.0	13.8	12.4	15.5	15.9	14.3	19.3	21.2	17.0	16.6	22.2	23.8	7.8	11.1	5.9					

<b>Six Tribal Bands Combined:</b>		Safe	Tribal	May	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Quota	Boat-	CPE
Area	Harvest	Quota	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	23	24	Harvest	Balance	Hour	Hour
Number of lakes:	254		26	15	11	10	9	0	0	0	0	0	0	0	0	4	3	1	0	597			
Area in acres:	230,433																						
Number of walleye:	71,139	40,301	353	6	9	46	0	0	0	0	0	0	0	0	3	18	0	0	0	24,002	16,299		
Number of spearer-nights:			32	10	7	3	1	0	0	0	0	0	0	0	3	4	0	0	0	1,740			
Number of interviews with effort:			12	4	3	1	0	0	0	0	0	0	0	0	1	2	0	0	0	682			
Number of interviews without effort:			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Number of boat-hours:	32.8	9.9	7.3	2.3	0	0	0	0	0	0	0	0	0	0	0	3.8	2.8	0	0	1736.0			
Catch-per-effort:	10.8	0.6	1.2	20.4	0	0	0	0	0	0	0	0	0	0	0	0.8	6.5	0	0				13.8

Appendix C. Total number of walleye harvested and measured per inch group and sexed during spring in 1996. Data arranged alphabetically by tribe, county, and lake.

Bad River		INCH GROUP																											Total Measured	Total Harvested	Total Inches	Mean Length	Male	Female	Unknown	Total Sexed
County	Lake	Area	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27												
Bayfield	L Owen	1323						4	22	27	18	15	8	18	17	9	6	2				2			1	1	150	150	2381.8	15.7	137	13	0	150		
Bayfield	Namekagon L	3227				1	6	47	94	108	107	68	20	12	10	4	5	2							1	1	485	485	6761.0	13.9	435	35	15	485		
Chippewa	L Wisconsin	6300			1	3	10	36	45	33	17	7	2	1	2										1	1	160	168	2219.8	13.9	149	8	11	168		
Chippewa	Long L	1052			3	7	23	61	79	113	65	37	14	5	5											4	4	412	412	5407.5	13.1	399	9	4	412	
Douglas	Whitefish L	832					1	3	23	28	30	22	24	36	20	6											193	193	2985.6	15.5	180	3	10	193		
Iron	Trude L	781																									182	182	2412.0	13.3	171	8	3	182		
Iron	Turtle-Flambeau FI	13545			1	3	8	44	41	33	15	15	3	4	1											183	204	2405.5	13.1	186	5	13	204			
Rusk	Chain L	468						1	9	8	19	11	13	5	5											71	71	1067.9	15.0	67	3	1	71			
Rusk	Island L	526						1	3	2	10	13	17	6	3	2	1									59	59	880.9	14.9	58	1	0	59			
Sawyer	Connors L	429			1	2	4	17	8	10	17	10	9	2	1	1	1		2						1	85	85	1187.7	14.0	35	6	44	85			
Sawyer	Nelson L	2503				4	12	38	32	36	29	17	20	18	20	7	3	2	2	3	2	2	1		1	247	247	3630.4	14.7	201	15	31	247			
Sawyer	Teal L	1049				6	18	29	27	10	5	2	3	2	2	2	2		1							113	198	1476.8	13.1	173	6	19	198			
Vilas	Crab L	949							1	3	3	1														9	9	134.4	14.9	5	2	2	9			
Vilas	Forest L	466						9	25	19	18	11	10	5	6	4	4	1	1							113	113	1652.6	14.6	98	15	0	113			
Vilas	Harris L	507				1		1	21	24	17	8	4	6	3	1	1		1						1	89	89	1277.8	14.4	78	3	8	89			
Vilas	High L	734			1	1	4	8	7	6	10	8	6	4	3	3	3		1							63	63	911.8	14.5	33	0	30	63			
Vilas	Presque Isle L Chain	1571						8	20	29	28	31	7	3	2	3	1	1	2	1	1	1			137	177	2004.5	14.6	165	11	1	177				
Vilas	S Turtle L	454						1																	4	4	72.6	18.2	2	1	1	4				
Sub-total:		36716	1	1	6	25	85	332	485	542	452	309	174	128	105	43	25	8	10	6	5	6	5	2	2755	2909	38850.5	14.1	2572	144	193	2909				









Appendix C (continued). Total number of walleye harvested and measured per inch group and sexed during spring in 1996. Data arranged alphabetically by tribe, county, and lake.

County	Lake	Area	INCH GROUP																		Total Measured	Total Harvested	Mean Length	Male	Female	Unknown	Total Sexed			
			9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26								27	28	29
Bayfield	Diamond L	341		2	1	4	7	4	8	12	14	11	7	7	2	3		2	2	1			87	87	17.5	72	7	8	87	
Bayfield	L Owen	1323		1	1	15	29	27	10	7	16	18	12	2	4	5	2	1					150	150	16.1	132	17	1	150	
Bayfield	Middle Eau Claire L	902	1	5	14	61	109	115	72	39	23	17	12	7	3	1	3	1	2	2		487	487	14.9	263	24	200	487		
Bayfield	Namekagon L	3227		3	21	33	61	58	44	30	15	11	3	5	3	2	1	1	2			293	485	14.8	229	42	25	296		
Bayfield	Pike L Chain	714			5	19	29	40	25	25	12	13	7		2	3						181	181	15.4	146	12	23	181		
Bayfield	Upper Eau Claire L	1030				3	7	20	49	46	26	23	15	12	11	3	6	1	2	6	1	239	239	17.8	192	38	9	239		
Douglas	L Nebagamon	914					3	7	3	4	3	3	3	3	1	1						28	28	16.5	23	5	0	28		
Douglas	Lower Eau Claire L	802	1	2	2	8	33	30	13	7	4	4	7	5	2	3	2					128	128	15.6	88	24	16	128		
Douglas	Upper St. Croix L	855			2	5	12	30	40	45	17	12	1		2	2						166	198	15.8	128	13	25	166		
Sawyer	Nelson L	2503	3	10	20	35	32	20	20	44	26	29	13	10	4	7	4	5	1			283	329	15.8	197	28	58	283		
Sawyer	Sissabagama L	719			9	11	25	25	9	6	1	1			1							88	88	14.0	82	3	3	88		
	Sub-total:	13330	5	23	75	194	347	376	293	265	157	142	80	48	36	27	21	14	9	6	9	2130	2400	15.7	1552	213	368	2133		

Appendix C (continued). Total number of walleye harvested and measured per inch group and sexed during spring in 1996. Data arranged alphabetically by tribe, county, and lake.

County	St. Croix Lake	Area	INCH GROUP																													Total Measured	Total Harvested	Total Inches	Mean Length	Male	Female	Unknown	Total Sexed
			9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29																
Barron	Bear L	1358				2	12	27	19	20	3	2	3	6	2	1	1	1	2													101	101	1625.5	16.1	94	6	1	101
Barron	Beaver Dam L	1112				1	5	6	6	8	10	8	5	6	3	3	1	2		2											63	63	1183.3	18.8	56	7	0	63	
Barron	Horseshoe L	119				1	1	1	1	5	6	1	1																	16	16	269.6	16.9	16	0	0	16		
Barron	Lower Turtle L	276				1	1	4	19	18	14	3																	60	60	1033.9	17.2	59	1	0	60			
Barron	Prairie L	1534							13	23	2	1	3	4	2	2													44	44	737.2	16.8	42	2	0	44			
Barron	Red Cedar L	1841	1	2	15	30	90	131	59	21	17	3	4	2	2													377	377	5832.2	15.5	359	17	1	377				
Barron	Sand L	322				1			5	8	4	2	1				1											22	22	372.8	16.9	20	1	1	22				
Barron	Staples L	305																										1	1	21.2	21.2	1	0	0	1				
Barron	Upper Turtle L	438						4	2	6	6	5	2	1														28	28	495.2	17.7	25	3	0	28				
Burnett	Big McKenzie L	1185				11	13	26	17	16	8	9	1															113	113	1815.4	16.1	96	16	1	113				
Burnett	Devils L	1001				3	7	5	4	2	1	1																25	25	384.9	15.4	22	2	1	25				
Burnett	Little Yellow L	348				1			1	1	1	7	5	4	1	3												26	26	494.3	19.0	12	12	2	26				
Burnett	Rooney L	322																										9	9	187.7	20.9	7	1	1	9				
Burnett	Sand L	962							2	3	10	9	17	5	2	3	2											55	55	1005.0	18.3	50	3	2	55				
Burnett	Yellow L	2287				1	2	4	3	3	3	1																20	20	333.2	16.7	13	7	0	20				
Polk	Balsam L	2054				4	19	6	6	5	10	10	15	8	3	3	3	3										102	102	1834.2	18.0	78	22	2	102				
Polk	Big Butternut L	378				2	10	13	5	1	4	1	3	1														53	53	892.5	16.8	36	17	0	53				
Polk	Big Round L	1015																										1	1	17.2	17.2	1	0	0	1				
Polk	Half Moon L	579				2	8	16	8	17	27	19	10	11														126	126	2184.4	17.4	105	17	2	124				
Polk	Magnor L	224							1	3	10	15	10	8														50	50	901.1	18.0	49	1	0	50				
Polk	Wapogasset L	1186				3	5	7	24	13	4		4	2	1													65	65	1046.0	16.1	61	4	0	65				
Washburn	Balsam L	285							1	5	19	4	4	3	2													43	43	709.5	16.5	41	2	0	43				
Washburn	Bass-Patterson L	188																										41	41	587.1	14.3	32	6	3	41				
Washburn	L Nancy	772				2	9	10	8	7	3																	46	46	785.6	16.6	41	1	4	46				
Washburn	Long L	3290	1	2	1	13	53	82	83	71	39	31	7	9	6	9	7	5	6	4	4	1					443	443	7364.6	16.6	369	49	25	443					
Washburn	Middle McKenzie L	530							5	2	8	8	4	5	1	1												34	34	589.9	17.4	31	3	0	34				
Washburn	Shell L	2580				1	2	4	4	7	2	2	3															28	28	476.1	17.0	23	3	2	28				
	Sub-total:	26501	1	3	8	76	180	311	380	331	201	173	91	67	35	33	26	23	19	14	11	8	1	1992	1992	33169.6	16.7	1739	203	48	1990								



Appendix D: Number of walleye per inch group taken during spring spearing seasons from 1985-1997.

Inch Group	Number of walleye in:													13 Year Total	Percent of Total	Cumulative Percent				
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997							
5														1				2	0.0%	0.0%
6		1												1				6	0.0%	0.0%
7														2				7	0.0%	0.0%
8														12				55	0.0%	0.0%
9	2	3	17	10	4	14	36	34	63	45	63	39	79	32	6	39	378	0.2%	0.2%	
10	5	49	123	121	60	183	229	243	386	245	386	219	372	219	233	2468	1.1%	1.3%		
11	31	358	558	678	306	649	957	957	1,186	905	1,186	1,311	1,230	1,311	1,026	10,152	4.6%	5.9%		
12	140	680	1,282	1,688	925	1,513	1,979	2,444	2,170	2,101	2,170	2,955	2,262	2,955	2,532	22,671	10.2%	16.1%		
13	265	928	1,892	2,755	1,684	2,370	2,582	3,507	3,110	3,636	3,110	4,113	3,242	4,113	3,879	33,963	15.3%	31.5%		
14	286	1,068	2,133	3,289	2,222	2,917	2,777	3,252	3,666	4,032	3,666	4,360	3,570	4,360	4,305	37,877	17.1%	48.6%		
15	293	985	1,895	2,951	2,154	2,856	2,543	2,375	3,368	3,111	3,368	3,768	3,390	3,768	3,867	33,556	15.2%	63.7%		
16	247	939	1,666	2,311	1,919	2,295	2,031	1,696	2,517	1,993	2,517	2,703	2,548	2,703	2,605	25,470	11.5%	75.2%		
17	172	801	1,374	1,658	1,390	1,862	1,687	1,207	1,796	1,323	1,796	1,756	1,580	1,756	1,664	18,270	8.2%	83.5%		
18	145	458	1,113	1,297	1,010	1,288	1,216	878	1,120	812	1,120	1,159	1,129	1,159	970	12,595	5.7%	89.2%		
19	118	255	811	932	634	932	811	562	850	589	850	729	639	729	617	8,479	3.8%	93.0%		
20	33	149	513	596	328	556	590	261	383	308	383	440	378	440	358	4,893	2.2%	95.2%		
21	25	72	259	316	210	307	303	199	267	218	267	238	237	238	240	2,891	1.3%	96.5%		
22	18	50	148	214	109	202	249	171	205	148	205	195	186	195	156	2,051	0.9%	97.4%		
23	18	23	116	134	76	160	151	129	189	120	189	164	142	164	120	1,542	0.7%	98.1%		
24	11	9	86	124	67	100	111	85	145	101	145	158	105	158	111	1,213	0.5%	98.7%		
25	7	10	76	89	48	107	102	66	98	80	98	109	98	109	97	987	0.4%	99.1%		
26	9		57	75	45	71	86	65	91	54	91	80	85	80	64	782	0.4%	99.5%		
27	10	3	42	56	31	63	46	42	55	33	55	57	56	57	51	545	0.2%	99.7%		
28	5	1	28	32	18	30	39	25	30	27	30	36	32	36	37	340	0.2%	99.9%		
29	8		25	30	8	15	15	17	12	12	12	16	13	16	15	186	0.1%	100.0%		
30	11		8	9	3	5	6	6	5	1	5	3	4	3	6	67	0.0%	100.0%		
31	6		2		2	1		1				1	1	1	1	15	0.0%	100.0%		
32	2															3	0.0%	100.0%		
33	1															1	0.0%	100.0%		
34																		0.0%	0.0%	
35																		0.0%	0.0%	
36																		0.0%	0.0%	
37																		0.0%	0.0%	
Total No. Measured:	1,868	6,842	14,224	19,368	13,254	18,500	18,551	18,226	21,726	19,903	21,726	24,605	21,399	24,605	22,999	221,465	100%	100%		
Total Length:	30,382	106,051	226,789	306,926	211,645	295,047	291,543	275,331	335,322	301,713	335,322	375,476	327,444	375,476	348,750	3,432,419	100%	100%		
Average Length:	16.3	15.5	15.9	15.8	16.0	15.9	15.7	15.1	15.4	15.2	15.4	15.3	15.3	15.3	15.2	15.6	15.6	15.6	0.0%	0.0%
Total No. Spared:	2,761	6,940	21,321	25,969	16,054	25,348	23,018	21,188	25,922	24,532	25,922	30,249	24,002	30,249	28,327	275,631	80%	80%		
Percent Measured:	68%	99%	67%	75%	83%	73%	81%	86%	84%	81%	84%	81%	89%	81%	81%	80%	80%	80%		







Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spea. - 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997 Safe Harvest	1997 Harvest Declaration	April 29	May 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	21	22	23	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre		
VILAS	BIG SAND L	1,408	LDF	25	13																				0	13	9	354.3	39.4	0.0058		
VILAS	BIG ST GERMAIN L	1,617	LDF	27	14						5		1										3			9	5	42.0	42.0	0.0019		
VILAS	BIRCH L	528	LDF	12	6																					1	6					
VILAS	BOULDER L	524	LDF	12	6																					0	6					
VILAS	CATFISH L	1,012	LDF	20	10					2																3	7	98.5	32.8	0.0030		
VILAS	CLEAR L	555	LDF	13	7																					5	2	202.5	40.5	0.0060		
VILAS	CRANBERRY L	956	LDF	19	10				5	1																2	8	64.8	32.4	0.0021		
VILAS	EAGLE L	572	LDF	13	7								2													2	5	73.0	36.5	0.0035		
VILAS	FISHTRAP L	329	LDF	9	5																					0	5					
VILAS	ISLAND L	1,023	LDF	20	11						2															2	9	69.8	34.9	0.0020		
VILAS	L LAURA	599	LDF	13	7						5															5	2	194.2	38.8	0.0063		
VILAS	LAC VIEUX DESERT	4,300	LDF	34	5			5		4																4	1	158.1	39.5	0.0009		
VILAS	LITTLE ARBOR VITAE L	534	LDF	12	6																					5	1	177.2	35.4	0.0064		
VILAS	LITTLE JOHN L	166	LDF	5	2																					0	2					
VILAS	LITTLE ST GERMAIN L	980	LDF	19	10										1											1	9	34.5	34.5	0.0010		
VILAS	LITTLE STAR L	244	LDF	7	4																					0	4					
VILAS	LITTLE TROUT L	978	LDF	6	3																						1	1				
VILAS	LONG L	872	LDF	10	5																						0	3				
VILAS	MANITOWISH L	506	LDF	12	6																						0	5				
VILAS	N TWIN L	2,788	LDF	39	20				3																		3	3	109.2	36.4	0.0059	
VILAS	OXBOW L	511	LDF	12	6						6		11														0	3	741.3	37.1	0.0072	
VILAS	PAPOOSE L	428	LDF	10	5																						0	6				
VILAS	PICKEREL L	293	LDF	8	4																						1	4				
VILAS	PLUM L	1,108	LDF	21	11							1															4	4	37.0	37.0	0.0023	
VILAS	PRESQUE ISLE L	1,280	LDF	23	6																						3	8	122.5	40.8	0.0027	
VILAS	REST L	608	LDF	14	7				3																		1	5	37.0	37.0	0.0008	
VILAS	S TWIN L	642	LDF	14	7																						3	4	110.7	36.9	0.0049	
VILAS	SNIPE L	239	LDF	7	4																						0	4				
VILAS	SPARKLING L	127	LDF	4	2																						0	2				
VILAS	SPIDER L	272	LDF	7	4																							0	4			
VILAS	SQUAW L	785	LDF	16	8																						0	4				
VILAS	STAR L	1,206	LDF	22	11																						0	8				
VILAS	TROUT L	3,816	LDF	48	24				1																		1	10	42.5	42.5	0.0008	
VILAS	TROUT L	220	LDF	6	3																						4	20	146.7	36.7	0.0010	
VILAS	VAN VLIET L	728	LDF	15	8																						0	3				
VILAS	WHITE SAND L	728	LDF	15	8																						0	8				
VILAS	WILD RICE L	379	LDF	8	4																						0	4				
	Lac du Flambeau sub-total:			1420	667	4	3	32	12	8	21	9	21	1	2	7	0	0	0	3	0	7	5	6	141	526	141	5263.2	37.3			

Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997 Sale Harvest	1997 Declaration	April 18	19	20	21	22	23	24	25	26	27	28	29	30	May 1	2	3	4	5	6	7	8	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre
FOREST	LILY L	211	MILK	6	3																					0	3	1	33.7	0.00		
FOREST	ROBERTS L	414	MILK	10	5																					1	4	1	33.7	0.00		
LANGLADE	ENTERPRISE L	502	MILK	12	7																					1	6	1	35.5	0.00		
LANGLADE	MOCCASIN L	110	MILK	4	2											1										0	2					
LINCOLN	ALEXANDER L	677	MILK	15	8																					0	8					
LINCOLN	L ALICE	1,369	MILK	24	14																					0	14					
LINCOLN	SPIRIT R FL	1,663	MILK	28	16																					0	16					
OCONTO	ARCHIBALD L	430	MILK	11	6																					0	6					
OCONTO	BOOT L	235	MILK	7	4																					0	4					
ONEIDA	BIG FORK L	690	MILK	15	8																					0	8					
ONEIDA	BIG L	865	MILK	17	10																					0	8					
ONEIDA	BIG STONE L	548	MILK	13	7																					1	9		28.0	0.001		
ONEIDA	LONG L	620	MILK	14	8																					1	6		37.4	0.001		
ONEIDA	PELICAN L	3,585	MILK	46	27														2							2	6		59.0	0.00		
ONEIDA	PLANTING GROUND L	1,012	MILK	20	11											14	1	1								23	4		844.2	0.00		
ONEIDA	SEVENMILE L	503	MILK	12	7																					1	10		31.1	0.001		
ONEIDA	THUNDER L	172	MILK	5	2																					0	7					
ONEIDA	WILLOW FL	5,135	MILK	59	17																					0	2					
VILAS	KENTUCK L	957	MILK	19	11																					0	17					
VILAS	LAC VIEUX DESERT	4,300	MILK	34	5																					0	11					
	Mole Lake sub-total:			371	178	0	0	0	0	0	0	0	0	0	1	0	15	2	1	2	0	0	0	0	0	0	30	148	30	1068.9	35.6	



Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997												1997 Safe Harvest	1997 Declaration	April	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre													
				17	18	19	20	21	22	23	24	25	26	27	28										29	30	May 1										
BARRON	SAND L	322	STC	8														2	2	72.0	38.0	0.008															
BURNETT	BIG MCKENZIE L	1,185	STC	22														11	2	430.5	39.1	0.008															
BURNETT	LITTLE YELLOW L	348	STC	9			1											5	0	209.0	41.8	0.014															
BURNETT	TWENTYSIX L	230	STC	7														4	0	160.2	40.1	0.017															
POLK	APPLE R FL	639	STC	14														0	8																		
POLK	BONE L	1,781	STC	142														35	0	1320.3	37.7	0.018															
POLK	DEER L	807	STC	17														10	0	379.7	38.0	0.012															
WASHBURN	BASS L	188	STC	6														0	3																		
WASHBURN	L NANCY	772	STC	16								3						3	6	123.3	41.1	0.003															
WASHBURN	MIDDLE MCKENZIE L	530	STC	12								1						2	5	88.0	44.0	0.003															
WASHBURN	SHELL L	2,580	STC	37														14	8	561.9	40.1	0.005															
St. Croix sub-total:				290														3	1	0	1	0	0	5	1	0	0	8	0	31	23	13	86	34	86	3344.9	38.9
Grand Total:				2807															333	1156	333	12521.1	37.6														



Appendix F. Number of muskellunge per inch group taken during spring spearing seasons from 1985-1997.

Inch Group	Number of muskellunge in:													13 Year Total	Percent of Total
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		
13						1								1	0.0%
14														0	0.0%
15											1			1	0.0%
16			1								1			2	0.1%
17				3			1							4	0.2%
18								1						1	0.0%
19				1					1		1			3	0.1%
20			2											2	0.1%
21												1		1	0.0%
22						1					1	2	1	5	0.2%
23		1					1				1			3	0.1%
24		1						1			2	1		5	0.2%
25	1		1		1	1			2	1	1			8	0.3%
26				1	2	3	1	1	3	1	1		1	14	0.5%
27			3	3	2	2		1	1	2	1	1	3	19	0.7%
28	2		3	1	5	4	5	1	3	3	3	1	3	34	1.3%
29	2	2	7	5	3	6	4	8	4	2	2	4	9	58	2.2%
30	8	3	4	6	6	15	6	5	6	11	3	7	8	88	3.4%
31	6	3	14	9	9	24	12	8	9	14	13	12	7	140	5.4%
32	7	2	15	13	11	18	10	7	11	14	20	4	19	151	5.8%
33	3	6	12	10	8	25	11	18	12	20	14	12	15	166	6.4%
34	8	1	16	10	8	20	20	13	21	17	23	26	23	206	7.9%
35	7	7	12	10	10	26	17	11	10	26	29	23	31	219	8.4%
36	2	4	12	7	6	20	18	18	22	15	22	27	30	203	7.8%
37	8	8	17	11	10	29	20	14	15	16	26	36	31	241	9.3%
38		6	12	9	7	27	11	12	14	16	25	25	25	189	7.3%
39	2	1	10	10	6	16	7	11	10	17	18	19	30	157	6.0%
40	1	2	8	6	5	19	16	11	11	11	15	22	20	147	5.7%
41	1	2	5	9	3	12	4	5	5	10	17	28	19	120	4.6%
42	1	1	4	6	5	6	3	4	8	11	14	17	10	90	3.5%
43	2	2	3	6	3	6	5	4	4	7	16	21	14	93	3.6%
44	2		3	7		5		4	6	4	5	12	7	55	2.1%
45			4	8	2	1	5	1	1	7	8	2	10	49	1.9%
46		1	4	3		2	2		1	8	5	2	6	34	1.3%
47	3		2	1	2	3	1	1	1	1	3	8	2	28	1.1%
48		1	4	1	1	2	3	2	3	5	4	2	5	33	1.3%
49	1		2	1	1	3	1		2	3	1	3	2	20	0.8%
50	1				1		1		1	1	1		2	8	0.3%
51				1		1								2	0.1%
52														0	0.0%
53		1												1	0.0%
Total Number Measured:	68	55	180	158	117	298	185	162	187	243	297	318	333	2,601	100%
Total Length:	2,407	1,994	6,507	5,805	4,175	10,761	6,725	5,845	6,822	9,034	11,072	12,117	12,521	95,784	
Average Length:	35.4	36.2	36.2	36.7	35.7	36.1	36.4	36.1	36.5	37.2	37.3	38.1	37.6	36.8	
Total Number Speared:	86	55	196	158	118	303	185	165	188	244	299	319	333	2,649	
Percent Measured:	79.1%	100.0%	91.8%	100.0%	99.2%	98.3%	100.0%	98.2%	99.5%	99.6%	99.3%	99.7%	100.0%	98.2%	

Appendix G. Number, average length (inches), and harvest per acre (largemouth and smallmouth bass and northern pike) for various lakes during spring spearing 1997.

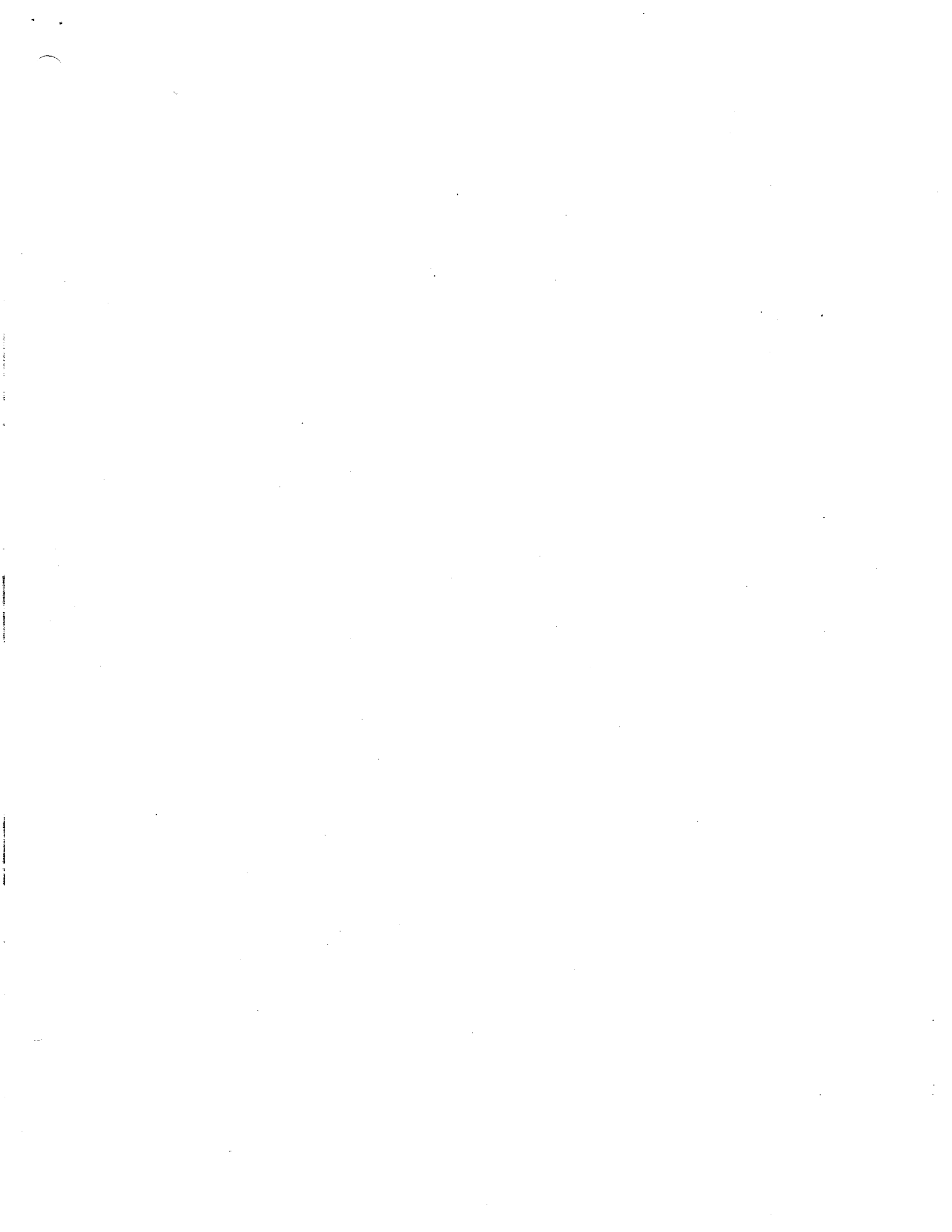
Tribe	County	Lake	Area	Species	Number Harvested	Number Measured	Total Inches	Average Length	Number Per Acre
STC	Barron	Bear L	1358	LMB	1	1	16.0	16.0	0.0007
STC	Barron	Lower Turtle L	276	LMB	2	2	24.7	12.4	0.0072
STC	Barron	Red Cedar L	1841	LMB	2	2	31.6	15.8	0.0011
STC	Barron	Sand L	322	LMB	1	1	15.7	15.7	0.0031
STC	Barron	Upper Turtle L	438	LMB	3	3	49.2	16.4	0.0068
RCF	Bayfield	Middle Eau Claire L	902	LMB	14	14	244.0	17.4	0.0155
RCF	Bayfield	Pike L Chain	714	LMB	1	1	16.3	16.3	0.0014
STC	Burnett	Big Mckenzie L	1185	LMB	10	10	154.2	15.4	0.0084
STC	Burnett	Devils L	1001	LMB	1	1	14.5	14.5	0.0010
STC	Burnett	Little Yellow L	348	LMB	1	1	18.8	18.8	0.0029
STC	Burnett	Rooney L	322	LMB	10	10	144.0	14.4	0.0311
STC	Burnett	Sand L	962	LMB	3	3	49.0	16.3	0.0031
LCO	Chippewa	Otter L	661	LMB	2	2	28.3	14.2	0.0030
RCF	Douglas	Lower Eau Claire L	802	LMB	3	3	43.5	14.5	0.0037
MLK	Florence	Keyes L	202	LMB	2	2	31.6	15.8	0.0099
MLK	Forest	Franklin L	892	LMB	1	1	16.3	16.3	0.0011
MLK	Oconto	Maiden L	290	LMB	1	1	17.6	17.6	0.0034
STC	Polk	Balsam L	2054	LMB	8	8	113.6	14.2	0.0039
STC	Polk	Big Butternut L	378	LMB	3	3	45.4	15.1	0.0079
STC	Polk	Big Round L	1015	LMB	2	2	26.8	13.4	0.0020
STC	Polk	Deer L	807	LMB	1	1	17.0	17.0	0.0012
STC	Polk	Half Moon L	579	LMB	3	3	54.0	18.0	0.0052
LCO	Sawyer	L Chetek	1920	LMB	1	1	14.8	14.8	0.0005
LCO	Sawyer	L of the Pines	273	LMB	1	1	17.5	17.5	0.0037
LCO	Sawyer	Round L	3054	LMB	5	5	86.8	17.4	0.0016
LCO	Sawyer	Smith L	323	LMB	1	1	12.2	12.2	0.0031
LCO	Sawyer	Whitefish L	786	LMB	2	2	30.6	15.3	0.0025
LDF	Vilas	Little St. Germaine L	980	LMB	1	1	18.8	18.8	0.0010
STC	Washburn	Balsam L	295	LMB	1	1	16.4	16.4	0.0034
STC	Washburn	L Nancy	772	LMB	2	2	28.3	14.2	0.0026
LCO	Washburn	Long L	3290	LMB	5	5	70.5	14.1	0.0015
STC	Washburn	Long L	3290	LMB	14	14	208.8	14.9	0.0043
STC	Washburn	Middle Mckenzie L	530	LMB	6	6	88.4	14.7	0.0113
Total:			32862		114	114	1765.2	15.5	0.0048
STC	Barron	Beaver Dam L	1112	SMB	1	1	12.4	12.4	0.0009
STC	Burnett	Little Yellow L	348	SMB	1	1	12.0	12.0	0.0029
MLK	Florence	Keyes L	202	SMB	3	3	46.4	15.5	0.0149
MLK	Forest	Lily L	211	SMB	1	1	18.3	18.3	0.0047
MLK	Langlade	Rolling Stone L	672	SMB	3	3	46.5	15.5	0.0045
MLK	Oconto	Maiden L	290	SMB	2	2	29.3	14.7	0.0069
MLK	Oneida	Pelican L	3585	SMB	1	1	20.0	20.0	0.0003
LCO	Rusk	Fireside Lakes	302	SMB	1	1	15.8	15.8	0.0033
RCF	Sawyer	Nelson L	2503	SMB	1	1	11.8	11.8	0.0004
LCO	Sawyer	Round L	3054	SMB	10	10	170.5	17.1	0.0033
LCO	Sawyer	Sand L	928	SMB	3	3	33.6	11.2	0.0032
BRV	Vilas	Forest L	466	SMB	1	1	19.0	19.0	0.0021
BRV	Vilas	High L	734	SMB	1	1	14.1	14.1	0.0014
LCO	Washburn	Long L	3290	SMB	2	2	29.9	15.0	0.0006
Total:			17697		31	31	479.6	15.5	0.0035
STC	Barron	Red Cedar L	1841	NOP	1	1	26.0	26.0	0.0005
STC	Barron	Upper Turtle L	438	NOP	1	1	22.1	22.1	0.0023
BRV	Bayfield	L Owen	1323	NOP	1	1	23.0	23.0	0.0008
RCF	Bayfield	Middle Eau Claire L	902	NOP	1	1	21.9	21.9	0.0011
STC	Burnett	Big Mckenzie L	1185	NOP	4	4	114.8	28.7	0.0034
RCF	Douglas	Lower Eau Claire L	802	NOP	1	1	22.3	22.3	0.0012
MLK	Florence	Keyes L	202	NOP	2	2	51.4	25.7	0.0099
MLK	Forest	L Metonga	2157	NOP	1	1	28.7	28.7	0.0005
MLK	Oneida	Pelican L	3585	NOP	2	2			0.0006
MLK	Oneida	Willow Fl	5135	NOP	1	1	21.8	21.8	0.0002
STC	Polk	Balsam L	2054	NOP	2	2	37.9	19.0	0.0010
STC	Polk	Big Butternut L	378	NOP	2	2	72.4	36.2	0.0053
STC	Polk	Big Round L	1015	NOP	1	1	22.7	22.7	0.0010
RCF	Sawyer	Nelson L	2503	NOP	1	1	20.2	20.2	0.0004
LCO	Sawyer	Round L	3054	NOP	10	10	339.9	34.0	0.0033
LCO	Sawyer	Smith L	323	NOP	1	1	21.5	21.5	0.0031
LCO	Sawyer	Whitefish L	786	NOP	4	4	110.9	27.7	0.0051
BRV	Vilas	High L	734	NOP	1	1	29.4	29.4	0.0014
Total:			28417		37	35	986.9	28.2	0.0023

Appendix H. Number of bass per inch group (largemouth and smallmouth) taken during spring spearing seasons from 1985-1997.

Inch Group	Number of bass in:													13 Year Total	Percent of Total		
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997				
5																0	0.0%
6					1											1	0.1%
7			1													3	0.2%
8		1	2													2	0.1%
9			2													7	0.4%
10			4													15	0.8%
11			8													44	2.3%
12			16													156	8.1%
13			43													312	16.2%
14			33													353	18.3%
15			25													316	16.4%
16			30													257	13.3%
17			15													158	8.2%
18			7													141	7.3%
19			5													93	4.8%
20			2													47	2.4%
21			1													15	0.8%
22			1													5	0.3%
23																1	0.1%
24																0	0.0%
25																2	0.1%
<b>Total No. Measured:</b>	<b>17</b>	<b>39</b>	<b>210</b>	<b>144</b>	<b>111</b>	<b>215</b>	<b>144</b>	<b>112</b>	<b>198</b>	<b>256</b>	<b>185</b>	<b>152</b>	<b>145</b>	<b>1,928</b>	<b>100%</b>		
<b>Total Length:</b>	<b>255</b>	<b>602</b>	<b>3,199</b>	<b>2,275</b>	<b>1,694</b>	<b>3,246</b>	<b>2,165</b>	<b>1,708</b>	<b>3,002</b>	<b>3,931</b>	<b>2,881</b>	<b>2,315</b>	<b>2,245</b>	<b>29,519</b>			
<b>Average Length:</b>	<b>15.0</b>	<b>15.4</b>	<b>15.2</b>	<b>15.8</b>	<b>15.3</b>	<b>15.1</b>	<b>15.0</b>	<b>15.3</b>	<b>15.2</b>	<b>15.4</b>	<b>15.6</b>	<b>15.2</b>	<b>15.5</b>	<b>15.3</b>			
<b>Total No. Speared:</b>	<b>21</b>	<b>39</b>	<b>275</b>	<b>167</b>	<b>113</b>	<b>219</b>	<b>147</b>	<b>136</b>	<b>201</b>	<b>261</b>	<b>187</b>	<b>160</b>	<b>145</b>	<b>2,071</b>			
<b>Percent Measured:</b>	<b>81.0%</b>	<b>100.0%</b>	<b>76.4%</b>	<b>86.2%</b>	<b>98.2%</b>	<b>98.2%</b>	<b>98.0%</b>	<b>82.4%</b>	<b>98.5%</b>	<b>98.1%</b>	<b>98.9%</b>	<b>95.0%</b>	<b>100.0%</b>	<b>93.1%</b>			

Appendix I. Number of northern pike per inch group taken during spring spearing seasons from 1985-1997.

Inch Group	Number of northern pike in:													Percent of Total		
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		13 Year Total	
11															0	0.0%
12		1													0	0.0%
13			1												2	0.6%
14															1	0.3%
15			1												0	0.0%
16															2	0.6%
17		1													2	0.6%
18			1												9	2.8%
19															14	4.3%
20															14	4.3%
21		2													24	7.4%
22			3												24	7.4%
23		2													28	8.6%
24		1													24	7.4%
25		1													24	7.4%
26															14	4.3%
27															17	5.2%
28															11	3.4%
29															20	6.1%
30															14	4.3%
31															10	3.1%
32															12	3.7%
33															11	3.4%
34															9	2.8%
35															7	2.1%
36															4	1.2%
37															8	2.5%
38															5	1.5%
39															6	1.8%
40															4	1.2%
41															4	1.2%
41															2	0.6%
Total No. Measured:	0	12	28	45	14	32	40	18	19	29	28	26	35	326	100%	
Total Length:	0	312	724	1,152	334	776	986	453	527	792	744	693	987	8,479		
Average Length:	NA	26.0	25.9	25.6	23.9	24.2	24.6	25.2	27.7	27.3	26.6	26.7	28.2	26.0		
Total No. Spared:	2	13	41	59	14	34	41	30	19	30	32	30	37	382		
Percent Measured:	0.0%	92.3%	68.3%	76.3%	100.0%	94.1%	97.6%	60.0%	100.0%	96.7%	87.5%	86.7%	94.6%	85.3%		





## ABSTRACT

Nineteen ninety-seven (1997) marked the thirteenth consecutive spring that spear fishing was conducted by Chippewa tribes in off-reservation waters of northern Wisconsin. A total of 455 tribal members participated in this traditional fishery. Spearing occurred on 153 lakes and walleye were harvested from all except 3. A total of 24,633 fish were taken with 97.4% of the catch (24,002 fish) being walleye. Numbers of other gamefish harvested were 333 muskellunge, 145 bass, and 37 northern pike. Average lengths were 15.3 inches for walleye and 37.6 inches for muskellunge. The tribal walleye quota was exceeded by 22 fish on 2 lakes. Except for these 2 instances, harvest of walleye and muskellunge was maintained within the established limits by a nightly permit system and by complete monitoring of the catch.

Fall spearing occurred on one night in September and one night in November. A total of 42 walleye were harvested from 2 lakes. No other species were taken. Average length for walleye was 13.3 inches.





## ABSTRACT

Nineteen ninety-seven (1997) marked the thirteenth consecutive spring that spear fishing was conducted by Chippewa tribes in off-reservation waters of northern Wisconsin. A total of 455 tribal members participated in this traditional fishery. Spearing occurred on 153 lakes and walleye were harvested from all except 3. A total of 24,633 fish were taken with 97.4% of the catch (24,002 fish) being walleye. Numbers of other gamefish harvested were 333 muskellunge, 145 bass, and 37 northern pike. Average lengths were 15.3 inches for walleye and 37.6 inches for muskellunge. The tribal walleye quota was exceeded by 22 fish on 2 lakes. Except for these 2 instances, harvest of walleye and muskellunge was maintained within the established limits by a nightly permit system and by complete monitoring of the catch.

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## TABLE OF CONTENTS

	PAGE
LIST OF TABLES .....	iii
LIST OF FIGURES .....	iv
INTRODUCTION .....	1
Regulations .....	1
Permit System and Monitoring .....	1
RESULTS AND DISCUSSION .....	4
Fishing Effort .....	4
Number of Spearers.....	4
Number of Spearer-nights or Permits Used .....	6
Number of Boat-hours .....	8
Total Harvest .....	10
Walleye Harvest .....	11
Mean Length .....	12
Sex Composition of Catch .....	13
Catch Per Effort (CPE) .....	15
Muskellunge Harvest .....	16
Bass Harvest .....	18
Northern Pike Harvest .....	20
Fall Spearing .....	20
ACKNOWLEDGMENTS .....	22
LITERATURE CITED .....	23
LIST OF APPENDICES .....	24

## LIST OF TABLES

TABLE		PAGE
1	Number of spearkers on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997 .....	4
2	Number of spearer-nights on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997 .....	6
3	Number of spearer boat-hours on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997 .....	8
4	Number of interviews and average length of spearing trip (in boat-hours) during spring spearing from 1989-1997 .....	9
5	Number of various fish species harvested during spring spearing seasons from 1993-1997 .....	10
6	Number and percent of walleye that were sexed and were male, female, or unknown sex during spring spearing seasons from 1985-1997 .....	13

## LIST OF FIGURES

FIGURE		PAGE
1	Map depicting the ceded territory in northern Wisconsin .....	2
2	Off-reservation Treaty Fishing Permit used during spring 1997 .....	3
3	Number of spearers during spring spearing seasons from 1986-1997 .....	5
4	Number of spearer-nights during spring spearing seasons from 1986-1997 .....	7
5	Number of boat-hours of effort during spring spearing seasons from 1986-1997 .....	9
6	Number of walleye and percent of quota harvested during spring spearing seasons from 1989-1997 .....	11
7	Length frequency of walleye speared during 1997 and during the thirteen year period 1985-1997 .....	12
8	Sex composition of the walleye harvest during spring spearing seasons from 1985-1997 .....	14
9	Walleye CPE (number per boat-hour) by lake during the 1997 spring spearing season .....	15
10	Number of muskellunge harvested during spring spearing seasons from 1985-1997 .....	17
11	Length frequency of muskellunge speared during 1997 and during the thirteen year period 1985-1997 .....	17
12	Number of bass harvested during spring spearing seasons from 1985-1997 .....	19
13	Length frequency of bass speared during 1997 and during the thirteen year period 1985-1997 .....	19
14	Number of northern pike harvested during spring spearing seasons from 1985-1997 .....	21
15	Length frequency of northern pike speared during 1997 and during the thirteen year period 1985-1997 .....	21

## INTRODUCTION

This report presents data for harvest and effort by Chippewa spearers in ceded territory waters of northern Wisconsin (Figure 1) during spring 1997. Since 1989 two other seasonal fisheries have sometimes occurred in off-reservation waters: fall spearing and summer gill netting. During 1997, the only other fishery that occurred was fall spearing.

## REGULATIONS

Regulations governing the use of spears and nets for harvesting walleye and muskellunge were adopted by each of the six Wisconsin tribes and became permanent in 1989. A listing of the major differences between permanent regulations and negotiated interim rules that governed tribal harvest in 1988 can be found in Kmiecik and Shively (1990).

## PERMIT SYSTEM AND MONITORING

The permit system has operated the same since 1988. Permits (Figure 2) were issued at a tribal office during the day or at the designated boat landing at night. The number of permits that could be issued was determined daily by dividing the remaining tribal quota (TQ) for a lake by the nightly bag limit selected for that lake. Lakes were closed to further spearing of walleye and to all netting once the walleye TQ was reached. However, spearing permits could be issued for harvest of other species.

All spearing was monitored by tribal creel clerks under the supervision of GLIFWC wardens and biologists. A set of instructions for collecting biological data was provided to creel clerks at a training meeting about two weeks prior to the season.

During spearing, teams of creel clerks and wardens were assigned to each lake in some areas and only to lakes where permits had been issued in other areas. These teams arrived at the designated boat landing before dark and prepared a work area. Upon return of each boating party, a catch report form was completed. For species other than walleye, all fish were identified, counted, sex determined, and measured. For walleye, all fish were counted. Also, the first 100 walleye plus all those in the last boat were measured and sex determined. In addition, permits were collected and a record made of each person's tribal ID number, the time spearing started and the time it ended.

Harvest and effort for each lake were totaled and reported by 9 a.m. the following day to administrative staff at the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) office in Odanah. These data were then transmitted to tribal and WDNR representatives by 10 a.m. and used to update walleye and muskellunge TQ's. Starting in 1993 all catch report forms were also faxed in daily. Before noon, tribal representatives notified GLIFWC of the lakes and bag limits selected for spearing that night. In turn, these data were transmitted to the WDNR.

Figure 1. Map depicting the ceded territory and tribal lands in northern Wisconsin.

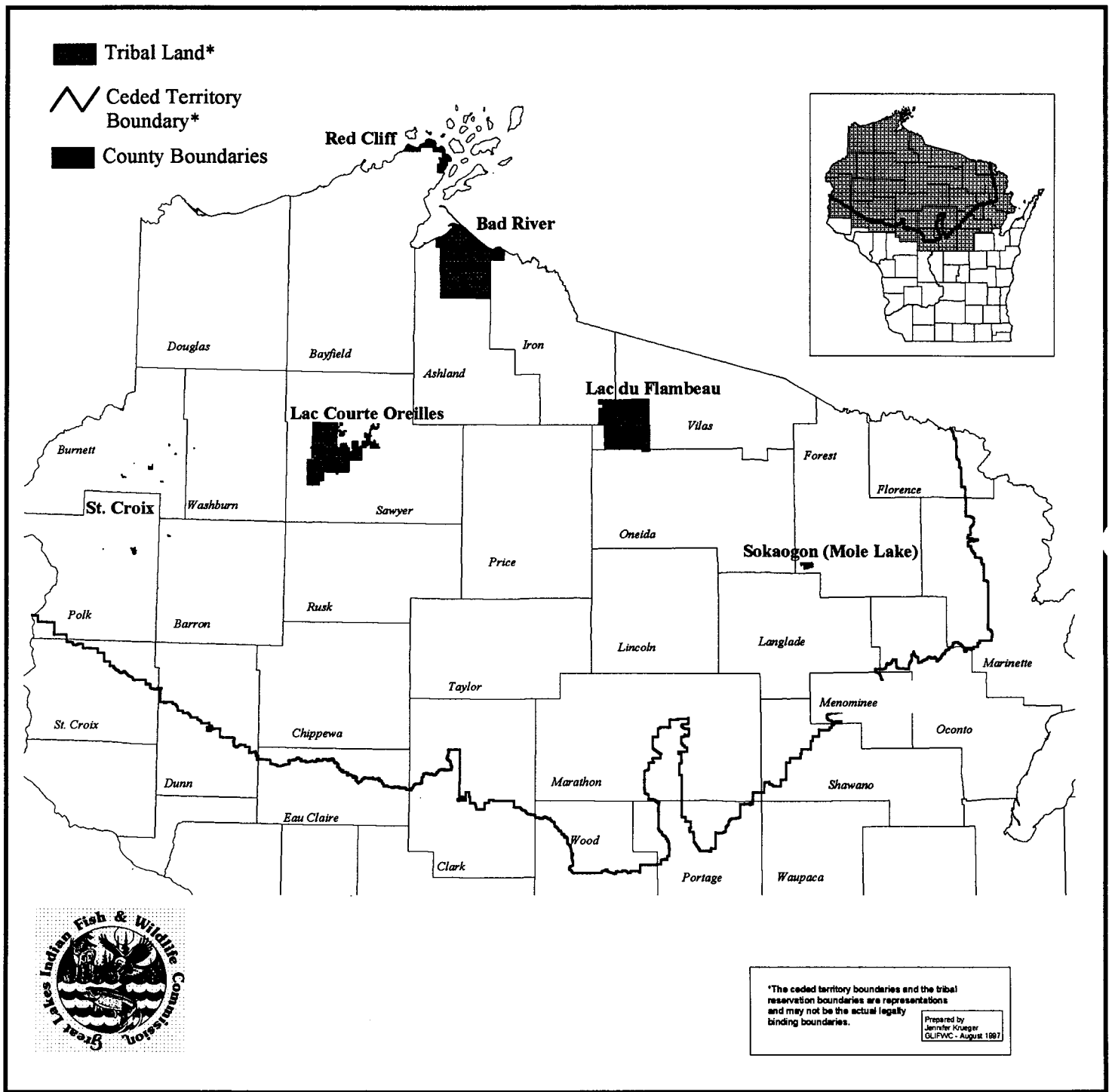


Figure 2

Off-Reservation Treaty Fishing Permit used during the 1997 open-water season.

28	29	30	31	Month _____	1	2	3	4	5	
27	<b>Off-Reservation Treaty Fishing Permit</b>								6	
	<input type="checkbox"/>	Spearing	<input type="checkbox"/>	Fyke Netting	No	0250			7	
26	<input type="checkbox"/>	Seining	<input type="checkbox"/>	Gill Netting						8
25	Tribal ID Number _____ of _____ Reservation								9	
	Signature of Permittee: _____								10	
24	Issued by: _____ of _____ Reservation								11	
	Water: _____ County: _____								12	
23	Bag Limit: Walleye _____ Muskellunge _____								13	
22	Other Restrictions: _____								14	
21	20	19	18	17	16	15	14	13	12	

FRONT

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

BACK

## RESULTS AND DISCUSSION

### Fishing Effort

As in previous years, effort in the spring spear fishery was measured in three ways: by the number of spearkers, the number of spearker-nights, and the number of boat-hours.

**Number of spearkers.** All tribal members spearing under permits issued by each tribe were counted as an individual spearker for that tribe regardless of whether the spearker was an enrolled member of the tribe issuing permits. A total of 455 tribal members participated in the 1997 spring spear fishery (Table 1, Figure 3, Appendix A). Compared to 1996 the total number of spearkers increased by 70 persons or 18%. Part of this increase was likely due to an Administration for Native Americans (ANA) grant aimed at providing spearing instruction and opportunity to youths.

**Table 1.** Number of spearkers on lakes selected by six Wisconsin Chippewa bands during spring spearing 1986-1997<sup>1</sup>.

YEAR	BRV	LCO <sup>2</sup>	LDF	MLK	RCF	STC <sup>3</sup>	TOTAL:
1986	2	26	119	32		15	194
1987	22	58	206	70		63	419
1988	35	48	200	63	14	66	426
1989	27	30	118	31	23	42	271
1990	46	43	142	46	40	64	381
1991	38	56	137	50	47	65	393
1992	36	41	112	40	52	64	345
1993	34	72	111	55	36	51	359
1994	31	87	134	66	31	70	419
1995	39	68	150	53	44	67	421
1996	25	50	153	54	42	61	385
1997	57	74	139	64	59	62	455
PERCENT CHANGE: 1996-1997	+128%	+48%	-9%	+19%	+41%	+2%	+18%

<sup>1</sup> Abbreviations for the various bands are: BRV = Bad River, LCO = Lac Courtes Oreilles, LDF = Lac du Flambeau, MLK = Mole Lake, RCF = Red Cliff, and STC = St. Croix.

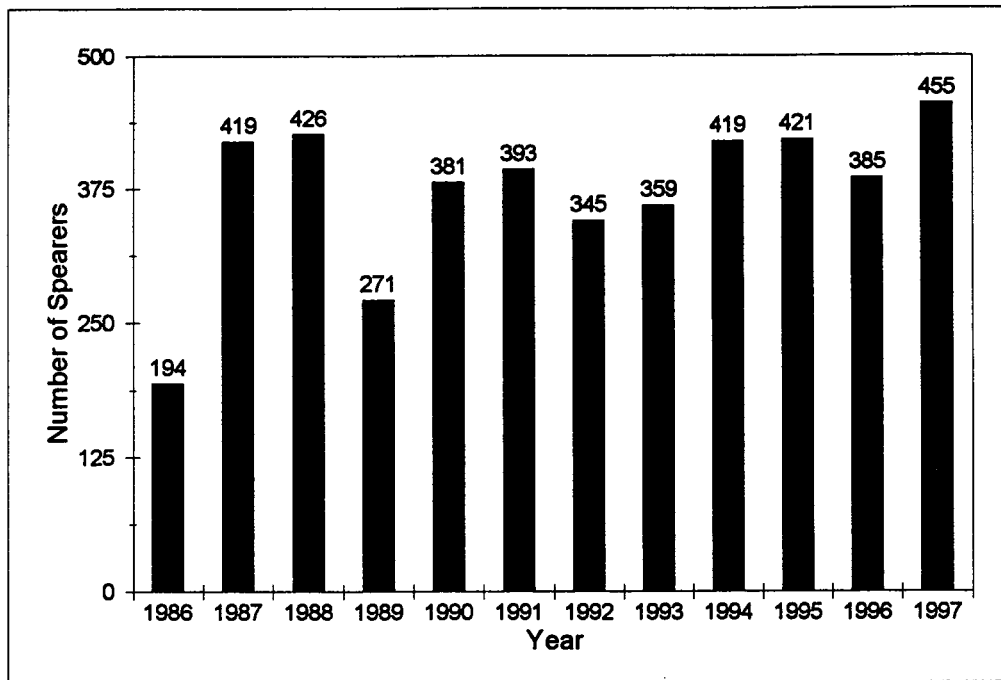
<sup>2</sup> Includes members from Mille Lacs tribe: 1 in 1990, 2 in 1991, 0 in 1992, 1 in 1993, 3 in 1994, 0 in 1995, and 0 in 1996.

<sup>3</sup> Includes members from Mille Lacs tribe: 7 in 1988, 8 in 1989, 11 in 1990, 15 in 1991, 13 in 1992, 4 in 1993, 14 in 1994, 15 in 1995, 16 in 1996, and 18 in 1997.



All persons spearing on lakes selected by Bad River, Lac Courte Oreilles, Lac du Flambeau, Mole Lake, and Red Cliff were members of that tribe (57, 74, 139, 64, and 59 persons, respectively). Of the 62 members spearing on lakes selected by St. Croix, 26 were members of another tribe (1 from Lac Courte Oreilles, 3 from Lac du Flambeau, 4 from Bad River, and 18 from Mille Lacs).

**Figure 3.** Number of spearers during spring spearing seasons from 1986-1997.



**Number of Spearer-nights or Permits Used.** In a previous report (Kmicik 1991), special clarification was given to the definition of "spearer-nights". It should be understood that the total number of "spearer-nights" is not simply the total number of nights that all tribal members speared, because some individuals speared under more than one permit on a single night. Additional permits have been issued at night at a boat landing on a "first come, first served" basis and only when enough fish remained in the tribal quota for a lake so that other permits could be issued. Persons receiving a second, third, or fourth permit may have speared on the same lake, a different lake, or both the same and a different lake. With this clarification in mind, this effort statistic will continue to be referred to as spearer-nights, but it can also be viewed as a count of the total number of permits used.

A total of 1,740 spearer-nights were recorded during spring 1997 (Table 2, Figure 4, Appendix B). Nearly 32% of this effort (554 spearer-nights) occurred on lakes selected by Lac du Flambeau. Spearer-nights on lakes selected by the other five tribes ranged from 144 at Bad River to 301 at Lac Courte Oreilles. Compared to 1996, effort decreased by 71 spearer-nights or 4%.

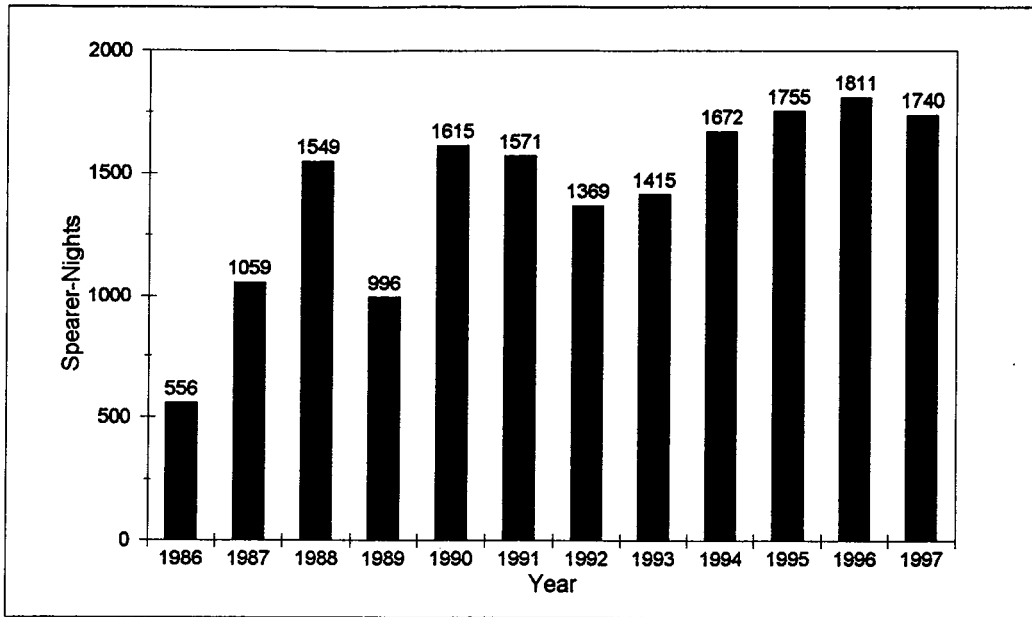
**Table 2.** Number of spearer-nights on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997.

YEAR	BRV	LCO <sup>1</sup>	LDF	MLK	RCF	STC <sup>2</sup>	TOTAL:
1986	2	50	382	72		50	556
1987	43	140	695	205		181	1,264
1988	64	165	788	249	37	246	1,549
1989	70	109	429	120	100	168	996
1990	174	116	751	221	124	229	1,615
1991	151	216	605	201	160	238	1,571
1992	140	140	512	177	168	232	1,369
1993	172	218	469	241	144	171	1,415
1994	129	255	700	167	132	289	1,672
1995	164	215	677	241	135	323	1,755
1996	120	215	712	294	119	351	1,811
1997	144	301	554	299	167	275	1,740
<b>PERCENT CHANGE: 1995-1997</b>	2%	4%	-22%	2%	40%	-22%	-4%

<sup>1</sup> Includes spearer-nights for Mille Lacs tribe: 2 in 1990, 3 in 1991, 0 in 1992, 1 in 1993, 6 in 1994, and 0 in 1995.

<sup>2</sup> Includes spearer-nights for Mille Lacs tribe: 22 in 1988, 29 in 1989, 35 in 1990, 45 in 1991, 53 in 1992, 9 in 1993, 34 in 1994, 59 in 1995, 74 in 1996, and 82 in 1997.

**Figure 4.** Number of spearer-nights during spring spearing season from 1986-1997.



**Number of Boat-Hours.** A total of 1,736 boat-hours of effort was recorded in 1997 (Table 3, Figure 5, Appendix B). Compared to 1996, the number of boat-hours increased by 6% (97 boat-hours). About one-fourth of the effort (472 boat-hours or 27%) occurred on lakes selected by Lac du Flambeau. Boat-hours on lakes selected by the other five tribes ranged from 138 at Bad River to 414 at Lac Courte Oreilles.

**Table 3.** Number of spearer boat-hours on lakes selected by six Wisconsin Chippewa bands during spring spearing from 1986-1997.

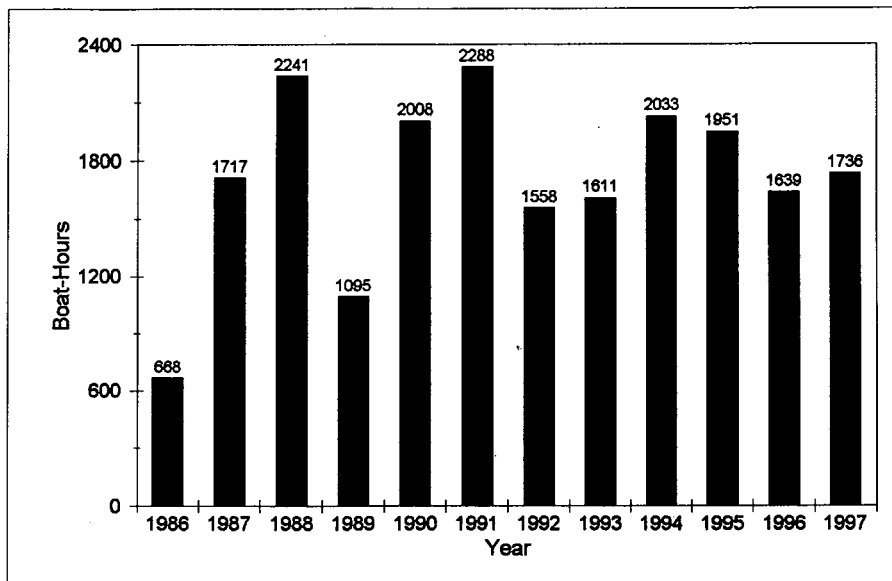
Year	BRV <sup>1</sup>	LCO <sup>2</sup>	LDF	MLK	RCF	STC <sup>3</sup>	Total:
1986	2	53	440	95		78	668
1987	46	163	976	252		280	1,717
1988	173	247	1094	393		334	3,341
1989	135	122	364	155	109	210	1,095
1990	254	151	787	298	181	338	2,008
1991	288	283	704	344	226	444	2,288
1992	206	221	453	218	178	281	1,558
1993	201	290	459	297	164	200	1,611
1994	172	356	743	247	133	381	2,033
1995	163	359	618	298	144	369	1,951
1996	131	304	641	156	105	302	1,639
1997	138	414	472	236	178	298	1,736
<b>PERCENT CHANGE: 1996-1997</b>	+5%	+27%	-36%	+34%	+41%	-1%	+6%

<sup>1</sup>Includes Red Cliff boat-hours in 1988.

<sup>2</sup>Includes effort for Mille Lacs tribe in 1990, 1991, 1993, and 1994.

<sup>3</sup>Includes effort for Mille Lacs tribe from 1988-1997.

**Figure 5.** Number of boat-hours of effort during spring spearing seasons from 1986-1997.



For all tribes combined, a total of 692 interviews were conducted and effort (boat-hours) was determined for all. Average length of a trip was 2.5 boat-hours (Table 4).

**Table 4.** Number of interviews and average length of spearing trip (in boat-hours) during spring spearing from 1989-1997.

YEAR	AVERAGE LENGTH OF TRIP:						TOTAL
	BRV	LCO <sup>1</sup>	LDF	MLK	RCF	STC <sup>1</sup>	
1989	4.1	2.4	2.5	2.6	2.5	2.7	2.7
1990	3.3	2.8	2.7	3.1	3.5	3.1	3.1
1991	3.9	3.0	2.8	3.9	2.8	3.5	3.3
1992	3.0	3.2	2	2.8	2.4	2.4	2.5
1993	2.7	3.0	2.2	2.3	2.6	2.4	2.6
1994	3.2	3.0	2.9	3.5	2.3	3.0	3.0
1995	2.1	3.5	2.0	2.8	2.7	2.5	2.5
1996	2.4	2.9	2.2	1.3	2.0	2.2	2.2
1997	2.7	3.0	2.2	2.3	2.6	2.4	2.5
1997 Boat-hours:	138	414	472	236	178	298	1736
1997 interviews with effort:	52	139	213	103	68	117	692
1997 interviews without effort:	0	0	0	0	0	0	0

<sup>1</sup>Includes effort for Mille Lacs tribe.

## Total Harvest

Ten taxa of fish were harvested during the 1997 spring spear fishery (Table 5). Of the 24,633 fish taken, 97.4% were walleye. Percentages of the total catch for other game fish species were 1.35% for muskellunge, 0.6% for bass, and 0.15% for northern pike. Other species combined (panfish and rough fish) totaled 116 fish and made up the remaining 0.5% of the harvest.

**Table 5.** Number of various fish species harvested during spring spearing seasons from 1993-1997.

Species:	1993	1994	1995	1996	1997
Walleye	24,532	25,922	30,249	28,327	24,002
Muskellunge	188	244	299	319	333
Bass Species	79	37	11	6	
Largemouth Bass	100	174	121	103	114
Smallmouth Bass	21	50	55	51	31
Northern Pike	19	30	32	30	37
Lake Sturgeon			3		
Rock Bass			1	4	12
Crappie	43	40	109	63	55
Bluegill	6	9	5	18	9
Yellow Perch	10	8	8	13	8
Bullhead	1			3	
Sucker	31	40	55	22	32
Carp	2	1	3	4	
Burbot		8	1		
<b>TOTAL:</b>	<b>25,032</b>	<b>26,563</b>	<b>30,952</b>	<b>28,963</b>	<b>24,633</b>

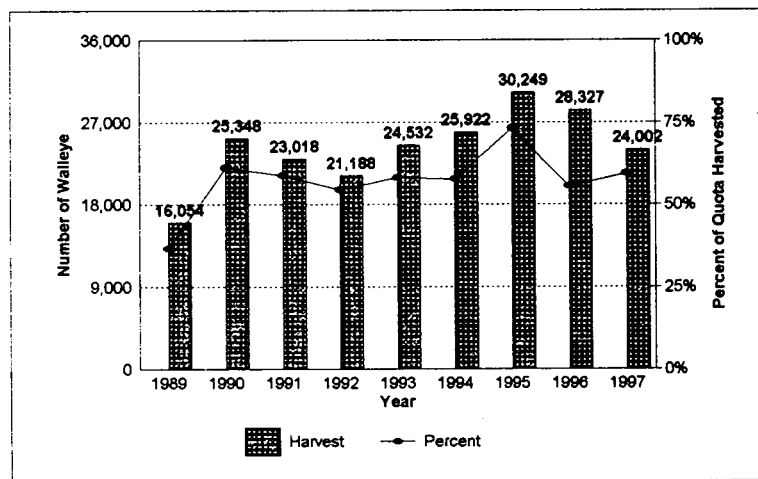
## Walleye Harvest

Tribal quotas (TQ) for walleye were selected for 245 lakes and totaled 40,301 walleye. The percent of the "safe harvest" selected as tribal quotas for lakes in 1997 ranged from 19.9% (Lac Vieux Desert Lake, Vilas County) to 93.33% (Windfall Lake, Sawyer County). Two tribes selected the same lake in 9 instances and agreed on various inter-tribal allocation formulas to keep the TQ within the selected percentage. No lakes were selected by more than two Wisconsin tribes.

Tribal spearers harvested a total of 24,002 walleye from 152 lakes (Table 5, Figure 6, Appendix B). Spearfishing also occurred in another 3 lakes [Pine Lake (Forest County), Spirit River Flowage (Lincoln County), and Manson Lake (Oneida County)] but no walleye were harvested. The percent of the total walleye quota harvested was 60%. Values for the tribal walleye quota and percent of this quota harvested from 1989-1997 were as follows:

Year	Tribal Walleye Quota	Number of Lakes with Quotas	Number of Walleye Harvested	Number of Lakes with Effort	Number of Lakes with Harvest	Percent of Quota Harvested
1989	43,801	254	16,054	102	98	37%
1990	41,373	178	25,348	119	117	61%
1991	39,090	204	23,018	159	147	59%
1992	38,863	222	21,188	153	146	55%
1993	42,112	220	24,532	134	130	58%
1994	44,821	218	25,922	147	145	58%
1995	41,283	222	30,249	153	149	73%
1996	50,897	248	28,327	167	157	56%
1997	40,301	245	24,002	155	152	60%

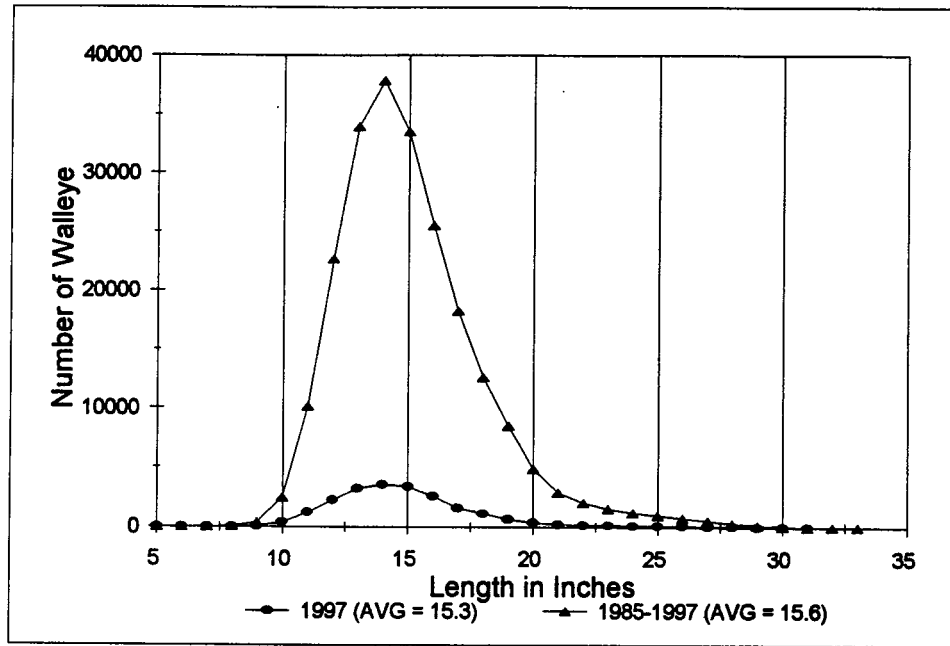
**Figure 6.** Number of walleye and percent of quota harvested during spring spearing seasons from 1989-1997.



**Mean Length.** A total of 21,399 walleye (89% of the catch) was measured in 1997 (Appendices C and D). The mean length was 15.3 inches, slightly less than the average length during 1987-1991 (range: 15.7-16.0 inches) but similar to the average length during 1992-1996 (range: 15.1 - 15.4 inches). Size restrictions were identical during each of these ten years; all walleye were to be under 20 inches except that each permit authorized the harvest of one walleye of 20-24 inches and one of any size.

For the 13 spring spearing seasons combined, 80.0% of the walleye harvest has been measured (221,465 of 275,631 fish) (Figure 7; Appendix D). Average length for this 13 year sample was 15.6 inches. Also, 7% of the walleye (15,516 fish) were 20 inches or larger and 1.3% (2,926 fish) were 25 inches or larger.

**Figure 7.** Length frequency of walleye speared during 1997 and during the thirteen year period from 1985-1997.





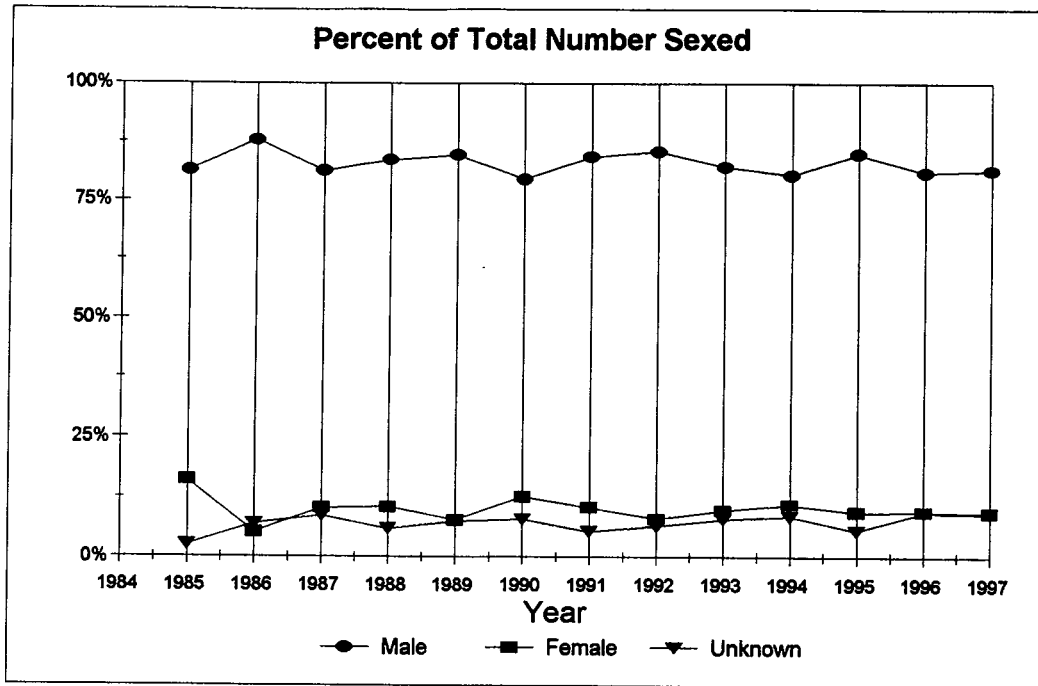
**Sex Composition of Catch.** The majority of walleye measured in 1997 were male: 17,541 of 21,550 fish or 81% (Table 6). Females (2,031 fish) comprised 9.4% of the measured harvest and those whose sex could not be determined (1,978 fish) made up 9.2%. Males made up 90% of sexable fish.

For the 13 spring spearing seasons combined, a total of 220,539 walleye have been sexed (Table 6, Figure 8). Of these, 83% were male, 10% were female, and 7% were of undetermined or unknown sex. Factors which influence the number of males and females speared were described by Kmiecik and Shively (1990). Some of the factors include bag and size restrictions, differences in behavior between the sexes during spawning season, and spearer preference.

**Table 6.** Number and percent of walleye that were sexed and were male, female, or unknown sex during spring spearing seasons from 1985-1997.

Year	Total Harvest	Male		Female		Unknown		Total Sexed:	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1985	2,761	696	81%	138	16%	22	3%	856	31%
1986	6,940	6,013	88%	356	5%	473	7%	6,842	99%
1987	21,321	11,539	81%	1,456	10%	1,229	9%	14,224	67%
1988	25,969	16,193	84%	2,033	10%	1,142	6%	19,368	75%
1989	16,054	11,222	85%	1,030	8%	1,002	8%	13,254	83%
1990	25,348	14,693	79%	2,342	13%	1,465	8%	18,500	73%
1991	23,018	15,626	84%	1,926	10%	999	5%	18,551	81%
1992	21,188	15,563	85%	1,473	8%	1,190	7%	18,226	86%
1993	24,532	16,357	82%	1,958	10%	1,588	8%	19,903	81%
1994	25,922	17,467	80%	2,407	11%	1,852	9%	21,726	84%
1995	30,249	20,897	85%	2,339	10%	1,369	5%	24,605	81%
1996	28,327	18,562	81%	2,191	9.5%	2,181	9.5%	22,934	81%
1997	24,002	17,541	81.4%	2,031	9.4%	1,978	9.2%	21,550	90%
<b>Total:</b>	<b>275,631</b>	<b>182,369</b>	<b>83%</b>	<b>21,680</b>	<b>10%</b>	<b>16,490</b>	<b>7%</b>	<b>220,539</b>	<b>80%</b>

**Figure 8.** Sex composition of the walleye harvest during spring spearing seasons from 1985-1997.



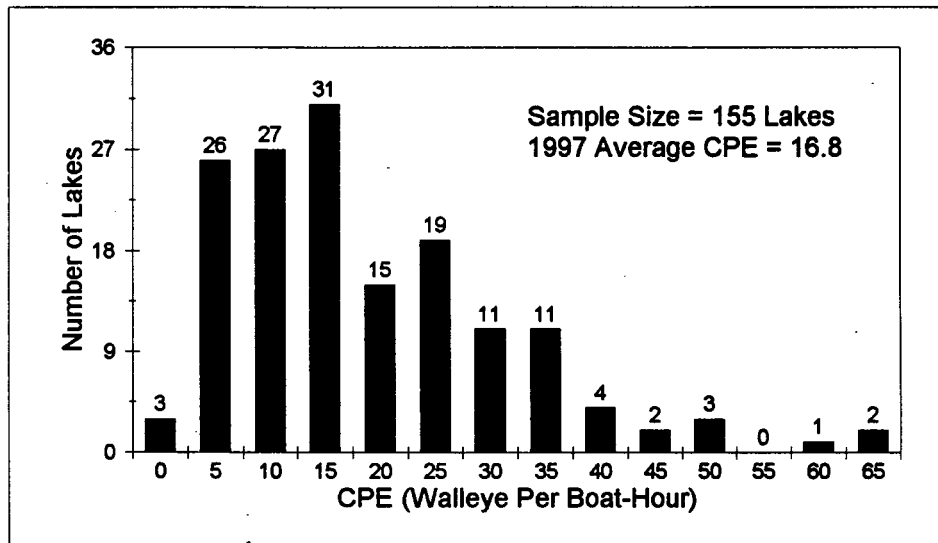
**Catch per effort (CPE).** In 1997 a total of 1,736 boat-hours of spearing was recorded in which 24,002 walleye were caught. Overall catch per effort was 13.8 walleye per boat-hour (Appendix B).

Catch rates for the 155 lakes speared in 1997 ranged from 0.0 to 62.7 and averaged 16.8 (Appendix B, Figure 9). Boat-hour effort was recorded for all lakes during spring 1997. Similar statistics for the years 1987-1997 were as follows:

Year	Number of Lakes	Range: CPE	Average: CPE
1987	66	0.0 - 46.4	12.2
1988	91	0.0 - 84.1	14.2
1989	98	0.0 - 63.9	18.5
1990	117	0.0 - 45.1	14.3
1991	159	0.0 - 46.5	11.3
1992	153	0.0 - 68.0	16.1
1993	134	0.0 - 123.5	15.2
1994	137	0.0 - 95.2	16.7
1995	153	0.0 - 91.1	19.5
1996	167	0.0 - 52.9	17.4
1997	155	0.0 - 62.7	16.8

(Biological Issues Group 1988, Kmiecik and Shively 1990, Kmiecik 1991, Kmiecik and Ngu 1992, Ngu and Kmiecik 1993, Ngu 1993, Ngu 1994, Ngu 1995, Krueger 1996).

**Figure 9.** Walleye CPE (number per boat-hour) by lake during the 1997 spring spearing season.



## Muskellunge Harvest

A total of 333 muskellunge were taken from 66 lakes during spring 1997 (Figure 10, Appendix E). This harvest represented 22.3% of the combined tribal muskellunge quota of 1,489 fish selected for 169 lakes. Similar muskellunge quota statistics for the years 1990 to 1996 were as follows:

Year	Tribal Muskellunge Quota	Number of Lakes with Quota	Number of Lakes with Harvest	Number Harvested	Percent of Quota Harvested
1990	1,148	117	57	303	26.4%
1991	1,240	155	54	185	14.9%
1992	1,240	155	52	165	13.3%
1993	1,223	134	49	188	15.5%
1994	1,326	158	49	244	18.4%
1995	1,364	153	59	299	21.9%
1996	1,555	171	68	319	20.5%
1997	1,489	169	66	333	22.3%

The number of muskellunge harvested from each of these 66 lakes ranged from 1 to 35 fish (Appendix E). Ten or more muskellunge were harvested from 11 lakes, 6-9 muskellunge were taken from 5 lakes, and 1-5 fish were speared in 50 lakes. No muskellunge were speared from the other 103 lakes.

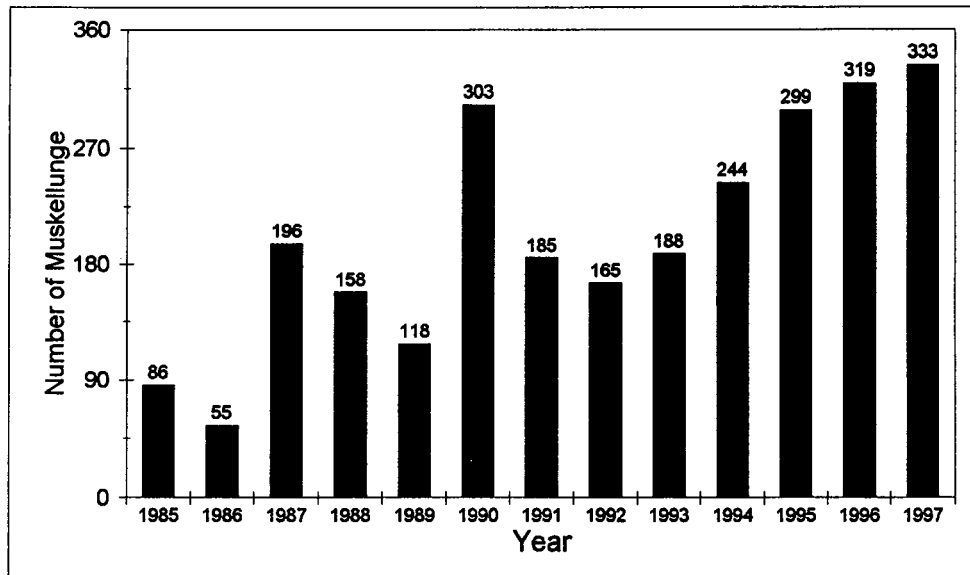
Lengths of the 333 measured muskellunge averaged 37.6 inches and ranged from 22.5 to 50.5 inches (Appendix F, Figure 11). During the thirteen spring seasons combined, 2,601 of 2,649 speared muskellunge have been measured. Average length for this sample of fish was 36.8 inches (range: 13.5-53.0 inches).

Of the measured catch in 1997, 15.3% (51 of 333 muskellunge) were 32 inches and smaller, while 8.1% (27 fish) were 45 inches and larger. For the 2,601 muskellunge measured from 1985-1997, 540 fish or 20.7% of the sample were less than or equal to 32 inches; 175 fish or 6.7% were 45 inches and larger (Appendix F).

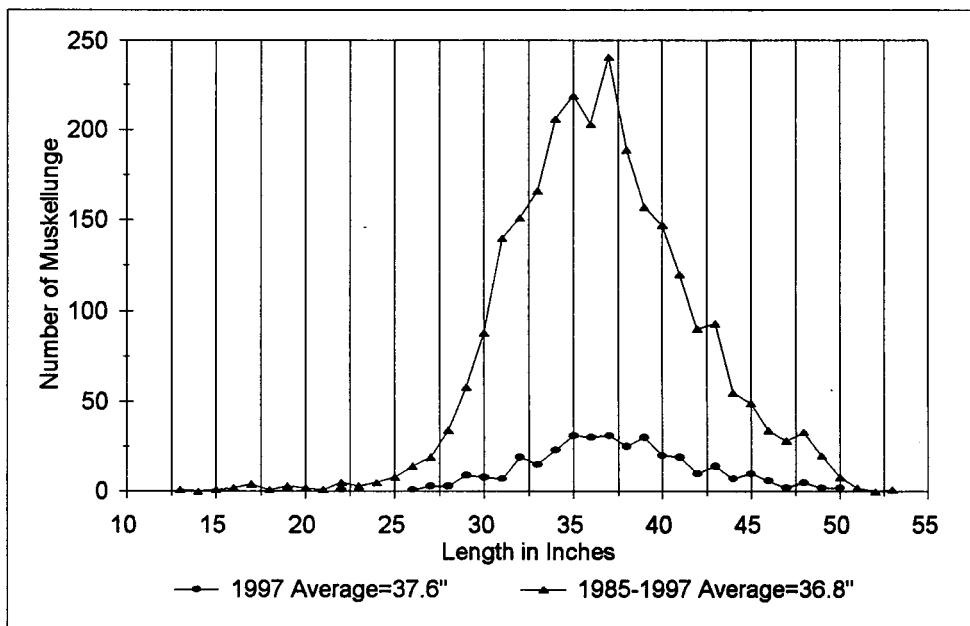
The number of muskellunge per spearer averaged 0.73 for all tribes combined. In other words, 73 muskellunge were taken for every 100 spearers. From 1987-1996 the number per spearer ranged from 0.16 to 1.19. For individual tribes in 1997, the number per spearer was highest for St. Croix members (1.37) compared to the other 5 tribes (range: 0.02-1.01).

Catch per boat-hour in 1996 and 1997 averaged 0.2 muskellunge and was greater than the CPE from 1987-1995 (0.07-0.15).

**Figure 10.** Number of muskellunge harvested during spring spearing seasons from 1985-1997.



**Figure 11.** Length-frequency of muskellunge speared during spring 1997 and during the thirteen year period 1985-1997.



## **Bass Harvest**

A total of 145 bass were harvested from 38 lakes in 15 counties (Appendix G). Species was recorded for all bass. A total of 114 largemouth bass were taken from 30 lakes in 12 counties and averaged 15.5 inches. Ten or more largemouth were speared from 4 lakes, 6-9 from 2 lakes, and 5 or less were taken from 26 lakes. The number harvested per surface acre of water averaged 0.0048 largemouth bass (range: 0.0005-0.0311).

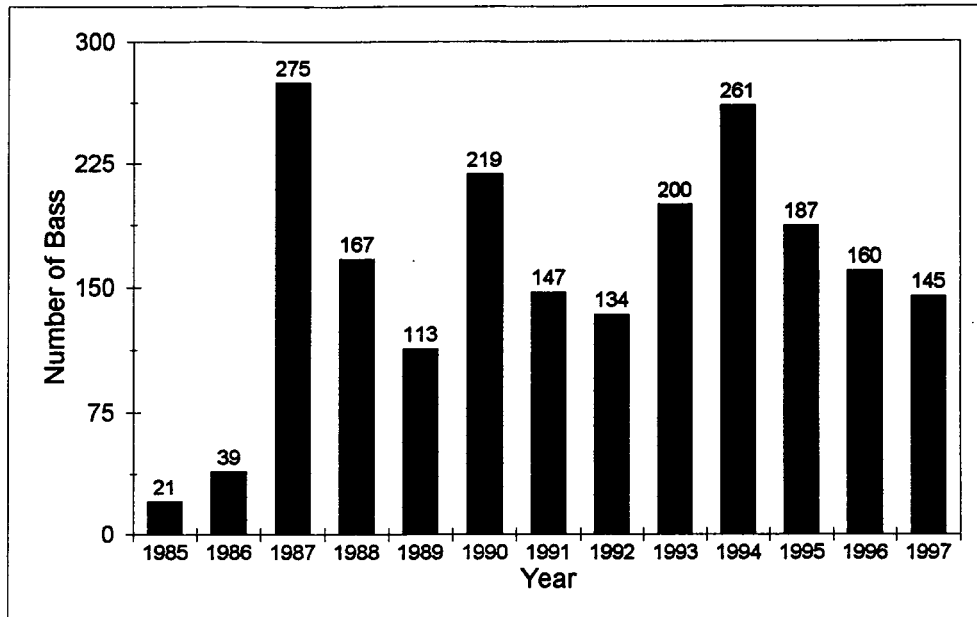
A total of 31 smallmouth bass were speared from 14 lakes in 11 counties. Average length was 15.5 inches. Five or fewer fish were taken from all but one lakes; 10 smallmouth were taken from Round Lake (Sawyer County). The number harvested per surface acre averaged 0.0035 smallmouth bass (range: 0.0003-0.0149).

Lengths of 145 measured bass ranged from 10.5-21.2 inches (Figure 13) and averaged 15.5 inches (Appendix H). Of the 2,071 bass speared during the thirteen spearing seasons combined, 1,928 have been measured. Average length for this sample was 15.3 inches (annual range: 15.0-15.8 inches).

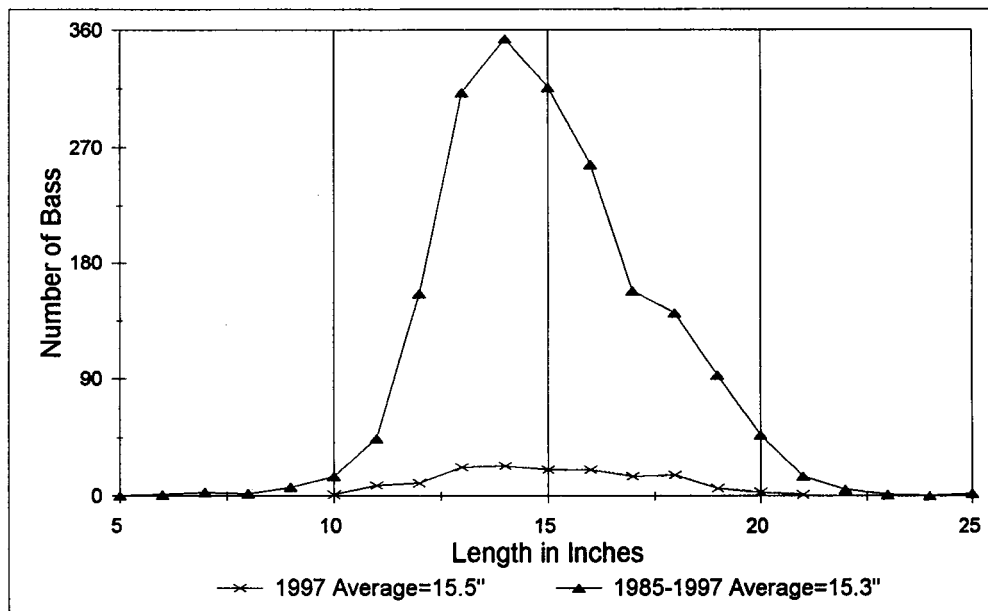
For all tribes combined the number of bass per spearer (CPE) was 0.32. CPE ranged from 0.37 to 0.66 from 1987-1996. For individual tribes, CPE (bass per spearer) was highest for St. Croix (1.21) as was the case during the previous 9 seasons (range: 1.14 - 3.33). Catch per spearer for the other five tribes ranged from 0.01 to 0.45 bass.

The combined tribal catch rate for bass in 1997 was 0.08 bass per boat-hour which was within the range of CPE's from 1987-1996 (0.06 to 0.14). Bass per boat-hour for St. Croix spearers was 0.27 in 1997.

**Figure 12.** Number of bass harvested during spring spearing seasons from 1985-1997.



**Figure 13.** Length-frequency for bass taken during 1997 and during the thirteen year period 1985-1997.



## **Northern Pike Harvest**

A total of 37 northern pike were harvested from 18 lakes in 10 counties (Appendix G). The number speared per lake never exceeded 4 fish except for Round Lake (Sawyer County) where 10 northern pike were taken. Catch per surface acre of water averaged 0.0023 (range: 0.0002-0.0099).

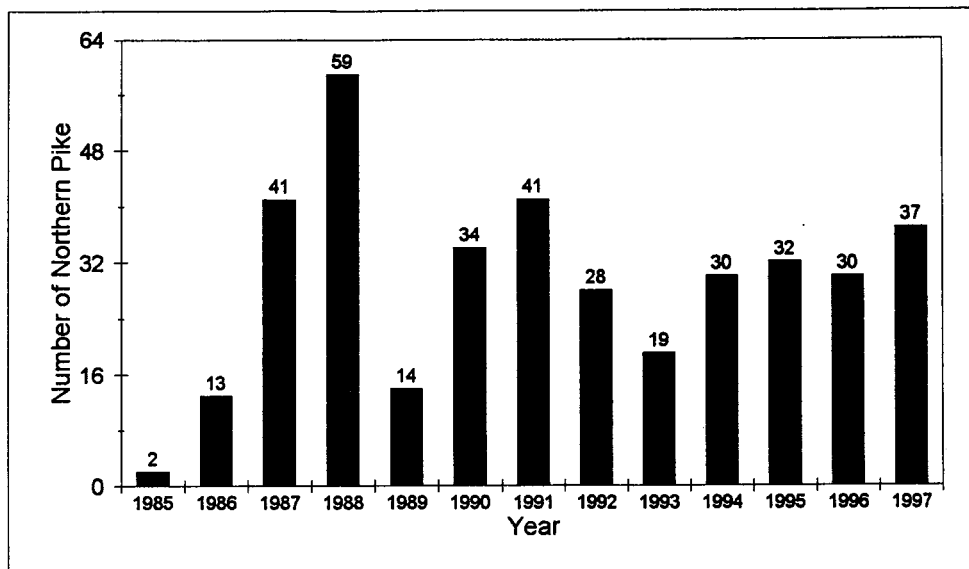
Lengths of 35 measured northern pike ranged from 18.3 to 38.3 inches and averaged 28.2 inches (Appendix I, Figure 15). During the thirteen spring seasons combined a total of 382 northern pike have been speared (Appendix I). Of these, 326 were measured and length averaged 26.0 inches. Harvest of pike continues to be incidental and an insignificant component of the fishery.

## **Fall Spearing**

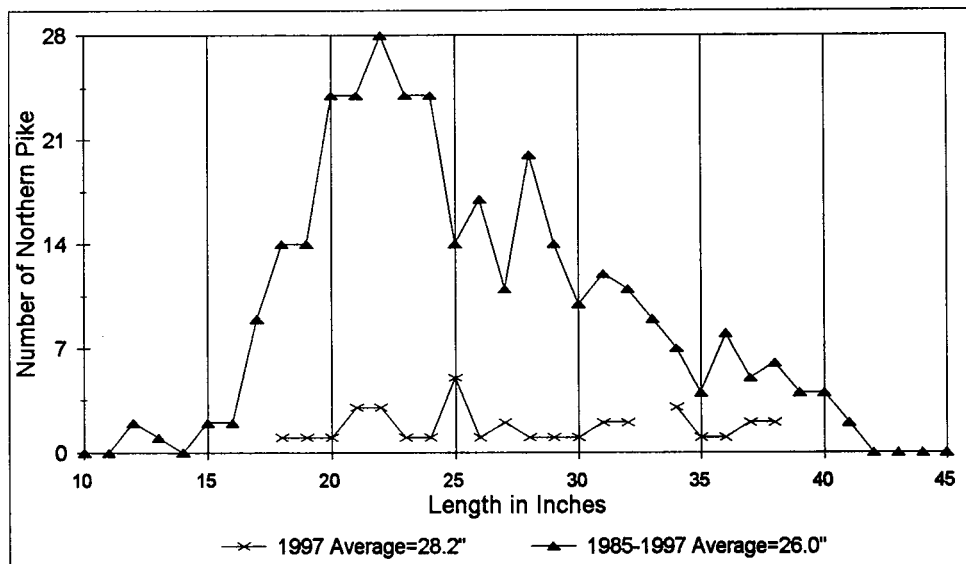
Fall spearing occurred on two dates and only walleye were taken. On September 26, two Bad River tribal members harvested 36 walleye (average length = 12.2) from the Turtle-Flambeau Flowage in Iron County. Effort was 4.6 boat-hours and the number of walleye caught per boat-hour was 7.8. On November 8 two Lac Courte Oreilles tribal members speared 6 walleye (average length = 14.3 inches) from the Chippewa Flowage in Sawyer County. Effort was 1.4 boat-hours and the number of walleye caught per boat-hour was 4.3.



**Figure 14.** Number of northern pike taken during spring spearing seasons from 1985-1997.



**Figure 15.** Length frequency of northern pike speared during 1997 and during the thirteen year period from 1986-1997.



## ACKNOWLEDGMENTS

The author extends a "Meegwitch" to the following workers who assisted with monitoring the fishery (either as creel clerk or seasonal warden) or who issued permits and helped to update and compile harvest data each day:

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The patience and humor of tribal members during the nightly counting and measuring of fish continues to be recognized and appreciated.

Thanks also go to Annie Thannum and Kim Campy for their diligence in compiling nightly harvest statistics, in providing these data to tribal and WDNR representatives, and in updating each day the list of lakes selected for harvest, along with the adjusted quota, the bag limits, and the number of permits available for each lake. Finally, I would like to thank Neil Kmiecik and Rick Madsen for help in editing this report.

## LITERATURE CITED

- Biological Issues Group. 1988. Report on Biological Issues. Plaintiff's Exhibit 106, Lac Courte Oreilles Band, et al. v. State of Wisconsin, et. al., W.D. Wis. No. 74-c-313.
- Kmiecik, N. and J. D. Shively. 1989. Spear Fishery of the Lake Superior Tribes of Chippewa Indians, Spring 1988. Great Lakes Indian Fish and Wildlife Commission Administrative Report 89-2. 43 pp.
- Kmiecik, N. and J. D. Shively. 1990. Open Water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1989. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 90-1. 40 pp.
- Kmiecik, N. 1991. Spear Fishery of the Lake Superior Tribes of Chippewa Indians, Spring 1990. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 91-4. 42 pp.
- Kmiecik, N. and H. H. Ngu. 1992. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1991. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 92-8. 46 pp.
- Ngu, H. and N. Kmiecik. 1993. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1992. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 93-4. 45 pp.
- Ngu, H. 1994. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1993. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 94-1. 46 pp.
- Ngu, H. 1995. Open water Spearing and Netting in Northern Wisconsin by Chippewa Indians during 1994. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 95-03. 45 pp.
- Ngu, H. 1996. Open water Spearing in Northern Wisconsin by Chippewa Indians During 1995. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 96-01. 43 pp.
- Krueger, J. 1997. Open water Spearing in Northern Wisconsin by Chippewa Indians During 1996. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 97-02. 51 pp.

## LIST OF APPENDICES

APPENDIX	PAGE
A Number of tribal members that speared one or more nights on lakes selected by six Wisconsin Chippewa bands during the 1997 spring spear fishery .....	25
B Number of walleye harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours and catch per effort (CPE = walleye per boat-hour) per lake .....	26
C Total number of walleye measured by per inch group and sexed during spring spearing 1997. Data arranged alphabetically by tribe, county, and lake .....	36
D Number of walleye per inch group taken during spring spearing seasons from 1985-1997 .....	43
E Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring 1997. Also average length and harvest per acre .....	44
F Number of muskellunge per inch group taken during spring spearing seasons from 1985-1997 .....	51
G Number, average length, and harvest per acre of bass (largemouth and smallmouth), and northern pike from various lakes during spring spearing in 1997 .....	52
H Number of bass (largemouth and smallmouth combined) taken during spring spearing seasons from 1985-1997 .....	53
I Number of northern pike per inch group taken during spring spearing seasons from 1985-1997 .....	54

Appendix A. Number of tribal members that speared one or more nights on lakes selected by six Wisconsin Chippewa bands during the 1997 spring spear fishery.

Number of Nights	BRV	LCO	LDF	MLK	RCF	STC <sup>1</sup>	Total:	Percent of Total:	Cumulative Percent:
1	33	30	38	12	24	19	156	34.3%	34.3%
2	12	16	32	19	16	11	106	23.3%	57.6%
3	4	4	15	8	6	7	44	9.7%	67.3%
4	4	3	13	4	8	3	35	7.7%	74.9%
5	0	6	12	6	4	5	33	7.3%	82.2%
6	2	6	11	7	1	4	31	6.8%	89.0%
7	0	1	6	5	0	2	14	3.1%	92.1%
8	1	0	4	2	0	2	9	2.0%	94.1%
9	1	2	3	1	0	1	8	1.8%	95.8%
10	0	4	2	0	0	1	7	1.5%	97.4%
11	0	0	0	0	0	2	2	0.4%	97.8%
12	0	0	1	0	0	3	4	0.9%	98.7%
13	0	0	0	0	0	0	0	0.0%	98.7%
14	0	0	1	0	0	0	1	0.2%	98.9%
15	0	0	1	0	0	1	2	0.4%	99.3%
16	0	0	0	0	0	1	1	0.2%	99.6%
17	0	0	0	0	0	0	0	0.0%	99.6%
18	0	0	0	0	0	0	0	0.0%	99.6%
19	0	1	0	0	0	0	1	0.2%	99.8%
20	0	0	0	0	0	0	0	0.0%	99.8%
21	0	0	0	0	0	0	0	0.0%	99.8%
22	0	1	0	0	0	0	1	0.2%	100.0%
23	0	0	0	0	0	0	0	0.0%	100.0%
24	0	0	0	0	0	0	0	0.0%	100.0%
25	0	0	0	0	0	0	0	0.0%	100.0%
Total:	57	74	139	64	59	62	455	100%	100%

<sup>1</sup> Includes 18 members from Milles Lacs, 4 from Bad River, 3 from Lac du Flambeau, and 1 from Lac Courte Oreilles.





Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

County	Lac du Flambeau		Walleye		Tribal Quota	April 29	May 30	May 1	May 2	3	4	5	6	7	8	9	10	11	12	13	14	May 21	22	23	Total Harvest	Quota Balance	Boat-Hour	CPE
	Lake	Area	Safe Harvest	Area																								
IRON	GILE FL	3384	1216	668	**												**								25	643	2.8	9.1
IRON	TURTLE-FLAMBEAU FL	13545	4414	2000	819				381	574	163						31								1968	32	90.5	21.7
LINCOLN	L MOHAWKSIN	1910	540	215	**											**									0	215	10.5	*
LINCOLN	RICE R FL CHAIN (3 Lakes)*	3916	1420	780	**		**			213						37	**								250	530	10.5	23.8
ONEIDA	BEARSKIN L	400	389	155	91					64		**				**	**								155	0	5.0	31.0
ONEIDA	BOOTH L	207	28	15								**													0	15	5.5	47.8
ONEIDA	BUCKSKIN L	634	659	263	167		96					**		5											5	18	1.5	3.3
ONEIDA	CARROLL L	335	42	23			141					**		**						**	**				141	10	8.8	16.0
ONEIDA	CLEAR L	846	379	151								**		**						**	**				117	17	4.5	26.0
ONEIDA	CRESCENT L	612	244	134	117		91			66		**		**						**	**				157	4	8.0	19.6
ONEIDA	DAM L	744	294	161	**					**															0	47		*
ONEIDA	GEORGE L	435	120	47			68					**		**											0	20	2.0	34.0
ONEIDA	GILMORE L	301	38	20								**		**											0	26		*
ONEIDA	HASBROOK L	302	125	68								**		**											68	0	2.0	34.0
ONEIDA	INDIAN L	397	49	26								**		**											0	7		*
ONEIDA	JULIA L	401	14	7			108			91		**		**											0	20	2.0	34.0
ONEIDA	KATHERINE L	590	236	129	36					91		**		**											127	2	8.0	15.9
ONEIDA	KAWAGUESAGA L	670	266	146						**		**		**											142	4	5.8	24.7
ONEIDA	L THOMPSON	382	47	18						**		**		**											0	18		*
ONEIDA	MADLINE L	159	22	12								**		**											1	11	1.0	1.0
ONEIDA	MANSON L	236	99	54						**		**		**											0	54	2.5	0.0
ONEIDA	MEDICINE L	372	153	84						**		**		**											0	84		*
ONEIDA	MINOQUA L	1360	518	284	125		120			**		**		**											269	15	18.3	14.7
ONEIDA	MOEN L	460	187	102	**					**		**		**											0	102	3.0	21.0
ONEIDA	MUSKELLUNGE L	284	118	64						63															63	1	3.0	21.0
ONEIDA	N NOKOMIS L	468	57	31																					0	31	0.8	6.3
ONEIDA	PICKEREL L	736	82	45								**		**											5	40	6.9	1.9
ONEIDA	RAINBOW FL	2035	756	215	10							**		**											13	202	6.9	1.9
ONEIDA	RHINELANDER FL	1326	506	278	**							**		**											0	278		*
ONEIDA	SAND L	540	217	119	**		20			19		**		**											39	80	4.8	8.1
ONEIDA	SQUASH L	392	160	87								**	41	**											41	46	3.5	11.7
ONEIDA	SQUIRREL L	1317	1044	417	349		64																		413	4	15.3	27.1
ONEIDA	TOMAHAWK CHAIN (2 Lakes)*	3552	1287	707	310		387				43								**	**					707	0	26.1	27.1
ONEIDA	TWO SISTERS L	719	81	44	**									**											43	1	2.0	21.5
ONEIDA	WILLOW FL	5135	1794	493	**									**											48	445	11.8	4.1
PRICE	BUTTERNUT L	1006	510	203	**									**											39	164	3.0	13.0



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County	Lac du Flambeau Lake	Area	Walleye Safe Harvest	Tribal Quota	April 29	May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	May 21	22	23	Total Harvest	Quota Balance	Boat- Hour	CPE
PRICE	PIKEL	806	317	174		**			0			**			23								23	151	8.8	2.6
PRICE	ROUND L	726	287	157		60		18	18			4			5								87	70	9.0	9.7
PRICE	TURNER L	149	64	35		**		**	**			**											0	35		*
VILAS	ALDER L	274	114	62			57					81											57	5	3.0	19.0
VILAS	ANVIL L	380	156	85						**		**											81	4	1.3	62.3
VILAS	BALLARD L	505	60	32								**											20	12	0.5	40.0
VILAS	BIG ARBOR VITAE L	1090	710	283		256					27												283	0	9.5	29.8
VILAS	BIG L T42N-R8E-S4	835	353	141			132																132	9	4.5	29.3
VILAS	BIG L T44N-R41W-S16	771	241	132				225				13			81					**			94	38	2.8	33.6
VILAS	BIG MUSKELLUNGE L	930	567	226					88			**			51								225	1	4.0	56.3
VILAS	BIG PORTAGE L	638	254	139					77			**											139	0	4.3	32.7
VILAS	BIG SAND L	1408	141	77					46				0			1				**			77	0	2.3	33.5
VILAS	BIG ST GERMAIN L	1617	609	334			185				84										10		326	8	19.4	16.8
VILAS	BIRCH L	528	213	117						16													16	101	2.7	5.9
VILAS	BOULDER L	524	240	95			79				16												79	16	2.5	31.6
VILAS	CATFISH L	1012	392	215				94			42				**								136	79	11.5	11.8
VILAS	CLEAR L	555	223	122			120																120	2	3.5	34.8
VILAS	CRANBERRY L	956	372	204				139		**	62				**								201	3	8.3	24.4
VILAS	EAGLE L	572	229	125						**	73				**								73	52	2.5	28.2
VILAS	FISHTRAP L	329	136	74							**				**								0	74		*
VILAS	ISLAND L	1023	396	217			95	47		75						**							217	0	14.6	14.9
VILAS	JAG L	158	68	37			**						4										4	33	0.5	8.0
VILAS	L LAURA	599	371	148					126														148	0	6.8	21.8
VILAS	LAC VIEUX DESERT	4300	1005	100					28	**	22				**								28	72	3.8	7.4
VILAS	LITTLE ARBOR VITAE L	534	493	197		197					**												197	0	4.3	45.8
VILAS	LITTLE JOHN L	166	71	39								**							**				0	39		*
VILAS	LITTLE ST GERMAIN L	980	104	57			**				**				1								8	49	6.0	1.3
VILAS	LITTLE STAR L	244	102	56			16				**				**								16	40	1.4	11.9
VILAS	LITTLE TROUT L	978	114	62					**		**				**								0	62		*
VILAS	LONG L	872	341	187						177													177	10	6.3	28.3
VILAS	MANITOWISH L	506	204	112			57		**			**			**								57	55	5.5	10.4
VILAS	OXBOW L	511	206	113						90					**								113	0	5.5	20.5
VILAS	PAPOOSE L	428	174	95						61	**		23										95	0	3.8	25.3
VILAS	PICKEREL L	293	38	20					**			34											0	20		*
VILAS	PLUM L	1033	416	166				158							**								166	0	5.0	33.5
VILAS	PRESQUE ISLE CHAIN (3 Lakes)	1571	614	150							150				**	**					8		150	0	3.0	50.0

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County	Lake	Lac du Flambeau	Area	Walleye Safe Harvest	Tribal Quota	April 29	May 30	May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	May 21	22	23	Total Harvest	Quota Balance	Boat-Hour	CPE		
VILAS	REST L		608	243	133				131																131	2	9.0	14.6		
VILAS	SNIPLE L		239	41	16										**										0	16	*	*		
VILAS	SPARKLING L		154	49	19										4										4	15	0.5	8.0		
VILAS	SPIDER L		272	113	62			33											**	**	**				33	29	2.3	14.7		
VILAS	SQUAW L		785	383	153										4				**	**	**				4	149	1.5	2.7		
VILAS	STAR L		1206	499	199				195										**	**	**				195	4	6.5	30.0		
VILAS	TROUT L		3816	319	175					96							**	**	**	**	**	3			174	1	8.5	20.5		
VILAS	TWIN LAKES CHAIN (2 Lakes)*		3430	1986	794						395		315	38				**	**	46					794	0	24.8	32.1		
VILAS	WHITE SAND L		728	81	44								43						**	**	**				43	1	1.0	43.0		
VILAS	WILD RICE L		379	124	68								**		**			**	**	**	**				0	68	*	*		
	Number of lakes:		82			11	11	15	14	14	14	20	21	17	22	16	19	11	10	10	9	3	3	1						
	Area in acres:		90526																											
	Number of walleye:			32344	14513	1194	830	1608	1481	1344	961	959	950	154	111	130	231	2	0	46	0	3	18	0	10,022	4,491				
	Number of spearer-nights:					54	52	69	69	77	50	39	48	25	17	13	22	6	3	3	0	3	4	0	554					
	Number of interviews with effort:					22	21	29	24	26	18	16	17	10	8	6	9	2	1	1	0	1	2	0	213					
	Number of interviews without effort:					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	Number of boat-hours:					52.7	39.7	53.9	61.4	62.4	46.1	41.2	29.5	18.2	10.0	17.2	24.3	4.6	2.5	2.3	0.0	3.8	2.8	0.0	472.2					
	Catch-per-effort:					22.7	20.9	29.8	24.1	21.5	20.9	23.3	32.2	8.5	11.1	7.6	9.5	0.4	0.0	20.4	0.0	0.8	6.5	0.0	21.2					

\* Lakes not speared during spring 1997.

\*\* Lakes open for spearing but no effort.

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County	Sotaegon (Mole Lake)		Area	Walleye State Harvest	Tribal Quota	April		May		3	4	5	6	7	8	May 21	Total Harvest	Quota Balance	Boat-Hour	CPE
	Lake	18				19	20	21	22											
FLORENCE	EMILY L		191	26	22												0	22		
FLORENCE	FAY L		247	32	27					**							0	27		
FLORENCE	HALSEY L		512	20	11					**				**			0	11		
FLORENCE	KEYES L		202	86	73					62							62	11	4.0	15.5
FLORENCE	PATTEN L		255	107	64												84	0	2.5	25.6
FLORENCE	PINE R FL		127	55	46												0	46		
FOREST	ARBUTUS L		161	22	18												0	18		
FOREST	BIRCH L		468	190	161												0	161		
FOREST	BUTTERNUT L		1292	418	295						26						295	0	15.8	18.7
FOREST	CRANEL		337	42	35												0	35		
FOREST	FRANKLIN L		892	348	208						11						208	0	11.8	17.6
FOREST	GROUND HEMLOCK L		88	13	11												0	11		
FOREST	HOWELL L		177	8	6												0	6		
FOREST	JUNGLE L		182	78	46												47	-1	0.8	62.7
FOREST	KING L		33	15	12												0	12		
FOREST	L LUCERNE		1026	108	64												64	0	10.0	6.4
FOREST	L METONGA		1991	740	443												443	0	46.5	9.5
FOREST	LILY L		211	89	53												48	5	3.0	16.0
FOREST	PINE L		1670	162	137												0	137	2.4	0.0
FOREST	RANGE LINE L		82	12	10												131	0	8.9	14.7
FOREST	ROBERTS L		414	220	131												131	0	1.5	14.7
FOREST	STEVENS L		297	38	22												22	0	8.8	13.7
FOREST	TRUMP L		172	24	20												0	20		
LANGLADE	BIG TWIN L		60	9	7												0	7		
LANGLADE	ENTERPRISE L		502	203	121												121	0	8.8	13.7
LANGLADE	JESSIE L		35	6	5												0	5		
LANGLADE	LAWRENCE L		50	8	6												0	6		
LANGLADE	LOWER POST L		377	47	39												0	39		
LANGLADE	MCCASIN L		110	16	13												0	13		
LANGLADE	MUELLER L		88	13	11												0	11		
LANGLADE	OTTER L		90	14	11												0	11		
LANGLADE	ROLLING STONE L		872	76	64												6	58	2.0	3.0
LANGLADE	ROSEL		112	16	13												0	13		
LANGLADE	SAWYER L		149	21	12												0	12		
LANGLADE	UPPER POST L		757	84	71												0	71		
LANGLADE	WHITE L		166	23	19												0	19		

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County	Sokaogon (Mole Lake)		Walleye Safe Harvest	Tribal Quota	May												Total Harvest	Quota Balance	Boat-Hour	CPE									
	Lake	Area			18	19	20	21	22	23	24	25	26	27	28	29					30	1	2	3	4	5	6	7	8
LANGLADE	WOLF RIVER	677	269	228	**	**																			0	0	7.0	0.6	
LINCOLN	ALEXANDER L	1369	138	117	**	4	**																		4	224	7.0	0.6	
LINCOLN	L ALICE	1663	162	137	**	0																			0	117	1.0	0.0	
LINCOLN	SPIRIT R FL	1498	567	481					10	**															0	137	1.0	0.0	
MARINETTE	HIGH FALLS RESERVOIR	430	15	12																**					10	471	7.0	1.4	
OCONTO	ARCHIBALD L	149	64	38															**					**	0	12	7.0	0.6	
OCONTO	BASS L	235	67	51															**					**	0	38	7.0	0.6	
OCONTO	BOOT L	362	14	11															**					**	0	51	7.0	0.6	
OCONTO	BOULDER L	290	121	72																					0	11	7.0	0.6	
OCONTO	MAIDEN L	293	122	73																					41	31	3.0	13.7	
OCONTO	WHEELER L	690	274	164																					60	13	1.8	34.3	
ONEIDA	BIG FORK L	865	338	202																					0	164	7.0	0.6	
ONEIDA	BIG L	548	220	186																					201	1	7.0	28.7	
ONEIDA	BIG STONE L	670	266	226																**					110	76	8.5	12.9	
ONEIDA	COLUMBUS L	650	259	220																**					0	226	7.0	0.6	
ONEIDA	HAT RAPIDS FL	620	247	209																**					0	220	7.0	0.6	
ONEIDA	LONG L	646	74	62																**					68	141	5.0	13.6	
ONEIDA	LOWER NINEMILE L	3585	915	704																**					0	62	7.0	0.6	
ONEIDA	PELICAN L	1012	392	235																**					0	704	40.8	17.3	
ONEIDA	PLANTING GROUND L	503	203	121																**					0	-21	17.6	14.6	
ONEIDA	SEVENMILE L	1768	170	144																**					113	8	5.2	21.9	
ONEIDA	THUNDER L	172	73	62																**					1	143	2.0	0.5	
ONEIDA	THUNDER L	5135	1794	493																**					0	62	3.3	8.0	
ONEIDA	WILLOW FL	957	77	59																**					26	467	4.9	11.3	
VILAS	KENTUCK L	4300	1005	100																**					55	4	2.8	36.4	
VILAS	LAC VIEUX DESERT	61			2	4	4	0	0	1	0	0	8	10	8	10	10	10	12	12	5	4	1	1	1	100	0	2.8	36.4
	Number of lakes:	43282																											
	Area in acres:	11235	6714	0	4	0	0	0	10	0	0	317	377	808	343	22	713	396	155	34	26	55	0	0	3260	3454			
	Number of walleye:				0	7	2	0	0	11	0	23	21	52	30	21	85	21	11	5	1	7	2	0	0	299			
	Number of spearer-nights:				0	3	1	0	0	4	0	9	8	17	13	9	20	8	4	3	0	3	1	0	0	103			
	Number of interviews with effort:				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Number of interviews without effort:				0.0	7.0	1.0	0.0	0.0	7.0	0.0	16.0	21.5	50.6	35.0	14.3	43.4	16.1	10.8	5.0	3.3	5.8	1.5	0.0	0.0	0.0			
	Number of boat-hours:				0.0	0.6	0.0	0.0	0.0	1.4	0.0	19.8	17.5	16.0	10.4	1.5	16.4	24.6	14.4	6.8	8.0	9.6	0.0	0.0	0.0	0.0			
	Catch-per-effort																												

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County	Red Cliff Lake	Area	Walleye Safe Harvest	Tribal Quota	April		May		Total Harvest	Quota Balance	Boat-Hour	CPE
					20	21	30	1				
BAYFIELD	DIAMOND L	341	137	105				**	87	18	11.0	7.9
BAYFIELD	PIKE L CHAIN (4 Lakes)*	714	303	181			79	58	181	0	11.9	15.2
BAYFIELD	L OWEN	1323	505	150			45	105	150	0	12.7	11.8
BAYFIELD	MIDDLE EAU CLAIRE L	902	644	495	**		247	150	487	8	36.8	13.3
BAYFIELD	NAMEKAGON L	3227	1163	485			229	256	485	0	23.3	20.9
BAYFIELD	UPPER EAU CLAIRE L	1030	399	239			105	43	239	0	19.3	12.4
DOUGLAS	L NEBAGAMON	914	98	58			28		28	30	3.8	7.5
DOUGLAS	LOWER EAU CLAIRE L	802	214	128	1		71	17	128	0	12.8	10.0
DOUGLAS	UPPER ST CROIX L	855	335	200			138	60	198	2	11.5	17.2
SAWYER	NELSON L	2503	1119	425			108	167	329	96	31.3	10.5
SAWYER	SISSABAGAMA L	719	284	238			88	**	88	150	4.0	22.0
	Number of lakes:	11			2	0	3	3	3	2	3	
	Area in acres:	13330										
	Number of walleye:		5201	2704	1	0	130	355	208	289	307	148
	Number of spearer-nights:				6	0	8	24	14	17	16	12
	Number of interviews with effort:				2	0	5	8	7	7	11	5
	Number of interviews without effort:				0	0	0	0	0	0	0	0
	Number of boat-hours:				2.5	0.0	8.0	27.5	20.0	19.5	20.4	11.8
	Catch-per-effort:				0.4	0.0	16.3	12.9	15.9	10.7	30.4	14.7
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5	16.8	8.8	16.8	9.5
							10.5	16.8	8.8	16.8	9.5	20.4
							16.8	10.5				

Appendix B Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997. Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

County	St. Croix	Lake	Area	Safe Harvest	Tribal Quota	April 17	18	19	20	21	22	23	24	25	26	27	28	29	30	May 1	2	Total Harvest	Quota Balance	Boat-Hour	CPE		
BARRON		BEAR L	1358	255	101																	101	0	6.8	14.9		
BARRON		BEAVER DAM L	1112	116	63																		63	0	6.5	9.7	
BARRON		DUCK L	100	44	24																**		24	0	1.5	10.7	
BARRON		HORSESHOE L	119	41	16					16													16	0	1.5	10.7	
BARRON		L CHETEK	770	85	46																		46	0	1.5	10.7	
BARRON		LOWER DEVILS L	162	69	37																		37	0	4.0	15.0	
BARRON		LOWER TURTLE L	276	115	63		60																60	3	4.0	15.0	
BARRON		POKEGAMA L	506	60	32										**								32	0	3.8	11.7	
BARRON		PRAIRIE L	1534	151	83								44										44	39	3.8	11.7	
BARRON		RED CEDAR L	1841	688	378			60		48		35	32			107	155			**		377	1	35.0	10.8		
BARRON		SAND L	322	41	22														22				22	0	3.5	6.3	
BARRON		STAPLES L	305	39	21			28													1		1	20	1.8	0.6	
BARRON		UPPER TURTLE L	438	53	29																0		28	1	2.0	14.0	
BURNETT		BIG MCKENZIE L	1185	285	113							8										113	0	21.4	5.3		
BURNETT		DEVILS L	1001	105	41		1		**	**				1								25	16	5.6	4.5		
BURNETT		LITTLE YELLOW L	348	143	78		7		14	**												26	52	11.3	2.3		
BURNETT		ROONEY L	322	41	22		2															9	13	5.4	1.7		
BURNETT		SAND L	962	103	56							55										55	1	8.5	6.5		
BURNETT		YELLOW L	2287	1023	409				**	**				11								20	389	4.5	4.4		
POLK		BALSAM L	2054	192	105		24		69	**							9					102	3	21.8	4.7		
POLK		BEAR L	155	67	36																	0	36	0	0	0	
POLK		BIG BUTTERNUT L	378	155	85			31	13		9											53	32	13.8	3.9		
POLK		BIG ROUND L	1015	107	58					1												1	57	6.0	0.2		
POLK		HALF MOON L	579	232	127			24	76		26											126	1	21.7	5.8		
POLK		INDIANHEAD FL	776	306	168																	0	168	0	0	0	
POLK		MAGNOR L	224	94	51						50											65	2	2.6	25.2		
POLK		WAPOGASSET L	1186	122	67		65															0	21	0	0	0	
POLK		WARD L	91	40	21																	0	21	0	0	0	
WASHBURN		BALSAM L	295	123	67					43		**				**						43	24	5.5	7.8		
WASHBURN		BASS L T40N-R10W-S17	188	247	98												41	**				41	57	5.3	7.8		
WASHBURN		BIG BASS L	203	27	14																	0	14	0	0	0	
WASHBURN		BIRCH L	368	46	25																	0	25	0	0	0	
WASHBURN		L NANCY	772	85	46												32	14				46	0	11.3	4.1		
WASHBURN		LONG L	3290	1184	503							149									**	443	60	63.4	7.0		
WASHBURN		MIDDLE MCKENZIE L	530	62	34					7		13	14							0		34	0	3.5	9.7		
WASHBURN		MINONG FL	1564	591	325																	0	325	0	0	0	
WASHBURN		SHELL L	2580	944	519												23	**				28	491	19.3	1.4		
WASHBURN		SPRING L	211	89	48																	0	48	0	0	0	
		Number of lakes:	38			5	6	5	6	6	5	4	7	5	4	4	5	5	5	3	4						
		Area in acres:	31407																								
		Number of walleye:		8170	4031	140	107	144	172	99	101	197	158	143	211	169	254	69	27	0	1	1992	2039				
		Number of spearer-nights:				20	25	24	21	15	11	18	27	23	21	15	28	11	10	0	6	275					
		Number of interviews with effort:				10	13	12	10	7	4	8	10	8	8	5	11	5	3	0	3	117					
		Number of interviews without effort:				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		Number of boat-hours:				23.6	20.7	24.3	28.4	19.7	7.8	30.2	29.5	26.2	17.8	19.0	31.9	9.8	6.8	0.0	4.8						
		Catch-per-effort:				5.9	5.2	5.9	6.1	5.0	12.9	6.5	5.4	5.5	11.9	8.9	8.0	7.1	4.0	0.0	0.2					6.7	

\* Lakes not speared during spring 1997.  
 \*\* Lakes open for spearing but no effort.

Appendix B. Number of walleye harvested nightly on lakes selected by six Wisconsin Chippewa bands during spring 1997.  
 Also, balance of quota, number of boat-hours, catch per effort (CPE - walleye per boat-hour), number of spearer-nights, number of interviews with effort, and number of interviews without effort.

Six Tribal Bands Combined:		Safe	Tribal	April	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9
Area	Harvest	Quota	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	May	1	2	3	4	5	6	7	8	9
Number of lakes:	254		5	9	12	15	10	14	16	15	16	23	24	22	34	33	45	37	36	30	28	27	21	25	21		
Area in acres:	230,433																										
Number of walleye:	71,139	40,301	140	136	376	307	141	521	624	489	1228	1407	1328	2165	2225	1627	2843	2574	1773	1197	985	1012	154	111	204		
Number of spearer-nights:			20	33	46	35	22	37	64	56	79	120	80	140	143	137	190	125	110	70	40	62	27	17	28		
Number of interviews with effort:			10	17	21	16	11	17	29	24	28	43	30	55	62	55	65	47	43	27	16	22	11	8	12		
Number of interviews without effort:			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Number of boat-hours:			23.6	38.4	44.3	39.2	23.1	41.5	85.7	68.1	94.2	101.8	107.5	140.0	139.5	113.6	147.3	121.5	104.0	71.9	44.5	42.5	19.7	10.0	34.5		
Catch-per-effort:			5.9	3.5	8.5	7.8	6.1	12.6	7.3	7.2	13.0	13.8	12.4	15.5	15.9	14.3	19.3	21.2	17.0	16.6	22.2	23.8	7.8	11.1	5.9		

Six Tribal Bands Combined:		Safe	Tribal	May	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Quota	Boat-	Hour	CPE
Area	Harvest	Quota	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Harvest	Balance	Hour	CPE	
Number of lakes:	254		26	15	11	10	9	0	0	0	0	0	0	0	0	4	3	1	0	597				
Area in acres:	230,433																							
Number of walleye:	71,139	40,301	353	6	9	46	0	0	0	0	0	0	0	0	3	18	0	0	0	24,002	16,299			
Number of spearer-nights:			32	10	7	3	0	0	0	0	0	0	0	0	3	4	0	0	0	1,740				
Number of interviews with effort:			12	4	3	1	0	0	0	0	0	0	0	0	1	2	0	0	0	692				
Number of interviews without effort:			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Number of boat-hours:			32.8	9.9	7.3	2.3	0	0	0	0	0	0	0	0	3.8	2.8	0	0	0	1736.0				
Catch-per-effort:			10.8	0.6	1.2	20.4	0	0	0	0	0	0	0	0	0.8	6.5	0	0	0					13.8

Appendix C. Total number of walleye harvested and measured per inch group and sexed during spring in 1996. Data arranged alphabetically by tribe, county, and lake.

Bad River		INCH GROUP																											Total Measured	Total Harvested	Total Inches	Mean Length	Males	Females	Unknown	Total Sexed
County	Lake	Area	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27												
Bayfield	L Owen	1323						4	22	27	18	15	8	18	17	9	6	2				2		1	1	150	2361.8	15.7	137	13	0	150				
Bayfield	Namekagon L	3227				1	6	47	94	108	107	68	20	12	10	4	5	2						1		485	6761.0	13.9	435	35	15	485				
Chippewa	L Wissota	6300			1	3	10	36	45	33	17	7	2	1	2									1		160	2219.8	13.9	149	8	11	168				
Chippewa	Long L	1052			3	7	23	61	79	113	65	37	14	5	5											412	5407.5	13.1	399	9	4	412				
Douglas	Whitefish L	832					1	3	23	28	30	22	24	36	20	6										193	2985.6	15.5	180	3	10	193				
Douglas	Trude L	781					4	49	38	33	28	17	7	3	3											182	2412.0	13.3	171	8	3	182				
Iron	Turtle-Flambeau FI	13545			1	3	8	44	41	33	15	15	3	4	1											183	2405.5	13.1	186	5	13	204				
Iron	Chain L	468					1	9	8	19	11	13	5	5												71	1067.9	15.0	67	3	1	71				
Rusk	Island L	526					1	3	2	10	13	17	6	3	2		1									59	880.9	14.9	58	1	0	59				
Rusk	Connors L	429			1	2	4	17	8	10	17	10	9	2	1	1		2						1		85	1187.7	14.0	35	6	44	85				
Sawyer	Nelson L	2503			4	12	38	32	36	29	17	20	18	20	7	3	2	3	2	2	1	1	4		1	247	3630.4	14.7	201	15	31	247				
Sawyer	Teal L	1049			6	18	29	27	10	5	2	3	2	2	2	2		1								113	1476.6	13.1	173	6	19	198				
Vilas	Crab L	949							1	3	3	1	1	1	1											9	134.4	14.9	5	2	2	9				
Vilas	Forest L	466						9	25	19	18	11	10	5	6	4	4	1	1							113	1652.6	14.6	98	15	0	113				
Vilas	Harris L	507					1	1	21	24	17	8	4	6	3	1	1	1	1					1		89	1277.8	14.4	78	3	8	89				
Vilas	High L	734			1	1	4	8	7	6	10	8	6	4	3	3		1	1	1	1	1	1			63	911.8	14.5	33	0	30	63				
Vilas	Presque Isle L Chain	1571						8	20	29	28	31	7	3	2	3	1	1	2	1	1	1	1			137	2004.5	14.6	165	11	1	177				
Vilas	S Turtle L	454						1							1											4	72.6	18.2	2	1	1	4				
Sub-total:		36716	1	1	6	25	85	332	485	542	452	309	174	128	105	43	25	8	10	6	5	6	5	2		2755	38850.5	14.1	2572	144	193	2909				



Appendix C (continued). . . . . number of walleye harvested and measured per inch group and sexed during spring in 1996. Data arranged . . . . . by tribe, county, and lake.

Lac Courte Oreilles		Area	INCH GROUP																												Total Measured	Total Harvested	Total Inches	Mean Length	Male	Female	Unknown	Total Sexed
County	Lake		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
Chippewa	Otter L	661																											60	1096.2	18.3	49	10	1	60			
Eau Claire	L Eau Claire	860	1																										29	430.0	14.8	1	13	15	29			
Rusk	Fireside Lakes	302																											5	94.6	18.9	0	2	3	5			
Sawyer	Grindstone L	3111																											466	7657.7	16.4	394	49	23	466			
Sawyer	L Chetek	1920																											154	2565.1	16.7	145	3	6	154			
Sawyer	L Chippewa	15300																											895	13330.9	14.9	765	76	34	895			
Sawyer	Lac Courte Oreilles	5039																											300	5355.5	17.9	239	47	14	300			
Sawyer	Lake of the Pines	273																											22	341.0	15.5	4	6	12	22			
Sawyer	Lost Land L	1304																											12	218.2	18.2	8	3	1	12			
Sawyer	Lower Clam L	229																											3	63.8	17.9	0	0	3	3			
Sawyer	Round L	3054	1																										575	8912.7	15.5	491	43	41	575			
Sawyer	Sand L	828																											184	3143.8	17.1	132	37	15	184			
Sawyer	Smith L	323																											98	1631.7	16.7	90	1	7	98			
Sawyer	Whitefish L	786																											73	1179.6	16.2	62	7	4	73			
Sawyer	Windfall L	102																											42	665.3	15.8	40	2	0	42			
Washburn	Long L	3290																											481	7372.1	15.3	459	27	15	501			
Sub-total:		37482	1	1	0	1	4	14	68	229	488	534	598	481	339	244	162	86	50	26	22	10	19	10	7	4	0	1	3399	54047.2	15.9	2899	326	194	3419			







Appendix C (continued). Total number of walleye harvested and measured per inch group and sexed during spring in 1996. Data arranged alphabetically by tribe, county, and lake.

<b>Red Cliff</b>		Area	INCH GROUP																												Total Measured	Total Harvested	Total Inches	Mean Length	Male	Female	Unknown	Total Sexed			
County	Lake		9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29																		
			Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total																	
Bayfield	Diamond L	341	2	1	4	7	4	8	12	14	11	7	7	2	2	3			2	2	1													87	87	1522.1	17.5	72	7	8	87
Bayfield	L Owen	1323	1	1	15	29	27	10	7	16	18	12	2	4	5	2			1															150	150	2414.0	16.1	132	17	1	150
Bayfield	Middle Eau Claire L	902	1	5	14	61	109	115	72	39	23	17	12	7	3	1	3	1	2		2												487	487	7238.9	14.9	263	24	200	487	
Bayfield	Namekagon L	3227	3	21	33	61	58	44	30	15	11	3	5	3	2	1			1		2												293	485	4349.3	14.8	229	42	25	296	
Bayfield	Pike L Chain	714		5	19	29	40	25	25	12	13	7																					181	181	2781.5	15.4	146	12	23	181	
Bayfield	Upper Eau Claire L	1030			3	7	20	49	46	26	23	15	12	11	3	6	6	1	2														239	239	4258.7	17.8	192	38	9	239	
Douglas	L Nebagamon	914				3	7	3	4	3	3	3																					28	28	463.0	16.5	23	5	0	28	
Douglas	Lower Eau Claire L	802	1	2	2	8	33	30	13	7	4	4	7	5	2	3	2																128	128	1998.8	15.6	88	24	16	128	
Douglas	Upper St. Croix L	855			2	5	12	30	40	45	17	12	1																				166	198	2619.6	15.8	128	13	25	166	
Sawyer	Nelson L	2503	3	10	20	35	32	20	20	44	26	29	13	10	4	7	4	5	1														283	329	4468.3	15.8	197	28	58	283	
Sawyer	Sisabagam L	719			9	11	25	25	9	6	1	1																					88	88	1231.3	14.0	82	3	3	88	
Sub-total:		13330	5	23	75	194	347	376	293	265	157	142	80	48	36	27	21	14	9	6	9	1	2	2130	2400	33345.5	15.7	1552	213	368	2133	2130	2400	33345.5	15.7	1552	213	368	2133		



Appendix D. Number of walleye per inch group taken during spring spearing seasons from 1985-1997.

Inch Group	Number of walleye in:													13 Year Total	Percent of Total	Cumulative Percent				
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997							
5														1				2	0.0%	0.0%
6		1																6	0.0%	0.0%
7									1									7	0.0%	0.0%
8				3	1				4									55	0.0%	0.0%
9		2	17	10	4				36									378	0.2%	0.2%
10		5	123	121	60	183			229									2,468	1.1%	1.3%
11		31	558	678	306	649			957									10,152	4.6%	5.9%
12		140	1,282	1,688	925	1,513			1,979									22,671	10.2%	16.1%
13		265	1,892	2,755	1,684	2,370			2,582									33,963	15.3%	31.5%
14		286	2,133	3,289	2,222	2,917			2,777									37,877	17.1%	48.6%
15		293	1,895	2,951	2,154	2,856			2,543									33,556	15.2%	63.7%
16		247	1,666	2,311	1,919	2,295			1,696									25,470	11.5%	75.2%
17		172	1,374	1,658	1,390	1,862			1,687									18,270	8.2%	83.5%
18		145	458	1,113	1,297	1,288			1,216									12,595	5.7%	89.2%
19		118	255	811	932	634			811									8,479	3.8%	93.0%
20		33	149	513	596	328			590									4,893	2.2%	95.2%
21		25	72	259	316	210			303									2,891	1.3%	96.5%
22		18	50	148	214	109			249									2,051	0.9%	97.4%
23		18	23	116	134	76			151									1,542	0.7%	98.1%
24		11	9	86	124	67			111									1,213	0.5%	98.7%
25		7	10	76	89	48			102									987	0.4%	99.1%
26		9	7	57	75	45			86									782	0.4%	99.5%
27		10	3	42	56	31			46									545	0.2%	99.7%
28		5	1	28	32	18			39									340	0.2%	99.9%
29		8		25	30	8			15									186	0.1%	100.0%
30		11		8	9	3			6									67	0.0%	100.0%
31		6		2	2	2			1									15	0.0%	100.0%
32		2																3	0.0%	100.0%
33		1																1	0.0%	100.0%
34																				
35																				
36																				
37																				
Total No. Measured:	1,868	6,842	14,224	19,368	13,254	18,500			18,551	18,226	19,903	21,726	24,605	22,999	21,399	221,465		100%		
Total Length:	30,382	106,051	226,789	306,926	211,645	295,047			291,543	275,331	301,713	335,322	375,476	348,750	327,444	3,432,419				
Average Length:	16.3	15.5	15.9	15.8	16.0	15.9			15.7	15.1	15.2	15.4	15.3	15.2	15.3	15.6				
Total No. Speared:	2,761	6,940	21,321	25,969	16,054	25,348			23,018	21,188	24,532	25,922	30,249	28,327	24,002	275,631				
Percent Measured:	68%	99%	67%	75%	83%	73%			81%	86%	81%	84%	81%	81%	89%	80%				





Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing 1997. Also, average length and harvest per acre.

County	Lake	Area	Tribes	1997 Safe Harvest	1997 Harvest Declaration	1997 April 18	19	20	21	22	23	24	25	26	27	28	29	30	May 1	2	3	4	5	6	7	8	9	10	11	12	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Numl Per A	
EAU CLAIRE	L EAU CLAIRE	860	LCO	9	5																																
RUSK	LADYSMITH FL	288	LCO	8	4																																
SAWYER	GRINDSTONE L	3,111	LCO	21	19																																
SAWYER	L CHIPPEWA	15,300	LCO	78	46																																
SAWYER	L OF THE PINES	273	LCO	8	4																																
SAWYER	LAC COURTE OREILLES	5,039	LCO	38	36																																
SAWYER	LOST LAND L	1,304	LCO	23	13																																
SAWYER	LOWER CLAM L	229	LCO	7	4																																
SAWYER	MASON L	190	LCO	6	3																																
SAWYER	ROUND L	3,054	LCO	42	25																																
SAWYER	SAND L	928	LCO	18	10																																
SAWYER	WHITEFISH L	786	LCO	16	9																																
	Lac Courte Oreilles sub-total:			274	178	0	0	0	0	0	0	4	9	1	3	4	4	10	0	5	6	3	2	0	6	0	1	3	0	0	61	117	61	2278.8	37.4		

Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997 Safe Harvest	1997 Harvest Declaration	April 29	May 30	May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	21	22	23	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre
IRON	GILE FL	3,384	LDF	45	23																				0	23	1	27.7	0.0001	
IRON	TURTLE-FLAMBEAU FL	13,545	LDF	109	40	1																			1	39	1	27.7	0.0001	
LINCOLN	L MOHAWKSIN	1,910	LDF	30	15																				0	15	3	103.1	0.0012	
LINCOLN	L NOKOMIS	2,433	LDF	36	18					3															3	15	3	103.1	0.0012	
LINCOLN	RICE R FL	920	LDF	18	9																				9	9	2	89.6	0.0050	
ONEIDA	BEARSKIN L	400	LDF	10	5	1				1															2	3	2	89.6	0.0050	
ONEIDA	BOOTH L	207	LDF	6	3																				3	3				
ONEIDA	BRIDGE L	411	LDF	10	5																				0	5				
ONEIDA	BUCKSKIN L	634	LDF	10	5																				0	5				
ONEIDA	CARROLL	335	LDF	9	5																				0	5				
ONEIDA	CLEAR L	846	LDF	17	9		5																		0	5				
ONEIDA	CRESCENT L	612	LDF	14	7	2																			5	4	5	219.5	0.0059	
ONEIDA	DAM L	744	LDF	16	8		1																		2	5	2	68.6	0.0033	
ONEIDA	GEORGE L	435	LDF	11	6																				1	7	1	36.4	0.0013	
ONEIDA	GILMORE L	301	LDF	8	4																				0	4				
ONEIDA	HASBROOK L	302	LDF	8	4		2																		0	4				
ONEIDA	INDIAN L	397	LDF	10	5																				2	2	2	81.0	0.0068	
ONEIDA	JULIA L	401	LDF	10	5																				0	5				
ONEIDA	KATHERINE L	590	LDF	13	7																				0	5				
ONEIDA	KAWAGUESAGA L	670	LDF	15	8		1			3															3	4	3	124.7	0.0051	
ONEIDA	L THOMPSON	382	LDF	10	5										3										4	4	4	140.1	0.0060	
ONEIDA	LITTLE TOMAHAWK L	160	LDF	5	2																				0	5				
ONEIDA	MADLINE L	159	LDF	5	2																				0	2				
ONEIDA	MANSON L	236	LDF	7	4																				0	2				
ONEIDA	MEDICINE L	372	LDF	9	5																				0	4				
ONEIDA	MINOCQUA L	1,360	LDF	24	12		1																		0	5				
ONEIDA	MOEN L	460	LDF	11	6																				0	6				
ONEIDA	MUSKELLUNGE L	284	LDF	8	4																				2	10	2	68.8	0.0015	
ONEIDA	PICKEREL L	736	LDF	16	8																				0	6				
ONEIDA	RAINBOW FL	2,035	LDF	32	7																				3	1	3	118.1	0.0106	
ONEIDA	RHINELANDER FL	1,326	LDF	24	12					3															0	7				
ONEIDA	SAND L	540	LDF	12	6																				0	12				
ONEIDA	SQUIRREL L	1,317	LDF	23	12																				0	6				
ONEIDA	TOMAHAWK L	3,392	LDF	45	23	1	4																		5	7	5	201.1	0.0036	
ONEIDA	TWO SISTERS L	719	LDF	15	8	1	5																		13	10	13	436.9	0.0036	
ONEIDA	WILLOW FL	5,135	LDF	59	13					1															1	7	1	37.5	0.0014	
PRICE	BUTTERNUT L	1,006	LDF	19	10																				0	13				
PRICE	PIKE L	806	LDF	17	9								1												1	9	1	39.5	0.0010	
PRICE	ROUND L	726	LDF	15	8		1																		0	9				
PRICE	TURNER L	149	LDF	5	2																				1	9	1	39.5	0.0010	
VILAS	ALDER L	274	LDF	8	4																				0	4				
VILAS	AVERILL L	71	LDF	3	1																				0	1				
VILAS	BALLARD L	505	LDF	12	6																				0	2				
VILAS	BIG ARBOR VITAE L	1,090	LDF	21	11		7																		10	6				
VILAS	BIG L	635	LDF	17	7					3															0	1	10	357.4	0.0092	
VILAS	BIG L	771	LDF	13	9																				0	7				
VILAS	BIG MUSKELLUNGE L	930	LDF	18	9					1															6	2	7	287.6	0.0075	

Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing, 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997 Safe Harvest	1997 Declaration	April 29	May 1	2	3	4	5	6	7	8	9	10	11	12	13	14	21	22	23	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre		
VILAS	BIG SAND L	1,408	LDF	25	13																			0	13	9	354.3	39.4	0.0056		
VILAS	BIG ST GERMAIN L	1,617	LDF	27	14				5			1											3		9	1	42.0	42.0	0.0011		
VILAS	BIRCH L	528	LDF	12	6							1													1	5	98.5	32.8	0.0030		
VILAS	BOULDER L	524	LDF	12	6							1													5	202.5	40.5	0.0090			
VILAS	CATFISH L	1,012	LDF	20	10				2																3	7	64.8	32.4	0.0021		
VILAS	CLEAR L	555	LDF	13	7							1													2	2	73.0	36.5	0.0035		
VILAS	CRANBERRY L	956	LDF	19	10							1													5	2	202.5	40.5	0.0090		
VILAS	EAGLE L	572	LDF	13	7				1			2													2	2	158.1	39.5	0.0008		
VILAS	FISHTRAP L	329	LDF	9	5																				5	1	177.2	35.4	0.0094		
VILAS	ISLAND L	1,023	LDF	20	11						2														2	2	69.8	34.9	0.0020		
VILAS	L LAURA	599	LDF	13	7				5																5	2	194.2	38.8	0.0083		
VILAS	LAC VIEUX DESERT	4,300	LDF	34	5				4																4	1	158.1	39.5	0.0008		
VILAS	LITTLE ARBOR VITAE L	534	LDF	12	6																				5	1	177.2	35.4	0.0094		
VILAS	LITTLE JOHN L	166	LDF	5	2																				2	2	34.5	34.5	0.0010		
VILAS	LITTLE ST GERMAIN L	980	LDF	19	10									1											1	9	109.2	36.4	0.0059		
VILAS	LITTLE TROUT L	244	LDF	7	4																				4	4	741.3	37.1	0.0072		
VILAS	LITTLE TROUT L	978	LDF	6	3																				3	3	37.0	37.0	0.0023		
VILAS	LONG L	872	LDF	10	5																				0	0					
VILAS	MANITOWISH L	506	LDF	12	6																				3	3	109.2	36.4	0.0059		
VILAS	N TWIN L	2,788	LDF	39	20				3			6	11												20	0	741.3	37.1	0.0072		
VILAS	OXBOW L	511	LDF	12	6																				0	0					
VILAS	PAPOOSE L	428	LDF	10	5																				3	3	109.2	36.4	0.0059		
VILAS	PICKEREL L	293	LDF	8	4									1											1	1	37.0	37.0	0.0023		
VILAS	PLUM L	1,108	LDF	21	11																				4	4	122.5	40.8	0.0027		
VILAS	PRESCUE ISLE L	1,280	LDF	23	6						1														3	8	37.0	37.0	0.0008		
VILAS	REST L	608	LDF	14	7				3																3	4	110.7	38.9	0.0049		
VILAS	S TWIN L	642	LDF	14	7																				0	0					
VILAS	SNIPE L	239	LDF	7	4																				0	0					
VILAS	SPARKLING L	127	LDF	4	2																				2	2	42.5	42.5	0.0008		
VILAS	SPIDER L	272	LDF	7	4																				0	0					
VILAS	SQUAW L	785	LDF	16	8																				0	0					
VILAS	STAR L	1,206	LDF	22	11																				1	10	146.7	36.7	0.0010		
VILAS	TROUT L	3,816	LDF	48	24																				4	20					
VILAS	VAN VLIET L	220	LDF	6	3																				0	0					
VILAS	WHITE SAND L	728	LDF	15	8																				0	0					
VILAS	WILD RICE L	379	LDF	8	4																				0	4					
	Lac du Flambeau sub-total:			1420	667	4	3	32	12	8	21	9	21	1	2	7	0	0	3	0	0	7	5	6	141	528	141	5283.2	37.3		



Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997 Safe Harvest	1997 Declaration	April 20	21	22	23	24	25	26	27	28	29	30	May 1	2	3	Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre
BAYFIELD	BUSKEY BAY	100	RCF	3	1															0	1	3	115.3	38.4	0.011
BAYFIELD	HART L	259	RCF	7	4												3			3	1	3			
BAYFIELD	L MILLICENT	183	RCF	6	3															0	3	10	378.5	37.9	0.011
BAYFIELD	MIDDLE EAU CLAIRE L	902	RCF	18	10					1	4									10	0	10			
BAYFIELD	NAMEKAGON L	3,227	RCF	43	20															0	20	1	36.0	36.0	0.005
BAYFIELD	TWIN BEAR L	172	RCF	5	2												1			1	1	1			
BAYFIELD	UPPER EAU CLAIRE L	1,030	RCF	20	11															0	11				
DOUGLAS	LOWER EAU CLAIRE L	802	RCF	17	10															0	10				
SAWYER	SISSABAGAMA L	719	RCF	15	8															0	8				
	Red Cliff sub-total:			134	69	0	0	0	0	0	1	4	0	0	0	0	9	0	0	14	55	14	529.8	37.8	

Appendix E. Number of muskellunge harvested nightly on lakes speared by six Wisconsin Chippewa bands during spring spearing 1997. Also average length and harvest per acre.

County	Lake	Area	Tribe	1997 Safe Harvest	1997 Declaration	1997												Total Harvest	Quota Balance	Number Measured	Total Inches	Average Length	Number Per Acre			
						17	18	19	20	21	22	23	24	25	26	27	28							29	30	31
BARRON	SAND L	322	STC	8	4															2	2	2	72.0	36.0	0.006	
BURNETT	BIG MCKENZIE L	1,185	STC	22	13																11	2	430.5	39.1	0.006	
BURNETT	LITTLE YELLOW L	348	STC	9	5																5	0	209.0	41.8	0.011	
BURNETT	TWENTYSIX L	230	STC	7	4				1												4	0	160.2	40.1	0.011	
POLK	APPLE R FL	639	STC	14	8																0	8				
POLK	BONE L	1,781	STC	142	35																35	0	1320.3	37.7	0.011	
POLK	DEER L	807	STC	17	10																10	0	379.7	38.0	0.011	
WASHBURN	BASS L	188	STC	6	3																0	3				
WASHBURN	L NANCY	772	STC	16	9																3	6	123.3	41.1	0.003	
WASHBURN	MIDDLE MCKENZIE L	530	STC	12	7																2	5	86.0	44.0	0.003	
WASHBURN	SHELL L	2,580	STC	37	22																14	8	561.9	40.1	0.005	
St. Croix sub-total:				290	120	3	1	0	1	0	0	0	5	1	0	0	8	0	31	23	13	86	34	3344.9	38.9	
Grand Total:				2807	1489																	333	1156	12521.1	37.8	

Appendix F. Number of muskellunge per inch group taken during spring spearing seasons from 1985-1997.

Inch Group	Number of muskellunge in:													13 Year Total	Percent of Total
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		
13						1								1	0.0%
14														0	0.0%
15											1			1	0.0%
16			1								1			2	0.1%
17				3			1							4	0.2%
18								1						1	0.0%
19				1					1					3	0.1%
20			2							1				2	0.1%
21												1		1	0.0%
22						1					1	2	1	5	0.2%
23		1					1				1			3	0.1%
24		1						1			2	1		5	0.2%
25	1		1		1	1			2	1	1			8	0.3%
26				1	2	3	1	1	3	1	1		1	14	0.5%
27			3	3	2	2		1	1	2	1	1	3	19	0.7%
28	2		3	1	5	4	5	1	3	3	3	1	3	34	1.3%
29	2	2	7	5	3	6	4	8	4	2	2	4	9	58	2.2%
30	8	3	4	6	6	15	6	5	6	11	3	7	8	88	3.4%
31	6	3	14	9	9	24	12	8	9	14	13	12	7	140	5.4%
32	7	2	15	13	11	18	10	7	11	14	20	4	19	151	5.8%
33	3	6	12	10	8	25	11	18	12	20	14	12	15	166	6.4%
34	8	1	16	10	8	20	20	13	21	17	23	26	23	206	7.9%
35	7	7	12	10	10	26	17	11	10	26	29	23	31	219	8.4%
36	2	4	12	7	6	20	18	18	22	15	22	27	30	203	7.8%
37	8	8	17	11	10	29	20	14	15	16	26	36	31	241	9.3%
38		6	12	9	7	27	11	12	14	16	25	25	25	189	7.3%
39	2	1	10	10	6	16	7	11	10	17	18	19	30	157	6.0%
40	1	2	8	6	5	19	16	11	11	11	15	22	20	147	5.7%
41	1	2	5	9	3	12	4	5	5	10	17	28	19	120	4.6%
42	1	1	4	6	5	6	3	4	8	11	14	17	10	90	3.5%
43	2	2	3	6	3	6	5	4	4	7	16	21	14	93	3.6%
44	2		3	7		5		4	6	4	5	12	7	55	2.1%
45			4	8	2	1	5	1	1	7	8	2	10	49	1.9%
46		1	4	3		2	2		1	8	5	2	6	34	1.3%
47	3		2	1	2	3	1	1	1	1	3	8	2	28	1.1%
48		1	4	1	1	2	3	2	3	5	4	2	5	33	1.3%
49	1		2	1	1	3	1		2	3	1	3	2	20	0.8%
50	1				1		1		1	1	1		2	8	0.3%
51				1		1								2	0.1%
52														0	0.0%
53		1												1	0.0%
Total Number Measured:	68	55	180	158	117	298	185	162	187	243	297	318	333	2,601	100%
Total Length:	2,407	1,994	6,507	5,805	4,175	10,761	6,725	5,845	6,822	9,034	11,072	12,117	12,521	95,784	
Average Length:	35.4	36.2	36.2	36.7	35.7	36.1	36.4	36.1	36.5	37.2	37.3	38.1	37.6	36.8	
Total Number Speared:	86	55	196	158	118	303	185	165	188	244	299	319	333	2,649	
Percent Measured:	79.1%	100.0%	91.8%	100.0%	99.2%	98.3%	100.0%	98.2%	99.5%	99.6%	99.3%	99.7%	100.0%	98.2%	

Appendix G. Number, average length (inches), and harvest per acre (largemouth and smallmouth bass and northern pike) for various lakes during spring spearing 1997.

Tribe	County	Lake	Area	Species	Number Harvested	Number Measured	Total Inches	Average Length	Number Per Acre
STC	Barron	Bear L	1358	LMB	1	1	16.0	16.0	0.0007
STC	Barron	Lower Turtle L	276	LMB	2	2	24.7	12.4	0.0072
STC	Barron	Red Cedar L	1841	LMB	2	2	31.6	15.8	0.0011
STC	Barron	Sand L	322	LMB	1	1	15.7	15.7	0.0031
STC	Barron	Upper Turtle L	438	LMB	3	3	49.2	16.4	0.0068
RCF	Bayfield	Middle Eau Claire L	902	LMB	14	14	244.0	17.4	0.0155
RCF	Bayfield	Pike L Chain	714	LMB	1	1	16.3	16.3	0.0014
STC	Burnett	Big Mckenzie L	1185	LMB	10	10	154.2	15.4	0.0084
STC	Burnett	Devils L	1001	LMB	1	1	14.5	14.5	0.0010
STC	Burnett	Little Yellow L	348	LMB	1	1	18.8	18.8	0.0029
STC	Burnett	Rooney L	322	LMB	10	10	144.0	14.4	0.0311
STC	Burnett	Sand L	962	LMB	3	3	49.0	16.3	0.0031
LCO	Chippewa	Otter L	661	LMB	2	2	26.3	14.2	0.0030
RCF	Douglas	Lower Eau Claire L	802	LMB	3	3	43.5	14.5	0.0037
MLK	Florence	Keyes L	202	LMB	2	2	31.6	15.8	0.0099
MLK	Forest	Franklin L	892	LMB	1	1	16.3	16.3	0.0011
MLK	Oconto	Maiden L	290	LMB	1	1	17.6	17.6	0.0034
STC	Polk	Balsam L	2054	LMB	8	8	113.6	14.2	0.0039
STC	Polk	Big Butternut L	378	LMB	3	3	45.4	15.1	0.0079
STC	Polk	Big Round L	1015	LMB	2	2	26.8	13.4	0.0020
STC	Polk	Deer L	807	LMB	1	1	17.0	17.0	0.0012
STC	Polk	Half Moon L	579	LMB	3	3	54.0	18.0	0.0052
LCO	Sawyer	L Chetek	1920	LMB	1	1	14.8	14.8	0.0005
LCO	Sawyer	L of the Pines	273	LMB	1	1	17.5	17.5	0.0037
LCO	Sawyer	Round L	3054	LMB	5	5	86.8	17.4	0.0016
LCO	Sawyer	Smith L	323	LMB	1	1	12.2	12.2	0.0031
LCO	Sawyer	Whitefish L	786	LMB	2	2	30.6	15.3	0.0025
LDF	Vilas	Little St. Germaine L	980	LMB	1	1	18.8	18.8	0.0010
STC	Washburn	Balsam L	295	LMB	1	1	16.4	16.4	0.0034
STC	Washburn	L Nancy	772	LMB	2	2	28.3	14.2	0.0026
LCO	Washburn	Long L	3290	LMB	5	5	70.5	14.1	0.0015
STC	Washburn	Long L	3290	LMB	14	14	208.8	14.9	0.0043
STC	Washburn	Middle Mckenzie L	530	LMB	6	6	88.4	14.7	0.0113
Total:			32862		114	114	1765.2	15.5	0.0048
STC	Barron	Beaver Dam L	1112	SMB	1	1	12.4	12.4	0.0009
STC	Burnett	Little Yellow L	348	SMB	1	1	12.0	12.0	0.0029
MLK	Florence	Keyes L	202	SMB	3	3	46.4	15.5	0.0149
MLK	Forest	Lily L	211	SMB	1	1	18.3	18.3	0.0047
MLK	Langlade	Rolling Stone L	672	SMB	3	3	46.5	15.5	0.0045
MLK	Oconto	Maiden L	290	SMB	2	2	29.3	14.7	0.0069
MLK	Oneida	Pelican L	3585	SMB	1	1	20.0	20.0	0.0003
LCO	Rusk	Fireside Lakes	302	SMB	1	1	15.8	15.8	0.0033
RCF	Sawyer	Nelson L	2503	SMB	1	1	11.8	11.8	0.0004
LCO	Sawyer	Round L	3054	SMB	10	10	170.5	17.1	0.0033
LCO	Sawyer	Sand L	928	SMB	3	3	33.6	11.2	0.0032
BRV	Vilas	Forest L	466	SMB	1	1	19.0	19.0	0.0021
BRV	Vilas	High L	734	SMB	1	1	14.1	14.1	0.0014
LCO	Washburn	Long L	3290	SMB	2	2	29.9	15.0	0.0006
Total:			17697		31	31	479.6	15.5	0.0035
STC	Barron	Red Cedar L	1841	NOP	1	1	26.0	26.0	0.0005
STC	Barron	Upper Turtle L	438	NOP	1	1	22.1	22.1	0.0023
BRV	Bayfield	L Owen	1323	NOP	1	1	23.0	23.0	0.0008
RCF	Bayfield	Middle Eau Claire L	902	NOP	1	1	21.9	21.9	0.0011
STC	Burnett	Big Mckenzie L	1185	NOP	4	4	114.8	28.7	0.0034
RCF	Douglas	Lower Eau Claire L	802	NOP	1	1	22.3	22.3	0.0012
MLK	Florence	Keyes L	202	NOP	2	2	51.4	25.7	0.0099
MLK	Forest	L Metonga	2157	NOP	1	1	28.7	28.7	0.0005
MLK	Oneida	Pelican L	3585	NOP	2	2	28.7	28.7	0.0006
MLK	Oneida	Willow Fl	5135	NOP	1	1	21.8	21.8	0.0002
STC	Polk	Balsam L	2054	NOP	2	2	37.9	19.0	0.0010
STC	Polk	Big Butternut L	378	NOP	2	2	72.4	36.2	0.0053
STC	Polk	Big Round L	1015	NOP	1	1	22.7	22.7	0.0010
RCF	Sawyer	Nelson L	2503	NOP	1	1	20.2	20.2	0.0004
LCO	Sawyer	Round L	3054	NOP	10	10	339.9	34.0	0.0033
LCO	Sawyer	Smith L	323	NOP	1	1	21.5	21.5	0.0031
LCO	Sawyer	Whitefish L	786	NOP	4	4	110.9	27.7	0.0051
BRV	Vilas	High L	734	NOP	1	1	29.4	29.4	0.0014
Total:			28417		37	35	986.9	28.2	0.0023



Appendix H. Number of bass per inch group (largemouth and smallmouth) taken during spring spearing seasons from 1985-1997.

Inch Group	Number of bass in:													Percent of Total		
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		13 Year Total	
5															0	0.0%
6					1					1					1	0.1%
7			1												3	0.2%
8		1	2			1									2	0.1%
9	1	1	2	4	1	1						1			7	0.4%
10	1	1	2	7	7	3	1	1	2	1	2	2	1		15	0.8%
11	2	2	8	10	10	30	11	11	7	5	13	5	8		44	2.3%
12	3	6	16	21	14	35	36	16	18	41	27	30	10		156	8.1%
13	7	2	43	27	17	47	34	20	42	37	36	35	22		312	16.2%
14		2	33	21	17	26	21	21	40	38	34	38	23		353	18.3%
15		8	25	19	17	25	11	13	29	35	27	17	20		316	16.4%
16		12	30	15	19	19	9	5	16	22	18	5	15		257	13.3%
17		3	20	9	11	16	9	11	13	17	18	10	16		158	8.2%
18	1	2	15	11	4	9	6	6	15	11	7	6	6		141	7.3%
19	1		7	11	8	9	2	3	12	9	2	3	3		93	4.8%
20		1	5	7	1	2	2	2	12	4	1	1	1		47	2.4%
21	1	1	2	1	1	1	1	1	2	1	1	1	1		15	0.8%
22			1	1	1				1						5	0.3%
23															1	0.1%
24															0	0.0%
25				1						1					2	0.1%
<b>Total No. Measured:</b>	<b>17</b>	<b>39</b>	<b>210</b>	<b>144</b>	<b>111</b>	<b>215</b>	<b>144</b>	<b>112</b>	<b>198</b>	<b>256</b>	<b>185</b>	<b>152</b>	<b>145</b>	<b>1,928</b>	<b>100%</b>	
<b>Total Length:</b>	<b>255</b>	<b>602</b>	<b>3,199</b>	<b>2,275</b>	<b>1,694</b>	<b>3,246</b>	<b>2,165</b>	<b>1,708</b>	<b>3,002</b>	<b>3,931</b>	<b>2,881</b>	<b>2,315</b>	<b>2,245</b>	<b>29,519</b>		
<b>Average Length:</b>	<b>15.0</b>	<b>15.4</b>	<b>15.2</b>	<b>15.8</b>	<b>15.3</b>	<b>15.1</b>	<b>15.0</b>	<b>15.3</b>	<b>15.2</b>	<b>15.4</b>	<b>15.6</b>	<b>15.2</b>	<b>15.5</b>	<b>15.3</b>		
<b>Total No. Speared:</b>	<b>21</b>	<b>39</b>	<b>275</b>	<b>167</b>	<b>113</b>	<b>219</b>	<b>147</b>	<b>136</b>	<b>201</b>	<b>261</b>	<b>187</b>	<b>160</b>	<b>145</b>	<b>2,071</b>		
<b>Percent Measured:</b>	<b>81.0%</b>	<b>100.0%</b>	<b>76.4%</b>	<b>86.2%</b>	<b>98.2%</b>	<b>98.2%</b>	<b>98.0%</b>	<b>82.4%</b>	<b>98.5%</b>	<b>98.1%</b>	<b>98.9%</b>	<b>95.0%</b>	<b>100.0%</b>	<b>93.1%</b>		

Appendix I. Number of northern pike per inch group taken during spring spearing seasons from 1985-1997.

Inch Group	Number of northern pike in:													13 Year Total	Percent of Total			
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997					
11																	0	0.0%
12		1															0	0.0%
13			1														2	0.6%
14																	1	0.3%
15																	0	0.0%
16																	2	0.6%
17																	2	0.6%
18																	9	2.8%
19																	14	4.3%
20																	14	4.3%
21																	24	7.4%
22																	24	7.4%
23																	28	8.6%
24																	24	7.4%
25																	24	7.4%
26																	14	4.3%
27																	17	5.2%
28																	11	3.4%
29																	20	6.1%
30																	14	4.3%
31																	10	3.1%
32																	12	3.7%
33																	11	3.4%
34																	9	2.8%
35																	7	2.1%
36																	4	1.2%
37																	8	2.5%
38																	5	1.5%
39																	6	1.8%
40																	4	1.2%
41																	4	1.2%
																	2	0.6%
<b>Total No. Measured:</b>	0	12	28	45	14	32	40	18	19	29	28	26	35	326	100%			
<b>Total Length:</b>	0	312	724	1,152	334	776	986	453	527	792	744	693	987	8,479				
<b>Average Length:</b>	NA	26.0	25.9	25.6	23.9	24.2	24.6	25.2	27.7	27.3	26.6	26.7	28.2	26.0				
<b>Total No. Spared:</b>	2	13	41	59	14	34	41	30	19	30	32	30	37	362				
<b>Percent Measured:</b>	0.0%	92.3%	68.3%	76.3%	100.0%	94.1%	97.6%	60.0%	100.0%	96.7%	87.5%	86.7%	94.6%	85.3%				