

## SEGMENT COMPLETION REPORT

STATE OF TEXAS

Project No. F4R3 Name Fisheries Investigations and Surveys of the Waters of Region 4-B.

Job No. B-12 Title Check on Commercial Catch of Rough Fish from Lake Whitney.

Period Covered November 1, 1955 to October 31, 1956

### OBJECTIVES

To determine the effectiveness of commercial fishing on the control of rough fish and predatory species and the value of the local fishery as well as the relative abundance and seasonal variation by species in the commercial catch.

### ABSTRACT

1. A 12-month study was made of the commercial catch of rough fish from Lake Whitney.
2. Slightly over 29,000 pounds of carp, carpsucker and buffalo were taken from the lake by the use of hoop nets.
3. The harvest was about two pounds of fish per surface acre which is insignificant for rough fish management purposes.
4. Carp composed 70 percent and buffalo 28 percent of the fish netted.
5. The wholesale market value of the fish harvested was \$3,918.24.
6. Recommendations were made for a program to begin which would explore practical means of effecting a more complete rough fish harvest.

### TECHNIQUES USED

The commercial fishermen were supplied forms to be filled out on which they recorded the amount and weight of each species that was netted. The forms were collected each month by mail or by personal contact with the fishermen.

### DISCUSSION

The only type of commercial fishing allowed on Lake Whitney is by state contract. The operator is bonded and compelled to submit a monthly report of his catch. He is limited to specific devices which may be used and the contract states which species of fish that may be taken from the lake. The responsibility of the operation of the netters is under the jurisdiction of the local game warden.

There have been only two commercial fishermen on Lake Whitney during the past year. One of them has done a limited amount of fishing on the upper end of the lake and has contributed only a small part of the total catch. The other fisherman has netted primarily in the Bear Creek and Cedar Creek areas. He has fished only during the cooler months and runs 20 to 35 nets during the period of operation. The fish are collected from the hoop nets two or three times each week. Hoop nets are the only type of gear allowed on the lake and carp, buffalo, carpsucker, shad, and gar are the only fish which can be taken by the commercial fishermen. Shad and gar are seldom caught in the nets.

Neither fisherman worked the lake for a continuous 12-month period. Therefore, it would be difficult to evaluate the seasonal variation in the percentage of each species of fish caught. But the data obtained does indicate that a higher percentage of smallmouth buffalo was caught during the colder months.

A total of 29,491 pounds of rough fish, worth \$3,918.24 on the wholesale market, was taken from Lake Whitney during the 12-month period. Carp were the most abundant fish caught, representing 70.68 percent by number and 70.99 percent by weight of the total harvest. A higher percentage of smallmouth buffalo (28 percent compared to 8 percent) were caught during the present study than were taken in last year's netting operation. The difference probably represents an improved technique in netting rather than a population trend. The total pounds of each species caught with their prevailing wholesale market value is given in Table 1. The number of each species taken and the percentage of the entire catch that they represent is given in Table 2. Figure 1 shows the harvest per surface acre with the area based on the mean of 14,285 surface acres for the 12-month period.

By a brief survey of the figures presented in the current report it can be readily understood that the present rate of harvest has no substantial effect upon the control of the rough fish in Lake Whitney. The total harvest of only two pounds of fish per surface acre is negligible as compared with the amount of rough fish that the lake is producing. It is known from the creel census taken on the lake, previous to the present survey, that the game fish harvest amounted to more than  $12\frac{1}{2}$  pounds per surface acre per month during a 27-month period. It is reasonable to believe that the rough fish production in the lake would be comparable to the game fish harvest. Therefore, it seems that a method of rough fish harvest that is at least as effective as the game fish catch is urgently needed for many of our lakes. The writer is of the opinion that even if the contract netters take was increased many times it could still fall short of the desirable harvest of rough fish. It is evident that more progressive methods of control must be applied to the non-game fish population if their management and full utilization is to ever be achieved.

#### RECOMMENDATIONS

It is recommended that a program be initiated which would explore practical means of effecting a more complete rough fish harvest. The results might be obtained by giving the contract netters technical assistance with their gear and methods or by working on research programs carried out entirely by the Inland Fisheries Division.

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Table 1. Pounds of Harvest and Wholesale Market Value of Fish Caught by Commercial Fishermen, Lake Whitney, Texas, November 1955 through October 1956.

Species	Total Pound Caught	Wholesale Price per Pound	Total Value
Carp	20,799	0.10	\$2,079.90
Smallmouth buffalo	8,237	0.22	1,812.14
Carp sucker	262	0.10	26.20
Totals	29,298		\$3,918.24

Table 2. Number of each Species Caught and the Percentage of the Entire Catch that they Represent. Lake Whitney, Texas, November 1955 - October 1956.

Species	Total Number Caught	Percent by Number	Percent by Weight
Carp	8,272	70.68	70.99
Smallmouth buffalo	3,298	28.18	28.11
Carpsucker	133	1.14	0.90
Totals	11,703	100.00	100.00

FIGURE 1

THE HARVEST OF ROUGH FISH PER SURFACE ACRE FROM LAKE WHITNEY, TEXAS,  
NOVEMBER 1955 THROUGH OCTOBER 1956



