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THE MICHIGAN GENERAL CREEL CENSUS FOR 1957

by

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Conservation officers have secured the records for the Michigan General Creel Census since 1927 as a part of their regular duties. The purpose of the census is to obtain a state-wide sample of the sport fishing. Creel records from special research projects of the Fish Division are not included.

During 1957, the officers obtained records on 90,439 angler trips, divided into three major categories--trout, nontrout and Great Lakes waters; each category was further subdivided into lakes and streams. This division of the data gives the best available indication of the fishing quality in the different types of waters administered by the state. The numbers of anglers interviewed from different types of waters were as follows: (1) <u>trout</u> waters, 11,854 (13% of all anglers contacted), of whom 1,548 fished in designated trout lakes and special trout ponds and 10,306 fished in streams; (2) <u>nontrout waters</u>, 64,849 (72%), of whom 57,430 fished in lakes and 7,419 fished in streams; (3) <u>Great Lakes waters</u>, 13,736 (15%), of whom 5,410 fished in the Great Lakes and 8,326 fished in the connecting waters.

Of the 90,439 anglers interviewed, 12,252 (14%) were nonresidents; 13,828 (15%) were women. For comparison with the number of interviews, the total sale of fishing licenses in 1957 was 1,113,842, of which 257,638 (23%) were nonresidents. If the nonresident licenses, 125,353 (11% of all fishing

From "1957 License Sales by Counties" issued by the Michigan Department of Conservation, 1958.

licenses sold) were temporary (15 day). Officers contacted proportionately fewer nonresidents than residents, probably because the 15-day licensee fishes only a few days and most nonresidents cannot fish in six southern Michigan counties from January 1 to the opening of the trout season.

Officers contacted anglers either while an angler was fishing or at the end of a fishing trip. Thus, the census is a partial rather than a complete record on 90,439 angling days. Only legal-size fish caught by sport fishermen are considered.

Detailed analysis

The 90,439 anglers contacted by conservation officers during 1957 (18% more than in 1956) had fished 208,636 hours and had caught 248,902 fish (Table 1). The average catch per hour for all fishing was 1.2, which is 0.1 fish below that recorded in 1956.

Creel records were obtained in 79 counties (Table 2). The lack of fishing records from four counties (Berrien, Calhoun, Lenawee and Saginaw) and the paucity of records from a few others tend to bias the state-wide sample of fishing.

The various types of waters are separated by Conservation Districts in this report (Fig. 1). Data from Alger County (which is in both Districts 3 and 4) have been separated according to the district to which the reporting officer was assigned.

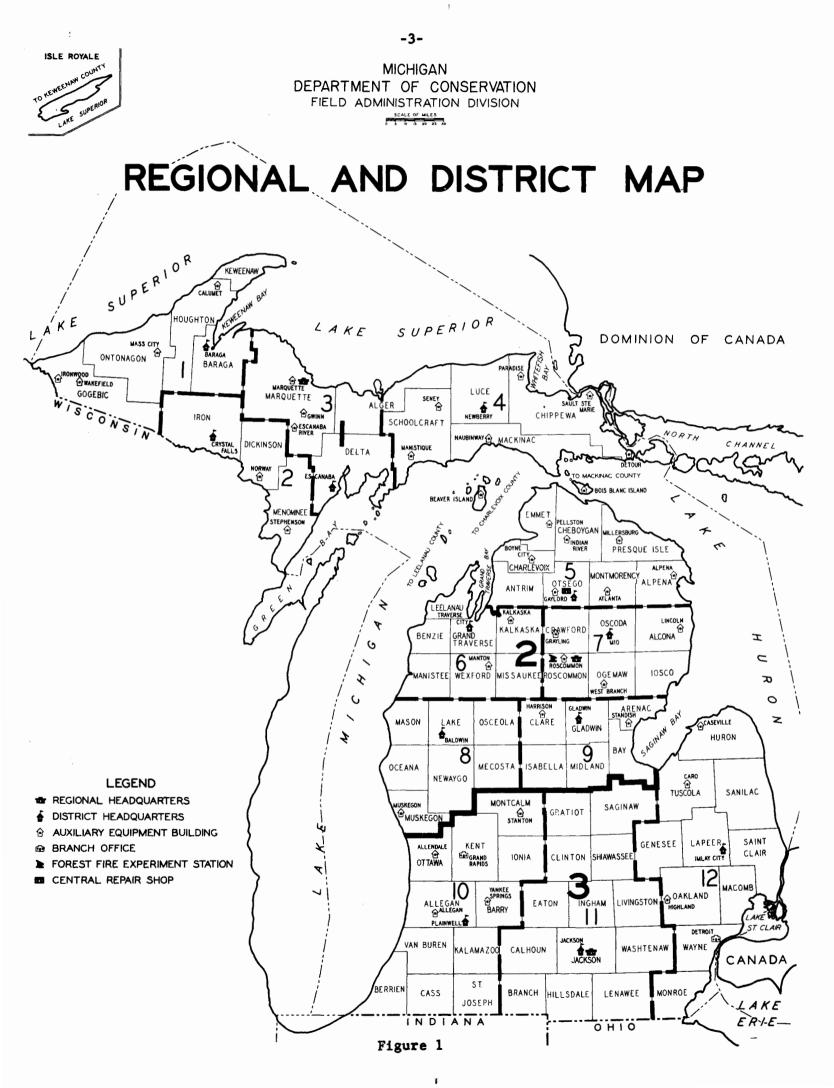
Fishing in Trout, Nontrout and Great Lakes

Waters, by Conservation Districts

The numbers and percentages of anglers interviewed while fishing in the various waters are given in Table 3. Regions I and II furnished 95 percent of all the records on trout fishing; here trout fishing made up 19 percent

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of all fishing censused. Five percent of the state's trout-fishing records were from Region III, where trout fishing comprised only 2 percent of the total fishing sampled.

Trout fishing reports made up the largest percentages of the fishing records from District 1 (36% of 3,316 anglers), District 4 (27% of 7,063 anglers) and District 7 (22% of 9,325 anglers). In contrast, the sample from District 11 included 98 percent nontrout anglers (among 8,458 fishermen), District 10 had 97 percent (among 9,059) and District 8 had 89 percent (among 8,924).

Officers obtained records on Great Lakes sport fishing in 8 of the 11 districts that border on the Great Lakes or their connecting waters. Most of the fishermen interviewed in District 12 (70% of 13,726 anglers) and District 3 (59% of 2,456 anglers) were fishing Great Lakes waters.

Numbers of Trout Caught in Trout Waters,

by Conservation Regions

Of the 20,231 trout reported from trout waters, brook trout comprised 54 percent; rainbow trout, 33 percent; and brown trout, 13 percent (Table 4). In 1956 these percentages were 56, 34 and 10, respectively. Ninety-six percent of all trout recorded in 1957 were from Regions I and II, combined.

Of the 10,905 brook trout reported in 1957, Region I contributed 6,414 (59%); Region II, 4,269 (39%); and Region III, 222 (2%). The 6,714 rainbow trout caught in 1957 were divided as follows: Region II, 5,003 (74%); Region I, 1,316 (20%); and Region III, 395 (6%). Of 2,612 brown trout recorded, 1,899 (73%) were taken in Region II; 434 (16%), in Region I; and 279 (11%), in Region III.

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Other Species Caught in Trout Waters

waters. The numbers	of each of	17 other species	reported are as f	C
Suckers	442	Carp	12	
Yellow perch	403	Smallmouth bass	8	
Rock bass	134	Creek chub	7	
Bluegi11	127	Largemouth bass	6	
Walleye	53	Pumpkinseed	6	
Northern pike	51	Lake trout	5	
Round whitefish	46	Sauger	2	
American smelt	25	Shallowwater cisc	:o <u>1</u>	
Bullheads	19	Total	1,347	

Brook, brown and rainbow trout made up 94 percent of all fish caught in trout waters. The numbers of each of 17 other species reported are as follows:

Catch per Hour--Trout Waters,

by Conservation Districts

Trout fishermen had the same fishing success of 0.8 fish per hour (trout and other species combined) as in 1956 (Table 5). The fishing quality index (trout only) was 0.7 trout per hour for both the designated trout lakes and trout streams. Most of the trout fishermen interviewed (87%) fished the streams. The highest catch per hour for trout lakes (1.2 trout) was recorded in District 3 whereas the highest catch per hour for trout streams (1.0) was recorded in District 2.

Composition of Catch--Nontrout Waters,

by Conservation District and Regions

Thirty-one kinds of fish were caught in nontrout waters. Bluegills and yellow perch together made up 65 percent of the catch (70% in Region I, 58% in Region II and 75% in Region III--see Table 6). No other species constituted 10 percent of the total catch in any one region. Other important species recorded were: black crappie, pumpkinseed, rock bass, northern pike, largemouth bass, rainbow trout, walleye and smallmouth bass. The 10 species mentioned have retained approximately the same rank in importance during the 10-year period 1948-1957 (Table 7). In 1957 these 10 species comprised 92 percent of the total recorded catch and at least 84 percent of the catch in every district except District 6. The remaining 21 species made up 8 percent. These 21 species and the numbers recorded were:

American smelt	9,220	Lake whitefish	53
Suckers	1,791	Bowfin	30
Bullheads	817	Golden shiner	11
Carp	582	Warmouth	7
Shallowwater cisco	568	Muskellunge	4
Brook trout	542	White bass	4
Lake trout	283	Freshwater drum	2
Catfishes	95	Burbot	1
Redhorse	63	Gar	1
Brown trout	62	Gizzard shad	1
Sauger	55	Total	14,192

Species composition of the catch is summarized in Table 8 by conservation regions in terms of the percentage of the total state catch of each species recorded in each region.

In nontrout waters the bluegill (66,553 caught) outranked all other species in the state as a whole. Most bluegills (59% of the state total) and largemouth bass were recorded in Region III. Region II (in which more than half of the total nontrout catch reported for 1957 was taken) yielded

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the highest catches of yellow perch (57% of the state total), black crappies, pumpkinseeds, rock bass, northern pike, rainbow trout and smallmouth bass. The largest number of walleyes was reported caught in Region I. Regions II and III combined produced 97 percent of all bluegills recorded in the census.

Catch per Hour--Nontrout Waters,

by Conservation Districts

The 1957 catch from nontrout waters of the entire state was 1.2 fish per hour (Table 9). The highest catch per hour (1.7) was recorded in Districts 4, 8 and 10. Seven districts had catches of better than 1.0 fish per hour. For nontrout streams Districts 5 and 7 yielded the highest catch per hour (1.8), followed by District 9 with 1.7 fish per hour.

Composition of Catch--Great Lakes Waters

Of the 53,814 fish reported from Great Lakes waters in 1957, yellow perch made up 81 percent and walleyes, rock bass, northern pike and smallmouth bass (combined) added 14 percent (Table 10). The remaining 5 percent was composed of 20 other kinds of fish as follows:

American smelt	794	Catfishes	36
Pumpkinseed	5 3 6	Lake whitefish	29
Freshwater drum	399	Suckers	16
Bullheads	295	Muskellunge	15
Black crappie	232	Gizzard shad	6
Bluegill	187	Bowfin	4
Largemouth bass	149	American eel	1
Shallowwater cisco	79	Mooneye	1
White bass	52	Sauger	1
Carp	50	Total	2,920
Lake trout	38		

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Catch per Hour--Great Lakes Waters,

by Conservation Districts

The average catch per hour for all Great Lakes and connecting waters was 1.3 (1.9 for the Great Lakes and 0.9 for the connecting waters), the lowest recorded during the 16 years (1942-1957) in which the Great Lakes waters have been tabulated separately from inland waters. District 9 had the best catch per hour, with an average of 6.7 for 544 hours of fishing (Table 11).

Residence of Anglers--All Waters

In the 1957 general creel census, 78,187 anglers (86%) were residents of Michigan and 12,252 anglers (14%) were nonresidents (Table 12). The greatest number of nonresident anglers (1,697) was contacted in District 10, where they comprised 19 percent of the total; in District 1 they made up 34 percent; in other districts, less than 27 percent.

As usual, anglers residing in all 83 counties of Michigan were recorded (Table 13). Residents of Wayne County constituted 16 percent of all residents; Kent County, 6; Ingham, 4; and Genesee, 4 (total for these four counties, 30 percent).

Nonresident anglers came from 34 states and the Province of Ontario (Table 13a). Ohio contributed 37 percent of all nonresidents; Indiana, 34; Illinois, 16; and Wisconsin, 10 (total for the four states, 97 percent).

Resident anglers caught 1.2 fish per hour (all waters combined); nonresidents, 1.0 (Table 14).

Sex of Anglers

Of 90,439 anglers interviewed in 1957, 13,828 (15%) were women. They constituted 10 percent of the trout anglers, 17 percent of the nontrout anglers and 13 percent of fishermen on the Great Lakes (Table 15).

Comparison of 1957 Data

with that of Other Years

Tables 15 to 19 summarize the general creel census for the past 10 years. The catch per hour for all waters has ranged from 1.1 fish in 1948 to 1.6 in 1950 (Table 16). For 1957 the catch for all waters was 1.2 fish per hour (0.2 fish below the simple average for the 10-year period).

For trout waters the highest catches per hour were recorded in 1948, 1954 and 1955 with 0.8 trout per hour and the lowest, in 1950 and 1953. The 1957 catch for trout waters was 0.7 trout per hour (the simple average for the 10-year period).

In 1948-1957 the catch per hour in nontrout waters has ranged from 1.6 fish in 1950 to 1.1 in 1948 (Table 18). The 1957 catch per hour of 1.2 fish is 0.1 fish below the simple 10-year average.

The catch per hour has been consistently higher for the Great Lakes waters than for trout or (inland) nontrout waters (Table 19). During the 1948-1957 period, anglers fishing the Great Lakes waters have averaged 2.9 fish per hour as compared to an average of 1.3 fish per hour in nontrout waters. In Great Lakes waters the catch has varied from 1.3 fish per hour in 1957 to 4.8 in 1950. The 1957 catch per hour was 1.6 fish below the average for the 10-year period.

The appendix to this report, in the form of detailed tables, has been omitted as in recent years. The tables are on file at the Institute for Fisheries Research.

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Acknowledgments

Mr. Gerald Kennedy and his staff, in Administrative Services, tabulated the data with IBM equipment. Mrs. Grace G. Hubbell assisted in the coding and analysis of records.

INSTITUTE FOR FISHERIES RESEARCH

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Typed by M. S. McClure

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District or region	Number of male anglers	Number of female anglers	Total anglers	Total hours fished	Total fish caught	Catch per hour	$\frac{\sum x^1}{N}$
District 1	2,880	436	3,316	7,546.5	4,740	0.6	0.7
District 2	2,885	323	3,208	7,364.8	6,839	0.9	1.0
District 3	2,224	232	2,456	7,939.0	6,053	0.8	1.0
District 4	5,976	1,087	7,063	19,462.1	27,728	1.4	1.6
Region I	13,965	2,078	16,043	42,312.4	45 ,3 60	1.1	1.2
District 5	9,751	1,979	11,730	29,414.5	23,012	0.8	0.9
District 6	6,666	1,213	7,879	18,068.8	25,543	1.4	1.5
District 7	7,695	1,630	9,325	19,014.2	14,963	0.8	0.8
District 8	7,532	1,392	8,924	17,886.1	27,598	1.5	1.6
District 9	4,473	822	5,295	10,245.2	15,221	1.5	1.5
Region II	36,117	7,036	43,153	94,628.8	106,337	1.1	1.2
District 10	7,527	1,532	9,059	19,020.0	30,861	1.6	1.7
District 11	7,126	1,332	8,458	16,866.0	21,562	1.3	1.3
District 12	11,876	1,850	13,726	35,809 .3	44,782	1.3	1.3
Region III	26,529	4,714	31,243	71,695.3	97,205	1.4	1.4
State total	76,611	13,828	90,439	208,636.5	248,902	1.2	1.3

This symbol in this and subsequent tables denotes the mean catch per hour per angler.

Table 2.--Number of anglers interviewed by conservation

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officers during 1957 and 1956, by counties

County	1957	1956	County	1957	1956
Alcona	955	1,188	Lake	866	1,092
Alger	400	514	Lapeer	731	153
Allegan	2,551	1,304	Leelanau	949	614
Alpena	2,252	2,314	Lenawee	• • •	•••
Antrim	1,312	2,032	Livingston	1,240	1,057
Arenac	366	98 3	Luce	2,098	1,316
Baraga	202	272	Mackinac	1,638	1,012
Barry	1,895	2,173	Macomb	4,893	4,962
Bay	•		Manistee	1,917	1,135
Benzie	1,184	1,167	Marquette	789	1,052
Berrien			Mason	1,029	472
Branch	1,583	1,540	Mecosta	1,133	1,090
Calhoun	-,	•••	Menominee	716	381
Cass	1,063	459	Midland	8 23	727
Charlevoix	1,617	1,717	Missaukee	777	754
Cheboygan	2,057	2,431	Monroe	372	1,910
Chippewa	1,786	676	Montcalm	892	1,077
Clare	1,245	1,295	Montmorency	1,936	2,560
Clinton	312	250	Muskegon	2,625	747
Crawford	803	514	Newaygo	1,265	1,195
Delta	1,526	407	Oakland	1,573	1,423
Dickinson	689	680	Oceana	1,519	650
Eaton	564	•••	Ogemaw	1,134	1,052
Emmet	1,397	1,632	Ontonagon	791	452
Genesee	377	• • •	Osceola	487	559
Gladwin	2,068	584	Oscoda	1,378	1,124
Gogebic	1,718	963	Otsego	408	448
Grand Traverse	1,487	778	Ottawa	433	363
Gratiot	171	125	Presque Isle	751	983
Hillsdale	631	243	Roscommon	3,782	2,733
Houghton	585	411	Saginaw	• • •	• • •
Huron	761	880	St. Clair	1,879	542
Ingham	841	651	St. Joseph	626	1,306
Ionia	270	546	Sanilac	2,091	1,734
Iosco	1,273	1,301	Schoolcraft	1,282	737
Iron	1,803	1,094	Shiawassee	141	35
Isabella	516	693	Tuscola	240	•••
Jackson	344	211	Van Buren	324	273
Kalamazoo	8	821	Washtenaw	2,631	2,237
Kalkaska	996	731	Wayne	809	777
Kent	997	1,206	Wexford	569	679
Keweenaw	20	74			
			Total	90,439	76,898

District or region		t waters Percentage		t waters ercentage		kes waters Percentage	Total number of anglers
District 1	1,196	36	2,111	64	9	.1 ⁄0	3,316
District 2	587	18	2,531	79	90	3	3,208
District 3	514	21	500	20	1,442	59	2,456
District 4	1,938	27	3,073	44	2,052	29	7,063
Region I	4,235	27	8,215	51	3,593	22	16,043
District 5	2,005	17	9,538	81	187	2	11,730
District 6	1,605	20	6,255	80	19	} 0	7,879
District 7	2,033	22	7,292	78	•••	• •	9,325
District 8	967	11	7,957	89	•••	• •	8,924
District 9	466	9	4,533	86	296	5	5,295
Region II	7,076	16	35,575	83	502	1	43,153
District 10	279	3	8,780	97	•••	* *	9 ,05 9
District 11	202	2	8,256	98	•••	••	8,458
District 12	62	.¥0	4,023	30	9,641	70	13,726
Region III	543	2	21,059	67	9,641	31	31,243
State total	11,854	13	64,849	72	13,736	15	90,439

Table 3.--Number and percentage of fishermen interviewed on trout, nontrout

and Great Lakes waters, by conservation districts and regions, 1957

 $\sqrt[1]{\text{Less than 0.5.}}$

District	Brog	ok trout	Bro	wn trout	Rainh	ow trout	Total number
region		Percentage		Percentage		Percentage	of trout
District 1	1,111	67	43	3	504	30	1,658
District 2	898	74	47	4	264	22	1,209
District 3	379	38	265	27	345	35	98 9
District 4	4,026	93	79	2	203	5	4 , 3 08
Region I	6,414	79	434	5	1,316	16	8,164
District 5	1,345	41	223	7	1,684	52	3,252
District 6	910	28	415	12	1,959	60	3,284
District 7	1,101	51	629	29	431	20	2,161
District 8	709	38	470	25	686	37	1,865
District 9	204	33	162	27	243	40	609
Region II	4,269	38	1,899	17	5,003	45	11,171
District 10	118	19	230	37	268	44	616
District 11	67	29	49	21	117	50	233

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279

2,612

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37

222

10,905

District 12

Region III

State total

79

25

54

47

896

20,231

21

44

33

10

395

6,714

Table 4.--Number and percentage of total trout catch made up by each of the three species of trout--all trout waters, by conservation districts and regions, 1957

Table 5.--General creel census data for trout lakes, trout streams and all

trout waters by conservation districts and regions, 1957

			Trout	lakes						and the second se	streams	the second s					A11 tr	out wat	ers		
District or region	Number of anglers	Hours fished	Total fish caught	Catch per hour	Total trout caught	Trout catch per hour	$\frac{\sum x}{N}$	Number of anglers	Hours fished	Total fish caught	Catch per hour	Total trout catch	Trout catch per hour	$\frac{\sum x}{N}$	Number of anglers	Hours fished	Total fish caught	Catch per hour	Total trout caught	Trout cátch per hour	
District 1	42	86.0	32	0.4	32	0.4	0.3	1,154	2,600.0	1,638	0.6	1,626	0.6	0.8	1,196	2,686.0	1,670	0.6	1,658	0.6	0.7
District 2	11	25.5	21	0.8	20	0.8	0.5	576	1,173.9	1,214	1.0	1,189	1.0	0.9	587	1,199.4	1,235	1.0	1,209	1.0	0.9
District 3	141	226.0	270	1.2	267	1.2	1.4	373	1,045.0	739	0.7	722	0.7	0.8	514	1,271.0	1,009	0.8	989	0.8	0.9
District 4	487	1,077.8	1,059	1.0	987	0.9	2.0	1,451	4,404.5	3,903	0.9	3,321	0.8	1.0	1,938	5,482.3	4,962	0.9	4 , 3 08	0.8	1.3
Region I	681	1,415.3	1,382	1.0	1,306	0.9	1.7	3,554	9,223.4	7,494	0.8	6,858	0.7	0.9	4,235	10,638.7	8,876	0.8	8,164	0.8	1.0
District 5	432	976.1	983	1.0	843	0.9	1.0	1,573	3,500,5	2,622	0.7	2,409	0.7	0.8	2,005	4,476.6	3,605	0.8	3,252	0.7	0.8
District 6	3	6.0	3	0.5	3	0.5	0.5	1,602	3,943.0	3,388	0.9	3,281	0.8	0.9	1,605	3,949.0	3,391	0.9	3,284	0.8	0.9
District 7	126	320.0	147	0.5	124	0.4	0.4	1,907	4,289.4	2,106	0.5	2,037	0.5	0.5	2,033	4,609.4	2,253	0.5	2,161	0.5	0.5
District 8	172	357.0	132	0.4	89	0.2	0.4	795	2,172.0	1,776	0.8	1,776	0.8	0.8	967	2,529.0	1,908	0.8	1,865	0.7	0.7
District 9	39	105.0	54	0.5	54	0,5	0.6	427	1,155.0	566	0.5	555	0.5	0.4	466	1,260.0	620	0.5	609	0.5	0.5
Region II	772	1,764.1	1,319	0.7	1,113	0.6	0.7	6 , 304	15,05 9. 9	10,458	0.7	10,058	0.7	0.7	7,076	16,824.0	11,777	0.7	11,171	0.7	0.7
District 10	9	10.0	6	0.6	6	0.6	0.6	270	710.1	637	0.9	610	0.9	0.8	279	720.1	643	0.9	616	0.9	0.7
District 11	59	9 9. 0	25	0.3	25	0.3	0.3	143	286.5	210	0.7	208	0.7	0.8	202	385.5	235	0.6	233	0.6	0.7
District 12	27	42.0	3	0.1	3	0.1	0.1	35	51.0	44	0.9	44	0.9	0.8	62	93.0	47	0.5	47	0.5	0.5
Region III	95	151.0	34	0.2	34	0.2	0.3	448	1,047.6	891	0.9	862	0.8	0.8	543	1,198.6	925	0.8	896	0.7	0.7
State total	1,548	3,330.4	2,735	0.8	2,453	0.7	1.1	10,306	25,330.9	18,843	0.7	17,778	0.7	0.8	11,854	28,661.3	21,578	0.8	20,231	0.7	0.8

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District or region	Blue- gill	Yellow perch	Black crappie	Pumpkin- seed	Rock bass	Northern pike	Largemouth bass	Rainbow trout	Wall- eye	Smallmouth bass	Miscel- laneous	Total fish
District 1	12	31	19	8 10 10	4	8	.2	_2	9	2	3	3,064
District 2	12	50	7	30	3 10	8	↓2 ↓0	₩	14	2	_ 4	5,480
District 3	14	54	••	40	4 0	5	J ³ J0	16	6	2	ŶО	897
District 4	8	71	1	2	4	3	∛ 0	2	2	1	6	12,384
Region I	10	60	5	2	3	5	1	2	6	1	5	21,825
District 5	16	29	2	8	5	16	3	3	1	1	16	19,173
District 6	23	26	3	2	5	2	1	2	1	1	34	21,925
District 7	32	35	5	8	8	5	1	1	1	2	2	12,710
District 8	38	33	14	5	4	1	2	1	1	1	, 0	25,690
District 9	29	23	32	3	5	1	1	2	J 0	1	3	10,962
Region II	2 8	30	9	5	5	5	2	2	1	1	12	90,460
District 10	68	10	7	6	1	J 0	2	3	. <u>1</u> 0	<u>,1</u> 0	3	30,218
District 11	67	7	7	7	3	1	4	, 10	Ĵ0	1	3	21,327
District 12	45	25	9	8	4	2	40	J 0	J 0	1	6	9,680
Region III	64	11	7	7	2	1	3	2	Ĵ⁄0	4 0	3	61,225
State total	3 8	27	8	5	4	4	2	2	1	1 .	8	173,510

Table 6.--Percentage of the total catch contributed by the 10 most important species taken in nontrout waters, by conservation districts and regions, 1957

 $\frac{1}{\sqrt{\text{Less than 0.5.}}}$

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Table 7.--Percentage of the total catch contributed by the 10 most important species taken in nontrout waters, 1948-1957

Species	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Mean, 1948- 1957
Bluegill	45	48	44	42	40	43	37	35	36	38	41
Yellow perch	23	24	29	34	33	27	31	32	31	27	29
Black crappie	10	9	8	6	8	9	8	11	7	8	8
Pumpkinseed	4	4	4	4	5	5	5	4	5	5	5
Rock bass	4	3	3	3	4	4	3	3	3	4	3
Northern pike	4	5	3	3	3	4	5	4	6	4	4
Largemouth bass	2	2	1	2	2	2	2	2	2	2	2
Rainbow trout	J 0	2	2	2	2	1					
Walleye	2	1	1	2	2	1	1	2	2	1	2
Smallmouth bass	2	1	1	1	1	1	1	1	1	1	1
Total	96	97	94	97	98	96	95	96	95	92	96

¹/_{Less than 0.5.}

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Table 8.--Numbers caught and percentage of the total state catch contributed by the 10 most important species taken in nontrout waters, by conser-

	Reg	ion I	Regi	ion II	Regio	on III	Total
Species	Number	Percent- age	Number	Percent- age	Number	Percent- age	fish
Bluegill	2,190	3	25,211	38	39,152	59	66 , 553
Yellow perch	13,028	28	26,753	57	6,770	15	46,551
Black crappie	989	7	8,593	61	4,547	32	14,129
Pumpkinseed	503	6	4,697	50	4,146	44	9,346
Rock bass	736	11	4,571	70	1,268	19	6,575
Northern pike	1,104	18	4,522	73	529	9	6,155
Largemouth bass	165	5	1,476	46	1,546	49	3,187
Rainbow trout	443	15	1,545	52	968	33	2,956
Walleye	1,328	61	819	37	36	2	2,183
Smallmouth bass	284	17	1,125	67	274	16	1,683
Totals or percentages	20,770	13	79,312	50	59,236	37	159,318

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vation regions, 1957

		Nontrout	lakes				Nontrou	t stream	IS			All nont	rout wate	ers	
District	Number			Catch		Number			Catch		Number			Catch	
or region	of anglers	Hours fished	Fish caught	p er hou r	<u>Σx</u> Ν	of anglers	Hours fished	Fish caught	per hour	<u>∑x</u> N	of anglers	Hours fished	Fish caught	per hour	Σ <u>x</u> N
District 1	1,867	4,318.0	2,918	0.7	0.7	244	524.5	146	0.3	0.3	2,111	4,842.5	3,064	0.6	0.7
District 2	1,793	4,513.9	4,610	1.0	1.2	7 3 8	1,464.0	870	0.6	0.6	2,531	5,977.9	5,480	0.9	1.0
District 3	469	1,000.0	852	0.9	0.9	31	91.0	45	0.5	0.5	500	1,091.0	897	0.8	0.8
District 4	2,923	6,978.7	11,832	1.7	1.6	150	451.0	552	1.2	1.0	3,073	7,429.7	12,384		1.6
Region I	7,052	16,810.6	20,212	1.2	1.2	1,163	2,530.5	1,613	0.6	0.6	8,215	19,341.1	21,825	1.1	1.1
District 5	9,245	23,709.7	18,131	0.8	0.9	293	572.2	1,042	1.8	1.7	9,538	24,281.9	19,173	0.8	0.9
District 6	5,802	13,177.3	20,762	1.6	1.7	453	880.5	1,163	1.3	1.6	6,255	14,057.8	21,925	1.6	1.7
District 7	7,015	13,784.8	11,596		0.9	277	620.0	1,114	1.8	1.8	7,292	14,404.8	12,710	0.9	0.9
District 8	7,713	14,824.6	25,466		1.7	244	532.5	224	0.4	0.4	7,957	15,357.1	25,690	1.7	1.7
District 9	3,165	6,220.2	7,279		1.1	1,368	2,221.5	3,683	1.7	1.6	4,533	8,441.7	10,962	1.3	1.3
Region II	32,940	71,716.6	83,234	1.2	1.2	2,635	4,826.7	7,226	1.5	1.5	35,575	76,543.3	90,460	1.2	1.3
District 10	8,287	17,248.4	29,123	1.7	1.7	493	1,051.5	1,095	1.0	1.2	8,780	18,299.9	30,218	1.7	1.7
District 11	6,587	13,863.5	19,415		1.5	1,669	2,617.0	1,912	0.7	0.7	8,256	16,480.5	21, 327	1.3	1.3
District 12	2,564	6,114.5	6,989		1.2	1,459	2,726.0	2,691	1.0	1.2	4,023	8,840.5	9,680		1.2
Region III	17,438	37 ,2 26.4	55,527	1.5	1.6	3,621	6,394.5	5,698	0.9	1.0	21,059	43,620.9	61,225	1.4	1.5
State total	57,430	125,753.6	158,973	1.3	1.3	7,419	13,751.7	14,537	1.1	1.1	64,849	139,505.3	173,510	1.2	1.3

Table 9.--General creel census data for nontrout lakes, nontrout streams and all

nontrout waters combined, by conservation districts and regions, 1957

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Table 10.--Percentage of the total catch contributed by the five species taken most frequently in Great Lakes waters

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Species	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Mean, 1948- 1957
Yellow perch	86	91	96	94	84	85	90	91	86	81	88
Walleye	5	4	1	1	4	1	1	2	3	7	3
Rock bass	2	} 0	∳o	1	6	4	2	2	3	4	2
Northern pike	1	1	₩	1	₩	2	1	∜ 0	¹∕ 0	2	1
Smallmouth bass	1	} 0	1	1	2	1	1	1	2	1	1
Total	95	96	98	98	96	93	95	96	94	95	95

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 $\sqrt[1]{Less than 0.5.}$

Table 11.--General creel census data for Great Lakes and connecting waters, by

		Great	Lakes				Connecti	ng water	s		A	11 Great L	akes wat	ers	Store Ballinson Specify State
District or region	Number of anglers	Hours fished	Fish caught	Catch per hour	<u>Σx</u>	Number of anglers	Hours fished	Fish caught	Catch per hour	<u>Σx</u>	Number of anglers	Hours fished	Fish caught	Catch per hour	<u>Σx</u>
District 1 District 2 District 3 District 4	9 90 1,442 670	18.0 187.5 5,577.0 1,935.1	6 124 4,147 5,199	0.7		1,382	4,615.0	5,183	···· ···· 1.1	 1.3	9 90 1,442 2,052	18.0 187.5 5,577.0 6,550.1	6 124 4,147 10,382	0.3 0.7 0.7 1.6	
Region I	2,211	7,717.6	9,476	1.2	1.8	1,382	4,615.0	5,183	1.1	1.3	3,593	12,332.6	14,659	1.2	1.6
District 5 District 6 District 9	187 19 296	656.0 62.0 543.5	234 227 3,639		0.3 3.0 6.9	•••	•••	•••	••••	•••	187 19 296	656.0 62.0 543.5	234 227 3,639	3.7	0.3 3.0 6.9
Region II	502	1,261.5	4,100	3.3	4.3	•••	•••	•••	•••	•••	502	1,261.5	4,100	3.3	4.3
District 12	2,697	7,836.5	18,157	2.3	2.5	6,944	19,039.3	16,898	0.9	0.8	9,641	26,875.8	35,055	1.3	1.3
Region III	2,697	7,836.5	18,157	2.3	2.5	6,944	19,039.3	16,898	0.9	0.8	9,641	26,875.8	35,055	1.3	1.3
£ tate total	5,410	16,815.6	31,733	1.9	2.4	8,326	23,654.3	22,081	0.9	0.9	13,736	40,469.9	53,814	1.3	1.5

conservation districts and regions, 1957

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	di	strict, all	waters, 1957	
District or region	Total anglers	Resident anglers	Nonresident anglers	Percentage nonresident
District 1	3,316	2,195	1,121	34
District 2	3,208	2,471	737	23
District 3	2,456	1,824	632	26
District 4	7,063	5,589	1,474	21
Region I	16,043	12,079	3,964	25
District 5	11,730	10,108	1,622	14
District 6	7,879	6,490	1,389	18
District 7	9 ,32 5	8,504	821	9
District 8	8,924	7,582	1,342	15
District 9	5,295	5,192	103	2
Region II	43,153	37,876	5,277	12
District 10	9,059	7,362	1,697	19
District 11	8,458	7,210	1,248	15
District 12	13,726	13,660	66	.≯o
Region III	31,243	28,232	3,011	10
State total	90,439	78,187	12,252	14

Table 12.--Number of resident and nonresident fishermen and percentage of nonresident fishermen in each conservation

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 $\stackrel{1}{\vee}_{\text{Less than 0.5.}}$

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Table 13.--Residence of Michigan fishermen interviewed

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County of	Male	Female	Total	County of	Male	Female	Total
residence	anglers	anglers	anglers	residence	anglers	anglers	anglers
Alcona	193	29	222	Lake	103	· 19	122
Alger	212	13	225	Lapeer	487	74	561
Allegan	1,288	198	1,486	Leelanau	448	18	466
Alpena	747	117	864	Lenawee	221	53	274
Antrim	460	99	559	Livingston	262	46	308
Arenac	165	48	213	Luce	1,281	134	1,415
Baraga	85	4	89	Mackinac	508	62	570
Barry	532	100	632	Macomb	2,221	318	2,539
Bay	1,456	308	1,764	Manistee	935	92	1,027
Benzie	384	26	410	Marquette	653	78	731
Berrien	450	122	572	Mason	270	35	305
Branch	396	64	460	Mecosta	296	61	357
Calhoun	505	119	624	Manominee	515	43	558
Cass	202	30	232	Midland	1,241	206	1,447
Charlevoix	553	65	618	Missaukee	269	19	288
Cheboygan	649	80	729	Monroe	280	61	341
Chippewa	537	107	644	Montcalm	478	79	557
Clare	643	92	735	Montmorency	412	80	492
Clinton	440	85	525	Muskegon	2,327	304	2,631
Crawford	258	24	282	Newaygo	347	29	376
Delta	507	43	550	Oakland	1,704	332	2,036
Dickinson	782	55	837	Oceana	410	59	469
Eaton	452	102	554	Ogemaw	232	26	258
Emmet	597	86	683	Ontonagon	492	44	536
Genesee	2,623	596	3,219	Osceola	232	31	263
Gladwin	577	66	643	Oscoda	296	57	353
	777	80	857	Otsego	422	77	499
Gogebic Grand Traverse	1,050	159	1,209	Ottawa	400	62	462
	499	95	594	Presque Isle	438	59	497
Gratiot		53	585	Roscommon	310	70	380
Hillsdale	532	22	292	Saginaw	1,813	391	2,204
Houghton	270		381	Saginaw St. Clair	859	138	997
Huron	328	53	3,320	St. Joseph	458	57	515
Ingham	2,648	672	-	Sanilac	412	76	488
Ionia -	339	78	417	Schoolcraft	514		558
Iosco	230		247	Shiawassee	328	70	398
Iron	1,073		1,190		232	47	279
Isabella	456		523	Tuscola	232	46	287
Jackson	714		858	Van. Buren		2 3 6	1,472
Kalamazoo	971		1,220	Washtenaw	1,236		-
Kalkaska	252		310	Wayne	10,353		12,324
Kent	3,748		4,453	Wexford	507	62	569
Keweenaw	8	•••	8				
				Total	65,031	11,013	76 , 044

in the general creel census, $1957\sqrt[1]{}$

The residence of 1,840 males and 303 females was not recorded; therefore, they are not included in Tables 13 and 13a.

Table 13a.--Residence of out-of-state fishermen

interviewed in the general creel census, 1957

State or province of residence Alabama Arizona Arkansas California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	Number of males 6 3 4 16 2 49 3 1,543 3,250 34 6 67 5	Number of females 2 1 1 13 3 429 871 4 2 11	Total 8 4 16 3 62 6 1,972 4,121 38 8
residence Alabama Arizona Arkansas California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	males 6 3 4 16 2 49 3 1,543 3,250 34 6 67 5	females 2 1 1 13 3 429 871 4 2	8 4 16 3 62 6 1,972 4,121 38 8
Alabama Arizona Arkansas California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	6 3 4 16 2 49 3 1,543 3,250 34 6 67 5	2 1 1 13 3 429 871 4 2	8 4 16 3 62 6 1,972 4,121 38 8
Arizona Arkansas California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	3 4 16 2 49 3 1,543 3,250 34 6 67 5	1 1 13 3 429 871 4 2	4 16 3 62 6 1,972 4,121 38 8
Arizona Arkansas California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	3 4 16 2 49 3 1,543 3,250 34 6 67 5	1 1 13 3 429 871 4 2	4 16 3 62 6 1,972 4,121 38 8
Arkansas California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	4 16 2 49 3 1,543 3,250 34 6 67 5	 1 13 3 429 871 4 2	4 16 3 62 6 1,972 4,121 38 8
California Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	16 2 49 3 1,543 3,250 34 6 67 5	13 3 429 871 4 2	16 3 62 6 1,972 4,121 38 8
Connecticut Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	2 49 3 1,543 3,250 34 6 67 5	13 3 429 871 4 2	3 62 6 1,972 4,121 38 8
Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	49 3 1,543 3,250 34 6 67 5	13 3 429 871 4 2	62 6 1,972 4,121 38 8
Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	3 1,543 3,250 34 6 67 5	3 429 871 4 2	6 1,972 4,121 38 8
Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland	1,543 3,250 34 6 67 5	429 871 4 2	1,972 4,121 38 8
Indiana Iowa Kansas Kentucky Louisiana Maryland	3,250 34 6 67 5	871 4 2	4,121 38 8
Iowa Kansas Kentucky Louisiana Maryland	34 6 67 5	4 2	3 8 8
Kansas Kentucky Louisiana Maryland	6 67 5	2	8
Kentucky Louisiana Maryland	67 5		
Louisiana Maryland	5	11	
Maryland			78
		• • •	5
	1	1	2
Massachusetts	1	•••	1
Minnesota	7		7
Mississippi	5	3	8
Missouri	33	9	42
New Jersey	4	• • •	4
New York	37	2	39
North Carolina	5	1	6
Ohio	3,487	999	4,486
Oklahoma	1	1	2
Pennsylvania	44	6	50
Rhode Island	1	• • •	1
South Carolina	1	1	2
South Dakota	2	2	4
Tennessee	4	1	5
Texas	14	2	16
Vermont	1		1
Virginia	2	•••	2
Washington	4	3	7
West Virginia	7	3	10
Wisconsin	1,087	139	1,226
Ontario	4	2	6
Total	9,740	2,512	12,252

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		Resident	anglers			Nonresident anglers						
District or region	Number of anglers	Hours fished	Fish caught	Catch per hour	$\frac{\sum \mathbf{x}}{N}$	Number of anglers	Hours fished	Fish caught	Catch per hour	$\frac{\sum \mathbf{x}}{N}$		
District 1	2,195	5,066.0	3,183	0.6	0.7	1,121	2,480,5	1,557	0.6	0.7		
District 2	2,471	5,505.1	5,542	1.0	1.0	737	1,859.7	1,297	0.7	0.8		
District 3	1,824	5,324.0	4,532	0.9	1.1	632	2,615.0	1,521	0.6	0.7		
District 4	5,589	15,897.5	23,920	1.5	1.7	1,474	3,564.6	3,808	1.1	1.1		
Region I	12,079	31,792.6	37,177	1.2	1.3	3,964	10,519.8	8,183	0.8	0.9		
District 5	10,108	25,778.8	19,745	0.8	0.9	1,622	3,635.7	3,267	0.9	0.9		
District 6	6,490	15,111.5	21,850	1.4	1.6	1,389	2,957.3	3,693	1.2	1.2		
District 7	8,504	17,559.0	13,955	0.8	0.9	821	1,455.2	1,008	0.7	0.7		
District 8	7,582	15,522.1	24,118	1.6	1.6	1,342	2,364.0	3,480	1.5	1.3		
District 9	5,192	10,028.2	14,895	1.5	1.5	103	217.0	326	1.5	1.3		
Region II	37,876	83,999.6	94,563	1.1	1.2	5,277	10,629.2	11,774	1,1	1.1		
District 10	7,362	15,277.9	24,993	1.6	1.7	1,697	3,742.1	5,868	1.6	1.6		
District 11	7,210	14,447.5	18,676	1.3	1.3	1,248	2,418.5	2,886	1.2	1.3		
District 12	13,660	35,664.3	44,676	1.3	1.3	66	145.0	106	0.7	0.7		
Region III	28,232	65,389.7	88 ,3 45	1.4	1.4	3,011	6,305.6	8,860	1.4	1,5		
State total	78,187	181,181,9	220,085	1.2	1.3	12,252	27,454.6	28,817	1.0	1.1		

Table 14.--Number of resident and nonresident anglers, number of hours fished, number of fish caught and the catch per hour for each group--all waters by conservation districts, 1957

Table 15.--Comparison of data from the general creel census,

1948-1957

										,	Mean, 1948-
Item	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1957
CATCH PER HOUR											
All waters	1.1	1.3	-	1.4	1.4	1.3	1.5	1.5	1.3	1.2	1.4
Residents	1.2	1.3		1.4	1.4	1.3	1.5	1.5	1.3	1.2	1.4
Nonresidents	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.3	1.1	1.0	1.1
Trout waters	0.8	0.7	0.6	0.8	0.7	0.6	0.8	0.8	0.8	0.8	0.7
Residents	0.8	0.7	0.6	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.7
Nonresidents	0.7	0.8	0.6	0.7	0.7	0.6	0.8	0.8	0.7	0.8	0.7
Nontrout waters	1.1	1.3	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.3
Residents	1.2	1.3	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.3	1.4
Nonresidents	1.1	1.2	1.2	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Great Lakes waters	2.9	3.1	4.8	3.2	2.6	3.0	3.3	2.8	1.9	1.3	2.9
Residents	3.1	3.2	4.9	3.4	2.6	3.1	3.3	2.8	2.0	1.4	3.0
Nonresidents	1.6	1.2	2.7	1.3	2.8	1.3	2.3	2.1	0.8	0.8	1.7
PERCENTAGE OF ALL ANG REPRESENTED BY: Nonresidents	LERS	10	10	11	10	15	14	13	14	14	13
Females	19	17	16	17	16	16	16	16	16	15	16
PERCENTAGE OF TROUT A	NGLER	S									
REPRESENTED BY:											
Nonresidents	6	6	7	6	5	8	6	8	9	9	7
Females	10	12	10	10	10	9	8	10	10	10	10
PERCENTAGE OF NONTROU	T										
ANGLERS REPRESENTED B	Y:										
Nonresidents	19	11	12	13	12	17	16	16	17	15	15
Females	21	18	18	19	18	18	17	17	18	17	18
PERCENTAGE OF GREAT L	AKES										
ANGLERS REPRESENTED B	Y:										
Nonresidents	13	6	4	8	5	5	4	4	5	9	6
Females	17	16	13	18	14	16	15	17	15	13	15

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Table 16.--Catch per hour for all waters by conservation districts

and regions, 1948-1957

District or region	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Me a n, 1948-1957
District 1	0.8	0.8	0.9	0.8	0.8	0.8	1.0	0.8	0.8	0.6	0.8
District 2	0.9	0.7	1.1	0.7	0.9	1.0	0.9	1.4	1.2	0.9	1.0
District 3	1.1	0.9	0.7	0.9	0.9	0.8	0.5	0.6	0.6	0.8	0.8
District 4	1.3	1.5	1.6	1.4	1.4	1.1	1.3	1.6	1.5	1.4	1.4
Region I	1.0	0.9	1.1	1.0	1.1	1.0	1.0	1.2	1.1	1.1	1.0
District 5	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7
District 6	1.1	1.2	1.9	1.3	1.2	1.5	1.4	1.2	1.2	1.4	1.3
District 7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.8
District 8	1.3	1.4	1.9	1.8	2.1	1.8	1.5	1.8	1.7	1.5	1.7
District 9	1.2	1.9	2.6	3.3	2.8	2.8	2.9	2.7	2.1	1.5	2.4
Region II	1.0	1.1	1.5	1.4	1.3	1.3	1.3	1.4	1.1	1.1	1.2
District 10	1.6	1.8	2.0	1.8	2.0	1.4	1.3	1.7	1,5	1.6	1.7
District 11	1.1	1.4	1.7	1.8	1.3	1.4	1.6	1.2	1.4	1.3	1.4
District 12	2.2	1.9	2.4	1.4	1,7	1.9	2.8	1.8	1.5	1.3	1.9
Region III	1.6	1.7	2.1	1.6	1.7	1.4	1.9	1.6	1.5	1.4	1.6
Entire state	1.1	1.3	1.6	1.4	1.4	1.3	1.5	1.5	1.3	1.2	1.4

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Table 17.--Catch of trout per hour in trout waters, by conservation districts and regions, 1948-1957

District or region	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Mean, 1948-1957
District 1	0.7	0.6	0.9	0.7	0.7	0,7	1.1	0.8	0.8	0.6	0.8
District 2	0.7	0.8	0.8	0.7	1.0	1.1	1.1	0.9	0.8	1.0	0.9
District 3	1.1	1.0	0.6	1.1	0.5	0.5	0.4	0.6	0.7	0.8	0.7
District 4	1.2	1.0	1,1	1.3	1.0	0.7	1.0	1.1	1.0	0.8	1.0
Region I	0.9	0.8	0.8	1.0	0.8	0.7	1.0	0.9	0.9	0.8	0.9
District 5	0.7	0.6	0.6	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.7
District 6	0.9	0.9	0.7	0.7	0.9	0.6	0.7	0.9	0.8	0.8	0.8
District 7	0.7	0.5	0.4	0.5	0.5	0.4	0.5	0.6	0.5	0.5	0.5
District 8	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.6	0.7	0.7
District 9	0,5	0.4	0.1	0.3	0.3	0.5	0.5	0.5	0.4	0.5	0.4
Region II	0.7	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6
District 10	0,5	0.4	0.6	0.5	0.5	0.7	0.7	0.7	0.5	0.9	0,6
District 11	0.5	0.4	0.6	0.4	0.5	0.5	0.8	0.6	0.4	0.6	0.5
District 12	•••	0.6	0.6	0.3	0.5	0.8	1.3	0.8	0.2	0.5	0.6
Region III	0.5	0.5	0.6	0.4	0.5	0.6	0.8	0.7	0.5	0.7	0.6
Entire state	0.8	0.7	0.6	0.7	0.7	0.6	0.8	0.8	0.7	0.7	0.7

Table 18.--Catch per hour for nontrout waters, by conservation

districts and regions, 1948-1957

District or region	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Mean, 1948-1957
District 1	0.8	0.9	1.0	0.9	0.8	0.9	0.9	0.7	0.8	0.6	0.8
District 2	0.9	0.7	1.1	0.7	0.8	0.9	0.9	1.6	1.3	0.9	1.0
District 3	1.2	0.8	0.9	0.8	1.0	0.8	0.5	0.6	0.8	0.8	0.8
District 4	1.4	1.7	1.8	1.5	1.6	2.1	1.8	1.9	1.8	1.7	1.7
Region I	1.0	0.9	1.2	0.9	1.2	1.2	1.0	1.3	1.3	1.1	1.1
District 5	0.7	0.7	0.9	0.6	0.7	0.7	0.7	0.8	0.9	0.8	0.8
District 6	1.2	1.5	2.4	1.5	1.3	1.7	1.4	1.4	1.2	1.6	1.5
District 7	0.8	0.9	1.2	1.1	1.1	1.0	0.9	1.0	0.9	0.9	1.0
District 8	1.5	1.5	2.1	2.0	2.3	1.9	1.6	1.9	1.7	1.7	1.8
District 9	1.0	1.8	2.3	3.3	2.4	2.4	2.1	1.7	1.7	1.3	2.0
Region II	1.0	1.1	1.7	1.5	1.4	1.4	1.2	1.3	1.1	1.2	1.3
District 10	1.7	1.8	2.1	1.9	2.0	1.4	1.3	1.7	1.6	1.7	1.7
District 11	1.1	1.4	1.7	1.8	1.3	1.4	1.6	1.2	1.4	1.3	1.4
District 12	1.4	1.2	1.1	1.3	1.3	1.2	1.6	0.8	0.9	1.1	1.2
Region III	1.4	1.5	1.7	1.7	1.5	1.4	1.5	1.2	1.4	1.4	1.5
Entire state	1.1	1.3	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.3

Table 19.--Catch per hour for Great Lakes waters, by conservation districts

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and regions,	1948 - 1957
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District or region	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Mean, 1948-1957
District 1	0,9	0.3	•••	•••	0.9	• • •	•••	•••	0.1	0.3	0.2
District 2	2.9	4.8	•••	•••	• • •		•••	•••	2.3	0.7	1.1
District 3	1.0	0.9	2.5	0.4	2.0	1.6	2.3	0.6	0.4	0.7	1.2
District 4	1.1	2.9	4.9	1.6	2.8	1.2	0.6	1.1	1.8	1.6	2.0
Region I	1.1	1.1	4.2	0.9	2.3	1.3	0.7	0.9	1.0	1.2	1.5
District 5	1.7	0.4	0.5	0.7	0.5	2.1	0.5	1.8	0.9	0.4	1.0
District 6	12.2	3.6	2.9	5.0	4.3	7.0	11.1	2.4	9.8	3.7	6.2
District 7	0.3	5.9	•••	5.0	•••	0.5	•••	4.3	7.6	•••	2.4
District 8	•••	•••	2.8	• • •	•••	•••	• • •	•••	•••	•••	0.3
District 9	5.8	5.4	5.7	4.9	4.4	5.4	6.8	5.0	5.2	6.7	5.5
Region II	5.5	4.9	5.1	4.7	3.7	4.9	6.9	4.7	4.6	3.3	4.8
District 10	•••	6.4	6,6		10.2	4.0	•••	• • •	•••	•••	2.7
District 12	3.9	3.3	4.7	2.3	2.2	2.9	3.2	2.5	1.8	1.3	2.8
Region III	3.9	3.4	4.8	2.3	2.4	2.9	3.2	2.5	1.8	1.3	2.8
Entire state	2.9	3.1	4.8	3.2	2.6	3.0	3.3	2.8	1.9	1.3	2.9

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Table 20.--Total fishing time reported (thousands of hours)

and catch per hour for various waters, 1928-1957

	Thousands	Catch per hour			
	of hours	A11	Trout	Nontrout	Great Lakes
Year	reported	waters	waters	waters	waters
1928	48	1.1	1.2	1.1	•••
1929	52	1.0	1.2	0.9	
1930	74	0.9	0.9	0.9	
1931	63	0.9	1.0	0.9	
1932	38	1.3	1.1	1.3	•••
1933	47	1.0	0.7	1.3	
1934	53	1.7	0.8	1.8	
1935	59	1.6	0.8	1.9	
1936	67	1.4	0.8	1.7	•••
1937	62	1.5	0.8	1.7	
1938	82	1.3	0.9	1.4	
1939	109	1.1	0.8	1.1	
1940	98	1.0	0.8	1.0	•••
1941	118	1.0	0.8	1.1	•••
1942	151	1.1	0.9	1,1	1.7
1943	103	1.2	0.9	1.2	1.6
1944	152	1.2	0.8	1.1	1.8
1945	144	1.1	0.8	1.1	2.2
1946	145	1.3	0.8	1.4	1.6
1947	96	1.4	0.8	1.4	2.7
1948	161	1.1	0.8	1.1	2.9
1949	168	1.3	0.7	1.3	3.1
1950	130	1.6	0.6	1.6	4.8
1951	123	1.4	0.8	1.5	3.2
1952	123	1.4	0.7	1.4	2.6
1953	148	1.3	0.6	1.4	3.0
1954	169	1.5	0.8	1.3	3.3
1955	147	1.5	0.8	1.3	2.8
1956	175	1.3	0.8	1.2	1.9
1957	209	1.2	0.8	1.2	1.3
Unweight					
mean	110	1.3	0.8	1.3	2.5

Data for the Great Lakes were included with "non-trout waters" prior to 1942.