

TR 80-4

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
FISHERIES DIVISION

Technical Report: No. 1980-4

July 1980

MICHIGAN'S 1979 SPORT FISHERY*

Gale C. Jansen, Information Manager

SUMMARY

In 1979 licensed anglers spent approximately 20.6 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 7.9 million angler-days, while anglers spent approximately 12.7 million days fishing inland lakes and streams in 1979.

*A contribution of Federal Aid in Fisheries and Wildlife Restoration, Michigan Project FW-3-R

MICHIGAN'S 1979 SPORT FISHERY

Gale C. Jamsen, Information Manager

INTRODUCTION

A one percent representative sample of sport fishermen licensed in Michigan was surveyed by mail about their 1979 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 1979. Licensed anglers were selected systematically with a random start. 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 post-card reminders and another questionnaire were sent to those individuals who failed to respond. Approximately 79 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, but are available from this Office.

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 million angler-days by 265,000 anglers. An additional 1.5 million days of salmon and steelhead fishing were enjoyed by 208,000 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 was 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 67, 71, 74, and 83 percent of the total catch of lake trout, steelhead trout, coho salmon, and chinook salmon, respectively.

Anglers numbering 371,000 were estimated to have spent 4 million days fishing for non-salmonids on the Great Lakes in 1979 (Table 3). The fish of primary importance was the yellow perch. It accounts for 74 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 (walleyes, bass, northern pike and muskellunge), and suckers on the Great Lakes. Saginaw Bay is the location of 51 percent of the non-salmonid fishing effort expended on Lake Huron. Lake Huron and Lake St. Clair fishermen accounted for 77 percent of the total Great Lakes non-salmonid fishing pressure and 76 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 1979. Inland lake activity accounted for 75 percent of the 12.7 million inland fishing days. Houghton Lake (227,000 angler-days) was the most popular inland lake in the state with more than twice as many fishing days as any other lake.

The AuSable River (360,000 angler-days) again was the leader in attracting river fishermen. The Muskegon River was second (299,000 angler-days) and the St. Joseph third with 265,000 days of fishing. These figures 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 1979.

<u>Districts**</u>	<u>Lake Trout/ Splake</u>	<u>Rainbow Steelhead</u>	<u>Brown Trout</u>	<u>Brook Trout</u>	<u>Coho Salmon</u>	<u>Chinook Salmon</u>	<u>Walleye/ Sauger</u>	<u>Bass</u>
1	120	62	22	80	27	12	150	58
2	1	18	10	100	2	3	109	70
3	25	130	53	220	52	16	66	44
4	20	34	19	100	14	10	120	63
5	91	83	81	160	20	65	140	270
6	200	280	220	100	190	360	130	320
7	44	110	180	160	55	110	90	260
8	3	32	44	24	3	9	20	200
9	140	140	120	48	130	270	16	290
11	19	7	22	1	18	4	540	290
12	140	130	110	21	180	200	9	530
13	0	6	15	1	2	0	570	420
14	1	12	6	1	14	1	900	470
TOTAL	820	1100	900	1000	700	1100	2900	3300

<u>Districts</u>	<u>N. Pike/ Musky</u>	<u>Yellow Perch</u>	<u>Panfish***</u>	<u>Bullhead</u>	<u>Sucker</u>	<u>Other****</u>	<u>Angler- Days</u>	<u>Anglers</u>
1	84	340	650	9	2	1	590	58
2	71	600	510	23	25	4	390	31
3	71	1300	170	10	45	9	670	47
4	200	1900	570	140	70	34	690	80
5	230	1000	1400	210	270	13	1400	120
6	170	1200	3000	76	72	64	2600	240
7	230	1800	2900	180	110	25	1800	190
8	92	4800	3100	340	440	140	1300	130
9	130	1400	4100	382	220	80	2000	160
11	120	6000	2700	350	570	260	1900	150
12	93	1200	9100	530	190	76	2800	180
13	89	3600	5200	450	210	130	2000	150
14	110	3300	4900	260	190	240	2600	190
TOTAL	1700	2900	3800	3000	2400	1100	21000	1200

* 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 steelhead trout and salmon sport fish catch and effort estimates* (thousands) on the Upper Great Lakes in 1979.

GREAT LAKE

Open Water

	<u>Steelhead</u>	<u>Coho Salmon</u>	<u>Chinook Salmon</u>	<u>Angler-Days</u>
Michigan	150	370	530	1300
Superior	37	49	9	250
Huron	28	47	78	440
TOTAL	220	460	620	2000

Tributary Streams

	<u>Steelhead</u>	<u>Coho Salmon</u>	<u>Chinook Salmon</u>	<u>Angler-Days</u>
Michigan	270	150	340	1100
Superior	56	29	13	130
Huron	46	40	78	210
TOTAL	370	220	440	1500

TOTAL for Great Lakes and Their Tributary Streams

	<u>Steelhead</u>	<u>Coho Salmon</u>	<u>Chinook Salmon</u>	<u>Angler-Days</u>
Michigan	420	520	870	2500
Superior	92	78	22	380
Huron	74	87	160	660
TOTAL	590	680	1100	3500

Table 3. Michigan non-salmonid sport fish catch and effort estimates* (thousands) on the Great Lakes in 1979.

GREAT LAKE

	<u>Perch</u>	<u>Walleye</u>	<u>Bass</u>	<u>Panfish</u>	<u>Northern Pike</u>	<u>Angler-Days</u>
Michigan	1500	35	61	110	44	390
Superior	160	3	0	22	30	58
Huron	11000	97	130	720	150	1200
St. Clair	3700	1400	180	1100	70	1900
Erie	3000	570	23	270	2	490
TOTAL	19000	2100	390	2200	290	4000

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

Jansen, 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.

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

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

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

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