

FILE

JOB PROGRESS REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-4-R-19

REGION 2-A FISHERIES STUDIES

Job. No. C-1: Pollution Studies

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ABSTRACT

Investigations were made this segment on reported fish kills or pollution activity on Farmers Branch, the Brazos River, Cottonwood Creek, and Eagle Mountain Lake.

It is recommended that this job be continued in an effort to monitor and correct future pollution in the public waters of Region 2-A.

Job Progress Report

State of Texas

Project No. F-4-R-19

Name: Region 2-A Fisheries Studies

Job No. C-1

Title: Pollution Studies

Period Covered: January 1, 1972 to December 31, 1972

Objective:

To investigate and check pollution in the waters of Region 2-A.

Segment Objectives:

General: To determine the source and nature of natural or man-made pollutants which affect fish populations in the public waters of Region 2-A.

Specific:

1. To determine the nature and source of pollution.
2. To determine the damage to the fish population, including analysis of species affected.
3. To report instances of violation and negligence to enforcement personnel of the Texas Parks and Wildlife Department as well as to the Water Quality Board and/or other proper authorities.

Procedures:

Pollution discovered or reported to project personnel was investigated through visual observations and appropriate water analysis.

Results:

A fish kill was investigated in Farmers Branch, a small tributary of the West Fork of the Trinity River, in Tarrant County, on February 9, 1972. The kill extended from the effluent of General Dynamics to the confluence of the creek with the Trinity River, a distance of four miles.

Approximately 800 fish of nine species were killed. In addition, numerous crustaceans, oligochaets, and aquatic insects were killed.

The kill was caused by a toxic chemical which was released into the creek through the effluent of General Dynamics. The chemical was used to extinguish a fire at the plant. Its exact composition was not known.

Fort Worth Pollution Control and the Water Quality Board were notified of the kill.

A fish kill in the Brazos River directly below DeCordova Bend Dam in Hood County was investigated on April 10, 1972. The kill was limited to a one-fourth mile section of the river directly below the dam.

An estimated 1500 fish were killed. These consisted of 80% Dorosoma cepedianum, 15% Morone chrysops and 5% Cyprinus carpio, Ictalurus punctatus, and Lepomis spp.

Water quality analysis revealed no lethal agents in the river.

Dead and dying fish were collected and examined for parasites. The fish were found to be parasitized with Ichthyophthirius mullifilis and Dactylogyrus sp.. The fish also exhibited symptoms of a bacterial infection.

One week prior to the die-off, the volume of discharge from the dam was greatly reduced. Sand blasting and spray painting activities were conducted on the dam during this period.

The exact cause of the kill was not known. It was likely related to the stress placed on the fish by the prolonged decrease in the volume of flow and the construction and painting activities on the dam.

On June 5, 1972, a fish kill was investigated in the Brazos River in Young and Throckmorton Counties. The kill occurred in a two mile section of the river one mile above and one mile below the State Highway 79 bridge.

An estimated 500 fish composed of 90% Carpionoxenus carpio, 5% Ictiobus bubalus, and 5% Ictalurus punctatus were found.

Water quality analysis taken above, at, and below the affected area indicated no lethal agents in the river.

Fish were checked for external parasites, but none were found. It was noted that many of the fish had external lesions, missing scales, inflamed fins and joints, and frayed fins. Most of the dead and dying fish were concentrated in the shallow riffle areas. The dying fish had a jerky convulsive type movement.

It was postulated that this kill was caused by some type of bacteria infection.

A fish kill was investigated in Cottonwood Creek, a small tributary of the Trinity River in Tarrant County, on September 16, 1972.

Approximately 5,000 fish were killed. These consisted of Ictalurus melas, Notemigonus crysoleucas, Lepomis spp., and Gambusia affinis. Small Ictalurus melas, (T.L. - 25mm) was the most frequently observed dead fish.

The kill extended for approximately one-fourth mile of the creek.

The kill was caused by a large amount of lime which washed into the creek during heavy rains. The lime was being used at a construction site near the area of the kill.

On December 12, 1972, project personnel investigated an oil spill in Flemming Slough at Eagle Mountain Lake, in Tarrant County. An estimated 100 gallons of crude oil had entered the lake from Texas Electric Service Company. The oil was accidentally released into the lake after a gauge and warning system did not function due to extremely cold weather on December 11.

Most of the oil was contained within Flemming Slough and posed no threat to the fish population.

The Texas Water Quality Board and the Fort Worth Pollution Control were notified of the oil spill.

Texas Electric Service Company cleaned up all of the affected area.

Recommendations:

It is recommended that this job be continued in an effort to monitor and correct future pollution in the public waters of Region 2-A.

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Date: February 20, 1973

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