STATE Texas
PROJECT NO. F-5-R-1, Job D-1
PERIOD June 22, 1953 - June 22, 1954

Segment Completinn Report

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TITLE

Fisheries Problem Determination.

OBJECTIVES

Analysis of data to determine specific fisheries problems in the concerned waters.

PROCEDURE

To determine by careful perusal of field collected data the specific fisheries problems which will require additional investigations or experimental methods of resolution.

FINDING

Investigation thus far has revealed three conditions that are probably resulting in fishery problems. In streams surveyed, as described in the Completion Reports for Jobs A-1, A-2, B-7 and B-6, radical flucuation in stream flow and a lakc of permanent flow have sulted in intermittent murky or silty pools whose chemical and physical properties apparatly favor the reproduction of obnoxious species. This condition is primarily a result of denudement of much of the upper watersheds by abusive land practices and by the extensive use of sub-surface water for irrigational purposes. Soil erosion and the seasonal use river pools for irrigation usually greatly reduces pool volumes. This action often occurs during or immediately following spawning seasons for game species. The overcrowding that results from this reduction of the living space apparently favors the propagation of obnóxious fishes and the elimination of game species. Carp are known to reproduce successfully under these conditions.

Lakes Nasworthy and Brownwood are often subjected to an extreme bi-annual lake level fluctuation resulting from the water demand from those reservoirs. At such times spawning failures by some ofthe more popular game species, notably largemouth black bass, have occurred.

In Oak Creek Reservoir, increases in yellow bullheads may indicate that those fish will become a future fishery problem.

SUMMARY

1. Chemical and physical conditions of pools usually making up much of the watersheds surveyed apparently favor successful propagation of obnoxious species and the elimination of game species.
2. Bi-annual fluctuations of Lake Nasworthy and Lake Brownwood occasionally result in spawning failures by some game species.
3. Yellow bullheads may become a fishery problem in Oak Creek Reservoir.