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MICHIGAN'S 1980 SPORT FISHERY*

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SUMMARY

In 1980 licensed anglers spent approximately 21.4 million days fishing in the State of Michigan. Great Lakes and anadromous salmonid fishing accounted for approximately 38 percent of the fishing effort or about 8.2 million angler-days, while anglers spent approximately 13.2 million days fishing inland lakes and streams in 1980.

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INTRODUCTION

A two percent representative sample of sport fishermen licensed in Michigan was surveyed by mail about their 1980 fishing activity. Survey objectives were to assess the recreational benefits resulting from sport fishing in Michigan for the purpose of guiding public and private investment in fishing and related programs.

SURVEY PROCEDURES

The survey sample was selected from carbon copies of the 1.4 million fishing licenses sold in 1980. The sampling rate did not include (a) spouses of license holders who receive a free license, (b) anglers under 17 who may legally fish without a license, (c) anglers who fish only on private lakes where a license is not needed, and (d) resident members of the armed services in possession of furlough papers. The catch and fishing effort of these individuals are not represented in the estimates. Several postcard reminders and another questionnaire were sent to those individuals who failed to respond. Approximately 68 percent of the delivered questionnaires were returned.

The survey data were collected so that Michigan fishing could be separated into five categories: (1) Great Lakes salmonid, (2) Great Lakes non-salmonid, (3) anadromous salmon and trout, (4) inland trout, and (5) inland non-trout. Within each of these five major categories, catch and effort estimates were generated by computer for the state and for smaller geographic units (e.g., counties and state planning regions). Origin-destination matrices for angling effort were also generated. These data are not presented in this report.

SURVEY RESULTS

Sport fishing catch and effort estimates are presented by fisheries management districts (Table 1 and Figure 1). In addition, Great Lakes fishing is presented in Tables 2 and 3. To eliminate confusion, the common and scientific names of sport fish species are provided (Table 4).

Upper Great Lakes salmon and trout fishing (Table 2) amounted to 2.0 million angler-days by 247,000 anglers. An additional 1.4 million days of salmon and

steelhead fishing were enjoyed by 175,000 anglers on tributary streams of the Great Lakes. Many of these anglers also fished for salmon on the Great Lakes. Lake Michigan and its tributary streams were the primary focus of angler activity. Sixty-eight percent of the fishing effort occurred there. Anglers on Lake Michigan and its major tributary streams also accounted for 65, 75, and 74 percent of the total Great Lakes catch of steelhead (rainbow) trout, coho salmon, and chinook salmon, respectively.

Anglers numbering 396,000 were estimated to have spent 4.6 million days fishing for non-salmonids on the Great Lakes in 1980 (Table 3). The fish of primary importance was the yellow perch. It accounts for 69 percent of the non-salmonid hook and line catch. Lake St. Clair and Saginaw Bay receive the heaviest fishing pressure for perch, panfish, game fish (walleye, bass, northern pike and muskellunge), and suckers on the Great Lakes. Saginaw Bay is the location of 53 percent of the non-salmonid fishing effort expended on Lake Huron. Lake Huron and Lake St. Clair fishermen accounted for 71 percent of the total Great Lakes non-salmonid fishing pressure and 75 percent of the total perch catch.

Inland fishing, lake and stream fishing for species that do not spend time in the Great Lakes, retained its level of importance by accounting for 62 percent of the fishing effort in the state in 1980. Inland lake activity accounted for 73 percent of the 13.2 million inland fishing days. Houghton Lake (241,000 angler-days) was the most popular inland lake in the state.

The AuSable River (390,000 angler-days) again was the leader in attracting river fishermen. The Muskegon River was second (275,000 angler-days) and the Grand River third with 246,000 days of fishing. These estimates include sport fishing for anadromous salmon and trout.

Figure 1

FISHERIES MANAGEMENT DISTRICTS

Table 1. Michigan sport fish catch and effort estimates* (thousands) by fisheries management district in 1980.

Districts**	Lake Trout/ Splake	Rainbow/ Steelhead	Brown Trout	Brook Trout	Coho Salmon	Chinook Salmon	Walleye/ Sauger	Bass
1	98	73	19	170	19	4	120	49
2	2	26	27	150	4	3	75	65
3	62	71	28	210	54	17	59	77
4	12	43	8	130	16	14	150	68
5	91	82	87	190	19	51	200	260
6	150	310	300	170	400	340	98	350
7	78	120	190	230	70	150	100	300
8	8	33	65	65	9	21	39	230
9	110	220	170	50	140	180	34	370
11	62	19	21	4	58	54	780	250
12	130	140	99	18	190	170	19	690
13	3	17	11	6	1	0	890	450
14	17	29	9	3	9	3	1400	580
TOTAL	820	1200	1000	1400	990	1000	3900	3800

Districts	N. Pike/ Musky	Yellow Perch	Panfish***	Catfish/ Bullhead	Sucker	Other****	Angler-Days	Anglers
1	67	380	290	13	9	3	600	48
2	47	280	560	20	51	1	480	29
3	80	1100	220	20	44	57	710	49
4	220	1900	570	140	90	160	710	83
5	190	940	1200	120	130	17	1400	120
6	140	1600	2700	110	100	65	2500	220
7	220	2100	2600	270	120	52	2100	200
8	96	6200	2500	260	340	66	1400	120
9	130	1200	3600	210	180	82	2000	140
11	120	6000	2400	370	610	91	2100	160
12	73	1600	7700	370	110	170	2700	170
13	74	3500	4700	500	150	140	2000	150
14	130	5100	4100	260	160	490	2700	200
TOTAL	1600	32000	33000	2700	2100	1400	21000	1100

* Numbers rounded to two significant figures
** See Figure 1 for map of Fisheries Management District
*** Bluegill, Sunfish, and Rock Bass
**** Does not include smelt and Great Lakes whitefish and cisco

Table 2. Michigan trout and salmon sport fish catch and effort estimates* (thousands) on the upper Great Lakes in 1980.

OPEN WATER

Great Lake	Steelhead	Brown Trout	Coho Salmon	Chinook Salmon	Angler Days
Michigan	140	130	580	490	1300
Superior	24	8	64	11	220
Huron	29	37	83	175	500
TOTAL	190	170	720	670	2100

TRIBUTARY STREAMS

Great Lake	Steelhead	Brown Trout	Coho Salmon	Chinook Salmon	Angler Days
Michigan	320	110	190	250	1000
Superior	44	10	14	5	120
Huron	45	35	52	59	260
TOTAL	400	160	250	320	1400

TOTAL

Great Lake	Steelhead	Brown Trout	Coho Salmon	Chinook Salmon	Angler Days
Michigan	460	240	760	740	2300
Superior	68	18	78	15	340
Huron	74	73	130	230	760
TOTAL	600	330	970	990	3400

Table 3. Michigan non-salmonid sport fish catch and effort estimates* (thousands) on the Great Lakes in 1980.

Great Lake	Perch	Walleye	Bass	Panfish	Northern Pike	Angler Days
Michigan	1600	33	75	190	36	660
Superior	230	2	2	14	16	63
Huron	11000	130	98	570	140	1200
St. Clair	5600	2000	290	1100	110	2100
Erie	3200	940	27	110	7	630
TOTAL	22000	3100	490	2000	300	4600

*Estimates rounded to two significant figures

SELECTED REFERENCES ON SPORT FISHING IN MICHIGAN

Jamsen, G. C., J. R. Ryckman, and F. W. Jamsen. 1970. Michigan's 1969 salmon and trout sport fishery. Michigan Dept. Nat. Res., Research and Development Rept. 203. 10pp.

Jamsen, G. C., and Paul V. Ellefson. 1970. Michigan's 1970 sport fishery, January 1 - April 24. Michigan Dept. Nat. Res., Research and Development Rept. 211. 4 pp.

Jamsen, G. C., and Paul V. Ellefson. 1971a. Michigan's 1970 sport fishery, April 25 - August 31. Michigan Dept. Nat. Res., Research and Development Rept. 234. 5 pp.

Jamsen, G. C., and Paul V. Ellefson. 1971b. Michigan's 1970 sport fishery, September 1 - December 31. Michigan Dept. Nat. Res., Research and Development Rept. 235. 5 pp.

Jamsen, G. C. 1972. Michigan's 1971 sport fishery. Michigan Dept. Nat. Res., Research and Development Rept. 268. 7 pp.

Michigan Dept. Nat. Res. 1973. Michigan's Great Lakes trout and salmon fishery (1969 - 1972). Michigan Dept. Nat. Res., Fisheries Management Rept. 5. 105 pp.

Jamsen, G. C. 1973. Michigan's 1972 sport fishery. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 122. 6 pp.

Jamsen, G. C. 1974. Michigan's 1973 sport fishery. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 133. 7 pp.

Bailey, R. J., and G. C. Jamsen. 1975. Michigan's 1973 fisherman opinion survey. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 147. 5 pp.

Jamsen, G. C., and R. J. Bailey. 1975. Geographic preference of fishing license revenue allocation. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 148. 2 pp.

Jamsen, G. C. 1975. Fishermen vs. non-fishermen conflicts in Michigan. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 149. 5 pp.

Jamsen, G. C. 1976. Michigan's 1975 sport fishery. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 156. 7 pp.

Jamsen, G. C. 1977. Michigan's 1976 sport fishery. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 165. 7 pp.

Werther, J. D. 1978. Michigan's 1977 sport fishery. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 175. 7 pp.

SELECTED REFERENCES ON SPORT FISHING IN MICHIGAN

Jamsen, G. C., and D. H. Burck. 1979. Residence of licensed fishermen in Michigan, 1978. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 178. 7 pp.

Jamsen, G. C. 1979. Michigan's 1978 sport fishery. Michigan Dept. Nat. Res., Surveys and Stat. Serv. Rept. 183. 8 pp.

Jamsen, G. C. 1980. Michigan's 1979 sport fishery, Michigan Dept. Nat. Res., Fisheries Div. Tech. Rept. 1980-4. 8 pp.

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Table 4. Common and scientific names of sport fish species.

Questionnaire List	Common Name	Scientific Name
Perch	Yellow perch	*Perca flavescens*
Walleye	Walleye	*Stizostedion vitreum*
Sauger	Sauger	*Stizostedion canadense*
Bass	Largemouth bass	*Micropterus salmoides*
	Smallmouth bass	*Micropterus dolomieui*
Bluegill	Bluegill	*Lepomis macrochirus*
Sunfish	Pumpkinseed	*Lepomis gibbosus*
Rock bass	Rock bass	*Ambloplites rupestris*
White bass	White bass	*Roccus chrysops*
Crappie	Black crappie	*Pomoxis nigromaculatus*
	White crappie	*Pomoxis annularis*
Bullhead	Black bullhead	*Ictalurus melas*
	Brown bullhead	*Ictalurus nebulosus*
	Yellow bullhead	*Ictalurus natalis*
Catfish	Channel catfish	*Ictalurus punctatus*
	Flatfish catfish	*Pylodictis olivaris*
Musky	Muskellunge	*Esox masquinongy*
Northern pike	Northern pike	*Esox lucius*
Suckers	Sucker family	Catostomidae
Whitefish	Lake whitefish	*Coregonus clupeaformis*
Menominee	Round whitefish	*Prosopium cylindraceum*
Cisco (Lake herring)	Shallowwater cisco	*Coregonus artedii*
Lake trout	Lake trout	*Salvelinus namaycush*
Rainbow trout	Rainbow trout	*Salmo gairdneri*
Brown trout	Brown trout	*Salmo trutta*
Brook trout	Brook trout	*Salvelinus fontinalis*
Atlantic salmon	Atlantic salmon	*Salmo salar*
Coho salmon	Coho salmon	*Oncorhynchus kisutch*
Chinook salmon	Chinook salmon	*Oncorhynchus tshawytscha*
Smelt	American smelt	*Osmerus mordax*