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# REPORT OF THE GENERAL CREEL CENSUS FOR 1952

by

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The report of the general creel census for 1952, the twenty-sixth year in which such data have been gathered by conservation officers, includes information on the quality of fishing in the various types of lakes and streams throughout the state. As in past years conservation officers recorded the data on general creel census forms (see sample) as a part of their regular duties and usually incidental to patrol activities. The fine cooperation by the Division of Field Administration of the Conservation Department, the U. S. Fish and Wildlife Service in Ann Arbor, and the School of Public Health of the University of Michigan is greatly appreciated. The writer wishes especially to express his thanks to the conservation officers who collected the records, Mr. John J. Freysinger of the School of Public Health for the use of the IBM sorting and tabulating machines, and Dr. James W. Moffett of the U. S. Fish and Wildlife Service for the use of the IBM key-punch machine.

The aim of the general creel census is to obtain a sample of the sport fishing in all parts of the state. Fishing records have been divided into three major groups: trout, non-trout, and Great Lakes waters and each in turn has been subdivided into lakes and streams. It is believed that this division of the data gives the best available

indication of the fishing quality and to some degree fishing intensity in the six types of water administered by the state. The number of anglers interviewed on the different types of waters were as follows: (1) Trout waters, 9,108 anglers (18.07 percent of all anglers contacted) of whom 1,217 fished on designated trout lakes and the remaining 7,891 fished on streams; (2) Non-trout waters, 37,629 fishermen (74.67 percent) of whom 33,396 fished on lakes and 4,233 fished on streams; (3) Great Lakes waters, 3,659 anglers (7.26 percent) of whom 3,389 fished in the Great Lakes and the other 270 fished in the connecting waters.

During 1952 the officers interviewed 50,396 anglers of whom 5,193 fishermen (10.3 percent of all anglers contacted) were non-residents; female anglers constituted 16.4 percent (8,258) of all those interviewed.

According to the March 31, 1953, tabulation of fishing licenses sold in 1952, of a total of 1,141,913 licenses 295,667 were non-resident (25.89 percent). Of these 139,690 (12.23 percent of all fishing licenses sold) were temporary non-resident fishing licenses. The difference in percentage of non-residents interviewed in the general creel census and non-resident licenses sold may be due in part to the probability that the conservation officer is less likely to interview the ten-day license holders because their fishing season is so short; also non-residents cannot fish through the ice in six southern Michigan counties from January 1 to the opening of the trout season. Based on the percentage of trout fishermen contacted (18.1 percent) in the general creel census and the total number of licenses sold (1,141,913) it may be estimated that approximately 207,000 persons did some trout fishing. About 1.7 percent of all fishermen contacted were resident female anglers fishing trout waters. Assuming that most of these were married and therefore not required to purchase a trout stamp, it can be estimated

that about 203,000 should have been sold in 1952. However, 192,511 trout stamps were sold; this number constitutes 16.9 percent of the total fishing licenses sold. One would be able to make a better estimate if the number of resident anglers who fished only the Great Lakes waters and if the number of resident anglers who fished both Trout and Non-trout waters were known. Also minors under 17 years of age are not required to purchase either fishing licenses or trout stamps.

Intensive stream and lake census records such as secured at the Hunt Creek and Pigeon River Research Areas, the Rifle River Area, and experimental lakes with liberalized fishing regulations have not been included in this report.

The term "fisherman-day" denotes the time which the angler had spent fishing that day prior to being interviewed by the conservation officer. The number of anglers or fishermen as used in this report should be understood to mean the number of fisherman-days, and not separate individuals. Only legal-size fish caught by sport anglers have been considered.

## Detailed Analysis

During 1952 conservation officers interviewed 50,396 anglers, a decrease of 449 (0.9 percent) under the records (50,845) collected in 1951. The 1952 records represent 122,841.2 hours of fishing, a decrease of 162.2 hours (0.1 percent) from the 123,003.4 hours recorded the previous year. The number of fish caught in 1952 was 170,980 fish, an increase of 2,067 (1.2 percent) above the previous year (168,913 fish). In 1952 the catch per hour for all fishing was 1.4 which is the same as was recorded in 1951.

Table 1

Total number of fishermen, total hours fished, total number of fish taken, and catch per hour for each conservation district and region, all waters, 1952

| | Number of male anglers | Number of female anglers | Total anglers | Total hours fished | Total fish caught | Catch per hour | $\frac{\Sigma x}{N}$ |
|---|---|---|---|---|---|---|---|
| District 1 | 1,134 | 152 | 1,286 | 3,212.5 | 2,514 | 0.78 | 0.87 |
| District 2 | 2,083 | 237 | 2,320 | 5,327.4 | 4,707 | 0.88 | 0.91 |
| District 3 | 1,819 | 160 | 1,979 | 5,732.5 | 5,041 | 0.88 | 0.90 |
| District 4 | 3,448 | 558 | 4,006 | 11,140.2 | 15,580 | 1.40 | 1.46 |
| Region 1 | 8,484 | 1,107 | 9,591 | 25,412.6 | 27,842 | 1.10 | 1.13 |
| District 5 | 4,771 | 1,036 | 5,807 | 17,256.3 | 11,284 | 0.65 | 0.81 |
| District 6 | 2,435 | 510 | 2,945 | 6,856.0 | 7,980 | 1.16 | 1.29 |
| District 7 | 5,225 | 1,187 | 6,412 | 14,927.5 | 12,967 | 0.87 | 0.94 |
| District 8 | 3,903 | 769 | 4,672 | 10,218.2 | 21,417 | 2.10 | 2.18 |
| District 9 | 3,124 | 722 | 3,846 | 7,375.7 | 20,467 | 2.77 | 2.75 |
| Region 2 | 19,458 | 4,224 | 23,682 | 56,633.7 | 74,115 | 1.31 | 1.49 |
| District 10 | 4,539 | 1,070 | 5,609 | 12,001.4 | 24,151 | 2.01 | 2.02 |
| District 11 | 3,356 | 839 | 4,195 | 9,770.5 | 12,749 | 1.30 | 1.34 |
| District 12 | 6,301 | 1,018 | 7,319 | 19,023.0 | 32,123 | 1.69 | 1.55 |
| Region 3 | 14,196 | 2,927 | 17,123 | 40,794.9 | 69,023 | 1.69 | 1.65 |
| State total | 42,138 | 8,258 | 50,396 | 122,841.2 | 170,980 | 1.39 | 1.48 |

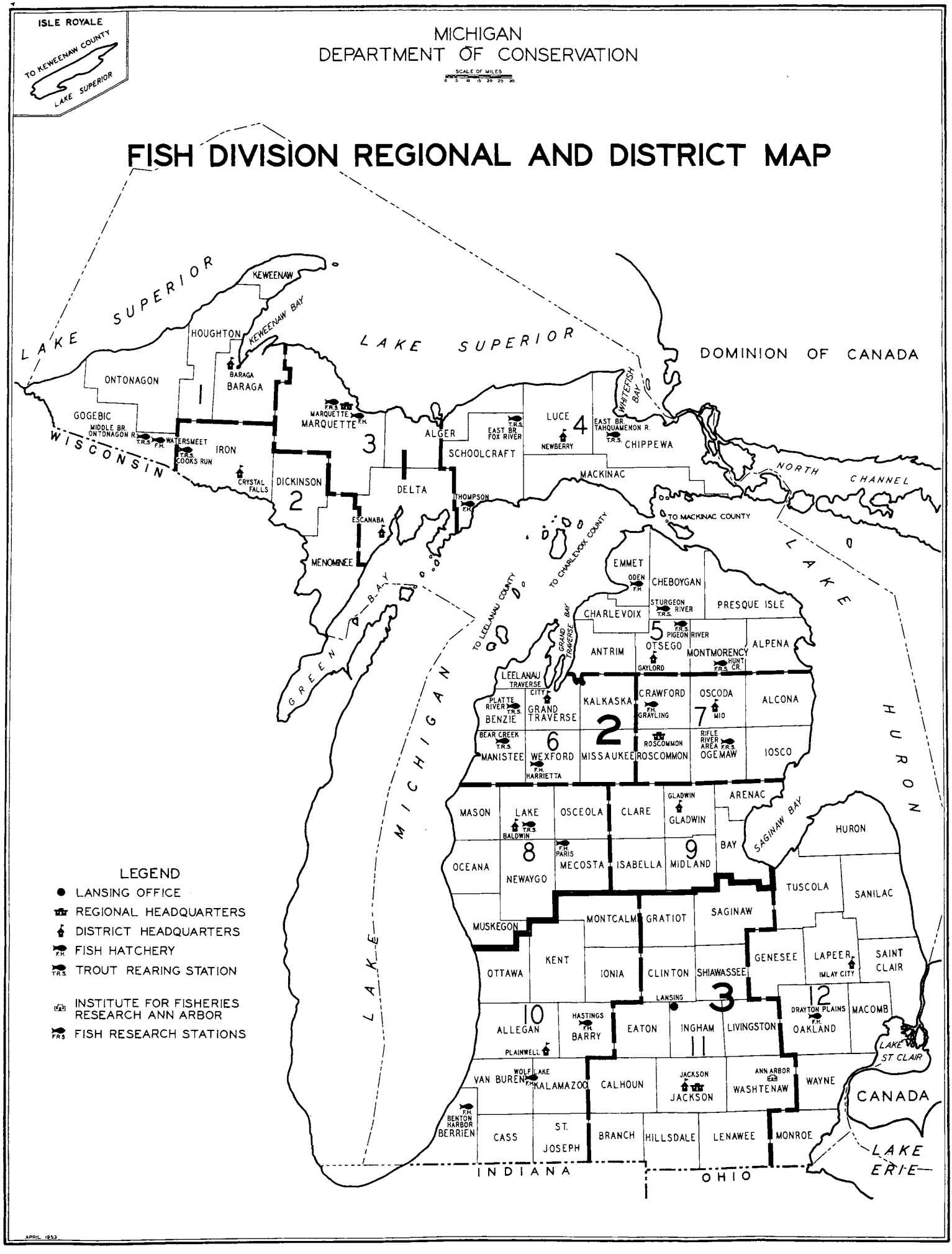
No records of fishing were submitted in 1952 from six counties, Berrien, Eaton, Gratiot, Lenawee, Monroe, and Tuscola, which have mainly non-trout lakes and non-trout streams within their boundaries. A lack of fishing records from these counties and other counties from which there are only a few records tend to prejudice the state-wide sample of fishing. The number of records submitted by counties are given in Table 2.

In this report the various types of waters are separated into Conservation Districts which were formerly called Field Administration Districts (see map). Data from Alger County (which lies in District 3 and 4) have been separated according to the district to which the reporting officer has been assigned.

## Fishing in Trout, Non-trout, and Great Lakes Waters by Conservation Districts

The data for 1952 on the number and percentage of anglers using the various waters are given in Table 3.

The greatest percentage of records for trout fishing in any district was taken in District 3 where 50.0 percent of the 1,979 anglers were contacted while fishing in trout waters. Districts 4 and 1 followed with 44.1 percent based on 4,006 angling-days and 41.3 percent based on 1,286 anglers respectively. The nine districts which make up Regions I and II furnished 94.7 percent of all the trout fishing. Also, the trout fishing in these two regions constituted 25.9 percent of all the fishing in that area. Trout anglers in Region III contributed the remaining 5.3 percent of all trout fishing records and these made up only 2.8 percent of all fishing recorded in this region.


MICHIGAN
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TO KEWEENAW COUNTY
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LAKE SUPERIOR
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HOUGHTON
BARAGA
ONTONAGON
GOGEBIC
MIDDLE BR. ONTONAGON R.
T.R.S.
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WATERSMEET
T.R.S. COOKS RUN
IRON
CRYSTAL FALLS
WISCONSIN
MARQUETTE
F.R.S.
F.H.
DICKINSON
ESCANABA
MENOMINEE
GREEN BAY
ALGER
SCHOOLCRAFT
T.R.S. EAST BR. FOX RIVER
DELTA
THOMPSON
F.H.
LUCE
NEWBERRY
EAST BR. TAHQUAMENON R.
T.R.S.
CHIPPEWA
WHITEFISH BAY
MACKINAC
NORTH CHANNEL
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TO CHARLEVOIX COUNTY
TO LEELANAU COUNTY
GRAND TRAVERSE BAY
EMMET
ODEN
F.H.
CHEBOYGAN
STURGEON RIVER
T.R.S.
PRESQUE ISLE
CHARLEVOIX
PIGEON RIVER
F.R.S.
OTSEGO
GAYLORD
ANTRIM
MONTMORENCY
HUNT CR.
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ALPENA
LEELANAU
TRAVERSE CITY
GRAND TRAVERSE
PLATTE RIVER
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BENZIE
KALKASKA
CRAWFORD
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GRAYLING
OSCODA
MIO
ALCONA
BEAR CREEK
T.R.S.
MANISTEE
WEXFORD
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HARRIETTA
MISSAUKEE
ROSCOMMON
RIFLE RIVER AREA
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PARIS
MECOSTA
ISABELLA
MIDLAND
BAY
TUSCOLA
SANILAC
MUSKEGON
MONTCALM
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GENESEE
LAPEER
IMLAY CITY
SAINT CLAIR
LANSING
ALLEGAN
PLAINWELL
HASTINGS
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EATON
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LIVINGSTON
DRAYTON PLAINS
F.H.
OAKLAND
MACOMB
LAKE ST. CLAIR
VAN BUREN
WOLF LAKE
F.H.
KALAMAZOO
CALHOUN
JACKSON
ANN ARBOR
WASHTENAW
WAYNE
CANADA
F.H.
BENTON HARBOR
BERRIEN
CASS
ST. JOSEPH
BRANCH
HILLSDALE
LENAWEE
MONROE
LAKE ERIE
INDIANA
OHIO
LEGEND
LANSING OFFICE
REGIONAL HEADQUARTERS
DISTRICT HEADQUARTERS
F.H. FISH HATCHERY
T.R.S. TROUT REARING STATION
INSTITUTE FOR FISHERIES RESEARCH ANN ARBOR
F.R.S. FISH RESEARCH STATIONS
APRIL 1953

Table 2

Number of anglers interviewed by conservation officers

during 1952, and 1951 by counties

| County | Number of anglers in 1952 | Number of anglers in 1951 | County | Number of anglers in 1952 | Number of anglers in 1951 |
|---|---|---|---|---|---|
| Alcona | 810 | 778 | Lake | 532 | 912 |
| Alger | 182 | 398 | Lapeer | 3,050 | 2,787 |
| Allegan | 863 | 835 | Leelanau | 203 | 278 |
| Alpena | 521 | 992 | Lenawee | ... | ... |
| Antrim | 387 | 217 | Livingston | 1,124 | 733 |
| Arenac | 1,432 | 1,505 | Luce | 1,256 | 422 |
| Baraga | 378 | 264 | Mackinac | 496 | 309 |
| Barry | 920 | 624 | Macomb | 167 | 320 |
| Bay | 189 | 642 | Manistee | 277 | 527 |
| Benzie | 356 | 300 | Marquette | 1,648 | 894 |
| Berrien | ... | ... | Mason | 277 | 465 |
| Branch | 1 | 453 | Mecosta | 910 | 1,239 |
| Calhoun | 319 | 270 | Menominee | 210 | 634 |
| Cass | 113 | 49 | Midland | 607 | ... |
| Charlevoix | 648 | 683 | Missaukee | 463 | 670 |
| Cheboygan | 1,213 | 2,402 | Monroe | ... | 32 |
| Chippewa | 790 | 911 | Montcalm | 456 | 1,554 |
| Clare | 845 | 776 | Montmorency | 1,589 | 1,323 |
| Clinton | 415 | 181 | Muskegon | 1,206 | 2,098 |
| Crawford | 721 | 1,240 | Newaygo | 288 | 432 |
| Delta | 316 | 188 | Oakland | 1,297 | 232 |
| Dickinson | 795 | 514 | Oceana | 913 | 346 |
| Eaton | ... | 819 | Ogemaw | 1,077 | 1,391 |
| Emmet | 390 | 374 | Ontonagon | 61 | 517 |
| Genesee | 60 | 81 | Osceola | 546 | 609 |
| Gladwin | 556 | 383 | Oscoda | 1,246 | 1,194 |
| Gogebic | 385 | 626 | Otsego | 505 | 524 |
| Grand Traverse | 433 | 648 | Ottawa | 766 | 385 |
| Gratiot | ... | 170 | Presque Isle | 554 | 403 |
| Hillsdale | 178 | 221 | Roscommon | 1,637 | 1,433 |
| Houghton | 348 | 402 | Saginaw | 20 | 96 |
| Huron | 407 | 69 | St. Clair | 214 | ... |
| Ingham | 506 | 372 | St. Joseph | 1,580 | 1,349 |
| Ionia | 208 | 175 | Sanilac | 716 | 837 |
| Iosco | 921 | 1,366 | Schoolcraft | 1,297 | 1,012 |
| Iron | 1,315 | 2,157 | Shiawassee | 359 | 90 |
| Isabella | 217 | 256 | Tuscola | ... | ... |
| Jackson | 252 | 86 | Van Buren | 209 | 74 |
| Kalamazoo | 55 | ... | Washtenaw | 1,021 | 555 |
| Kalkaska | 625 | 119 | Wayne | 1,408 | 451 |
| Kent | 439 | 368 | Wexford | 588 | 680 |
| Keweenaw | 114 | 124 | | | |
| | | | Total | 50,396 | 50,845 |

Table 3

Number and percentage of fishermen interviewed on trout, non-trout, and Great Lakes waters by conservation districts and regions, 1952

| District or region | Trout waters | | Non-trout waters | | Great Lakes waters | | Total anglers |
|---|---|---|---|---|---|---|---|
| | Number anglers | Percentage of anglers | Number anglers | Percentage of anglers | Number anglers | Percentage of anglers | |
| District 1 | 531 | 41.29 | 746 | 58.01 | 9 | 0.70 | 1,286 |
| District 2 | 778 | 33.53 | 1,542 | 66.47 | ... | ... | 2,320 |
| District 3 | 990 | 50.02 | 766 | 38.71 | 223 | 11.27 | 1,979 |
| District 4 | 1,768 | 44.13 | 2,013 | 50.25 | 225 | 5.62 | 4,006 |
| Region 1 | 4,067 | 42.40 | 5,067 | 52.83 | 457 | 4.77 | 9,591 |
| District 5 | 1,305 | 22.47 | 4,384 | 75.50 | 118 | 2.03 | 5,807 |
| District 6 | 795 | 26.99 | 2,143 | 72.77 | 7 | 0.24 | 2,945 |
| District 7 | 1,808 | 28.20 | 4,604 | 71.80 | ... | ... | 6,412 |
| District 8 | 425 | 9.10 | 4,247 | 90.90 | ... | ... | 4,672 |
| District 9 | 223 | 5.80 | 2,780 | 72.28 | 843 | 21.92 | 3,846 |
| Region 2 | 4,556 | 19.24 | 18,158 | 76.67 | 968 | 4.09 | 23,682 |
| District 10 | 273 | 4.87 | 5,241 | 93.44 | 95 | 1.69 | 5,609 |
| District 11 | 120 | 2.86 | 4,075 | 97.14 | ... | ... | 4,195 |
| District 12 | 92 | 1.26 | 5,088 | 69.52 | 2,139 | 29.22 | 7,319 |
| Region 3 | 485 | 2.83 | 14,404 | 84.12 | 2,234 | 13.05 | 17,123 |
| State total | 9,108 | 18.07 | 37,629 | 74.67 | 3,659 | 7.26 | 50,396 |

District 11 had 97.1 percent non-trout reports based on 4,195 fisherman-days. District 10 followed with 93.4 percent based on 5,609 records and District 8 with 90.9 percent based on 4,672 fisherman-days.

Of the twelve districts only one, District 11, does not border one of the Great Lakes or their connecting waters. Eight of the remaining 11 districts submitted some records on Great Lakes sport fishing. Officers obtain relatively few records on Great Lakes sport fishing which is restricted somewhat to sheltered bays, island areas, and certain docking areas. District 12 furnished the highest percentage with 29.2 percent based on 7,319 fisherman-days; District 9 had 21.9 percent based on 3,846 anglers; and District 3 had 11.3 percent based on 1,979 fisherman-days.

## Number of Trout Caught in Trout Waters by Conservation Regions

As in the past brook trout made up the bulk of the total trout catch (68.38 percent). Rainbow trout (19.50 percent) and brown trout (12.12 percent) made up the remainder of the trout catch. The number and percentage of each of the three main species of trout are given in Table 4. These figures indicate an increase in the percentage of rainbow trout (15.90 percent in 1951) and a decrease in the percentage of brook trout (69.74 percent in 1951) and brown trout (14.36 percent in 1951).

Of the 12,702 brook trout recorded by officers in the 1952 general creel census 7,699 or 60.61 percent were reported caught in Region I. A total of 4,634 brook trout or 36.48 percent was taken in Region II. The remaining 369 or 2.91 percent were caught in Region III.

In 1952 a total of 3,623 rainbow trout were recorded caught. Of this total 2,767 or 76.37 were taken in Region II, 775 or 21.39 percent in Region I, and 81 or 2.24 percent in Region III.

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, 1952

| District or Region | Brook trout | | Brown trout | | Rainbow trout | | Total trout |
|---|---|---|---|---|---|---|---|
| | Number | Percentage | Number | Percentage | Number | Percentage | |
| District 1 | 698 | 71.66 | 51 | 5.24 | 225 | 23.10 | 974 |
| District 2 | 1,551 | 88.78 | 87 | 4.98 | 109 | 6.24 | 1,747 |
| District 3 | 1,056 | 77.65 | 59 | 4.34 | 245 | 18.01 | 1,360 |
| District 4 | 4,394 | 93.19 | 125 | 2.65 | 196 | 4.16 | 4,715 |
| Region 1 | 7,699 | 87.53 | 322 | 3.66 | 775 | 8.81 | 8,796 |
| District 5 | 2,213 | 59.06 | 254 | 6.78 | 1,280 | 34.16 | 3,747 |
| District 6 | 641 | 33.40 | 516 | 26.89 | 762 | 39.71 | 1,919 |
| District 7 | 1,285 | 50.31 | 694 | 27.17 | 575 | 22.52 | 2,554 |
| District 8 | 453 | 58.98 | 169 | 22.01 | 146 | 19.01 | 768 |
| District 9 | 42 | 21.43 | 150 | 76.53 | 4 | 2.04 | 196 |
| Region 2 | 4,634 | 50.46 | 1,783 | 19.41 | 2,767 | 30.13 | 9,184 |
| District 10 | 192 | 56.97 | 115 | 34.13 | 30 | 8.90 | 337 |
| District 11 | 95 | 57.93 | 32 | 19.51 | 37 | 22.56 | 164 |
| District 12 | 82 | 85.42 | ... | ... | 14 | 14.58 | 96 |
| Region 3 | 369 | 61.81 | 147 | 24.62 | 81 | 13.57 | 597 |
| State total | 12,702 | 68.38 | 2,252 | 12.12 | 3,623 | 19.50 | 18,577 |

The greatest percentage of brown trout (79.17 percent) were taken in Region II, Region I and III had 14.30 and 6.53 percent respectively. Of the 17,980 trout reported, 96.79 percent were caught in Regions I and II.

## Other Species Caught in Trout Waters

The three species of trout constituted 98.44 percent of all fish caught in trout waters. Twelve other species of fish were reported as taken from trout waters and are listed in order of abundance as follows:

| | | | |
|---|---|---|---|
| Rock bass | 83 | Northern pike | 8 |
| Bluegill | 75 | Menominee whitefish | 4 |
| Yellow perch | 57 | Smallmouth bass | 3 |
| Redhorse | 21 | Lake trout | 1 |
| Suckers | 21 | Largemouth bass | 1 |
| Walleye | 21 | Pumpkinseed | 1 |
| | | Total | 296 |

## Catch per Hour--Trout Waters by Conservation Districts

Trout anglers were recorded in all 12 districts. Trout fishermen, 18.1 percent of all anglers contacted in 1952, had poorer fishing success (0.71 fish per hour and 0.69 trout per hour) than they did in 1951 when the catch per hour was 0.76 fish per hour and 0.74 trout per hour. As shown by the catch per hour, trout fishing was best in District 2 (see Table 5). Separating trout waters into lakes and streams revealed that the catch per hour in trout streams was better than in the designated trout lakes. The majority (86.64 percent) of trout fishermen fished in streams. The highest catch per hour for trout lakes (0.85 trout) was recorded in District 7. For trout streams catches of better than 1.0 trout per hour were recorded in Districts 4 and 2.

Table 5

General creel census data for trout lakes, trout streams, and all trout waters combined by conservation districts and regions, 1952

| | Trout lakes | | | | | | | Trout Streams | | | | | | | All trout waters | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number anglers | Hours fished | Total fish caught | Catch per hour | Total trout caught | Trout catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Total fish caught | Catch per hour | Total trout caught | Trout catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Total fish caught | Catch per hour | Total trout caught | Trout catch per hour | $\frac{\Sigma x}{N}$ |
| District 1 | 2 | 6.0 | 3 | 0.50 | 3 | 0.50 | 0.50 | 529 | 1,348.7 | 971 | 0.72 | 971 | 0.72 | 0.78 | 531 | 1,354.7 | 974 | 0.72 | 974 | 0.72 | 0.78 |
| District 2 | 10 | 12.0 | 11 | 0.92 | 4 | 0.33 | 0.95 | 768 | 1,725.9 | 1,746 | 1.01 | 1,744 | 1.01 | 0.92 | 778 | 1,737.9 | 1,757 | 1.01 | 1,748 | 1.01 | 0.92 |
| District 3 | 476 | 1,162.5 | 272 | 0.23 | 272 | 0.23 | 0.28 | 514 | 1,681.5 | 1,108 | 0.66 | 1,088 | 0.65 | 0.69 | 990 | 2,844.0 | 1,380 | 0.49 | 1,360 | 0.48 | 0.49 |
| District 4 | 330 | 818.0 | 461 | 0.56 | 447 | 0.55 | 0.64 | 1,438 | 3,942.5 | 4,316 | 1.09 | 4,268 | 1.08 | 1.16 | 1,768 | 4,760.5 | 4,777 | 1.00 | 4,715 | 0.99 | 1.06 |
| Region 1 | 818 | 1,998.5 | 747 | 0.37 | 726 | 0.36 | 0.43 | 3,249 | 8,698.6 | 8,141 | 0.94 | 8,071 | 0.93 | 0.97 | 4,067 | 10,697.1 | 8,888 | 0.83 | 8,797 | 0.82 | 0.86 |
| District 5 | 286 | 771.8 | 544 | 0.70 | 532 | 0.69 | 0.84 | 1,019 | 5,048.0 | 3,218 | 0.64 | 3,215 | 0.64 | 0.83 | 1,305 | 5,819.8 | 3,762 | 0.65 | 3,747 | 0.64 | 0.83 |
| District 6 | ... | ... | ... | ... | ... | ... | ... | 795 | 2,136.0 | 1,967 | 0.92 | 1,919 | 0.90 | 0.99 | 795 | 2,136.0 | 1,967 | 0.92 | 1,919 | 0.90 | 0.99 |
| District 7 | 27 | 75.0 | 64 | 0.85 | 64 | 0.85 | 1.18 | 1,781 | 5,123.0 | 2,564 | 0.50 | 2,490 | 0.49 | 0.50 | 1,808 | 5,198.0 | 2,628 | 0.51 | 2,554 | 0.49 | 0.51 |
| District 8 | 9 | 20.0 | 1 | 0.05 | 1 | 0.05 | 0.06 | 416 | 1,068.7 | 767 | 0.72 | 767 | 0.72 | 0.74 | 425 | 1,088.7 | 768 | 0.71 | 768 | 0.71 | 0.73 |
| District 9 | 66 | 139.5 | 96 | 0.69 | 33 | 0.24 | 0.89 | 157 | 424.0 | 163 | 0.38 | 163 | 0.38 | 0.34 | 223 | 563.5 | 259 | 0.46 | 196 | 0.35 | 0.51 |
| Region 2 | 388 | 1,006.3 | 705 | 0.70 | 630 | 0.63 | 0.85 | 4,168 | 13,799.7 | 8,679 | 0.63 | 8,554 | 0.62 | 0.69 | 4,556 | 14,806.0 | 9,384 | 0.63 | 9,184 | 0.62 | 0.71 |
| District 10 | ... | ... | ... | ... | ... | ... | ... | 273 | 720.0 | 339 | 0.47 | 337 | 0.47 | 0.43 | 273 | 720.0 | 339 | 0.47 | 337 | 0.47 | 0.43 |
| District 11 | 11 | 17.0 | 13 | 0.76 | 13 | 0.76 | 0.68 | 109 | 316.0 | 153 | 0.48 | 151 | 0.48 | 0.45 | 120 | 333.0 | 166 | 0.50 | 164 | 0.49 | 0.47 |
| District 12 | ... | ... | ... | ... | ... | ... | ... | 92 | 180.0 | 96 | 0.53 | 96 | 0.53 | 0.52 | 92 | 180.0 | 96 | 0.53 | 96 | 0.53 | 0.52 |
| Region 3 | 11 | 17.0 | 13 | 0.76 | 13 | 0.76 | 0.68 | 474 | 1,216.0 | 588 | 0.48 | 584 | 0.48 | 0.45 | 485 | 1,233.0 | 601 | 0.49 | 597 | 0.48 | 0.46 |
| State total | 1,217 | 3,021.8 | 1,465 | 0.48 | 1,369 | 0.45 | 0.47 | 7,891 | 23,714.3 | 17,408 | 0.73 | 17,209 | 0.73 | 0.79 | 9,108 | 26,736.1 | 18,873 | 0.71 | 18,578 | 0.69 | 0.76 |

## Composition of Catch--Non-trout Waters by Conservation Districts and Regions

During 1952 the officers recorded 30 different kinds of fish in the non-trout anglers' catch. Bluegill were caught in greatest numbers. Other important species recorded were: yellow perch, black crappie, pumpkinseed, rock bass, northern pike, walleye, largemouth bass, and smallmouth bass. These nine species comprised 97.4 percent of the total catch from non-trout waters and the remaining 21 species constituted 2.6 percent. The remaining species not listed in Table 6 in order of abundance are as follows:

| | | | |
|---|---|---|---|
| Suckers | 846 | Brown trout | 19 |
| Bullheads | 734 | White bass | 19 |
| Smelt | 534 | Dogfish | 13 |
| Carp | 369 | Sheepshead | 11 |
| Brook trout | 243 | Shiner | 11 |
| Rainbow trout | 197 | Garpike | 5 |
| Catfish | 64 | Muskellunge | 5 |
| Redhorse | 61 | Chubsucker | 4 |
| Cisco | 42 | Sturgeon | 1 |
| Saugers | 37 | Warmouth bass | 1 |
| Lake trout | 26 | | |
| | | Total | 3,242 |

The three species of stream trout--brook, brown, and rainbow--made up only 0.38 percent of the total catch from non-trout waters.

The nine species most frequently caught in non-trout waters and their percentage abundance in the total catch for each conservation district are given in Table 6. In each district these fish made up 90.3 percent of the total catch. Furthermore, they constituted more than 95 percent in nine of the districts.

The composition of the total non-trout catch has been determined by conservation regions also. Two methods of comparing the catch in

Table 6

Percentage catch of the most important species from non-trout waters, by conservation districts and regions, 1952

| | Bluegill | Yellow perch | Black crappie | P'seed | Rock Bass | Northern pike | Walleye | L.M. bass | S.M. bass | Total fish |
|---|---|---|---|---|---|---|---|---|---|---|
| District 1 | 21.77 | 35.47 | 2.78 | 2.52 | 4.77 | 11.78 | 9.40 | 1.85 | 6.09 | 1,511 |
| District 2 | 17.59 | 23.86 | 24.68 | 1.25 | 1.53 | 16.20 | 10.24 | 0.61 | 2.41 | 2,950 |
| District 3 | 10.20 | 60.49 | ... | 0.81 | 0.19 | 12.33 | 8.30 | 2.94 | 4.60 | 2,108 |
| District 4 | 5.90 | 65.72 | 0.50 | 1.37 | 7.03 | 8.15 | 7.01 | 0.51 | 0.64 | 8,748 |
| Region 1 | 10.31 | 53.95 | 5.32 | 1.38 | 4.81 | 10.64 | 8.04 | 1.00 | 2.06 | 15,317 |
| District 5 | 13.08 | 25.65 | 0.45 | 18.37 | 7.70 | 11.62 | 2.96 | 6.40 | 5.91 | 7,326 |
| District 6 | 31.19 | 34.87 | 1.13 | 5.05 | 8.19 | 4.56 | 2.81 | 1.57 | 0.96 | 5,937 |
| District 7 | 38.24 | 30.43 | 4.84 | 7.58 | 8.15 | 4.39 | 1.06 | 1.95 | 0.85 | 10,339 |
| District 8 | 37.47 | 43.01 | 10.31 | 3.98 | 1.93 | 0.89 | 1.02 | 0.64 | 0.12 | 20,649 |
| District 9 | 11.85 | 62.70 | 19.60 | 2.25 | 0.58 | 1.40 | 0.01 | 0.39 | 0.50 | 12,140 |
| Region 2 | 28.27 | 41.82 | 9.06 | 6.25 | 4.19 | 3.42 | 1.25 | 1.67 | 1.18 | 56,391 |
| District 10 | 69.28 | 17.28 | 7.02 | 3.53 | 0.50 | 0.57 | 0.09 | 1.01 | 0.06 | 22,067 |
| District 11 | 56.45 | 14.80 | 9.81 | 6.45 | 5.07 | 2.11 | 0.27 | 2.82 | 1.04 | 12,583 |
| District 12 | 59.52 | 15.49 | 6.39 | 6.25 | 2.27 | 1.27 | ... | 1.46 | 0.31 | 13,335 |
| Region 3 | 63.20 | 16.13 | 7.58 | 5.05 | 2.19 | 1.17 | 0.11 | 1.61 | 0.39 | 47,985 |
| State total | 39.97 | 33.08 | 7.99 | 5.15 | 3.47 | 3.44 | 1.66 | 1.56 | 0.97 | 119,693 |

Table 7

Percentage composition of the total catch for non-trout waters

(most abundant game and pan fish only)

| Species | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bluegill | 37.4 | 48.3 | 44.2 | 48.0 | 27.2 | 30.2 | 44.3 | 47.6 | 43.5 | 41.6 | 40.0 |
| Yellow perch | 23.8 | 17.8 | 21.1 | 18.4 | 53.7 | 40.0 | 23.1 | 24.4 | 29.1 | 33.5 | 33.1 |
| Black crappie | 5.8 | 8.3 | 5.8 | 9.2 | 4.3 | 6.8 | 9.3 | 8.5 | 7.6 | 6.4 | 8.0 |
| Pumpkinseed | 5.1 | 4.4 | 4.8 | 3.6 | 2.4 | 2.4 | 4.2 | 3.8 | 3.8 | 4.1 | 5.1 |
| Rock bass | 4.2 | 3.2 | 3.6 | 2.3 | 2.1 | 2.1 | 4.3 | 3.2 | 3.1 | 3.3 | 3.5 |
| Northern pike | 3.4 | 3.3 | 4.6 | 5.3 | 2.8 | 3.0 | 4.3 | 4.8 | 2.9 | 3.3 | 3.4 |
| Walleye | 2.8 | 3.2 | 3.6 | 2.0 | 1.2 | 0.9 | 1.9 | 1.2 | 1.2 | 1.5 | 1.7 |
| Largemouth bass | 2.2 | 2.5 | 2.6 | 2.6 | 1.0 | 1.2 | 2.2 | 1.5 | 1.5 | 1.6 | 1.6 |
| Smallmouth bass | 2.2 | 1.7 | 1.8 | 1.1 | 0.7 | 0.8 | 1.8 | 1.1 | 1.0 | 1.1 | 1.0 |
| Total | 86.9 | 92.7 | 92.1 | 92.5 | 95.4 | 87.4 | 95.4 | 96.1 | 93.7 | 96.4 | 97.4 |

the three regions have been used: (1) The percentage of the total state catch of each species caught tabulated by regions (Table 8), and (2) the percentage of each species in the total catch tabulated for each of the three regions (Table 9).

The bluegill was caught in greater numbers from non-trout waters than any other single species. More than 63 percent of all bluegills reported in the 1952 general creel census were taken in Region III. The yellow perch was caught most frequently in Region II and next in Region I, and lastly in Region III. Over nine-tenths (96.70 percent) of all bluegills recorded and above eight-tenths (79.13 percent) of all yellow perch recorded in the 1952 general creel census were caught in the Lower Peninsula. The walleye was the species which was reported most often in Region I. Yellow perch, black crappie, pumpkinseed, rock bass, northern pike, largemouth bass, and smallmouth bass were caught most frequently in Region II. In Region III the bluegill was the species which was reported most often in the catch.

In all three regions the combined catch of bluegills and yellow perch constituted more than six-tenths of the total catch (64.26 percent in Region I, 70.09 percent in Region II, and 79.33 percent in Region III). For the entire state these two species made up 73.05 percent of the total non-trout catch. Northern pike was the only other species which made up more than 10 percent of the total catch of any one region (10.64 percent in Region I).

## Catch per Hour--Non-trout Waters by Conservation Districts

For non-trout waters the highest catch per hour was recorded in District 9 with 2.43 fish per hour (Table 10). All districts had catches

Table 8

Number and percentage of the total catch for the whole state of each of the species tabulated by conservation regions--all non-trout waters, 1952

| Species | Region I | | Region II | | Region III | | Total fish | Total percent |
|---|---|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent | | |
| Bluegill | 1,579 | 3.30 | 15,941 | 33.32 | 30,328 | 63.38 | 47,848 | 100.00 |
| Yellow perch | 8,264 | 20.87 | 23,587 | 59.58 | 7,741 | 19.55 | 39,592 | 100.00 |
| Black crappie | 814 | 8.52 | 5,107 | 53.43 | 3,637 | 38.05 | 9,558 | 100.00 |
| Pumpkinseed | 212 | 3.44 | 3,525 | 57.22 | 2,423 | 39.34 | 6,160 | 100.00 |
| Rock bass | 736 | 17.74 | 2,362 | 56.93 | 1,051 | 25.33 | 4,149 | 100.00 |
| Northern pike | 1,629 | 39.54 | 1,930 | 46.84 | 561 | 13.62 | 4,120 | 100.00 |
| Walleye | 1,232 | 61.91 | 705 | 35.43 | 53 | 2.66 | 1,990 | 100.00 |
| Largemouth bass | 153 | 8.19 | 943 | 50.48 | 772 | 41.33 | 1,868 | 100.00 |
| Smallmouth bass | 316 | 27.10 | 663 | 56.86 | 187 | 16.04 | 1,166 | 100.00 |
| Totals or percentages | 14,935 | 12.82 | 54,763 | 47.03 | 46,753 | 40.15 | 116,451 | 100.00 |

Table 9

Number and percentage of each species caught in the total catch in each of the three conservation regions--all non-trout waters, 1952

| Species | Region I | | Region II | | Region III | |
|---|---|---|---|---|---|---|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| Bluegill | 1,579 | 10.31 | 15,941 | 28.27 | 30,328 | 63.20 |
| Yellow perch | 8,264 | 53.95 | 23,587 | 41.82 | 7,741 | 16.13 |
| Black crappie | 814 | 5.32 | 5,107 | 9.06 | 3,637 | 7.58 |
| Pumpkinseed | 212 | 1.38 | 3,525 | 6.25 | 2,423 | 5.05 |
| Rock bass | 736 | 4.81 | 2,362 | 4.19 | 1,051 | 2.19 |
| Northern pike | 1,629 | 10.64 | 1,930 | 3.42 | 561 | 1.17 |
| Walleye | 1,232 | 8.04 | 705 | 1.25 | 53 | 0.11 |
| Largemouth bass | 153 | 1.00 | 943 | 1.67 | 772 | 1.61 |
| Smallmouth bass | 316 | 2.06 | 663 | 1.18 | 187 | 0.39 |
| Total or percentages | 14,935 | 97.51 | 54,763 | 97.11 | 46,753 | 97.43 |

Table 10

General creel census data for non-trout lakes, non-trout streams, and all non-trout waters combined, by conservation districts and regions, 1952

| | Non-trout lakes | | | | | Non-trout streams | | | | | All non-trout waters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ |
| District 1 | 714 | 1,738.8 | 1,459 | 0.84 | 0.95 | 32 | 85.0 | 52 | 0.61 | 0.61 | 746 | 1,823.8 | 1,511 | 0.83 | 0.93 |
| District 2 | 1,091 | 2,546.0 | 2,332 | 0.92 | 1.03 | 451 | 1,043.5 | 618 | 0.59 | 0.58 | 1,542 | 3,589.5 | 2,950 | 0.82 | 0.90 |
| District 3 | 585 | 1,675.5 | 1,805 | 1.08 | 1.14 | 181 | 425.5 | 303 | 0.71 | 0.77 | 766 | 2,101.0 | 2,108 | 1.00 | 1.05 |
| District 4 | 1,761 | 4,798.7 | 7,540 | 1.57 | 1.67 | 252 | 844.5 | 1,208 | 1.43 | 1.31 | 2,013 | 5,643.2 | 8,748 | 1.55 | 1.62 |
| Region 1 | 4,151 | 10,759.0 | 13,136 | 1.22 | 1.30 | 916 | 2,398.5 | 2,181 | 0.91 | 0.82 | 5,067 | 13,157.5 | 15,317 | 1.16 | 1.21 |
| District 5 | 4,108 | 10,620.0 | 7,032 | 0.66 | 0.82 | 276 | 410.5 | 294 | 0.72 | 0.77 | 4,384 | 11,030.5 | 7,326 | 0.66 | 0.82 |
| District 6 | 2,064 | 4,546.5 | 5,829 | 1.28 | 1.43 | 79 | 156.0 | 108 | 0.69 | 0.57 | 2,143 | 4,702.5 | 5,937 | 1.26 | 1.39 |
| District 7 | 4,522 | 9,486.0 | 10,108 | 1.07 | 1.11 | 82 | 243.5 | 231 | 0.95 | 0.93 | 4,604 | 9,729.5 | 10,339 | 1.06 | 1.10 |
| District 8 | 4,132 | 8,835.5 | 20,455 | 2.32 | 2.37 | 115 | 294.0 | 194 | 0.66 | 0.71 | 4,247 | 9,129.5 | 20,649 | 2.26 | 2.33 |
| District 9 | 1,738 | 3,036.8 | 3,820 | 1.26 | 1.22 | 1,042 | 1,957.4 | 8,320 | 4.25 | 4.46 | 2,780 | 4,994.2 | 12,140 | 2.43 | 2.44 |
| Region 2 | 16,564 | 36,524.8 | 47,244 | 1.29 | 1.40 | 1,594 | 3,061.4 | 9,147 | 2.99 | 3.17 | 18,158 | 39,586.2 | 56,391 | 1.42 | 1.56 |
| District 10 | 5,005 | 10,635.9 | 21,323 | 2.00 | 1.98 | 236 | 474.5 | 744 | 1.57 | 1.35 | 5,241 | 11,110.4 | 22,067 | 1.99 | 1.96 |
| District 11 | 3,373 | 7,925.0 | 10,878 | 1.37 | 1.40 | 702 | 1,512.5 | 1,705 | 1.13 | 1.25 | 4,075 | 9,437.5 | 12,583 | 1.33 | 1.37 |
| District 12 | 4,303 | 8,720.0 | 11,568 | 1.33 | 1.29 | 785 | 1,706.0 | 1,767 | 1.04 | 0.98 | 5,088 | 10,426.0 | 13,335 | 1.28 | 1.24 |
| Region 3 | 12,681 | 27,280.9 | 43,769 | 1.60 | 1.59 | 1,723 | 3,693.0 | 4,216 | 1.14 | 1.14 | 14,404 | 30,973.9 | 47,985 | 1.55 | 1.54 |
| State total | 33,396 | 74,564.7 | 104,149 | 1.40 | 1.46 | 4,233 | 9,152.9 | 15,544 | 1.70 | 1.84 | 37,629 | 83,717.6 | 119,693 | 1.43 | 1.50 |

of better than 1.0 fish per hour except Districts 1, 2, and 5. According to the catch per hour, lake fishing was best in District 8 where the anglers caught 2.32 fish per hour, followed by Districts 10, 4, and 11 with 2.00, 1.57, and 1.37 fish per hour respectively. For non-trout streams District 9 yielded the highest catch per unit of effort (4.25 fish) followed by Districts 10, 4, and 11 with 1.57, 1.43, and 1.13 fish per hour respectively. In 1952 the catch from non-trout waters for the entire state was 1.43 fish per hour, which is a drop of 0.07 fish per hour (1.50 fish per hour in 1951).

## Composition of Catch--Great Lakes Waters

A total of 32,414 fish were recorded from Great Lakes waters. The yellow perch made up the bulk of the total catch, 84.11 percent (Table 11). The following four species are arranged according to their abundance in the catch: yellow perch, rock bass, walleye, and smallmouth bass. These species constituted 95.40 percent of all fish caught from Great Lakes waters and 11 other species of fish were included in the remaining 4.60 percent.

The other species of fish are listed as follows:

| | | | |
|---|---|---|---|
| White bass | 544 | Largemouth bass | 36 |
| Sheepshead | 436 | Cisco | 8 |
| Smelt | 171 | Bluegill | 6 |
| Pumpkinseed | 138 | Muskellunge | 1 |
| Northern pike | 104 | Rainbow trout | 1 |
| Black crappie | 48 | | |
| | | Total | 1,493 |

## Catch per Hour--Great Lakes Waters by Conservation Districts

In 1952 fishing records from the Great Lakes and their connecting waters were submitted by officers in eight districts. District 11 does

Table 11

Percentage composition of the total catch for Great Lakes waters

(only the 4 most abundant species for 1952 are given)

| Species | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Yellow perch | 84.23 | 76.67 | 72.16 | 86.46 | 65.73 | 82.48 | 86.26 | 90.64 | 96.17 | 94.29 | 84.11 |
| Rock bass | 3.80 | 2.95 | 3.82 | 0.60 | 3.19 | 1.31 | 1.56 | 0.47 | 0.20 | 0.84 | 5.86 |
| Walleye | 1.68 | 6.53 | 6.50 | 3.09 | 7.81 | 8.23 | 5.21 | 3.91 | 1.36 | 1.48 | 3.68 |
| Smallmouth bass | 2.10 | 6.29 | 3.81 | 1.72 | 3.15 | 1.40 | 1.18 | 0.24 | 0.38 | 0.54 | 1.75 |
| Totals | 91.81 | 92.44 | 86.29 | 91.87 | 79.88 | 93.42 | 94.21 | 95.26 | 98.11 | 97.15 | 95.40 |

not border on the Great Lakes or their connecting waters and Districts 2, 7, and 8 did not submit any catch records from the Great Lakes waters. The greatest success in fishing Great Lakes waters was reported from District 10 (10.20 fish per hour). This high catch per hour is attributed to 1,326 yellow perch taken in 110.0 hours by 61 anglers in Ottawa County (Table 12). In five of the districts the anglers experienced a catch of better than 2.0 fish per hour and the average for all Great Lakes waters was 2.62 fish per hour. Fishing in the Great Lakes proper was better than in the connecting water (2.71 fish per hour and 1.35 fish per hour respectively).

## Quality of Fishing--All Waters by Conservation Districts and Regions

The fishing quality is usually expressed in terms of the number of fish caught per hour of fishing and this varies considerably with the method of angling used by the fisherman as well as with the skill of the angler. Districts 9, 8, and 10 had catches per hour of 2.77, 2.10, and 2.01 fish respectively. In District 9 the high figure was due to the huge number of yellow perch taken in non-trout streams (7,188) and in Great Lakes waters (7,908). The high catch per hour was caused in District 8 by the great percentage of fishermen angling in non-trout waters with good success and in District 10 by the great percentage of fishermen angling in non-trout lakes with good success.

In terms of number of fish caught per hour the best fishing was in Region III with a catch of 1.69 fish per hour, whereas Regions II and I had catches per hour of 1.31 and 1.10 fish respectively. Furthermore 74,115 fish (43.35 percent) of the total 170,980 recorded in the

Table 12

General creel census data for Great Lakes and connecting waters, and such waters combined by conservation districts and regions, 1952

| | Great Lakes | | | | | Connecting waters | | | | | All Great Lakes waters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ |
| District 1 | 9 | 34.0 | 29 | 0.85 | 0.86 | ... | ... | ... | ... | ... | 9 | 34.0 | 29 | 0.85 | 0.86 |
| District 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| District 3 | 223 | 787.5 | 1,553 | 1.97 | 2.15 | ... | ... | ... | ... | ... | 223 | 787.5 | 1,553 | 1.97 | 2.15 |
| District 4 | 205 | 658.0 | 2,001 | 3.04 | 3.33 | 20 | 78.5 | 54 | 0.69 | 0.74 | 225 | 736.5 | 2,055 | 2.79 | 3.10 |
| Region 1 | 437 | 1,479.5 | 3,583 | 2.42 | 2.68 | 20 | 78.5 | 54 | 0.69 | 0.74 | 457 | 1,558.0 | 3,637 | 2.33 | 2.59 |
| District 5 | 118 | 406.0 | 196 | 0.48 | 0.47 | ... | ... | ... | ... | ... | 118 | 406.0 | 196 | 0.48 | 0.47 |
| District 6 | 7 | 17.5 | 76 | 4.34 | 4.33 | ... | ... | ... | ... | ... | 7 | 17.5 | 76 | 4.34 | 4.33 |
| District 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| District 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| District 9 | 843 | 1,818.0 | 8,068 | 4.44 | 4.39 | ... | ... | ... | ... | ... | 843 | 1,818.0 | 8,068 | 4.44 | 4.39 |
| Region 2 | 968 | 2,241.5 | 8,340 | 3.72 | 3.91 | ... | ... | ... | ... | ... | 968 | 2,241.5 | 8,340 | 3.72 | 3.91 |
| District 10 | 95 | 171.0 | 1,745 | 10.20 | 10.19 | ... | ... | ... | ... | ... | 95 | 171.0 | 1,745 | 10.20 | 10.19 |
| District 11 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| District 12 | 1,889 | 7,611.5 | 17,551 | 2.31 | 2.43 | 250 | 805.5 | 1,141 | 1.42 | 1.55 | 2,139 | 8,417.0 | 18,692 | 2.22 | 2.33 |
| Region 3 | 1,984 | 7,782.5 | 19,296 | 2.48 | 2.80 | 250 | 805.5 | 1,141 | 1.42 | 1.55 | 2,234 | 8,588.0 | 20,437 | 2.38 | 2.66 |
| State total | 3,389 | 11,503.5 | 31,219 | 2.71 | 3.10 | 270 | 884.0 | 1,195 | 1.35 | 1.49 | 3,659 | 12,387.5 | 32,414 | 2.62 | 2.98 |

census were caught in Region II, 69,023 fish (40.37 percent) were taken in Region III, and the remaining 27,842 (16.28 percent) were caught in Region I.

Residence of Anglers--All Waters

Of the 50,396 anglers recorded in the 1952 general creel census, there were 45,203 (89.70 percent) who resided in Michigan and the remaining 5,193 (10.30 percent) lived outside the state (Table 13). Conservation officers in District 5 contacted the greatest number of non-resident anglers. In this district 969 anglers (16.69 percent of all anglers interviewed in the district) were from outside the state. However, Districts 1 and 2 had a higher percentage of non-resident anglers to total anglers with 26.28 and 24.31 percent respectively. Officers in District 9 interviewed the fewest non-residents (48) and these anglers comprised only 1.43 percent of all fishermen recorded in the district. The lowest percentage of non-resident anglers was recorded in District 12.

Anglers residing in all of the 83 counties of Michigan were recorded in the 1952 general creel census. Residents of Wayne County constituted 14.13 percent of all anglers interviewed in 1952. Other counties from which anglers were recorded in great numbers were Genesee (5.74 percent), Kent (4.30 percent), Ingham (3.63 percent), and Oakland (3.38 percent). Residents from the above mentioned counties accounted for 31.18 percent of all anglers contacted.

Out-of-state fishermen came from 28 states in the Union, District of Columbia, and the Province of Ontario. The four states bordering Michigan furnished 94.97 percent of all non-resident anglers. Fishermen from Ohio made up 38.88 percent; from Indiana, 29.19 percent; from

Table 13

Number of fishermen, resident and non-resident, and percentage of non-resident fishermen in each conservation district, all waters, 1952

| | Total anglers | Resident anglers | Non-resident anglers | Percent non-resident |
|---|---|---|---|---|
| District 1 | 1,286 | 948 | 338 | 26.28 |
| District 2 | 2,320 | 1,756 | 564 | 24.31 |
| District 3 | 1,979 | 1,645 | 334 | 16.88 |
| District 4 | 4,006 | 3,402 | 604 | 15.08 |
| Region 1 | 9,591 | 7,751 | 1,840 | 19.18 |
| District 5 | 5,807 | 4,838 | 969 | 16.69 |
| District 6 | 2,945 | 2,719 | 226 | 7.67 |
| District 7 | 6,412 | 5,861 | 551 | 8.59 |
| District 8 | 4,672 | 4,168 | 504 | 10.79 |
| District 9 | 3,846 | 3,798 | 48 | 1.25 |
| Region 2 | 23,682 | 21,384 | 2,298 | 9.70 |
| District 10 | 5,609 | 4,750 | 859 | 15.31 |
| District 11 | 4,195 | 4,067 | 128 | 3.05 |
| District 12 | 7,319 | 7,251 | 68 | 0.93 |
| Region 3 | 17,123 | 16,068 | 1,055 | 6.16 |
| State total | 50,396 | 45,203 | 5,193 | 10.30 |

Illinois, 18.43 percent; and from Wisconsin, 8.47 percent. The county of residence for Michigan fishermen and the state of residence for non-residents are given in Table 14.

## Catch per Hour--Resident and Non-resident Anglers--All Waters

Resident anglers had a higher catch per hour (1.42 fish) than did the non-resident anglers (1.13 fish). Comparison of resident and non-resident anglers is given in Table 15.

## Sex of Anglers--All Waters

A total of 8,258 female anglers was interviewed in 1952. Of the total 50,396 anglers contacted 16.4 percent were female anglers.

## Comparison of 1952 General Creel Census Data with that of Other Years

Tables 16 to 21 summarize the general creel census data for the past 11 years. The catch per hour for all waters has ranged from 1.1 fish in 1945 to 1.6 fish in 1950 and the simple average for the 11-year period is 1.3. For 1952 the catch for all waters was 0.1 fish per hour above the average.

During the past 11 years the catch per hour of all fish in trout waters has varied 0.4 fish per hour. The highest catch during this period was in 1942 and 1943 with 0.9 fish per hour and the low of 0.6 fish per hour was recorded in 1950. The simple average for the 11-year period is 0.8 fish per hour which is 0.1 fish per hour better than the catch per hour of 1952.

The catch per hour for non-trout waters is very similar to the catch per hour for all waters, because the number of records from

Table 14

Residence of fishermen interviewed in the general creel census, 1952

| County of residence | Male anglers | Female anglers | Total anglers |
|---|---|---|---|
| Alcona | 106 | 23 | 129 |
| Alger | 128 | 6 | 134 |
| Allegan | 399 | 56 | 455 |
| Alpena | 313 | 44 | 357 |
| Antrim | 329 | 74 | 403 |
| Arenac | 222 | 31 | 253 |
| Baraga | 195 | 20 | 215 |
| Barry | 175 | 38 | 213 |
| Bay | 881 | 199 | 1,080 |
| Benzie | 181 | 16 | 197 |
| Berrien | 95 | 25 | 120 |
| Branch | 135 | 25 | 160 |
| Calhoun | 470 | 94 | 564 |
| Cass | 55 | 18 | 73 |
| Charlevoix | 194 | 34 | 228 |
| Cheboygan | 270 | 20 | 290 |
| Chippewa | 306 | 39 | 345 |
| Clare | 346 | 45 | 391 |
| Clinton | 338 | 105 | 443 |
| Crawford | 159 | 14 | 173 |
| Delta | 268 | 20 | 288 |
| Dickinson | 672 | 67 | 739 |
| Eaton | 143 | 30 | 173 |
| Emmet | 175 | 23 | 198 |
| Genesee | 2,341 | 552 | 2,893 |
| Gladwin | 162 | 34 | 196 |
| Gogebic | 121 | 8 | 129 |
| Grand Traverse | 260 | 42 | 302 |
| Gratiot | 237 | 73 | 310 |
| Hillsdale | 110 | 33 | 143 |
| Houghton | 261 | 19 | 280 |
| Huron | 166 | 38 | 204 |
| Ingham | 1,408 | 423 | 1,831 |
| Ionia | 178 | 55 | 233 |
| Iosco | 260 | 58 | 318 |
| Iron | 767 | 71 | 838 |
| Isabella | 288 | 63 | 351 |
| Jackson | 319 | 70 | 389 |
| Kalamazoo | 538 | 159 | 697 |
| Kalkaska | 183 | 13 | 196 |
| Kent | 1,680 | 489 | 2,169 |
| Keweenaw | 34 | 1 | 35 |
| Lake | 64 | 18 | 82 |
| Lapeer | 905 | 120 | 1,025 |
| Leelanau | 112 | 9 | 121 |
| Lenawee | 29 | 17 | 46 |
| Livingston | 88 | 16 | 104 |
| Luce | 979 | 121 | 1,100 |
| Mackinac | 236 | 20 | 256 |
| Macomb | 315 | 66 | 381 |
| Manistee | 209 | 26 | 235 |
| Marquette | 1,289 | 80 | 1,369 |
| Mason | 191 | 36 | 227 |
| Mecosta | 486 | 109 | 595 |
| Menominee | 163 | 8 | 171 |
| Midland | 705 | 167 | 872 |
| Missaukee | 227 | 29 | 256 |
| Monroe | 79 | 21 | 100 |
| Montcalm | 406 | 70 | 476 |
| Montmorency | 321 | 69 | 390 |
| Muskegon | 1,132 | 147 | 1,279 |
| Newaygo | 154 | 16 | 170 |
| Oakland | 1,454 | 248 | 1,702 |
| Oceana | 236 | 30 | 266 |
| Ogemaw | 246 | 12 | 258 |
| Ontonagon | 59 | 14 | 73 |
| Osceola | 333 | 54 | 387 |
| Oscoda | 224 | 43 | 267 |
| Otsego | 239 | 23 | 262 |
| Ottawa | 306 | 45 | 351 |
| Presque Isle | 383 | 52 | 435 |
| Roscommon | 117 | 39 | 156 |
| Saginaw | 1,119 | 275 | 1,394 |
| St. Clair | 213 | 25 | 238 |
| St. Joseph | 843 | 118 | 961 |
| Sanilac | 278 | 27 | 305 |
| Schoolcraft | 572 | 66 | 638 |
| Shiawassee | 349 | 123 | 472 |
| Tuscola | 142 | 33 | 175 |
| Van Buren | 102 | 23 | 125 |
| Washtenaw | 663 | 103 | 766 |
| Wayne | 5,849 | 1,274 | 7,123 |
| Wexford | 405 | 54 | 459 |
| Total | 38,090 | 7,113 | 45,203 |
| Grand total (Resident and non-resident) | 42,138 | 8,258 | 50,396 |

Table 14 (continued)

Residence of fishermen interviewed in the general creel census, 1952

| State of residence | Male anglers | Female anglers | Total anglers |
|---|---|---|---|
| Alabama | 5 | ... | 5 |
| Arizona | 3 | 2 | 5 |
| Arkansas | 6 | ... | 6 |
| California | 5 | ... | 5 |
| Florida | 15 | 6 | 21 |
| Illinois | 755 | 202 | 957 |
| Indiana | 1,168 | 348 | 1,516 |
| Iowa | 10 | 2 | 12 |
| Kansas | 6 | 2 | 8 |
| Kentucky | 20 | 4 | 24 |
| Louisiana | 4 | 4 | 8 |
| Minnesota | 5 | 1 | 6 |
| Mississippi | 1 | 1 | 2 |
| Missouri | 10 | 2 | 12 |
| Nebraska | 2 | 1 | 3 |
| Nevada | 1 | 1 | 2 |
| New Jersey | 6 | ... | 6 |
| New York | 22 | 8 | 30 |
| North Carolina | 2 | 2 | 4 |
| Ohio | 1,530 | 489 | 2,019 |
| Oklahoma | 2 | 1 | 3 |
| Pennsylvania | 43 | 5 | 48 |
| Tennessee | 2 | 1 | 3 |
| Texas | 12 | 2 | 14 |
| Virginia | 2 | 2 | 4 |
| Washington | 2 | ... | 2 |
| West Virginia | 12 | 13 | 25 |
| Wisconsin | 394 | 46 | 440 |
| Washington D. C. | 2 | ... | 2 |
| Ontario | 1 | ... | 1 |
| Total | 4,048 | 1,145 | 5,193 |

Table 15

Number of resident and non-resident anglers, number of hours spent fishing, number fish caught, and the catch per hour for each group--all waters, by conservation districts, 1952

| | Resident anglers | | | | | Non-resident anglers | | | | | All anglers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ | Number anglers | Hours fished | Fish caught | Catch per hour | $\frac{\Sigma x}{N}$ |
| District 1 | 948 | 2,295.5 | 1,736 | 0.76 | 0.80 | 338 | 917.0 | 778 | 0.85 | 1.07 | 1,286 | 3,212.5 | 2,514 | 0.78 | 0.87 |
| District 2 | 1,756 | 4,077.4 | 3,322 | 0.82 | 0.84 | 564 | 1,250.0 | 1,385 | 1.11 | 1.11 | 2,320 | 5,327.4 | 4,707 | 0.88 | 0.91 |
| District 3 | 1,645 | 4,750.5 | 3,877 | 0.82 | 0.82 | 334 | 982.0 | 1,164 | 1.19 | 1.25 | 1,979 | 5,732.5 | 5,041 | 0.88 | 0.90 |
| District 4 | 3,402 | 9,491.7 | 13,672 | 1.44 | 1.52 | 604 | 1,648.5 | 1,908 | 1.16 | 1.12 | 4,006 | 11,140.2 | 15,580 | 1.40 | 1.46 |
| Region 1 | 7,751 | 20,615.1 | 22,607 | 1.10 | 1.13 | 1,840 | 4,797.5 | 5,235 | 1.09 | 1.13 | 9,591 | 25,412.6 | 27,842 | 1.10 | 1.13 |
| District 5 | 4,838 | 15,216.3 | 9,669 | 0.64 | 0.80 | 969 | 2,040.0 | 1,615 | 0.79 | 0.89 | 5,807 | 17,256.3 | 11,284 | 0.65 | 0.81 |
| District 6 | 2,719 | 6,449.5 | 7,532 | 1.17 | 1.31 | 226 | 406.5 | 448 | 1.10 | 1.13 | 2,945 | 6,856.0 | 7,980 | 1.16 | 1.29 |
| District 7 | 5,861 | 13,639.1 | 11,690 | 0.86 | 0.94 | 551 | 1,288.4 | 1,277 | 0.99 | 0.96 | 6,412 | 14,927.5 | 12,967 | 0.87 | 0.94 |
| District 8 | 4,168 | 9,194.7 | 19,717 | 2.14 | 2.26 | 504 | 1,023.5 | 1,700 | 1.66 | 1.55 | 4,672 | 10,218.2 | 21,417 | 2.10 | 2.18 |
| District 9 | 3,798 | 7,310.2 | 20,396 | 2.79 | 2.77 | 48 | 65.5 | 71 | 1.08 | 1.19 | 3,846 | 7,375.7 | 20,467 | 2.77 | 2.75 |
| Region 2 | 21,384 | 51,809.8 | 69,004 | 1.33 | 1.53 | 2,298 | 4,823.9 | 5,111 | 1.06 | 1.08 | 23,682 | 56,633.7 | 74,115 | 1.31 | 1.49 |
| District 10 | 4,750 | 10,436.8 | 21,972 | 2.11 | 2.14 | 859 | 1,564.6 | 2,179 | 1.39 | 1.39 | 5,609 | 12,001.4 | 24,151 | 2.01 | 2.02 |
| District 11 | 4,067 | 9,434.5 | 12,483 | 1.32 | 1.36 | 128 | 336.0 | 266 | 0.79 | 0.92 | 4,195 | 9,770.5 | 12,749 | 1.30 | 1.34 |
| District 12 | 7,251 | 18,873.0 | 31,702 | 1.68 | 1.55 | 68 | 150.0 | 421 | 2.81 | 1.83 | 7,319 | 19,023.0 | 32,123 | 1.69 | 1.55 |
| Region 3 | 16,068 | 38,744.3 | 66,157 | 1.71 | 1.67 | 1,055 | 2,050.6 | 2,866 | 1.40 | 1.36 | 17,123 | 40,794.9 | 69,023 | 1.69 | 1.65 |
| State total | 45,203 | 111,169.2 | 157,768 | 1.42 | 1.51 | 5,193 | 11,672.0 | 13,212 | 1.13 | 1.16 | 50,396 | 122,841.2 | 170,980 | 1.39 | 1.48 |

Table 16

Comparison of data from the general creel census for the past 11 years

| | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | Simple average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATCH PER HOUR: | | | | | | | | | | | | |
| All waters | 1.1 | 1.2 | 1.2 | 1.1 | 1.3 | 1.4 | 1.1 | 1.3 | 1.6 | 1.4 | 1.4 | 1.3 |
| Resident | 1.2 | 1.2 | 1.2 | 1.1 | 1.4 | 1.5 | 1.2 | 1.3 | 1.7 | 1.4 | 1.4 | 1.3 |
| Non-resident | 0.8 | 1.1 | 1.1 | 0.9 | 0.8 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.0 |
| Trout waters | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.6 | 0.8 | 0.7 | 0.8 |
| Resident | 0.9 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.6 | 0.8 | 0.7 | 0.8 |
| Non-resident | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.8 | 0.6 | 0.7 | 0.7 | 0.7 |
| Non-trout waters | 1.1 | 1.2 | 1.2 | 1.1 | 1.4 | 1.4 | 1.2 | 1.3 | 1.6 | 1.5 | 1.4 | 1.3 |
| Resident | 1.2 | 1.2 | 1.1 | 1.1 | 1.4 | 1.5 | 1.2 | 1.3 | 1.7 | 1.6 | 1.5 | 1.3 |
| Non-resident | 0.9 | 1.0 | 1.0 | 0.8 | 0.8 | 1.1 | 1.1 | 1.2 | 1.2 | 1.0 | 1.1 | 1.0 |
| Great Lakes waters | 1.7 | 1.6 | 1.8 | 2.2 | 1.6 | 2.7 | 2.9 | 3.1 | 4.8 | 3.2 | 2.6 | 2.6 |
| Resident | 2.0 | 1.5 | 1.8 | 2.2 | 1.6 | 2.7 | 3.1 | 3.2 | 4.9 | 3.4 | 2.6 | 2.6 |
| Non-resident | 0.9 | 1.8 | 2.1 | 1.4 | 0.6 | 1.9 | 1.6 | 1.2 | 2.7 | 1.3 | 2.8 | 1.7 |
| PERCENTAGE OF ALL ANGLERS REPRESENTED BY: | | | | | | | | | | | | |
| Non-residents | 15.7 | 11.2 | 11.3 | 10.1 | 11.1 | 9.7 | 15.6 | 9.8 | 10.4 | 10.9 | 10.3 | 11.5 |
| Female anglers | 17.1 | 16.3 | 15.1 | 16.5 | 19.4 | 13.9 | 18.7 | 16.5 | 16.5 | 16.8 | 16.4 | 16.6 |
| PERCENTAGE OF TROUT ANGLERS REPRESENTED BY: | | | | | | | | | | | | |
| Non-residents | 11.0 | 4.0 | 4.5 | 4.9 | 7.7 | 6.6 | 6.1 | 6.4 | 6.9 | 5.7 | 5.4 | 6.3 |
| Female anglers | 10.2 | 7.6 | 7.1 | 8.3 | 7.4 | 9.3 | 10.1 | 11.6 | 9.9 | 10.0 | 10.4 | 9.3 |
| PERCENTAGE OF NON-TROUT ANGLERS REPRESENTED BY: | | | | | | | | | | | | |
| Non-residents | 17.3 | 12.5 | 13.8 | 11.7 | 12.5 | 11.5 | 18.6 | 10.9 | 11.7 | 12.7 | 12.0 | 13.2 |
| Female anglers | 19.1 | 17.8 | 16.3 | 18.4 | 21.9 | 15.9 | 21.3 | 17.7 | 18.4 | 18.9 | 18.1 | 18.5 |
| PERCENTAGE OF GREAT LAKES ANGLERS REPRESENTED BY: | | | | | | | | | | | | |
| Non-residents | 9.7 | 13.3 | 4.9 | 6.7 | 6.1 | 2.9 | 12.7 | 6.3 | 4.1 | 8.0 | 4.9 | 7.2 |
| Female anglers | 11.6 | 13.1 | 19.3 | 16.5 | 18.2 | 9.6 | 17.0 | 16.1 | 12.9 | 17.9 | 14.1 | 15.1 |

Table 17

Catch per hour for all waters by conservation districts and regions since 1942

| | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | Simple average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| District 1 | 0.6 | 0.7 | 0.6 | 0.8 | 0.7 | 0.6 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.7 |
| District 2 | 0.8 | 1.2 | 0.6 | 0.6 | 0.7 | 0.5 | 0.9 | 0.7 | 1.1 | 0.7 | 0.9 | 0.8 |
| District 3 | 0.8 | 0.7 | 0.9 | 1.6 | 0.9 | 0.9 | 1.1 | 0.9 | 0.7 | 0.9 | 0.9 | 0.9 |
| District 4 | 1.9 | 1.2 | 1.2 | 0.9 | 0.8 | 1.0 | 1.3 | 1.5 | 1.6 | 1.4 | 1.4 | 1.3 |
| Region 1 | 0.9 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 1.0 | 0.9 | 1.1 | 1.0 | 1.1 | 0.9 |
| District 5 | 0.6 | 0.9 | 1.1 | 0.7 | 0.8 | 1.1 | 0.7 | 0.7 | 0.8 | 0.7 | 0.7 | 0.8 |
| District 6 | 1.9 | 1.5 | 1.3 | 1.1 | 1.0 | 1.5 | 1.1 | 1.2 | 1.9 | 1.3 | 1.2 | 1.4 |
| District 7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.7 |
| District 8 | 1.5 | 1.2 | 1.1 | 1.4 | 1.4 | 1.6 | 1.3 | 1.4 | 1.9 | 1.8 | 2.1 | 1.5 |
| District 9 | 1.2 | 1.4 | 1.6 | 1.2 | 2.9 | 3.0 | 1.2 | 1.9 | 2.6 | 3.3 | 2.8 | 2.1 |
| Region 2 | 1.1 | 1.0 | 1.0 | 0.9 | 1.5 | 1.5 | 1.0 | 1.1 | 1.5 | 1.4 | 1.3 | 1.2 |
| District 10 | 1.3 | 1.4 | 1.6 | 1.6 | 1.2 | 1.6 | 1.6 | 1.8 | 2.0 | 1.8 | 2.0 | 1.6 |
| District 11 | 1.3 | 1.1 | 1.3 | 1.1 | 1.2 | 1.0 | 1.1 | 1.4 | 1.7 | 1.8 | 1.3 | 1.3 |
| District 12 | 1.4 | 1.4 | 1.7 | 1.6 | 1.6 | 2.5 | 2.2 | 1.9 | 2.4 | 1.4 | 1.7 | 1.8 |
| Region 3 | 1.3 | 1.3 | 1.5 | 1.4 | 1.4 | 1.7 | 1.6 | 1.7 | 2.1 | 1.6 | 1.7 | 1.6 |
| Entire state | 1.1 | 1.2 | 1.2 | 1.1 | 1.3 | 1.4 | 1.1 | 1.3 | 1.6 | 1.4 | 1.4 | 1.3 |

Table 18

Catch per hour for trout waters by conservation districts and regions since 1942

(Trout only)

| | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | Simple average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| District 1 | 1.0 | 0.7 | 0.6 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.9 | 0.7 | 0.7 | 0.8 |
| District 2 | 1.2 | 0.7 | 0.6 | 0.8 | 0.6 | 0.5 | 0.7 | 0.8 | 0.8 | 0.7 | 1.0 | 0.8 |
| District 3 | 0.8 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 1.1 | 1.0 | 0.6 | 1.1 | 0.5 | 0.8 |
| District 4 | 0.7 | 1.2 | 0.8 | 0.7 | 1.0 | 1.0 | 1.2 | 1.0 | 1.1 | 1.3 | 1.0 | 1.0 |
| Region 1 | 0.9 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 1.0 | 0.8 | 0.8 |
| District 5 | 0.4 | 0.4 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.7 | 0.6 | 0.7 |
| District 6 | 0.8 | 0.6 | 1.0 | 0.9 | 0.6 | 1.0 | 0.9 | 0.9 | 0.7 | 0.7 | 0.9 | 0.8 |
| District 7 | 0.5 | 0.5 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 | 0.5 | 0.4 | 0.5 | 0.5 | 0.6 |
| District 8 | 0.9 | 0.7 | 0.7 | 0.7 | 1.0 | 0.8 | 0.6 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 |
| District 9 | 0.2 | 0.8 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 0.1 | 0.3 | 0.3 | 0.5 |
| Region 2 | 0.6 | 0.5 | 0.8 | 0.8 | 0.7 | 0.8 | 0.7 | 0.6 | 0.5 | 0.6 | 0.6 | 0.7 |
| District 10 | 0.6 | 0.5 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.6 | 0.5 | 0.5 | 0.5 |
| District 11 | 1.0 | 1.6 | 0.1 | 0.4 | 0.5 | ... | 0.5 | 0.4 | 0.6 | 0.4 | 0.5 | 0.6 |
| District 12 | 0.6 | 1.7 | 0.6 | 0.4 | 0.4 | 0.6 | ... | 0.6 | 0.6 | 0.3 | 0.5 | 0.6 |
| Region 3 | 0.7 | 0.9 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.6 | 0.4 | 0.5 | 0.6 |
| Entire state | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.8 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 |

Table 19

Catch per hour for non-trout waters by conservation districts and regions since 1942

| | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | Simple average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| District 1 | 0.5 | 0.7 | 0.5 | 0.7 | 0.8 | 0.4 | 0.8 | 0.9 | 1.0 | 0.9 | 0.8 | 0.7 |
| District 2 | 0.6 | 1.3 | 0.5 | 0.5 | 0.6 | 0.5 | 0.9 | 0.7 | 1.1 | 0.7 | 0.8 | 0.7 |
| District 3 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 0.6 | 1.2 | 0.8 | 0.9 | 0.8 | 1.0 | 0.8 |
| District 4 | 1.5 | 0.9 | 1.4 | 0.8 | 0.7 | 0.8 | 1.4 | 1.7 | 1.8 | 1.5 | 1.6 | 1.3 |
| Region 1 | 0.7 | 0.9 | 0.7 | 0.6 | 0.7 | 0.6 | 1.0 | 0.9 | 1.2 | 0.9 | 1.2 | 0.9 |
| District 5 | 0.6 | 1.0 | 1.1 | 0.6 | 0.7 | 1.2 | 0.7 | 0.7 | 0.9 | 0.6 | 0.7 | 0.8 |
| District 6 | 1.9 | 1.4 | 1.2 | 1.1 | 0.8 | 1.4 | 1.2 | 1.5 | 2.4 | 1.5 | 1.3 | 1.4 |
| District 7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.8 | 0.9 | 1.2 | 1.1 | 1.1 | 0.8 |
| District 8 | 1.7 | 1.2 | 1.3 | 1.7 | 1.4 | 1.8 | 1.5 | 1.5 | 2.1 | 2.0 | 2.3 | 1.7 |
| District 9 | 1.2 | 1.5 | 1.5 | 1.3 | 3.2 | 3.5 | 1.0 | 1.8 | 2.3 | 3.3 | 2.4 | 2.1 |
| Region 2 | 1.1 | 1.0 | 0.9 | 0.9 | 1.6 | 1.7 | 1.0 | 1.1 | 1.7 | 1.5 | 1.4 | 1.3 |
| District 10 | 1.3 | 1.4 | 1.7 | 1.6 | 1.2 | 1.6 | 1.7 | 1.8 | 2.1 | 1.9 | 2.0 | 1.7 |
| District 11 | 1.3 | 1.1 | 1.3 | 1.1 | 1.2 | 1.0 | 1.1 | 1.4 | 1.7 | 1.8 | 1.3 | 1.3 |
| District 12 | 1.2 | 1.4 | 1.4 | 1.2 | 1.1 | 1.3 | 1.4 | 1.2 | 1.1 | 1.3 | 1.3 | 1.3 |
| Region 3 | 1.3 | 1.3 | 1.5 | 1.3 | 1.2 | 1.4 | 1.4 | 1.5 | 1.7 | 1.7 | 1.5 | 1.4 |
| Entire state | 1.1 | 1.2 | 1.1 | 1.1 | 1.4 | 1.4 | 1.1 | 1.3 | 1.6 | 1.5 | 1.4 | 1.3 |

Table 20

Catch per hour for Great Lakes waters by conservation districts and regions since 1942

| | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | Simple average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| District 1 | 0.2 | 0.4 | 0.2 | 0.1 | 0.1 | 0.5 | 0.9 | 0.3 | ... | ... | 0.9 | 0.4 |
| District 2 | ... | ... | 1.5 | 2.3 | 3.4 | 1.8 | 2.9 | 4.8 | ... | ... | ... | 2.8 |
| District 3 | 0.3 | 1.0 | 1.0 | 4.1 | 1.2 | 1.0 | 1.0 | 0.9 | 2.5 | 0.4 | 2.0 | 1.4 |
| District 4 | 3.1 | 2.3 | 1.2 | 1.5 | 0.7 | 1.1 | 1.1 | 2.9 | 4.9 | 1.6 | 2.8 | 2.1 |
| Region 1 | 1.5 | 2.2 | 1.1 | 2.7 | 0.6 | 1.0 | 1.1 | 1.1 | 4.2 | 0.9 | 2.3 | 1.7 |
| District 5 | 1.3 | 3.0 | 2.7 | 1.6 | 1.0 | 4.2 | 1.7 | 0.4 | 0.5 | 0.7 | 0.5 | 1.6 |
| District 6 | 0.5 | 5.9 | 4.8 | 0.8 | 4.6 | 8.2 | 12.2 | 3.6 | 2.9 | 5.0 | 4.3 | 4.8 |
| District 7 | ... | ... | 0.8 | 4.2 | ... | 0.9 | 0.3 | 5.9 | ... | 5.0 | ... | 2.8 |
| District 8 | ... | ... | ... | ... | ... | ... | ... | ... | 2.8 | ... | ... | 2.8 |
| District 9 | ... | ... | 3.8 | 2.2 | 2.0 | 5.7 | 5.8 | 5.4 | 5.7 | 4.9 | 4.4 | 4.4 |
| Region 2 | 0.5 | 5.7 | 3.3 | 2.5 | 2.4 | 7.1 | 5.5 | 4.9 | 5.1 | 4.7 | 3.7 | 4.1 |
| District 10 | ... | 2.9 | 9.0 | ... | 2.8 | ... | ... | 6.4 | 6.6 | ... | 10.2 | 6.3 |
| District 11 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| District 12 | 1.6 | 1.4 | 1.9 | 2.0 | 2.0 | 4.0 | 3.9 | 3.3 | 4.7 | 2.3 | 2.2 | 2.7 |
| Region 3 | 1.6 | 1.4 | 1.9 | 2.0 | 2.0 | 4.0 | 3.9 | 3.4 | 4.8 | 2.3 | 2.4 | 2.7 |
| Entire state | 1.7 | 1.6 | 1.8 | 2.2 | 1.6 | 2.7 | 2.9 | 3.1 | 4.8 | 3.2 | 2.6 | 2.6 |

Table 21

Catch per hour for all waters, trout waters, non-trout waters, and Great Lakes waters as indicated by the general creel census since 1928

| Year | All waters | Trout waters | Non-trout waters | Great Lakes waters |
|---|---|---|---|---|
| 1928 | 1.09 | 1.17 | 1.05 | ... |
| 1929 | 0.96 | 1.17 | 0.88 | ... |
| 1930 | 0.88 | 0.93 | 0.85 | ... |
| 1931 | 0.91 | 0.97 | 0.88 | ... |
| 1932 | 1.26 | 1.10 | 1.32 | ... |
| 1933 | 0.97 | 0.68 | 1.28 | ... |
| 1934 | 1.73 | 0.79 | 1.80 | ... |
| 1935 | 1.58 | 0.80 | 1.85 | ... |
| 1936 | 1.40 | 0.79 | 1.66 | ... |
| 1937 | 1.46 | 0.76 | 1.68 | ... |
| 1938 | 1.29 | 0.91 | 1.41 | ... |
| 1939 | 1.06 | 0.83 | 1.12 | ... |
| 1940 | 0.99 | 0.78 | 1.04 | ... |
| 1941 | 1.00 | 0.77 | 1.06 | ... |
| 1942 | 1.14 | 0.89 | 1.11 | 1.67 |
| 1943 | 1.16 | 0.90 | 1.17 | 1.60 |
| 1944 | 1.16 | 0.79 | 1.13 | 1.81 |
| 1945 | 1.12 | 0.83 | 1.05 | 2.16 |
| 1946 | 1.31 | 0.80 | 1.37 | 1.56 |
| 1947 | 1.42 | 0.79 | 1.44 | 2.72 |
| 1948 | 1.14 | 0.80 | 1.15 | 2.92 |
| 1949 | 1.29 | 0.72 | 1.28 | 3.06 |
| 1950 | 1.61 | 0.63 | 1.65 | 4.84 |
| 1951 | 1.37 | 0.76 | 1.50 | 3.21 |
| 1952 | 1.39 | 0.71 | 1.43 | 2.62 |
| Simple average | 1.23 | 0.84 | 1.29 | 2.56 |

non-trout waters is so great. The catch of 1.4 fish per hour recorded in 1952 for non-trout waters is the fourth highest for the 11-year period. The highest was recorded in 1950 with 1.6 fish and the lowest, in 1945 with 1.1 fish per hour. For the 11-year period the simple average is 1.3 fish per hour which is 0.1 fish per hour lower than the catch per hour for 1952.

The catch per hour for Great Lakes waters has remained consistently higher than that for trout and non-trout waters for the 11 years these waters have been tabulated separately. In the Great Lakes waters the anglers have averaged 2.6 fish per hour as compared to an average of 1.3 fish per hour in non-trout waters over the same period. The catch from Great Lakes waters has ranged from 1.6 fish per hour in 1943 to 4.8 fish per hour in 1950. The 1952 catch per hour was the same as the simple average for the 11-year period.

The appendix to this report in the form of detailed tables has been omitted as in recent years. The detailed tables for the data herein presented are on file at the Institute for Fisheries Research, University Museums Annex, Ann Arbor, Michigan.

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