Biological and Commercial Catch Statistics from the Chippewa Inter-Tribal Gill Net Fishery within Michigan Waters of Lake Superior During 2007

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ABSTRACT

The 2007 commercial inter-tribal fishery in the 1842 treaty-ceded waters of Michigan consisted of seven (7) large boats and 15 small boats, representing 22 tribal licensees from the Keweenaw Bay, Bad River and Red Cliff Bands of Lake Superior Chippewa. Gill nets were the only gear used in the fishery.

The fishing season for whitefish and lake trout was closed from November 1 through November 27 and commercial fishing was prohibited during October in seven seasonal refuges. Target fishing for lean lake trout (fishing in water < 35 fathoms) in areas outside the refuges was prohibited during October to reduce the impact of fishing on spawning stocks of lake trout. The Keweenaw Bay tribe managed their lake herring fishery through a quota system.

Fishermen reported fishing 4.83 million feet of gill net and harvesting 796,300 round pounds of fish. Whitefish was the primary target species, making up 84.4% of the total, followed by lake trout (14.3%), with the remaining 1.3% consisting of lake herring (ciscoe), siscowet, salmon, chubs, walleye, and menominee.

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ACKNOWLEDGMENTS

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INTRODUCTION

The Red Cliff, Bad River and Keweenaw Bay Bands of Lake Superior Chippewa entered into an agreement to establish an inter-tribal off-reservation assessment fishery in the western Michigan waters of Lake Superior (from the Wisconsin- Michigan state line to the West Entry in the Keweenaw Peninsula) on 23 August 1984. In 1988 tribal off-reservation commercial fishing expanded to include more fishermen and fishing in waters east of the Keweenaw Peninsula. An inter-tribal agreement was developed to manage this expanded fishery. Since 1990 Bad River and Red Cliff have managed their fishery within the guidelines of this inter-tribal agreement, while Keweenaw Bay manages their fishery through a fisheries management plan. Results of the early assessment fishery and the expanded commercial fishery have been reported annually as administrative reports of the Great Lakes Indian Fish and Wildlife Commission.

Biological and commercial fishery statistics were summarized for calendar year 2007 from the inter-tribal fishery in the 1842 treaty-ceded territory within Michigan waters of Lake Superior (Figure 1), and compared to those from previous years. Statistics were reported by management unit, grid, and gear type as indicated on individual catch reports.

Description of the Fishery

The commercial fishery consisted of seven (7) large boats and 15 small boats, representing 22 tribal licenses from the Keweenaw Bay, Bad River and Red Cliff Bands. As in previous years, the area south of a line from the East Entry of Keweenaw Peninsula to Point Abbaye (Figure 1) was open only to Keweenaw Bay small boat fishermen. Gill nets were the only gear used in the fishery during 2007.

The fishing season for whitefish and lake trout was closed from November 1 through November 27. Fishing for siscowet was prohibited in water less than 35 fathoms during the closed season for lake trout and whitefish. Commercial fishing was prohibited during October in seasonal refuges, of which four were created in 1988, and three in 1989 (Figure 1). Target fishing for lean lake trout in other areas was prohibited during October to reduce the impact of fishing on spawning stocks of lake trout. The Keweenaw Bay tribe employed a quota system for regulating lake herring harvest by its fishermen. The Bad River and Red Cliff tribes did not use this system for lake herring. Also, the three bands allowed fishing for lake herring year-round (i.e. no seasonal restriction).

Quota Management System

Since 1985, the tribes have used a quota management system to regulate lake trout harvest and to limit mortality on lake trout stocks in the 1842 inter-tribal gill net fishery within Michigan waters of Lake Superior. In 1985 and 1986, each gill net tug was assigned a lake trout quota of 3,750 or 15,000 pounds depending on tribal affiliation. Starting with the 1987-1990 time period and for each of the four management units, total allowable catch (TAC, expressed as number of fish) values were estimated for each year within the time period. The average TAC was then calculated and used as the TAC for each fishing year within the time period. A tribal fishing year began in November and ran through October of the next year. Harvest quotas applied only to lean lake trout (referred to as "lake trout" in this report). Harvest of siscowet, a form of lake trout that generally inhabits deeper water and has a higher fat content than lean lake trout, was not regulated by quotas. TAC's and tribal quotas by management unit, and each fishing year within a 4-6 year period were as follows:

UNIT		YEARS				
		Nov. 1987-Oct. 1990[1]	Nov. 1990-Oct. 1994[2]	Nov. 1994-Oct. 1999[3]	Nov.1999-Oct. 2005[4,5]	Nov. 2006-Oct. 2009[6]
MI-2	TAC	19,800	10,400	9,700	6,606	6,606
	Tribal	9,900	5,200	4,850	3,303	3,303
MI-3	TAC	5,000	7,600	6,600	4,950	4,950
	Tribal	2,500	3,800	3,300	2,475	2,475
MI-4	TAC	20,600	53,400	46,920	40,440	43,200
	Tribal	10,300	26,700	23,460	20,220	21,600
MI-5	TAC	16,100	15,700	17,080	33,130	33,130
	Tribal	4,830	4,710	5,124	16,565	16,565
Total	TAC	61,500	87,100	80,300	85,126	87,886
	Tribal	27,530	40,410	36,734	42,563	43,943

[1] GLIFWC. 1987.
[2] Ebener et al. 1989.
[3] Mattes. 1994.
[4] Mattes. 2000.
[5] Mattes. 2004.
[6] Mattes. 2006.

METHODS

Effort and harvest data were collected from mandatory daily catch reports filed bi-weekly by all fishermen who sold fish in their names, or by the boat captain who reported all effort and catch for his vessel. Gill net effort was reported as linear feet of gill net lifted. Harvest was reported in both dressed and round pounds. Species for which harvest was reported by fishermen as dressed pounds and conversion factors used to calculate round pounds are as follows:

Species	Conversion
Whitefish	1.17
Lake trout	1.25
Siscowet	1.25
Salmon and Trout	1.25
Herring	1.20
Round whitefish (menominee)	1.15
Chub	1.20

Harvest of other species (walleye, sucker, smelt, burbot, and northern pike) were reported by fishermen as round pounds.

Biological statistics were derived from biological monitoring data. Biological monitoring of catches occurred several times a month by the Keweenaw Bay Natural Resources Department, the Red Cliff Fisheries Department, and the Great Lakes Indian Fish and Wildlife Commission.

RESULTS AND DISCUSSION

Commercial Catch and Effort Statistics

Fishermen reported fishing 4.83 million feet of gill net and harvesting 796,300 round pounds of fish. Whitefish was the primary target species, making up 84.4% of the total, followed by lake trout (14.3%), with the remaining 1.3% consisting of lake herring (ciscoe), siscowet, salmon, chubs, walleye, and menominee.

Unit MI-2

Harvest. Thirty-three percent of the overall harvest was taken in MI-2 (Table 1). Of the 260,030 round pounds harvested in MI-2, 93.5% were whitefish, 5.6% lake trout, 0.6% siscowet, 0.2% herring (ciscoe), and 0.1% chub (Table 2). Lake trout harvest was highest in grid 1512 (4,245 dressed pounds), followed by grid 1414 (3,121 dressed pounds), and less than 2,500 dressed pounds were taken in each of the remaining five statistical grids fished (Figure 2). Whitefish harvest was greatest in grid 1414 (95,407 dressed pounds), followed by grids 1413 and 1315 (44,507 and 42,826 dressed pounds, respectively). Less than 15,000 pounds were taken in each of the other four grids fished (Figure 3).

Effort. Twenty-four percent of the overall gill-net effort occurred in MI-2 (Table 1) which was fished by two tribes (Table 3). Fishing effort in MI-2 was 1,171,600 feet with 35.5% (415,600 feet) occurring in grid 1414 and over 200,000 feet fished in two other grids (1413 and 1315) (Figure 4). Gill-nets of 4 ½ inch mesh accounted for all of the unit's effort (Table 2 and Figure 5).

Target Effort and Harvest. All fishing effort was targeted at whitefish and lake trout (Tables 4 and 5). Target effort (1.17 million feet) and harvest of whitefish (207,745 dressed pounds) was greater than the 1985-2007 average (341,328 feet and 61,034 dressed pounds, respectively). Target lake trout harvest (11,582 dressed pounds) was above the 1985-2007 average of 7,346 dressed pounds.

Catch Per Effort (CPE). Whitefish CPE (pounds harvested per 1,000 feet of gill-net) for targeted fishing in the seven grids fished in MI-2 ranged from 65-230 pounds (Table 4). Whitefish CPE for the seven grids combined was 177 similar to the average CPE of 179 for this unit for the 23 year period 1985-2007 (Table 5). Lake trout CPE for targeted fishing ranged from 4-98 per grid and was 10 for all grids combined, below the1985-2007 average CPE of 22 pounds.

Unit MI-3

Harvest. Thirty-eight percent of the overall harvest was taken in MI-3 (Table 1). Of the 298,797 round pounds harvested in MI-3, 97.7% were whitefish and 2.3% lake trout (Table 2). Harvest occurred in six statistical grids, where lake trout harvest was less than 2,500 dressed pounds per grid (Figure 2). Whitefish harvest was greatest in grid 1121 (164,980 dressed pounds) followed by grids 1219 and 925 (41,350 and 17,710 dressed pounds, respectively). Whitefish harvest was less than 15,000 pounds in each of the other three grids fished (Figure 3).

Effort. Thirty percent of the overall gill-net effort occurred in MI-3 (Table 1) which was fished by three tribes (Table 3). Fishing effort in MI-3 was 1,466,400 feet with 69% (1,008,000

feet) occurring in grid 1121, followed by 17% (252,000 feet) in grid 1219 (Figure 4). Gill-nets of 4 ½ inch mesh accounted for over 94% of the unit's effort (Table 2 and Figure 5).

Target Effort and Harvest. All fishing effort in MI-3 was targeted at whitefish and lake trout (Table 4). Target gill-net effort (1.47 million feet) was below the 1985-2007 average of 1.83 million feet (Table 5). Target harvest of whitefish (249,555 dressed pounds) was above the 1985-2007 average (163,281 dressed pounds). Target harvest of lake trout (5,414 dressed pounds) was below the 1985-2007 average (18,977 dressed pounds).

Catch Per Effort (CPE). Whitefish CPE (pounds harvested per 1,000 feet of gill-net) for targeted fishing in the six grids fished ranged from 124-320 pounds (Table 4). Whitefish CPE for the six grids combined was 170 pounds and above the average CPE of 89 for this unit for the 23 year period 1985-2007 (Table 5). Lake trout CPE for targeted fishing ranged from 2-15 pounds and was 4 for all grids combined, below the 1985-2007 average CPE of 10 pounds.

Unit MI-4

Harvest. Twenty percent of the overall harvest was taken in MI-4 (Table 1). Of the 160,981 round pounds harvested, 63.8% were whitefish, 31.8% lake trout, 3.0% herring, 0.9% salmon, 0.4% siscowet, and 0.1% walleye (Table 2). Harvest occurred in eight statistical grids. Lake trout harvest was highest in grids 1224 and 1423 (15,793 and 12,986 dressed pounds, respectively), and greater than 5,000 pounds in grid 1323 (Figure 2). Less than 5,000 dressed pounds were harvested in each of the other five grids fished. Whitefish harvest was greatest in grid 1125 (31,919 dressed pounds) followed by grids 1224 and 1423 (21,330 and 17,999 dressed pounds, respectively) and exceeded 10,000 pounds in grid 1323 (Figure 3). Less than 5,000 dressed pounds were harvested in each of the other four grids fished.

Effort. Twenty-eight percent of the overall gill-net effort occurred in MI-4 (Table 1) which was fished by three tribes (Table 3). Fishing effort in MI-4 was 1,363,610 feet with all but 9,470 feet being large mesh effort (Table 2). Effort was greatest in grid 1224 (379,100 feet or 28% of the unit's effort) followed by grid 1423 (357,055 feet or 26% of the unit's effort). Effort exceeded 250,000 feet in two other grids (1323 and 1125) (Figure 4). Gill-nets of 4½ inch mesh accounted for 1,082,400 feet or 79% of the unit's effort (Figure 5).

Target Effort and Harvest. The majority of fishing effort (1,345,140 feet) was targeted at whitefish and lake trout with 18,470 feet directed at lake herring (Table 4). Target effort for whitefish and lake trout (1.3 million feet) was lower than the 1985-2007 average of 3.2 million feet (Table 5). Target harvest of whitefish (87,772 dressed pounds) was below the 1985-2007 average (194,974 dressed pounds). Target harvest of lake trout (40,856 dressed pounds) was also below the 1985-2007 average (71,234 dressed pounds). Target harvest was 3,521 dressed pounds for herring.

Catch Per Effort (CPE). Whitefish CPE (pounds harvested per 1,000 feet of gill-net) for targeted fishing in the eight grids fished ranged from 21-148 pounds (Table 4). Whitefish CPE for the eight grids combined was 65 pounds and near the average CPE of 60 for this unit for the 23 year period 1985-2007 (Table 5). Lake trout CPE for targeted fishing ranged from 0-71 pounds and was 30 for all grids combined, above the 1985-2007 average CPE of 22 pounds. Herring CPE for targeted fishing was 191 dressed pounds in the one grid fished (1423).

Unit MI-5

Harvest. Ten percent of the overall harvest was taken in MI-5 (Table 1). Of the 76,493 round pounds harvested in MI-5, 44.8% were whitefish, 53.9% lake trout, 1.0% herring, and 0.2% salmon (Table 2). Harvest occurred in three statistical grids. Lake trout harvest was 13,463 in grid 1529, 10,175 in grid 1428, and 9,350 in grid 1327 (Figure 2). Whitefish harvest was 15,600 in grid 1327, 8,301 in grid 1428, and 5,412 in grid 1529 (Figure 3).

Effort. Seventeen percent of the overall gill-net effort occurred in MI-5 (Table 1) which was fished by one tribe (Table 3). Fishing effort in MI-5 was 826,500 feet with 40% (332,100 feet) occurring in grid 1529, 33% (272,400 feet) in grid 1428, and 27% (222,000 feet) in grid 1327 (Figure 4). Gill-nets of 4 ½ inch mesh accounted for all of the unit's effort (Table 2 and Figure 5).

Target Effort and Harvest. The majority of fishing effort (820,500 feet) was targeted at whitefish and lake trout with 6,000 feet directed at lake herring (Table 4). Gill net effort targeted at whitefish and lake trout (0.8 million feet) was above the 1986-2007 average of 0.4 million feet (Table 5). Target harvest of whitefish (29,254 dressed pounds) was near the 1986-2007 average (28,368 dressed pounds). Target harvest of lake trout (32,988 dressed pounds) was higher than the 1986-2007 average (20,677 dressed pounds).

Catch Per Effort (CPE). Whitefish CPE (pounds harvested per 1,000 feet of gill-net) for targeted fishing was 70 in grid 1327, 31 in grid 1428, and 16 in grid 1529 (Table 4). Whitefish CPE for the three grids combined, 36 pounds, was below the average CPE of 68 pounds for this unit for the 22 year period 1986-2007 (Table 5). Lake trout CPE for targeted fishing in the three grids combined was 40 pounds which is below the 1986-2007 average CPE of 49 pounds.

Biological Statistics

Lake Trout MI-2

Ten year classes of wild trout (6-13, 19, 37) were represented in a sample of 56 lake trout aged from MI-2 (Table 6). Mean age of wild fish was 10.0 years with fish ten years and older representing 48% of the catch.

Mean length for the 76 fish measured was 22.9 inches and mean weight for the 76 fish weighed was 4.1 pounds round. Average size at age of 7-9 year old wild lake trout has decreased and become narrower since 1985, while average size of age 10 wild fish has fluctuated due to low sample size in some years (Figure 6).

Lamprey marking rates were 0 wounds and 0 scars/100 fish (Table 7). Annual total mortality was estimated to be 46% ($Z=0.61 \pm 0.17$) for wild fish ages 10-13 (Table 8).

Lake Trout MI-3

Two age groups of hatchery fish (10 and 32) and eleven year classes of wild trout (5-13, 16, 28) were represented in a sample of 70 lake trout aged from MI-3 (Table 9). Mean age of hatchery and wild fish was 21.0 and 9.8 years, respectively. Fish ten years and older made up 56% of the wild component of the catch.

For wild fish mean length for the 83 fish measured was 23.5 inches and mean weight for the 83 fish weighed was 4.2 pounds round. Average size at age of 7-10 year old wild lake trout has decreased and become narrower since 1985 (Figure 6).

Overall lamprey-marking rates were 1.2 wounds and 0 scars/100 fish (Table 7). Annual total mortality rate was estimated at 33% (Z=0.40, $\pm$ 0.09) for wild fish ages 10-13 (Table 8).

Lake Trout MI-4

Five age groups of hatchery fish (4, 5, 8, 11, 12) and thirteen year classes of wild trout (4-16) were represented in a sample of 56 lake trout aged from MI-4 (Table 10). Mean age of hatchery and wild fish was 7.9 and 9.1 years, respectively. Fish ten years and older made up 36% of the wild component of the catch.

Mean length of the 61 fish sampled was 23.3 inches and mean weight of the 61 fish weighed was 4.5 round pounds (Table 10). The average size of wild fish (23.3 inches, 4.5 pounds) was similar to that of hatchery fish (23.3 inches, 4.7 pounds). Average length of wild fish at ages 7-10 has decreased and become narrower since 1985 (Figure 6).

Lamprey marking rates were 1.6 wounds and 3.3 scars/100 fish (Table 7) compared to 4.3 wounds and 4.6 scars/100 fish in 2006 (Mattes et al. 2008). Annual total mortality for fish ages 9-16 was estimated to be 28% (Z=0.33 $\pm$ 0.06) for wild fish and 30% (Z=0.35 $\pm$ 0.07) for wild and hatchery fish combined (Table 8).

Lake Trout MI-5

One hatchery fish (age 12) and eleven year classes of wild trout (5, 7-14, 16, 17) were represented in a sample of 41 lake trout aged from MI-5 (Table 11). Mean age of wild fish was 10.3 years with fish ten years and older representing 51% of the catch.

Mean length for the 48 fish measured was 23.1 inches and mean weight for the 47 fish weighed was 4.1 pounds round. Average length of wild fish at ages 7-10 has become narrower since 1987 (Figure 6).

Lamprey marking rates were 6.3 wounds and 0 scars/100 fish (Table 7) compared to 3.3 wounds and 9.0 scars/100 fish in 2006 (Mattes et al. 2008). Annual total mortality was estimated to be 21% (Z=0.23 $\pm$ 0.05) for wild fish ages 9-17 (Table 8).

Lake Whitefish MI-2

Eleven age groups (6-16) were represented in the 604 whitefish aged in MI-2 which had a mean age of 9.6 years (Table 12). Mean length of the 821 fish measured was 19.9 inches and mean weight of the 605 fish weighed was 2.6 round pounds. The average length of age 7 to 10 year old fish has generally been similar since 1995 (Figure 7). Annual total mortality was estimated at 46% (Z=0.62 +/-0.17) for ages 9-12.

Lake Whitefish MI-3

Twelve age groups (5-15, 17) were represented in the 1,327 whitefish aged in MI-3, which had a mean age of 9.4 years (Table 12). The 1996 and 1997 year classes (ages 10 and 11) comprised 25% and 11% of the sample, respectively, while the 1998 year class (age 9) comprised 28% of the sample. Average length of 1,998 lake whitefish measured was 19.5 inches and weight for 1,339 lake whitefish sampled averaged 2.5 round pounds. The average length of age 7 to 10 year old fish has generally been similar since 1995 (Figure 7). Annual total mortality was estimated at 39% (Z=0.50 +/-0.13) for ages 8-13.

Lake Whitefish MI-4

Eight age groups (6-13) were represented in the 102 whitefish aged in MI-4, which had a mean age of 8.9 years (Table 12). The 1996 and 1997 year classes (ages 11 and 10) comprised 11% and 15% of the sample, respectively, while the 1998 year class (age 9) comprised 27% of the sample. Average length of 150 lake whitefish measured was 21.0 inches and weight for 103 lake whitefish sampled averaged 3.4 round pounds. The average length of age 7 to 10 year old fish has generally been similar since 1997 (Figure 7). Annual total mortality was estimated at 53% (Z=0.75 +/-0.16) for ages 9-13.

Lake Whitefish MI-5

Thirteen age groups (7-18, 20) were represented in the 58 whitefish aged in MI-5 (Table 12), where mean age was 12.0 years. Average length or 59 lake whitefish measured was 22.9 inches, and weight averaged 4.6 round pounds. The average length of age 7 to 10 year old fish has generally shown the most variation of any of the units since 1995 (Figure 7). Annual total mortality was estimated at 47% (Z=0.64 +/-0.24) for ages 12-14.

Siscowet

There were twenty age groups of siscowet in the 35 fish sampled in units MI-3, MI-4, and MI-5 (Table 13) which had a mean age of 15.0 years. Mean length and weight for 38 fish sampled was 21.6 inches and 3.7 round pounds, respectively. Annual total mortality was estimated at 42% (Z=0.55 +/-0.08) for ages 15-17 for all units combined.

Lake Herring and Menominee Whitefish

Seventeen age groups (4, 6-20, 27) were represented in 90 lake herring aged from units MI-3, MI-4 and MI-5, where mean age was 11.2 (N=48), 7.6 (N=16), and 12.5 (N=26), respectively (Table 14). For MI-3, MI-4 and MI-5 lake herring mean length was 15.5, 15.6, 19.1 inches and mean weight was 1.2, 1.2, and 2.3 round pounds, respectively. For the eighth consecutive year otoliths replaced scale samples as the aging structure used to assign age to individual fish. Total annual mortality was estimated at 44% (Z=0.58 +/-0.14) for ages 15-18.

No menominee whitefish were sampled in 2007.

Coho and Chinook Salmon

Six coho salmon were sampled from MI-4 and MI-5 in 2007 (Table 15). Mean age was 3.5 years, mean length 16.8 inches, and mean weight 2.0 round pounds. In addition, six chinook salmon were sampled from MI-4 with a mean age of 3.5 years, mean length of 23.1 inches, and mean weight of 4.7 round pounds (Table 16).

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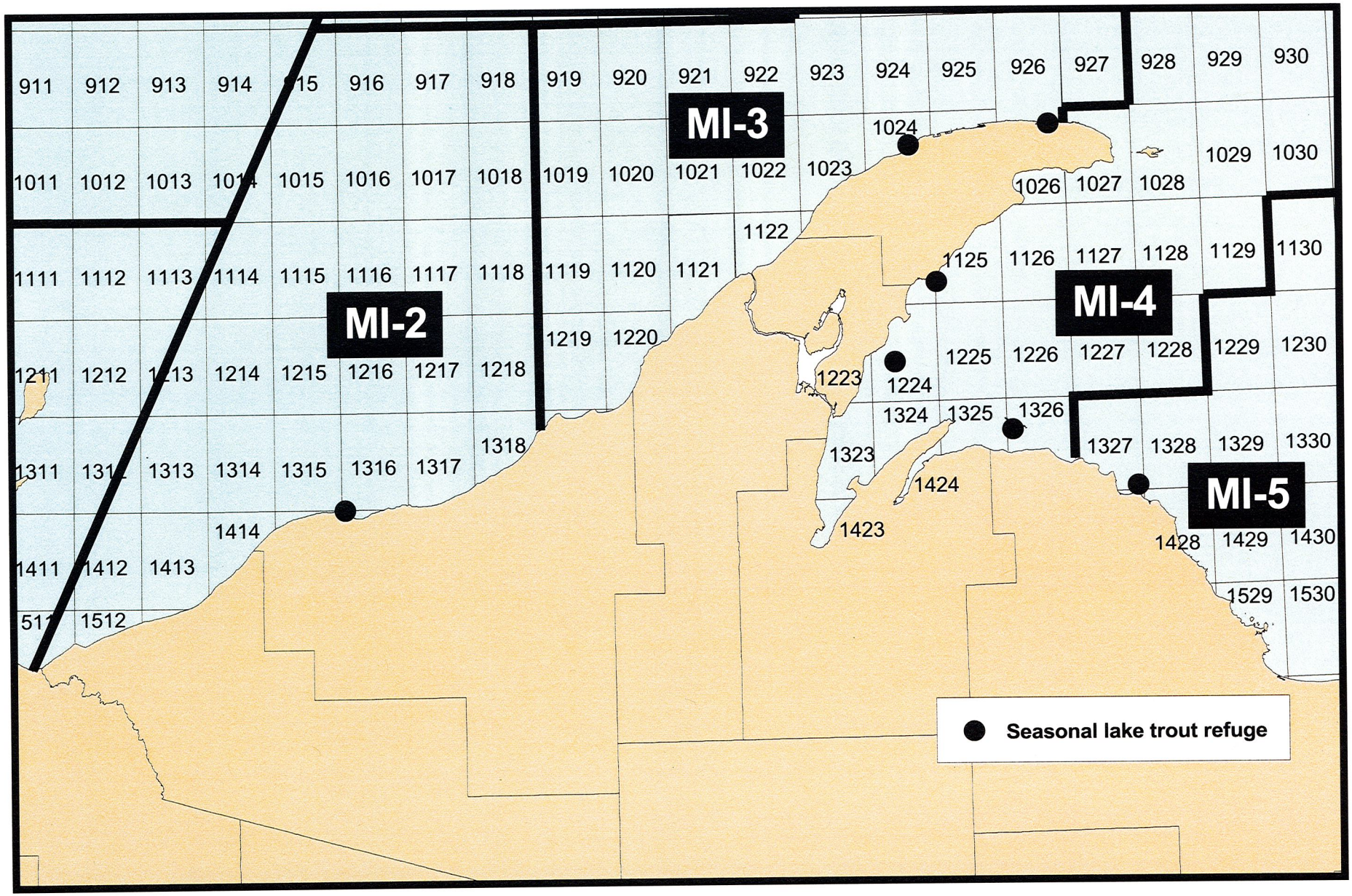


Figure 1. Management units and statistical grids in the 1842 treaty ceded area within Michigan waters of Lake Superior.

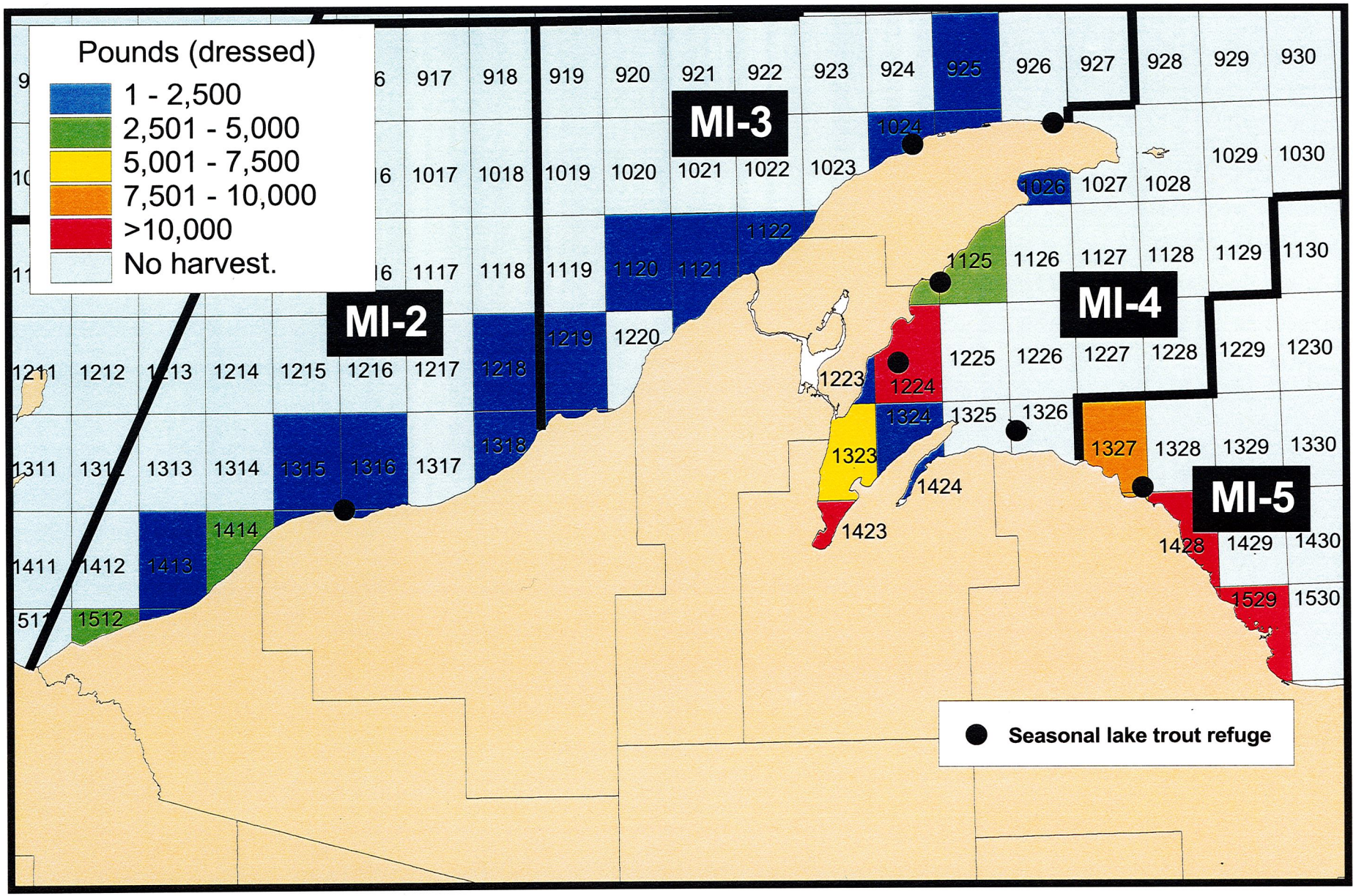


Figure 2. Lake trout harvest (dressed pounds) by statistical grid in the 1842 treaty ceded area within Michigan waters of Lake Superior during 2007.

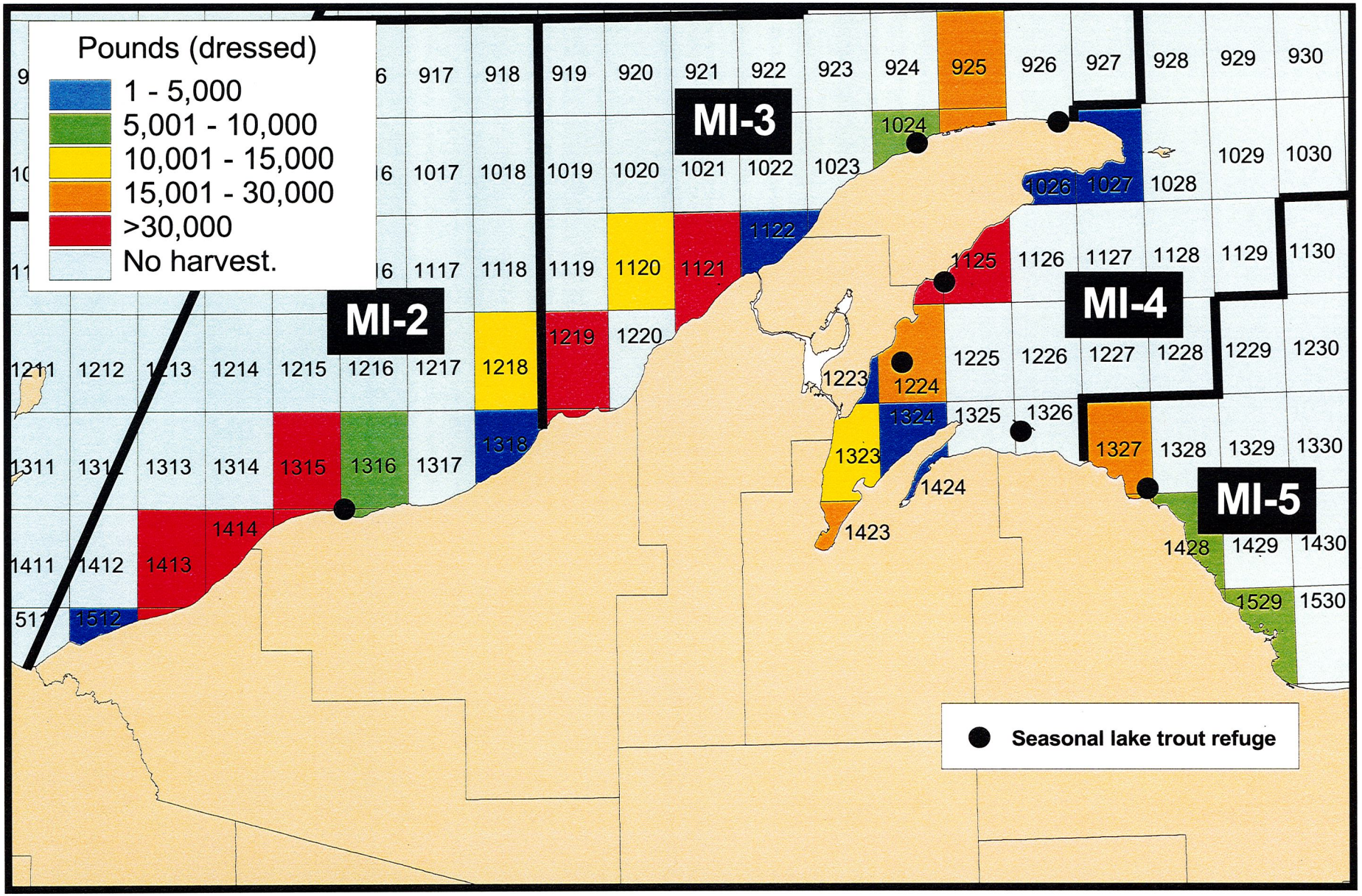


Figure 3. Whitefish harvest (dressed pounds) by statistical grid in the 1842 treaty ceded area within Michigan waters of Lake Superior during 2007.

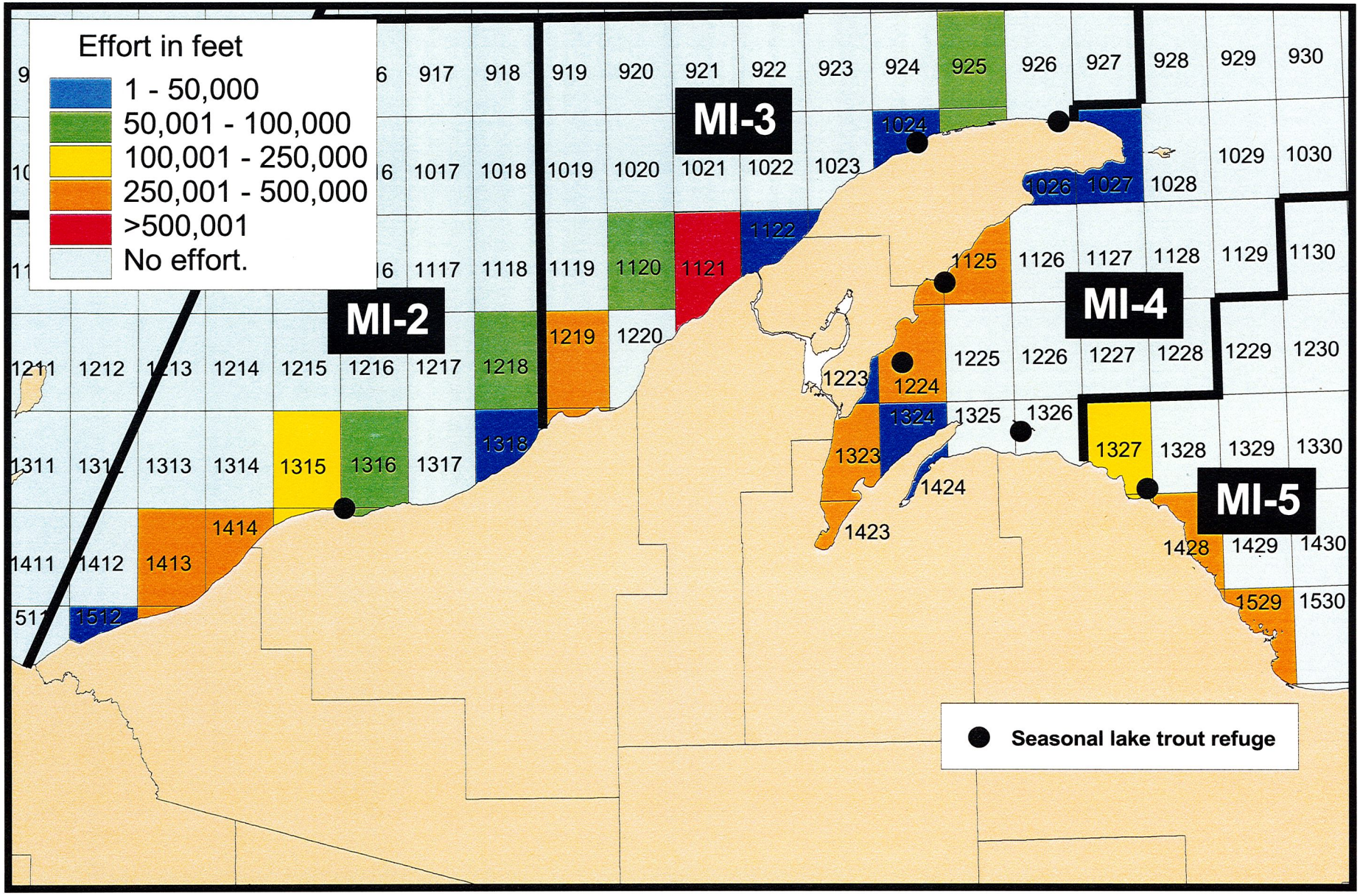
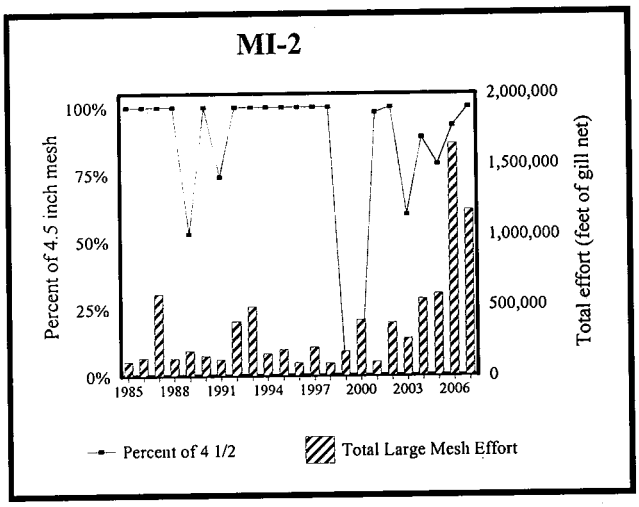
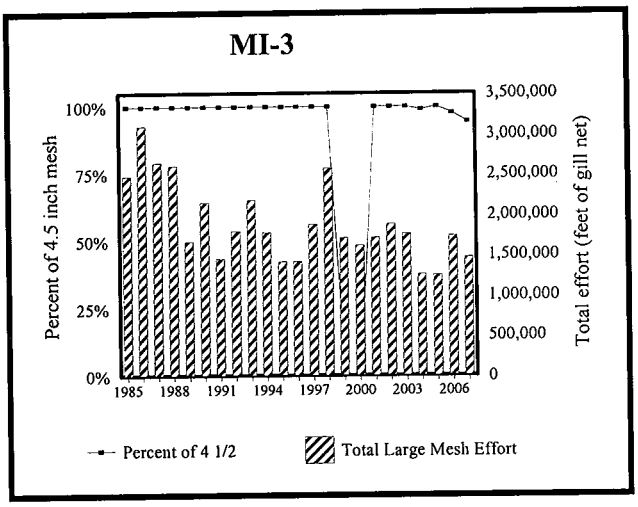
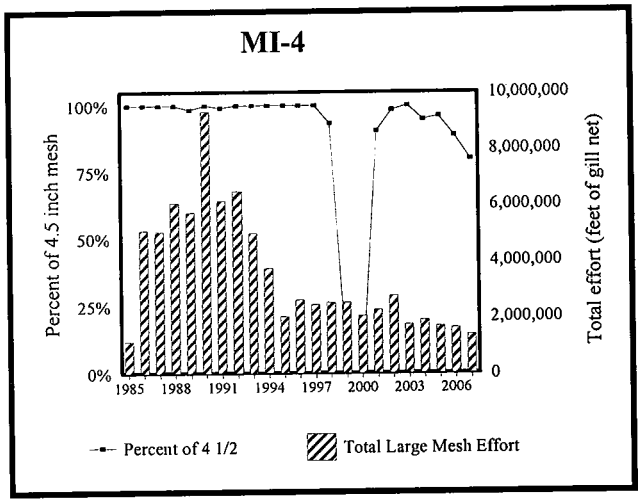


Figure 4. Effort in feet by statistical grid in the 1842 treaty ceded area within Michigan waters of Lake Superior during 2007.







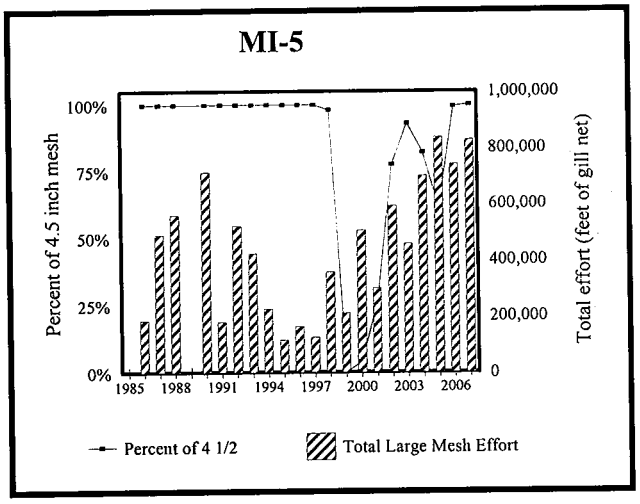
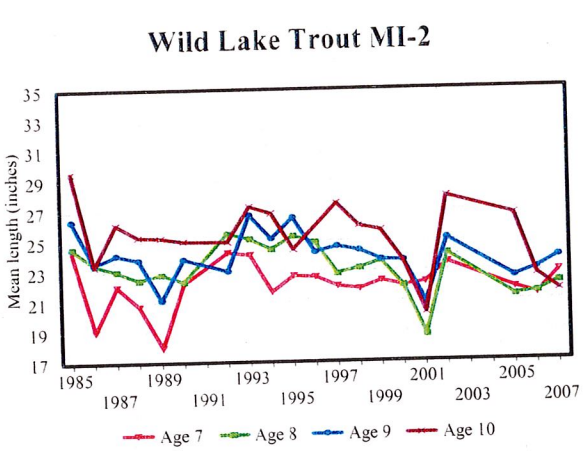
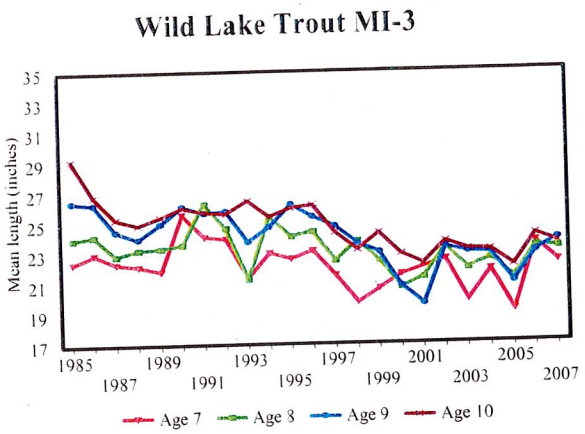
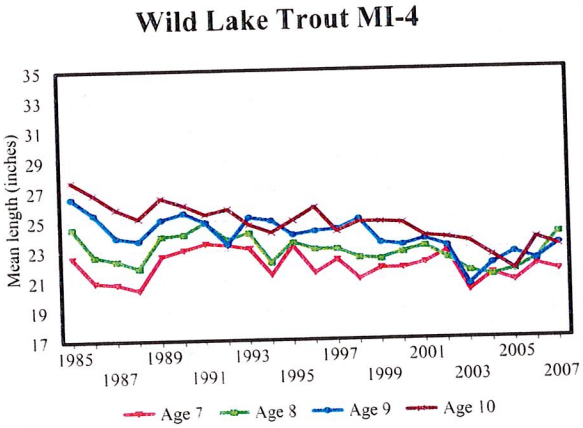


Figure 5. Total tribal large mesh gill net effort and percent composed of 4 1/2 inch mesh by management unit, 1985 to 2007.







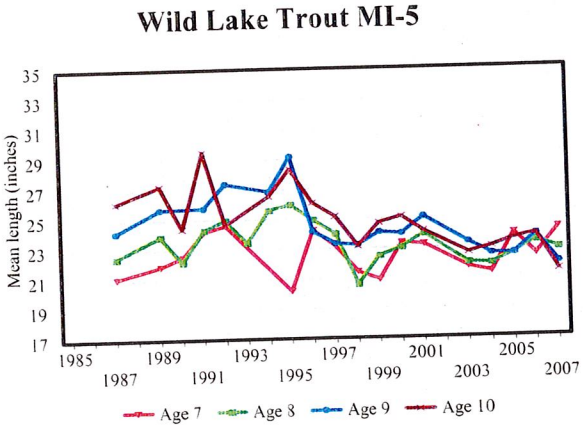


Figure 6. Trends in average length (inches) of wild lake trout (ages 7-10) in Michigan management units within the 1842 treaty ceded area, from 1985-2007.

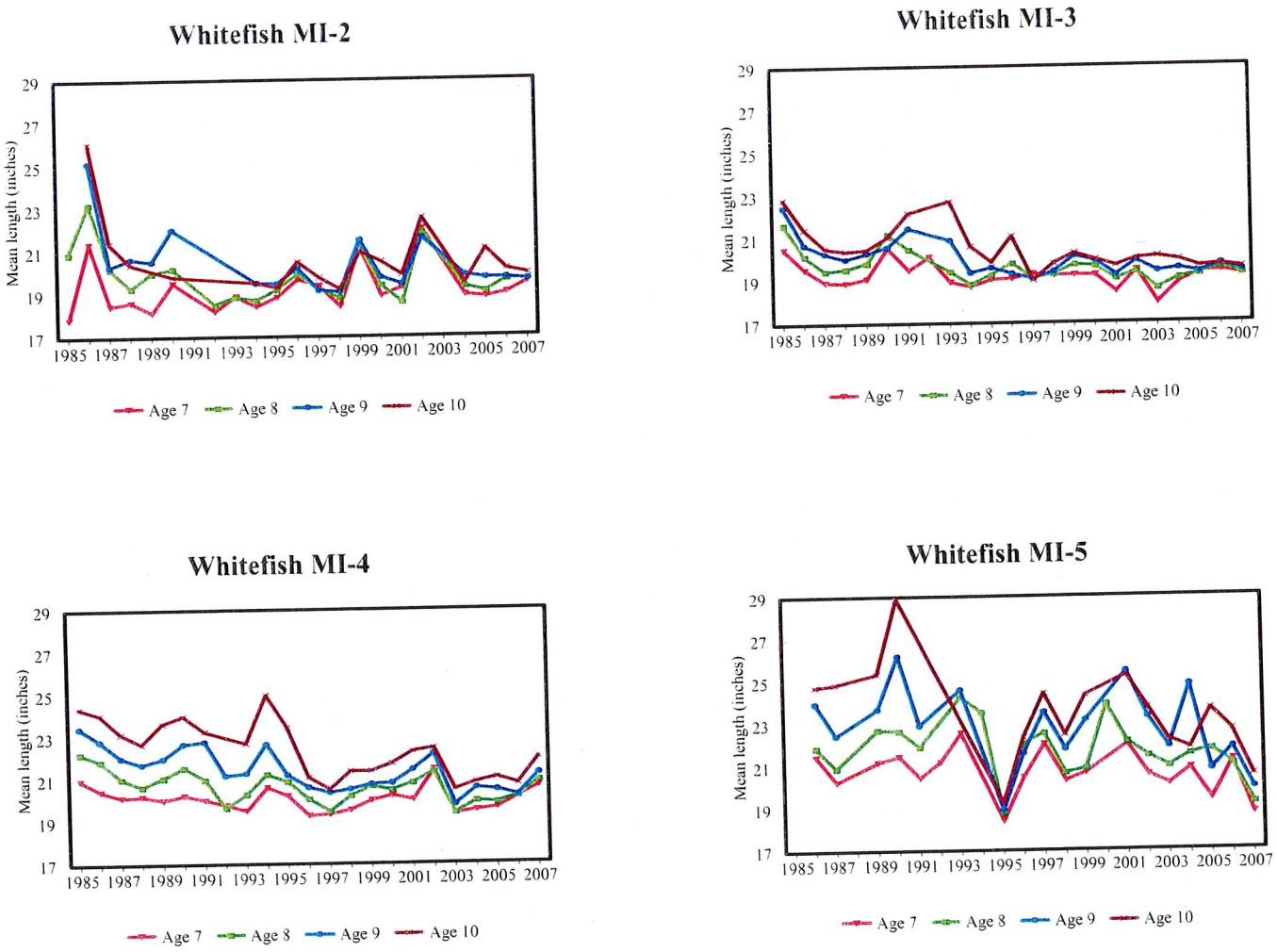


Figure 7. Trends in average length (inches) of whitefish (ages 7-10) in Michigan management units within the 1842 treaty ceded area, from 1985-2007.

Table 1. Total tribal commercial gill net effort (feet) and harvest (pounds) by management unit, grid, and species from the 1842 ceded area within Michigan waters of Lake Superior in 2007.

Management Unit	Grid	Effort	Percent of Total Effort*	Lake trout	Whitefish	Siscowet	Herring	Salmon	Chub	Menominee	Walleye	Sucker	Smelt	Burbot	Total Harvest Round Pounds	Percent of Total Harvest
MI-2	1218	80,000	6.8%	725	11,472	0	0	0	0	0	0	0	0	0		
	1315	236,800	20.2%	1,033	42,826	40	0	0	31	0	0	0	0	0		
	1316	89,200	7.6%	542	7,888	26	0	0	0	0	0	0	0	0		
	1318	42,400	3.6%	911	2,750	0	0	0	0	0	0	0	0	0		
	1413	264,400	22.6%	1,005	44,507	17	0	0	110	0	0	0	0	0		
	1414	415,600	35.5%	3,121	95,407	1,256	400	0	139	0	0	0	0	0		
	1512	43,200	3.7%	4,245	2,895	0	0	0	0	0	0	0	0	0		
Subtotals:	Effort:	1,171,600	24.3%													
	Dressed Pounds:			11,582	207,745	1,339	400	0	0	0						
	Round Pounds:			14,477.5	243,061.7	1,673.8	480.0	0.0	336.0	0	0	0	0	0	260,028.9	32.7%
MI-3	925	82,000	5.6%	1,156	17,710	0	0	0	0	0	0	0	0	0		
	1024	28,800	2.0%	299	9,215	0	0	0	36	0	0	0	0	0		
	1120	60,000	4.1%	880	11,900	0	0	0	0	0	0	0	0	0		
	1121	1,008,000	68.7%	1,815	164,980	0	0	0	0	0	0	0	0	0		
	1122	35,600	2.4%	445	4,400	0	0	0	6	0	0	0	0	0		
	1219	252,000	17.2%	819	41,350	0	0	0	0	0	0	0	0	0		
Subtotals:	Effort:	1,466,400	30.4%													
	Dressed Pounds:			5,414	249,555	0	0	0	0	0						
	Round Pounds:			6,767.5	291,979.4	0.0	0.0	0.0	50.4	0	0	0	0	0	298,797.3	37.5%
MI-4	1026	31,200	2.3%	1,469	4,621	0	0	0	0	0	0	0	0	0		
	1027	2,000	0.1%	0	75	0	0	0	0	0	0	0	0	0		
	1125	284,000	20.8%	3,320	31,919	0	0	0	0	0	51	0	0	0		
	1223	11,850	0.9%	837	248	0	0	2	0	0	0	0	0	0		
	1224	379,100	27.8%	15,793	21,330	3	0	2	3	0	0	0	0	0		
	1323	294,405	21.6%	6,405	11,408	60	80	203	0	0	46	0	0	0		
	1324	4,000	0.3%	81	207	21	0	0	0	0	0	0	0	0		
	1423	357,055	26.2%	12,986	17,999	430	3,933	947	0	2	129	0	0	0		
Subtotals:	Effort:	1,363,610	28.2%													
	Dressed Pounds:			40,891	87,807	514	4,013	1,154	0	0						
	Round Pounds:			51,113.8	102,734.2	642.5	4,815.6	1,442.5	3.6	2	226	0	0	0	160,980.5	20.2%
MI-5	1327	222,000	26.9%	9,350	15,600	0	0	0	0	0	0	0	0	0		
	1428	272,400	33.0%	10,175	8,301	0	656	37	0	0	0	0	0	0		
	1529	332,100	40.2%	13,463	5,412	0	8	95	0	0	0	0	0	0		
Subtotals:	Effort:	826,500	17.1%													
	Dressed Pounds:			32,988	29,313	0	664	132	0	0						
	Round Pounds:			41,235.0	34,296.2	0.0	796.8	165.0	0.0	0	0	0	0	0	76,493.0	9.6%
Grand Totals:	Effort:	4,828,110														
	Dressed Pounds:			90,875	574,420	1,853	5,077	1,286	0	0						
	Round Pounds:			113,593.8	672,071.4	2,316.3	6,092.4	1,607.5	390.0	2	226	0	0	0	796,299.7	

*For subtotals, percentage refers to percent of overall effort fished in unit.

Table 2. Tribal commercial gill net effort (feet) harvest (pounds) by management unit, gill net mesh size, and species from the 1842 ceded area within Michigan waters of Lake Superior in 2007.

Unit	Mesh	Effort	Percent of Total Effort*	Lake trout	Whitefish	Siscowet	Herring	Salmon	Chub	Menominee	Walleye	Total Harvest Round Pounds
MI-2	4.5	1,171,600	100.0%	11,582	207,745	1,339	400	0	280	0	0	
Subtotals:	Effort:	1,171,600	24.3%									
	Dressed Pounds:			11,582	207,745	1,339	400	0	280	0		
	Round Pounds:			14,477.5	243,061.7	1,673.8	480.0	0.0	336.0	0.0	0.0	260,028.9
Percent of Unit Harvest:				5.6%	93.5%	0.6%	0.2%	0.0%	0.1%	0.0%	0.0%	
MI-3	4.5	1,384,400	94.4%	4,258	231,845	0	0	0	42	0	0	
	4.5-5	82,000	5.6%	1,156	17,710	0	0	0	0	0	0	
Subtotals:	Effort:	1,466,400	30.4%									
	Dressed Pounds:			5,414	249,555	0	0	0	42	0		
	Round Pounds:			6,767.5	291,979.4	0.0	0.0	0.0	50.4	0.0	0.0	298,797.3
Percent of Unit Harvest:				2.3%	97.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
MI-4	2.5	2,720	0.2%	0	0	0	695	0	0	0	0	
	3.0	6,750	0.5%	0	0	0	2,483	31	0	0	0	
	4.5	1,082,400	79.4%	35,972	69,371	362	835	979	3	2	71	
	5.0	207,740	15.2%	4,402	5,772	152	0	144	0	0	104	
	4.5-5	64,000	4.7%	517	12,664	0	0	0	0	0	51	
Subtotals:	Effort:	1,363,610	28.2%									
	Dressed Pounds:			40,891	87,807	514	4,013	1,154	3	2		
	Round Pounds:			51,113.8	102,734.2	642.5	4,815.6	1,442.5	3.6	2.4	226.0	160,980.5
Percent of Unit Harvest:				31.8%	63.8%	0.4%	3.0%	0.9%	0.0%	0.0%	0.1%	
MI-5	4.5	826,500	100.0%	32,988	29,313	0	664	132	0	0	0	
Subtotals:	Effort:	826,500	17.1%									
	Dressed Pounds:			32,988	29,313	0	664	132	0	0		
	Round Pounds:			41,235.0	34,296.2	0.0	796.8	165.0	0.0	0.0	0.0	76,493.0
Percent of Unit Harvest:				53.9%	44.8%	0.0%	1.0%	0.2%	0.0%	0.0%	0.0%	
Totals:	Effort:	4,828,110										
	Dressed Pounds:			90,875	574,420	1,853	5,077	1,286	325	2		
	Round Pounds:			113,593.8	672,071.4	2,316.3	6,092.4	1,607.5	390.0	2.4	226.0	796,299.7
Percent of Total Harvest:				14.3%	84.4%	0.3%	0.8%	0.2%	0.0%	0.0%	0.0%	

*For subtotals, percentage refers to percent of overall effort fished in unit.

Table 3. Total and target harvest, effort, and CPE by management unit and tribe for lake trout, whitefish, and siscowet in Michigan waters of Lake Superior in 2007.*

		TOTAL HARVEST							TARGET HARVEST							
			Whitefish		Lake trout		Siscowet			Whitefish		Lake trout			Siscowet	
Unit	Tribe	Effort	pounds	CPE	pounds	CPE	pounds	CPE	Effort	pounds	CPE	pounds	CPE	Effort	pounds	CPE
MI-2	Bad River	669,600	107,692	161	7,449	11	1,339	2	669,600	107,692	161	7,449	11	0	0	0
	Keweenaw Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red Cliff	502,000	100,053	199	4,133	8	0	0	502,000	100,053	199	4,133	8	0	0	0
	subtotal	1,171,600	207,745	177	11,582	10	1,339	1	1,171,600	207,745	177	11,582	10	0	0	0
MI-3	Bad River	38,400	10,715	279	354	9	0	0	38,400	10,715	279	354	9	0	0	0
	Keweenaw Bay	26,000	2,900	112	390	15	0	0	26,000	2,900	112	390	15	0	0	0
	Red Cliff	1,402,000	235,940	168	4,670	3	0	0	1,402,000	235,940	168	4,670	3	0	0	0
	subtotal	1,466,400	249,555	170	5,414	4	0	0	1,466,400	249,555	170	5,414	4	0	0	0
MI-4	Bad River	9,600	805	84	35	4	0	0	9,600	805	84	35	4	0	0	0
	Keweenaw Bay	1,078,010	54,362	50	37,207	35	514	0	1,059,540	54,327	51	37,172	35	0	0	0
	Red Cliff	276,000	32,640	118	3,649	13	0	0	276,000	32,640	118	3,649	13	0	0	0
	subtotal	1,363,610	87,807	64	40,891	30	514	0	1,345,140	87,772	65	40,856	30	0	0	0
MI-5	Bad River	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Keweenaw Bay	826,500	29,313	35	32,988	40	0	0	820,500	29,254	36	32,988	40	0	0	0
	Red Cliff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	subtotal	826,500	29,313	35	32,988	40	0	0	820,500	29,254	36	32,988	40	0	0	0
Total	Bad River	717,600	119,212	166	7,838	11	1,339	2	717,600	119,212	166	7,838	11	0	0	0
	Keweenaw Bay	1,930,510	86,575	45	70,585	37	514	0	1,906,040	86,481	45	70,550	37	0	0	0
	Red Cliff	2,180,000	368,633	169	12,452	6	0	0	2,180,000	368,633	169	12,452	6	0	0	0
	All Tribes	4,828,110	574,420	119	90,875	19	1,853	0	4,803,640	574,326	120	90,840	19	0	0	0

*Pounds are in dressed weight, effort is feet of net lifted and CPE is pounds/1000 ft of net lifted. Target species was assigned to each lift based on reported target species from individual catch reports. Target effort for whitefish and lake trout was combined.

Table 4. Gill net harvest, effort, and CPE for target species by management unit and grid in Michigan waters of Lake Superior in 2007.*

		Whitefish			Lake trout			Siscowet			Salmon			Herring		
Unit	Grid	Effort	pounds	CPE	Effort	pounds	CPE	Effort	pounds	CPE	Effort	pounds	CPE	Effort	pounds	CPE
MI-2	1218	80,000	11,472	143	80,000	725	9									
	1315	236,800	42,826	181	236,800	1,033	4									
	1316	89,200	7,888	88	89,200	542	6									
	1318	42,400	2,750	65	42,400	911	21									
	1413	264,400	44,507	168	264,400	1,005	4									
	1414	415,600	95,407	230	415,600	3,121	8									
	1512	43,200	2,895	67	43,200	4,245	98									
	subtotal	1,171,600	207,745	177	1,171,600	11,582	10	0	0	0	0	0	0	0	0	0
MI-3	925	82,000	17,710	216	82,000	1,156	14									
	1024	28,800	9,215	320	28,800	299	10									
	1120	60,000	11,900	198	60,000	880	15									
	1121	1,008,000	164,980	164	1,008,000	1,815	2									
	1122	35,600	4,400	124	35,600	445	13									
	1219	252,000	41,350	164	252,000	819	3									
	subtotal	1,466,400	249,555	170	1,466,400	5,414	4	0	0	0	0	0	0	0	0	0
MI-4	1026	31,200	4,621	148	31,200	1,469	47									
	1027	2,000	75	38	2,000	0	0									
	1125	284,000	31,919	112	284,000	3,320	12									
	1223	11,850	248	21	11,850	837	71									
	1224	379,100	21,330	56	379,100	15,793	42									
	1323	294,405	11,408	39	294,405	6,405	22									
	1324	4,000	207	52	4,000	81	20									
	1423	338,585	17,964	53	338,585	12,951	38							18,470	3,521	191
	subtotal	1,345,140	87,772	65	1,345,140	40,856	30	0	0	0	0	0	0	18,470	3,521	191
MI-5	1327	222,000	15,600	70	222,000	9,350	42									
	1428	266,400	8,242	31	266,400	10,175	38							6,000	282	47
	1529	332,100	5,412	16	332,100	13,463	41									
	subtotal	820,500	29,254	36	820,500	32,988	40	0	0	0	0	0	0	6,000	282	47
Grand Total		4,803,640	574,326	120	4,803,640	90,840	19	0	0	0	0	0	0	24,470	3,803	155

*Pounds are in dressed weight, effort is feet of net lifted and CPE is pounds/1,000 ft of net lifted. Target species was assigned to each lift based on reported target species from individual catch reports. Target effort for whitefish and lake trout was combined.

Table 5. Tribal commercial gill net effort (feet), harvest (dressed pounds), and catch per unit effort (CPE, pounds/1,000 feet) for whitefish, lake trout and siscowet by management unit and year from the 1842 ceded area within Michigan waters of Lake Superior from 1985-2007. Target effort for whitefish and lake trout was combined.

		Whitefish				Lake trout				Siscowet			
Unit	Year	Target effort	Target harvest	CPE	Total Harvest	Target effort	Target harvest	CPE	Total Harvest	Target effort	Target harvest	CPE	Total Harvest
MI-2	1985	101,100	5,664	56	5,664	101,100	9,238	91	9,238	0	0	0	45
	1986	128,000	16,234	127	16,234	128,000	7,550	59	7,550	0	0	0	63
	1987	576,200	80,246	139	80,246	576,200	18,568	32	18,633	3,200	0	0	2,059
	1988	98,000	2,809	29	2,809	98,000	17,374	177	17,374	24,000	4,945	206	5,377
	1989	178,000	33,511	188	33,511	178,000	13,488	76	13,488	0	0	0	4,181
	1990	113,000	22,867	202	24,012	113,000	2,789	25	3,269	28,000	8,145	291	13,308
	1991	136,800	32,003	234	32,003	136,800	5,273	39	5,273	0	0	0	812
	1992	217,000	44,814	207	45,377	217,000	2,290	11	2,332	166,000	25,946	156	27,476
	1993	419,100	74,220	177	74,473	419,100	7,780	19	8,263	52,400	10,029	191	18,680
	1994	148,200	17,629	119	17,629	148,200	7,790	53	7,790	5,000	747	149	1,990
	1995	155,000	11,236	73	12,160	155,000	9,729	63	10,104	15,000	3,307	221	6,682
	1996	89,600	4,418	49	4,418	89,600	7,777	87	7,777	1,200	3	3	189
	1997	196,300	19,512	99	19,512	196,300	10,675	54	11,302	5,000	1,608	322	2,311
	1998	85,400	10,250	120	10,250	85,400	3,125	37	3,125	0	0	0	250
	1999	170,100	31,466	185	31,466	170,100	1,130	7	1,130	0	0	0	3,628
	2000	391,800	120,494	308	120,494	391,800	3,925	10	3,925	0	0	0	3,911
	2001	95,000	16,944	178	16,944	95,000	463	5	463	0	0	0	1,483
	2002	371,800	43,377	117	43,377	371,800	3,582	10	3,582	0	0	0	6,667
	2003	261,600	37,887	145	37,887	261,600	2,910	11	2,910	0	0	0	1,700
	2004	526,900	80,959	154	80,959	526,900	5,745	11	5,745	0	0	0	26
	2005	577,600	129,062	223	129,062	577,600	7,103	12	7,103	0	0	0	280
	2006	1,642,450	360,434	219	360,434	1,642,450	9,072	6	9,072	0	0	0	705
	2007	1,171,600	207,745	177	207,745	1,171,600	11,582	10	11,582	0	0	0	1,339
Average:		341,328	61,034	179	61,159	341,328	7,346	22	7,436	13,035	2,380	183	4,485
MI-3	1985	2,475,200	309,525	125	309,525	2,475,200	31,501	13	31,501	0	0	0	6,098
	1986	2,936,200	265,269	90	266,919	2,936,200	39,682	14	39,888	161,000	26,172	163	44,384
	1987	2,098,900	136,353	65	145,245	2,098,900	36,409	17	37,340	538,800	58,797	109	78,320
	1988	2,427,300	222,321	92	225,440	2,427,300	32,677	14	33,158	176,400	21,934	124	34,289
	1989	1,596,000	134,078	84	134,182	1,596,000	28,215	18	28,224	68,000	10,660	157	22,461
	1990	2,127,500	110,615	52	110,615	2,127,500	28,361	13	28,361	20,000	2,967	148	28,771
	1991	1,329,900	62,714	47	65,264	1,329,900	22,507	17	23,790	123,400	14,458	117	30,005
	1992	1,675,200	119,291	71	120,176	1,675,200	19,537	12	19,912	84,600	8,272	98	27,350
	1993	2,100,100	172,270	82	172,488	2,100,100	16,958	8	17,255	63,700	5,933	93	22,052
	1994	1,703,800	73,556	43	74,632	1,703,800	12,651	7	13,433	71,000	5,053	71	22,099
	1995	1,408,400	91,358	65	91,358	1,408,400	8,013	6	8,013	0	0	0	9,774
	1996	1,359,700	135,822	100	136,622	1,359,700	9,843	7	10,798	56,000	2,750	49	6,277
	1997	1,854,100	136,221	74	136,971	1,854,100	15,954	9	16,435	18,000	1,546	86	13,270
	1998	2,556,700	267,336	105	267,411	2,556,700	24,629	10	24,759	9,500	400	42	11,706
	1999	1,706,300	178,485	105	178,485	1,706,300	12,430	7	12,430	0	0	0	11,455
	2000	1,609,300	204,065	127	204,065	1,609,300	8,951	6	8,951	0	0	0	3,389
	2001	1,711,600	154,154	90	154,154	1,711,600	17,246	10	17,246	0	0	0	7,819
	2002	1,879,000	85,980	46	85,980	1,879,000	19,558	10	19,558	0	0	0	8,986
	2003	1,759,000	196,274	112	196,274	1,759,000	12,585	7	12,585	0	0	0	0
	2004	1,255,400	67,579	54	67,579	1,255,400	9,973	8	9,973	0	0	0	0
	2005	1,246,000	118,185	95	118,185	1,246,000	4,738	4	4,738	0	0	0	0
	2006	1,731,000	264,460	153	264,460	1,731,000	12,714	7	12,714	0	0	0	56
	2007	1,466,400	249,555	170	249,555	1,466,400	5,414	4	5,414	0	0	0	0
Average:		1,826,652	163,281	89	164,156	1,826,652	18,719	10	18,977	60,452	6,911	114	16,894
MI-4	1985	1,083,275	218,666	202	219,376	1,083,275	43,118	40	44,289	0	0	0	241
	1986	4,864,900	526,710	108	527,148	4,864,900	129,258	27	129,565	105,800	25,924	245	32,038
	1987	4,110,190	300,332	73	301,898	4,110,190	71,863	18	72,864	768,200	136,596	178	160,297
	1988	5,547,065	245,246	44	246,854	5,547,065	117,982	21	119,281	266,000	34,653	130	53,689
	1989	6,781,675	371,247	55	372,637	6,781,675	112,829	17	114,353	70,000	21,781	311	58,127
	1990	8,557,900	377,190	44	382,839	8,557,900	133,645	16	139,272	600,500	38,606	64	81,902
	1991	5,945,200	278,295	47	286,046	5,945,200	94,581	16	104,481	789,300	55,800	71	96,699
	1992	5,152,100	299,967	58	313,370	5,152,100	74,849	15	86,074	950,750	46,489	49	96,550
	1993	3,939,425	165,440	42	176,357	3,939,425	65,184	17	76,105	747,500	55,090	74	92,518
	1994	2,801,325	88,866	32	95,085	2,801,325	53,075	19	62,290	559,050	38,703	69	60,395
	1995	1,529,225	74,466	49	84,682	1,529,225	47,471	31	61,986	376,000	35,363	94	51,510
	1996	2,096,400	101,931	49	108,219	2,096,400	43,737	21	50,828	336,900	23,662	70	38,361
	1997	2,238,988	127,998	57	129,103	2,238,988	54,929	25	56,302	137,986	41,753	303	65,555
	1998	2,202,700	136,100	62	139,384	2,202,700	60,014	27	63,419	196,870	19,377	98	33,038
	1999	2,338,100	141,873	61	143,432	2,338,100	69,671	30	70,896	79,400	14,920	188	25,154
	2000	1,922,025	128,261	67	129,288	1,922,025	78,318	41	79,097	43,700	6,616	151	17,851
	2001	2,193,800	114,051	52	114,867	2,193,800	66,726	30	67,347	22,800	6,949	305	34,091
	2002	2,735,450	160,561	59	160,564	2,735,450	91,897	34	91,897	0	0	0	19,050
	2003	1,714,600	158,437	92	158,437	1,714,600	45,406	27	45,406	0	0	0	500
	2004	1,864,550	147,536	79	147,594	1,864,550	49,185	26	49,208	0	0	0	664
	2005	1,660,670	142,676	86	142,676	1,660,670	41,026	25	41,026	0	0	0	123
	2006	1,601,855	90,777	57	90,833	1,601,855	52,758	33	52,857	3,375	165	49	1,538
	2007	1,345,140	87,772	65	87,807	1,345,140	40,856	30	40,891	0	0	0	514
Average:		3,227,242	194,974	60	198,195	3,227,242	71,234	22	74,771	263,223	26,193	100	44,365

Table 5. Continued.

		Whitefish				Lake trout				Siscowet			
Unit	Year	Target effort	Target harvest	CPE	Total Harvest	Target effort	Target harvest	CPE	Total Harvest	Target effort	Target harvest	CPE	Total Harvest
MI-5	1986	180,000	25,205	140	25,205	180,000	10,667	59	10,667	4,000	750	188	1,772
	1987	440,000	32,095	73	33,126	440,000	13,509	31	13,509	48,000	2,502	52	6,269
	1988	551,900	47,233	86	47,363	551,900	32,105	58	32,105	6,000	333	56	5,449
	1989	225,500	42,809	190	42,809	225,500	12,661	56	12,661	0	0	0	2,785
	1990	706,000	80,394	114	80,394	706,000	18,490	26	18,490	0	0	0	10,026
	1991	305,500	24,355	80	24,540	305,500	7,789	26	7,899	36,000	405	11	9,787
	1992	426,000	35,827	84	37,169	426,000	8,042	19	8,977	72,000	2,970	41	8,672
	1993	416,000	21,375	51	21,522	416,000	25,555	61	25,597	4,500	206	46	2,833
	1994	211,000	5,318	25	5,388	211,000	24,974	118	24,974	14,000	290	21	2,878
	1995	113,400	9,288	82	9,288	113,400	8,445	75	8,445	0	0	0	1,839
	1996	161,400	7,672	48	7,672	161,400	8,040	50	8,040	0	0	0	1,033
	1997	102,300	17,997	176	18,831	102,300	5,249	51	6,105	8,000	200	25	1,855
	1998	280,300	23,950	85	24,452	280,300	14,942	53	16,247	74,000	1,989	27	4,023
	1999	178,000	12,213	69	12,813	178,000	18,342	103	19,824	15,500	1,222	79	4,038
	2000	481,800	44,454	92	44,842	481,800	48,030	100	48,479	7,500	578	77	3,073
	2001	292,700	22,949	78	22,949	292,700	6,377	22	7,321	0	0	0	0
	2002	576,600	31,159	54	31,329	576,600	23,010	40	23,010	0	0	0	1,849
	2003	454,500	14,988	33	14,988	454,500	37,706	83	37,706	0	0	0	5
	2004	705,700	20,742	29	20,742	705,700	31,827	45	31,827	0	0	0	480
	2005	835,070	29,985	36	29,988	835,070	29,505	35	29,530	1,190	60	50	383
	2006	738,700	44,839	61	44,839	738,700	36,650	50	36,668	0	0	0	0
	2007	820,500	29,254	36	29,313	820,500	32,988	40	32,988	0	0	0	0
Average:		418,312	28,368	68	28,616	418,312	20,677	49	20,958	13,213	523	40	3,139
All units	1985	3,659,575	533,855	146	534,565	3,659,575	83,857	23	85,028	0	0	0	6,384
	1986	8,109,100	833,418	103	835,506	8,109,100	187,157	23	187,670	270,800	52,846	195	78,257
	1987	7,225,290	549,026	76	560,515	7,225,290	140,349	19	142,346	1,358,200	197,895	146	246,945
	1988	8,624,265	517,609	60	522,466	8,624,265	200,138	23	201,918	472,400	61,865	131	98,804
	1989	8,781,175	581,645	66	583,139	8,781,175	167,193	19	168,726	138,000	32,441	235	87,554
	1990	11,504,400	591,066	51	597,860	11,504,400	183,285	16	189,392	648,500	49,718	77	134,007
	1991	7,717,400	397,367	51	407,853	7,717,400	130,150	17	141,443	948,700	70,663	74	137,303
	1992	7,470,300	499,899	67	516,092	7,470,300	104,718	14	117,295	1,273,350	83,677	66	160,048
	1993	6,874,625	433,305	63	444,840	6,874,625	115,477	17	127,220	868,100	71,258	82	136,083
	1994	4,864,325	185,369	38	192,734	4,864,325	98,490	20	108,487	649,050	44,793	69	87,362
	1995	3,206,025	186,348	58	197,488	3,206,025	73,658	23	88,548	391,000	38,670	99	69,805
	1996	3,707,100	249,843	67	256,931	3,707,100	69,397	19	77,443	394,100	26,415	67	45,860
	1997	4,391,688	301,728	69	304,417	4,391,688	86,807	20	90,144	168,986	45,107	267	82,991
	1998	5,125,100	437,636	85	441,497	5,125,100	102,710	20	107,550	280,370	21,766	78	49,017
	1999	4,392,500	364,037	83	366,196	4,392,500	101,573	23	104,280	94,900	16,142	170	44,275
	2000	4,404,925	497,274	113	498,689	4,404,925	139,224	32	140,452	51,200	7,194	141	28,224
	2001	4,293,100	308,098	72	308,914	4,293,100	90,812	21	92,377	22,800	6,949	305	43,393
	2002	5,562,850	321,077	58	321,250	5,562,850	138,047	25	138,047	0	0	0	36,552
	2003	4,189,700	407,586	97	407,586	4,189,700	98,607	24	98,607	0	0	0	2,205
	2004	4,352,550	316,816	73	316,874	4,352,550	96,730	22	96,753	0	0	0	1,170
	2005	4,319,340	419,908	97	419,911	4,319,340	82,372	19	82,397	1,190	60	50	786
	2006	5,714,005	760,510	133	760,566	5,714,005	111,194	19	111,311	3,375	165	49	2,299
	2007	4,803,640	574,326	120	574,420	4,803,640	90,840	19	90,875	0	0	0	1,853
Average:		5,795,347	446,424	77	450,883	5,795,347	117,078	20	121,231	349,349	35,984	103	68,747

Table 6. Age and size composition of hatchery (H) and wild (N) lake trout in tribal commercial harvests from unit MI-2 during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

Unit	Origin	Age	Number Aged	Number Measured	Length (in.) mean	Length (in.) sd	Number Weighed	Weight (lbs) mean	Weight (lbs) sd
MI-2									
	H								
		23	1	1	41.2		1	18.0	
Sample Size:			1	1			1		
Means:		23.0			41.2			18.0	
	N								
			0	20	23.2	4.0	20	4.5	3.3
		6	1	1	23.0		1	4.0	
		7	8	8	22.9	1.3	8	4.3	1.3
		8	8	8	22.2	2.3	8	3.7	1.1
		9	12	12	23.8	1.6	12	4.1	0.9
		10	15	15	21.6	2.2	15	3.2	1.1
		11	4	4	22.6	1.8	4	3.3	0.8
		12	4	4	21.9	1.5	4	3.2	0.2
		13	2	2	24.5	2.1	2	4.9	1.3
		19	1	1	21.1		1	2.8	
		37	1	1	33.5		1	19.5	
Sample Size:			56	76			76		
Means:		10.0			22.9	2.9		4.1	2.6
Sample Size:			57	77			77		
Means:		10.2			23.1	3.6		4.3	3.0

Table 7. Lamprey wounding and scarring rates (marks/100 fish) on lake trout, per Lake Superior Technical Committee protocol, captured in the tribal commercial harvests from management units in the 1842 ceded area within Michigan waters of Lake Superior during 2007.

Unit	Length Category (Inches)	Fish Examined	Type AI, AII, AIII Wounds	Wounds per 100 fish	Scars	Scars per 100 fish
MI-2						
	2: 17-20.9	21	0	0.0	0	0.0
	3: 21-24.9	43	0	0.0	0	0.0
	4: 25-28.9	9	0	0.0	0	0.0
	5: > 29	4	0	0.0	0	0.0
	Total:	77	0	0.0	0	0.0
MI-3						
	2: 17-20.9	13	0	0.0	0	0.0
	3: 21-24.9	46	1	2.2	0	0.0
	4: 25-28.9	24	0	0.0	0	0.0
	5: > 29	2	0	0.0	0	0.0
	Total:	85	1	1.2	0	0.0
MI-4						
	1: < 17	1	0	0.0	0	0.0
	2: 17-20.9	11	1	9.1	0	0.0
	3: 21-24.9	37	0	0.0	1	2.7
	4: 25-28.9	11	0	0.0	1	9.1
	5: > 29	1	0	0.0	0	0.0
	Total:	61	1	1.6	2	3.3
MI-5						
	2: 17-20.9	6	0	0.0	0	0.0
	3: 21-24.9	38	0	0.0	0	0.0
	4: 25-28.9	2	0	0.0	0	0.0
	5: > 29	2	3	150.0	0	0.0
	Total:	48	3	6.3	0	0.0

Table 8. Catch curve mortality and survival rates on lake trout from management units in the 1842 ceded area within Michigan waters of Lake Superior for data collected January-December 1988-2007.

		Wild and Hatchery Lake Trout Combined					Wild Lake Trout				
Management Unit	Year	Ages	Instantaneous total mortality Z	95% confidence limit for Z	Annual total mortality A	Annual Survival S	Ages	Instantaneous total mortality Z	95% confidence limit for Z	Annual total mortality A	Annual Survival S
MI-2	2007	10-13	0.61	+/- 0.17	0.46	0.54	10-13	0.61	+/- 0.17	0.46	0.54
	2006	7-13	0.25	+/- 0.03	0.22	0.78	7-13	0.25	+/- 0.03	0.22	0.78
	2005	6-17	0.23	+/- 0.05	0.21	0.79	6-17	0.23	+/- 0.05	0.21	0.79
	2002	9-11	0.46	+/- 0.03	0.37	0.63	9-11	0.46	+/- 0.03	0.37	0.63
	2001	9-15	0.34	+/- 0.10	0.29	0.71	9-15	0.33	+/- 0.10	0.28	0.72
	2000	9-13	0.22	+/- 0.30	0.20	0.80	9-13	0.22	+/- 0.34	0.20	0.80
	1999	7-13	0.29	+/- 0.16	0.25	0.75	7-13	0.26	+/- 0.16	0.23	0.77
	1998	7-13	0.39	+/- 0.11	0.32	0.68	7-13	0.39	+/- 0.11	0.32	0.68
	1990	8-12	0.71	+/- 0.25	0.51	0.49	8-11	0.75	+/- 0.42	0.53	0.47
	1988	9-13	0.41	+/- 0.31	0.33	0.67	9-13	0.41	+/- 0.31	0.33	0.67
MI-3	2007	10-13	0.41	+/- 0.10	0.34	0.66	10-13	0.40	+/- 0.09	0.33	0.67
	2006	9-11	0.50	+/- 0.01	0.39	0.61	9-11	0.60	+/- 0.04	0.45	0.55
	2005	9-15	0.32	+/- 0.08	0.27	0.73	9-15	0.32	+/- 0.08	0.27	0.73
	2004	8-17	0.39	+/- 0.05	0.32	0.68	8-17	0.39	+/- 0.04	0.32	0.68
	2003	7-14	0.29	+/- 0.07	0.25	0.87	7-14	0.28	+/- 0.08	0.24	0.87
	2002	7-20	0.31	+/- 0.04	0.27	0.73	7-20	0.31	+/- 0.04	0.27	0.73
	2000	7-11	0.20	+/- 0.45	0.18	0.82	7-11	0.20	+/- 0.45	0.18	0.81
	1999	7-16	0.04	+/- 0.09	0.20	0.80	7-16	0.22	+/- 0.10	0.20	0.80
	1997	7-11	0.21	+/- 0.20	0.19	0.81	7-11	0.18	+/- 0.21	0.17	0.84
	1996	8-13	0.28	+/- 0.19	0.24	0.76	8-13	0.24	+/- 0.27	0.21	0.79
	1995	8-11	0.56	+/- 0.33	0.43	0.57	8-11	0.52	+/- 0.33	0.41	0.60
	1992	7-13	0.37	+/- 0.36	0.31	0.69	Insufficient data.				
	1991	8-11	0.40	+/- 0.33	0.33	0.67	8-11	0.47	+/- 0.35	0.38	0.63
	1989	8-11	0.64	+/- 0.09	0.47	0.53	8-12	0.72	+/- 0.08	0.51	0.49
	1988	11-13	0.78	+/- 0.45	0.54	0.46	9-13	0.65	+/- 0.40	0.48	0.52

Table 8. Continued.

		Wild and Hatchery Lake Trout Combined					Wild Lake Trout				
Management Unit	Year	Ages	Instantaneous total mortality Z	95% confidence limit for Z	Annual total mortality A	Annual Survival S	Ages	Instantaneous total mortality Z	95% confidence limit for Z	Annual total mortality A	Annual Survival S
MI-4	2007	9-16	0.35	+/- 0.07	0.30	0.70	9-16	0.33	+/- 0.06	0.28	0.72
	2006	9-15	0.59	+/- 0.09	0.45	0.55	9-15	0.56	+/- 0.08	0.43	0.57
	2005	8-18	0.31	+/- 0.06	0.27	0.73	8-18	0.29	+/- 0.06	0.25	0.75
	2004	8-15	0.30	+/- 0.04	0.26	0.74	8-15	0.26	+/- 0.04	0.23	0.88
	2003	8-17	0.27	+/- 0.04	0.24	0.88	8-17	0.26	+/- 0.05	0.23	0.88
	2002	7-12	0.27	+/- 0.06	0.24	0.76	7-12	0.23	+/- 0.07	0.21	0.79
	2001	7-15	0.37	+/- 0.06	0.31	0.69	7-15	0.36	+/- 0.05	0.30	0.70
	2000	5-13	0.27	+/- 0.52	0.24	0.76	6-13	0.32	+/- 0.59	0.28	0.72
	1999	7-12	0.25	+/- 0.03	0.22	0.78	7-12	0.20	+/- 0.07	0.18	0.82
	1998	7-12	0.30	+/- 0.13	0.26	0.74	7-12	0.22	+/- 0.17	0.20	0.80
	1997	7-12	0.34	+/- 0.12	0.29	0.71	7-12	0.46	+/- 0.18	0.37	0.63
	1996	7-12	0.57	+/- 0.15	0.43	0.57	7-12	0.56	+/- 0.16	0.43	0.57
	1995	7-12	0.25	+/- 0.17	0.22	0.78	7-12	0.20	+/- 0.23	0.18	0.82
	1994	7-12	0.31	+/- 0.09	0.27	0.73	7-12	0.28	+/- 0.10	0.24	0.76
	1993	6-11	0.30	+/- 0.24	0.26	0.74	6-11	0.35	+/- 0.33	0.30	0.71
	1992	5-11	0.45	+/- 0.08	0.36	0.64	5-11	0.43	+/- 0.11	0.35	0.65
	1991	6-11	0.58	+/- 0.10	0.44	0.56	6-11	0.59	+/- 0.13	0.45	0.55
	1990	6-11	0.59	+/- 0.09	0.45	0.55	6-11	0.72	+/- 0.15	0.51	0.49
	1989	7-11	0.71	+/- 0.22	0.51	0.49	7-11	0.79	+/- 0.40	0.55	0.45
	1988	8-13	0.54	+/- 0.28	0.42	0.58	9-13	0.91	+/- 0.13	0.60	0.40
MI-5	2007	9-17	0.23	+/- 0.05	0.21	0.79	9-17	0.23	+/- 0.05	0.21	0.79
	2006	8-13	0.66	+/- 0.10	0.48	0.52	8-13	0.66	+/- 0.10	0.48	0.52
	2005	8-17	0.33	+/- 0.03	0.28	0.72	8-17	0.33	+/- 0.03	0.28	0.72
	2004	8-15	0.44	+/- 0.06	0.36	0.64	8-15	0.47	+/- 0.06	0.37	0.63
	2003	12-22	0.27	+/- 0.05	0.24	0.88	12-22	0.26	+/- 0.05	0.23	0.88
	2001	7-15	0.28	+/- 0.07	0.24	0.76	7-15	0.27	+/- 0.07	0.24	0.76
	2000	10-16	0.17	+/- 0.26	0.16	0.84	10-16	0.19	+/- 0.34	0.17	0.83
	1991	5-8	0.60	+/- 0.45	0.45	0.55	5-8	0.74	+/- 0.56	0.52	0.48

Table 9. Age and size composition of hatchery (H) and wild (N) lake trout in tribal commercial harvests from unit MI-3 during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

			Number	Number	Length (in.)		Number	Weight (lbs)	
Unit	Origin	Age	Aged	Measured	mean	sd	Weighed	mean	sd
MI-3									
	H								
		10	1	1	23.7		1	4.4	
		32	1	1	35.4		1	17.9	
Sample Size:			2	2			2		
Means:		21.0			29.5	8.3		11.2	9.5
	N								
			0	15	22.5	2.8	15	3.8	1.3
		5	1	1	21.4		1	3.3	
		6	4	4	21.3	1.2	4	3.1	0.5
		7	8	8	22.3	1.9	8	3.5	1.0
		8	8	8	23.2	1.5	8	3.9	0.6
		9	9	9	23.8	2.5	9	4.3	1.2
		10	17	17	23.5	2.1	17	4.1	1.1
		11	8	8	24.4	2.0	8	4.7	1.2
		12	6	6	24.8	1.8	6	4.9	0.8
		13	5	5	25.4	1.2	5	4.8	0.3
		16	1	1	23.0		1	3.9	
		28	1	1	36.0		1	16.0	
Sample Size:			68	83			83		
Means:		9.8			23.5	2.6		4.2	1.7
Sample Size:			70	85			85		
Means:		10.2			23.7	2.9		4.4	2.2

Table 10. Age and size composition of hatchery (H) and wild (N) lake trout in tribal commercial harvests from unit MI-4 during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

Unit	Origin	Age	Number Aged	Number Measured	Length (in.) mean	Length (in.) sd	Number Weighed	Weight (lbs) mean	Weight (lbs) sd
MI-4									
	H								
			0	1	23.8		1	5.3	
		4	3	3	20.0	3.1	3	3.7	2.0
		5	1	1	24.9		1	5.0	
		8	3	3	24.0	1.5	3	4.9	1.2
		11	2	2	23.7	0.1	2	4.4	0.0
		12	2	2	25.6	0.0	2	5.6	0.1
Sample Size:			11	12			12		
Means:		7.9			23.3	2.5		4.7	1.2
	N								
			0	4	23.8	2.8	4	4.6	1.9
		4	2	2	19.6	0.1	2	2.4	0.1
		5	3	3	19.7	2.1	3	2.7	0.8
		6	4	4	21.8	2.1	4	3.6	0.8
		7	2	2	21.5	2.5	2	3.4	0.9
		8	6	6	24.0	2.3	6	4.9	1.6
		9	12	12	23.2	1.6	12	4.2	0.9
		10	4	4	23.1	1.2	4	4.2	0.7
		11	4	4	23.6	1.3	4	4.6	0.7
		12	3	3	24.0	4.1	3	5.2	3.8
		13	1	1	30.8		1	10.6	
		14	2	2	25.4	2.8	2	5.4	1.1
		15	1	1	26.1		1	5.2	
		16	1	1	28.8		1	9.9	
Sample Size:			45	49			49		
Means:		9.1			23.3	2.7		4.5	1.9
Sample Size:			56	61			61		
Means:		8.9			23.3	2.6		4.5	1.7

Table 11. Age and size composition of hatchery (H) and wild (N) lake trout in tribal commercial harvests from unit MI-5 during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

			Number	Number	Length (in.)		Number	Weight (lbs)	
Unit	Origin	Age	Aged	Measured	mean	sd	Weighed	mean	sd
MI-5									
	H								
		12	1	1	24.5		1	4.4	
Sample Size:			1	1			1		
Means:		12.0			24.5			4.4	
	N								
			0	6	24.0	2.8	5	4.8	2.7
		5	1	1	22.9		1	3.9	
		7	1	1	24.2		1	4.7	
		8	8	8	22.9	1.5	8	4.0	1.0
		9	10	10	21.9	1.9	10	3.5	1.0
		10	5	5	21.4	0.6	5	3.3	0.4
		11	5	5	22.5	0.8	5	3.8	0.4
		12	2	2	23.7	0.5	2	4.5	0.9
		13	4	4	23.5	1.0	4	4.3	0.9
		14	2	2	23.4	1.3	2	4.1	0.9
		16	2	2	25.3	3.3	2	4.3	0.2
		17	1	1	32.8		1	12.5	
Sample Size:			41	47			46		
Means:		10.3			23.1	2.3		4.1	1.7
Sample Size:			42	48			47		
Means:		10.4			23.1	2.3		4.1	1.7

Table 12. Age and size composition of whitefish in tribal commercial harvests from management units in the 1842 ceded area within Michigan waters of Lake Superior during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

Unit	Age	Number Aged	Number Measured	Length (in.) mean	sd	Number Weighed	Weight (lbs) mean	sd
MI-2								
		0	217	19.9	1.3	4	2.3	0.4
	6	3	3	18.7	0.8	3	2.1	0.2
	7	29	29	19.5	1.0	29	2.5	0.4
	8	108	108	19.7	1.0	107	2.5	0.4
	9	176	176	19.6	0.9	174	2.5	0.4
	10	148	148	19.9	1.1	148	2.6	0.5
	11	90	90	20.0	1.3	90	2.7	0.6
	12	26	26	20.3	1.3	26	2.8	0.6
	13	12	12	20.4	1.4	12	2.8	0.6
	14	7	7	21.1	1.9	7	3.2	0.8
	15	4	4	22.5	1.3	4	4.1	1.0
	16	1	1	24.8		1	5.4	
Sample Size:		604	821			605		
Means:	9.6			19.9	1.2		2.6	0.5
MI-3								
		0	673	19.5	1.2	13	2.4	0.6
	5	1	1	16.0		1	1.3	
	6	12	12	19.4	1.0	12	2.5	0.4
	7	85	85	19.2	1.0	85	2.4	0.4
	8	254	253	19.3	1.0	254	2.4	0.4
	9	378	377	19.4	1.1	377	2.4	0.4
	10	336	336	19.5	1.1	336	2.5	0.4
	11	147	147	19.9	1.4	147	2.7	0.6
	12	73	73	20.0	1.4	73	2.7	0.8
	13	25	25	19.4	0.9	25	2.4	0.4
	14	9	9	20.5	1.1	9	2.7	0.5
	15	4	4	22.6	2.0	4	3.3	1.0
	17	3	3	25.8	0.6	3	5.8	1.2
Sample Size:		1,327	1,998			1,339		
Means:	9.4			19.5	1.2		2.5	0.5

Table 12. Continued.

Unit	Age	Number Aged	Number Measured	Length (in.) mean	sd	Number Weighed	Weight (lbs) mean	sd
MI-4								
		0	48	20.3	1.4	1	1.8	
	6	7	7	20.4	0.6	7	3.2	0.3
	7	14	14	20.6	1.8	14	3.0	0.8
	8	21	21	20.9	1.3	21	3.1	0.8
	9	27	27	21.2	1.5	27	3.3	1.0
	10	15	15	22.0	1.7	15	3.8	1.5
	11	11	11	23.0	2.1	11	4.2	1.2
	12	6	6	21.9	2.5	6	4.0	2.0
	13	1	1	22.6		1	3.9	
Sample Size:		102	150			103		
Means:	8.9			21.0	1.7		3.4	1.1
MI-5								
		0	1	21.8		1	3.9	
	7	1	1	18.7		1	2.5	
	8	4	4	19.2	1.6	4	2.7	0.7
	9	8	8	19.9	1.6	8	2.8	0.6
	10	10	10	20.5	1.6	10	3.1	0.6
	11	6	6	22.9	1.3	6	4.3	0.8
	12	9	9	23.3	1.7	9	4.6	1.2
	13	4	4	24.5	0.8	4	5.1	0.7
	14	5	5	24.1	2.2	5	4.7	1.4
	15	1	1	27.5		1	7.7	
	16	4	4	27.4	0.7	4	7.8	0.9
	17	1	1	27.5		1	8.5	
	18	4	4	27.1	0.6	4	7.6	0.9
	20	1	1	29.3		1	9.0	
Sample Size:		58	59			59		
Means:	12.0			22.9	3.1		4.6	2.0

Table 13. Age and size composition of siscowet in tribal commercial harvests from management units in the 1842 ceded area within Michigan waters of Lake Superior during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

Unit	Age	Number Aged	Number Measured	Length (in.) mean	sd	Number Weighed	Weight (lbs) mean	sd
MI-3								
		0	2	14.0	1.2	2	0.7	0.1
	5	4	4	16.8	0.8	4	1.5	0.3
	7	3	3	18.0	4.3	3	1.4	0.3
	8	1	1	17.0		1	1.1	
	9	1	1	18.1		1	2.0	
	10	2	2	22.3	2.2	2	3.9	1.4
	12	1	1	27.8		1	6.6	
	13	1	1	20.2		1	2.0	
	14	2	2	20.6	0.7	2	2.3	0.9
	15	3	3	22.8	3.3	3	3.7	2.2
	16	1	1	22.3		1	3.1	
	17	1	1	22.1		1	3.5	
	18	2	2	20.8	0.9	2	2.7	0.5
	20	1	1	15.2		1	0.9	
	23	1	1	22.1		1	3.3	
	24	2	2	26.2	4.6	2	6.0	3.2
	27	3	3	29.2	3.2	3	9.3	3.3
	30	1	1	31.0		1	8.2	
	33	1	1	32.9		1	15.2	
Sample Size:		31	33			33		
Means:	15.5			21.6	5.3		3.8	3.5
MI-4								
		0	1	23.2		1	4.2	
	6	1	1	19.6		1	2.4	
	13	1	1	21.5		1	2.9	
	16	1	1	24.6		1	4.4	
Sample Size:		3	4			4		
Means:	11.7			22.2	2.2		3.5	1.0
MI-5								
	11	1	1	20.4		1	2.3	
Sample Size:		1	1			1		
Means:	11.0			20.4			2.3	
Sample Size:		35	38			38		
Means:	15.0			21.6	5.0		3.7	3.3

Table 14. Age and size composition of lake herring in tribal commercial harvests from management units in the 1842 ceded area within Michigan waters of Lake Superior during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

		Number	Number	Length (in.)		Number	Weight (lbs)	
Unit	Age	Aged	Measured	mean	sd	Weighed	mean	sd
MI-3								
		0	7	14.2	0.6	7	0.8	0.3
	4	1	1	16.0		1	1.2	
	6	3	3	17.1	1.6	3	1.7	0.6
	7	3	3	16.4	0.9	3	1.5	0.3
	8	4	4	14.6	1.2	4	1.1	0.3
	9	9	9	14.6	1.1	9	0.9	0.2
	10	5	5	15.5	1.2	5	1.2	0.4
	11	7	7	15.4	2.3	7	1.2	0.6
	12	3	3	16.5	2.5	3	1.4	0.6
	14	3	3	15.0	1.2	3	0.9	0.3
	15	2	2	16.4	0.6	2	1.4	0.0
	16	3	3	16.4	1.0	3	1.5	0.3
	17	2	2	16.4	0.6	2	1.5	0.2
	19	1	1	14.7		1	1.0	
	20	1	1	17.2		1	1.7	
	27	1	1	18.2		1	2.1	
Sample Size:		48	55			55		
Means:	11.2			15.5	1.6		1.2	0.4
MI-4								
	4	2	2	14.7	0.4	2	0.8	0.2
	6	1	1	14.0		1	0.8	
	7	5	5	15.8	1.4	5	1.1	0.5
	8	3	3	14.7	1.1	3	0.8	0.3
	9	3	3	15.6	1.5	3	1.1	0.4
	10	1	1	16.1		1	2.9	
	12	1	1	19.7		1	2.1	
Sample Size:		16	16			16		
Means:	7.6			15.6	1.6		1.2	0.6
MI-5								
		0	3	18.3	1.3	3	1.9	0.5
	4	1	1	18.5		1	2.2	
	7	4	4	19.1	0.6	4	2.4	0.4
	8	3	3	18.5	0.3	3	2.2	0.2
	9	1	1	19.3		1	2.3	
	11	1	1	19.3		1	1.7	
	13	1	1	19.3		1	2.3	
	14	2	2	19.4	0.2	2	2.2	0.2
	15	5	5	19.8	0.5	5	2.6	0.2
	16	4	4	19.1	0.6	4	2.2	0.2
	17	3	3	18.5	0.2	3	2.2	0.1
	18	1	1	20.1		1	2.5	
Sample Size:		26	29			29		
Means:	12.5			19.1	0.7		2.3	0.3

Table 15. Age and size composition of coho salmon in tribal commercial harvests during 2007. Weight is in round pounds, length is in inches, and sd=standard deviation.

Unit	Age	Number Aged	Number Measured	Length (in.) mean	sd	Number Weighed	Weight (lbs) mean	sd
MI-4								
	2	2	2	17.8	3.6	2	2.8	2.0
	3	1	1	17.5		1	2.4	
Sample Size:		3	3			3		
Means:	2.3			17.7	2.6		2.6	1.4
MI-5								
	4	1	1	17.1		1	1.8	
	5	2	2	15.2	1.1	2	1.2	0.2
Sample Size:		3	3			3		
Means:	4.7			15.8	1.3		1.4	0.3
Sample Size:		6	6			6		
Means:	3.5			16.8	2.1		2.0	1.2

Table 16. Age and size composition of chinook salmon in tribal commercial harvests during 2007. Weight is in round pounds (rlbs), length is in inches (in), and sd=standard deviation.

Unit	Age	N(Age)	N(length)	Length mean(in.)	sd(in.)	N(weight)	Weight mean(lb.)	sd(lb.)
MI-4								
	2	1	1	22.4		1	4.2	
	3	2	2	21.8	0.4	2	4.2	0.0
	4	2	2	23.2	1.3	2	4.7	1.1
	5	1	1	26.0		1	6.2	
Sample Size:		6	6			6		
Means:	3.5			23.1	1.7		4.7	0.9