# SECTION G, CONSERVATION 

# Commercial Fisheries Catch in Oklahoma, 1957 ${ }^{1}$ 

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#### Abstract

The history of commercial fishing in Oklahoma waters has been one of continuous controversy between sports fishing interests and the commercial fisherman. Sports fishing interests have been singularly shortsighted in realizing that the rough fish populations of our lakes and streams are a renewable resource and should be utilized as such. Because these rough species, with the exception of the flathead catfish and the white bass, are rarely caught or harvestable by ordinary hook and line methods, it falls the lot of the commercial fisherman to harvest and utilize these species. Much of the controversy in the past has been caused by the misconception that commercial fishermen were depleting the game fish populations while fishing with commercial gear. The purpose of this paper is to report the 1957 commercial fish catch in Oklahoma waters; thereby attempting to dispel some of these prevalent misconceptions about the commercial fishing industry, and to provide a sound basis of fact for a future commercial fishing program.


In 1955 the Oklahoma State Legislature passed the present commercial fishing law, (House Bill 701, Section 222). This iaw states, in part, that it shall be unlawful for any person to take fish for commercial purposes, on Saturday or Sunday, or any legal holiday and further; that it is unlawful to have any part of a commercial fishing device within one hundred yards of the shore line, and within four feet of the surface of the water.

The above statements are, I believe, the provisions of the present law which are most in need of modification or change.

The first provision was obviously enacted to lessen the conflict between the commercial fishermen and the weekend fishermen. However, it is extremely difficult to either earn a living or to manage a fisheries resource on a four-day-per-week basis. It is also obvious that, if the commercial fisherman cannot afford to operate in the State of Oklahoma, it will become necessary for the State to devise some other method for the utilization and control of our rough fish populations.

The second provision in the present law effectively and completely eliminates commercial fishing in the streams and rivers of Oklahoma and prevents the commercial utilization of these rough fish populations. It also restricts, to a very marked degree, the harvest, in our reservoirs, of those species that move into the shallow upper reaches of lakes during the spawning season.

## Method of Obtaining Data

This analysis was compiled entirely from data contained in reports that commercial fishermen are required to file with the Oklahoma Depart-

[^0]ment of Wildlife Conservation. The commercial fishing report is a daily record of species, numbers, and weights of fishes taken in commercial operations.

## Discussion

The total harvest of fish, for commercial use, in Oklahoma waters was for 1957, 126,908 individuals weighing 646,041 pounds. These figures appear substantial. However, they represent the aggregate catch of only fifty fishermen who fished thirteen individual bodies of water and took an average of approximately 62 pounds of fish per man per day.

Total numbers, total weights, and average weights for each species from each body of water are found in Table I. Total numbers, total weights, and pounds of fish per acre for the three main commercial species, buffalofish, carp, and flathead catfish, from Grand Lake, Ft. Gibson Lake, and Tenkiller Lake, are recorded in Table II.

Grand Lake, Ft. Gibson Lake, and Tenkiller Lake were chosen for individual discussion and comparison, because they were open to fishing throughout 1957 and reports from these lakes were the most complete. These lakes contributed $\mathbf{6 0 . 9 5}$ percent of the total harvest.

## Grand Lake

Grand Lake, the first of the major reservoirs in Oklahoma, supports the oldest continuous commercial fishery in the state.

In 1957 the commercial catch from Grand Lake totaled 248,211 pounds of fish, or 36.38 percent of the total statewide harvest. The average weight of commercial fish from Grand Lake was 4.09 pounds. The most important commercial species were buffalofish, carp, and flathead catfish, which contributed 104,389 pounds, 109,596 pounds, and 21,776 pounds respectively to the total catch. The harvest of these three species was approximately 5.24 pounds per acre.

## Ft. Gibson Lake

The harvest of commercial fishes from Fit. Gibson Lake totaled $\mathbf{9 2 , 6 1 0}$ pounds, or 13.57 percent of the total poundage harvested in the state. Of this total, buffalofish, carp, and flathead catfish represent 31,457 pounds, 33,200 pounds, and 22,581 pounds respectively, and a harvest rate of 2.41 pounds per acre.

## Tenkiller Lake

Tenkiller Lake, the newest and smallest of the three reservoirs, produced 11.0 percent of the state's commercial fish. These fish weighed a total of 75,075 pounds. The catches (in pounds) of buffalofish $(35,831)$, carp $(19,523)$, and flathead catfish $(13,848)$ comprised the major portion of the commercial harvest from Tenkiller Lake. These species were harvested at the rate of 5.5 pounds per acre.

## Monthly Catch Fluctuations

Grand, Ft. Gibson, and Tenkiller Lakes supported most ( 60 percent) of the commercial fishing in 1957. For this reason, data pertaining to buffalofish, carp, and flathead catfish were combined to indicate the periods of peak activity and harvest, and the pounds-per-acre yield (Table II).

All three species of fishes exhibited two periods during the year when they were most active (Figure I). Buffalofish and carp both exhibited definite increases in activity during March. This increased activity was
probably associated with spawning and was followed by a sharp drop in harvest during April and May. The buffalofish attained its peak period of activity during the months of June, July, and August. This seems somewhat paradoxical as it is generally assumed that fish activity is relatively low during the hot summer months. The catch of carp reached its peak in June and declined throughout the remainder of the year. Flathead catfish also exhibited yearly activity peaks which generally coincided with the periods of reduced activity of buffalofish and carp. The primary peak of flathead activity occurred in May and a secondary peak occurred in October.

Pounds per acre harvested was determined for each species for each month.
Table I. Statewide Summary of the Commercial Fisheries Catch in Oklahoma during 1957.

| Bodies of Water | Buffalofish |  | Carp |  | Flathead Catfish |  | Drum |  | Paddlefish |  | River Carpsucker |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds |
| Arkansas |  |  |  |  |  |  |  |  |  |  |  |  |
| River | 1,380 | 11,175 | 224 | 1,515 | 12 | 124 | 43 | 132 | 8 |  | 16 |  |
| Av. Wt. |  | 8.10 |  | 6.76 |  | 10.33 |  | 3.07 |  | 7.50 |  | 5.13 |
| Carl |  | . |  |  |  |  |  |  |  |  |  |  |
| Blackwell |  |  | 110 | 503 | 620 | 6,738 | 53 | 156 |  |  | 323 | 1,600 |
| Av. Wt. |  |  |  | 4.57 |  | 10.87 |  | 2.94 |  |  |  | 4.95 |
| Cache Creek | 956 | 2,726 | 35 | 115 | 14 | 89 |  |  |  |  | 125 | 269 |
| Av. Wt. |  | 2.85 |  | 3.29 |  | 6.36 |  |  |  |  |  | 2.15 |
| Canton | 910 | 7,061 | 31 | 115 | 18 | 121 | 100 | 391 |  |  | 477 | 1,126 |
| Av. Wt. |  | 7.76 |  | 6.03 |  | 6.37 |  | 5.59 |  |  |  | 3.83 |
| Ft. Gibson | 6,376 | 31,457 | 7,006 | 33,200 | 3,397 | 22,591 | 2,505 | 4,015 | 42 | 1,100 | 45 | 121 |
| Av., Wt. |  | 4.93 |  | 4.86 |  | 6.64 |  | 6.90 |  | 26.19 |  | 2.69 |
| Grand | 27,894 | 104,389 | 24,937 | 109,596 | 3,256 | 21,776 | 3,119 | 8,571 | 86 | 2,607 | 125 | 172 |
| Av. Wt. |  | 3.74 |  | 4.39 |  | 6.66 |  | 2.78 |  | 30.31 |  | 1.38 |
| Greenleaf | 366 | 7,857 | 234 | 2,631 | 36 | 228 |  |  |  |  |  |  |
| Av. Wt. |  | 21.47 |  | 11.23 |  | 6.33 |  |  |  |  |  |  |
| Heyburn |  |  | 20 | 126 | 10 | 55 |  |  |  |  |  |  |
| Av. Wt. |  |  |  | 6.30 |  | 5.5 |  |  |  |  |  |  |
| Hulah | 8,776 | 57,015 | 1,122 | 7,941 | 57 | 484 | 163 | 858 |  |  | 12 | 47 |
| Av. W't. |  | 6.50 |  | 7.08 |  | 8.49 |  | 5.26 |  |  |  | 3.92 |
| Tenkiller | 5,693 | 35,831 | 4,720 | 19,523 | 1,481 | 13,848 | 454 | 1,737 | 8 | 72 | 996 | 3,334 |
| Av. Wt. |  | 6.27 |  | 4.35 |  | 8.95 |  | 3.76 |  | 3.60 |  | 3.35 |
| Texoma | 3,492 | 21,129 | 1,125 | 6,187 | 343 | 4,775 | 11 | 179 |  |  |  |  |
| Av. Wt. |  | 6.27 |  | 5.57 |  | 14.74 |  | 16.27 |  |  |  |  |
| Washita River | 490 | 3,698 | 15 | 99 | 100 | 1,022 |  |  |  |  |  |  |
| Av. Wt. |  | 7.55 |  | 6.60 |  | 10.22 |  |  |  |  |  |  |
| Wister | 3,241 | 16,308 | 1,261 | 6,169 | 9 | 119 | 77 | 475 |  |  |  | . |
| Av. Wt. |  | 5.03 |  | 4.89 |  | 13.22 |  | 6.17 |  |  |  |  |
| Totals | 59,574 | 298,646 | 40,840 | 187,720 | 9,353 | 71,970 | 6,525 | 16,514 | 144 | 3,839 | 2,119 | 6,751 |
| Av. Wt. |  | 5.01 |  | 4.60 |  | 7.69 |  | 2.53 |  | 26.66 |  | 3.19 |

Table I. ( Continued)

| Bodies of Water | Gor |  | White Bass |  | Channel Catfish |  | White Crappie |  | $\begin{gathered} \text { Largemouth } \\ \text { Bass } \end{gathered}$ |  | Blue Catfish |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds |
| Arkansas River Av. Wt. | 1,375 | $\begin{array}{r} 13,750 \\ 10.00 \end{array}$ |  |  |  |  |  |  |  |  | 40 | $\begin{array}{r} 385 \\ 9.63 \end{array}$ |
| Carl <br> Blackwell Av. Wt. |  |  | 4 | $\begin{aligned} & 14 \\ & 3.5 \end{aligned}$ | 13 | $\begin{array}{r} 136 \\ 10.46 \end{array}$ | 1 | $4.0^{4}$ | 10 | $\begin{array}{r} 57 \\ 5.70 \end{array}$ |  |  |
| Cache Creek Av. Wt | 121 | $\begin{aligned} & 726 \\ & 6.0 \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |
| Canton Av. Wt. <br> Ft Gibson |  |  | 33 | $\begin{array}{r} 50 \\ 1.52 \end{array}$ | 30 | 126 |  |  |  |  |  |  |
| Ft. Gibson ${ }_{\text {Av. }}$ | 1,190 | 11,351 9.54 |  |  | 30 | 4.20 |  |  |  |  |  |  |
| Grand Av. Wt. | 742 | $\begin{array}{r} 4,905 \\ 6.61 \end{array}$ | 1,016 | $\begin{array}{r} 2,166 \\ \mathbf{2 . 0 4} \end{array}$ | 182 | $\begin{array}{r} 890 \\ 4.47 \end{array}$ | 80 | $\begin{array}{r} 190 \\ 2.39 \end{array}$ | 5 | $\begin{array}{r} 20 \\ 4.00 \end{array}$ |  |  |
| Greenleaf Av. Wt. Heyburn Av. Wt. |  |  |  |  |  |  |  |  |  |  |  |  |
| Hulah Av. Wt. | 2,669 |  |  |  |  |  |  |  |  |  |  |  |
| Tenkiller Av. Wt. | 562 | 3,600 6.41 | 43 | $\begin{array}{r} 113 \\ 2.67 \end{array}$ | 91 | $\begin{array}{r} 444 \\ 4.88 \end{array}$ | 58 | $\begin{array}{r} 143 \\ 2.49 \end{array}$ | 10 | $\begin{array}{r} 30 \\ 3.00 \end{array}$ |  |  |
| Texoma | 105 | 1,188 |  |  |  |  |  |  |  |  |  |  |
| Av. Wt. Washita River Av. Wt. Wister Av. Wt. |  | 11.31 |  |  |  |  |  |  |  |  |  |  |
| Totals Av. Wt. | 6,764 | $\begin{array}{r} 55,833 \\ 8.25 \end{array}$ | 1,096 | $\begin{array}{r} 2,343 \\ 2.14 \end{array}$ | 316 | $\begin{array}{r} 1,596 \\ 5.05 \end{array}$ | 139 | $\begin{array}{r} 337 \\ 2.42 \end{array}$ | 25 | $\begin{array}{r} 107 \\ 4.28 \end{array}$ | 40 | $\begin{array}{r} 385 \\ \mathbf{9 . 3 6} \end{array}$ |

Table II. Monthly Catch Record Totals for Grand, Fort Gibson and Tenkiller Lakes in 1957.

| Lake | January |  | February |  | March |  | April |  | May |  | June |  | July |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds |
| Grand |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalofish | 1187 | 4124 | 1465 | 4846 | 2811 | 9429 | 2514 | 8434 | 2839 | 10,562 | 3802 | 16,818 | 4386 | 18,294 |
| Carp | 546 | 2715 | 815 | 3350 | 2201 | 9601 | 2690 | 11,737 | 3375 | 13,013 | 4500 | 19,145 | 3059 | 15,147 |
| Flathead Catfish | 39 | 226 | 51 | 334 | 247 | 1671 | 526 | 4045 | 803 | 5984 | 333 | 2660 | 176 | 928 |
| Pounds per Acre |  | . 16 |  | . 19 |  | . 46 |  | . 54 |  | . 66 |  | . 86 |  | . 76 |
| Ft. Gibson |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalofish | 165 | 713 | 235 | 1116 | 198 | 8889 | 253 | 1648 | 183 | 913 | 506 | 3449 | 1282 | 6544 |
| Carp | 165 | 870 | 882 | 4318 | 742 | 3606 | 541 | 2485 | 388 | 2088 | 643 | 3122 | 1317 | 6344 |
| Flathead Catfish | 65 | 505 | 79 | 480 | 116 | - 625 | 298 | 2166 | 328 | 2162 | 275 | 2216 | 533 | 3608 |
| Pounds per Acre |  | . 06 |  | . 16 |  | . 14 |  | .17 |  | . 14 |  | . 24 |  | . 45 |
| Tenkiller |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalofish | 198 | 1395 | 1395 | 8455 | 917 | 6051 | 424 | 3175 | 128 | 915 | 589 | 3392 |  |  |
| Carp | 255 | 1073 | 1187 | 3300 | 789 | 3554 | 371 | 1866 | 331 | 1677 | 440 | 1837 |  |  |
| Flathead Catfish | 18 | 163 | 82 | 583 | 211 | 1715 | 151 | 1547 | 219 | 2213 | 60 | 584 |  |  |
| Pounds per Acre |  | . 21 |  | . 99 |  | . 91 |  | . 53 |  | . 38 |  | . 46 |  |  |

Table II. ( Continued)

|  | August |  | September |  | October |  | November |  | December |  | Totals | Pounds |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lake | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds | No. | Pounds |  |  |
| Grand |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalofish | 3673 | 13,118 | 2189 | 7538 | 1534 | 5861 | 1116 | 3868 | 378 | 1497 | 27,894 | 104,389 |
| Carp | 2731 | 12,131 | 1659 | 7329 | 1711 | 7804 | 1194 | 5455 | 456 | 2169 | 24,937 | 109,596 |
| Flathead Catfish | 282 | 1410 | 302 | 1624 | 351 | 1979 | 122 | 752 | 24 | 163 | 3,256 | 21,776 |
| Pounds per Acre |  | . 59 |  | . 37 |  | . 35 |  | . 22 |  | . 08 |  | 5.24 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalofish | 1996 | 9024 | 842 | 3721 | 395 |  | 181 | 933 1810 | 140 | 1759 | 6,376 | $33,200$ |
| Carp | 751 | 3118 | 657 | 3146 | 317 | 1534 | 306 | 1810 | 297 | 1759 | 7,006 | $33,200$ |
| Catfish | 645 | 3601 | 561 | 3553 | 311 | 2224 | 84 | 613 | 102 | 838 | 3,397 | 22,591 |
| Pounds per Acre |  | . 43 |  | . 28 |  | . 15 |  | . 09 |  | . 10 |  | 2.41 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalofish | 423 | 2400 | 258 | 1863 | 623 | 3825 | 565 | 3290 | 173 | 1059 | 5,693 | 35,831 |
| Carp | 146 | 605 | 125 | 831 | 614 | 3003 | 390 | 1839 | 81 | 538 | 4,720 | 19,523 |
| Flathead Catfish | 62 | 405 | 90 | 804 | 249 | 1943 | 305 | 2633 | 34 | 258 | 1,481 | 13,848 |
| Pounds per Acre |  | . 27 |  | . 28 |  | . 70 |  | . 62 |  | .15 |  | 5.5 |



Figure 1. Monthly Aggregate Weights of Buffalofish, Carp, and Flathead Catfish; from Grand, Ft. Gibson, and Tenkiller Lakes 1957.


[^0]:    ${ }^{1}$ Contribution No. 70 of the Oklahoma Fishery Research Laboratory, a cooperative unit of the Oklahoma Department of Wildlife Conservation and the University of Oklahoma Biological Survey.

