

PERFORMANCE REPORT

As Required By

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project F-4-R-21

Region 2-A Fisheries Studies

Objective C-1: Pollution Studies

Project Leader: Allen Forshage

Assistant Project Leader: Robert B. Gamble

Clayton T. Garrison

Executive Director

Texas Parks and Wildlife Department

Austin, Texas

Lonnie J. Peters
Chief, Inland Fisheries

Robert J. Kemp
Director, Fisheries Division

November 12, 1974

Abstract

Investigations of reported fish kills on the West Fork of the Trinity River, Clear Fork of the Brazos River, Cooper Creek, Sycamore Creek and Marine Creek were made during 1974. Estimates of the number and species of fish killed were made. When necessary, findings were reported to the appropriate enforcement agencies for further action.

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State: Texas Project Number: F-4-R-21

Project Title: Region 2-A Fisheries Studies

Project Section: Research and Surveys

Study Title: Pollution Studies

Contract Period: January 1, 1974 To December 31, 1974

Program Narrative Objective Number: C-1

Objective: To locate and identify aquatic pollution.

I. Job Segment Objective:

- A. To determine the source and extent of natural or man-made pollutants which effect fish populations.
- B. To suggest remedial action in pollution abatement.

II. Summary of Progress:

Reports of fish kills and suspected pollution were investigated. Efforts were made to determine the nature and source of any pollutants through visual observations and appropriate water analyses. Water analyses were made according to standard methods (A.P.H.A., 1971). If fish mortalities had occurred, estimates of the number and species of fish killed were made. Mortality estimates were determined by counting the number of fish carcasses per square yard and extrapolating for the entire effected area. When necessary, findings were reported to appropriate enforcement agencies for further action.

West Fork of the Trinity River

A fish kill on the West Fork of the Trinity River in Wise County was investigated on April 1, 1974. The kill originated directly below the Bridgeport sewage treatment plant and extended 0.5 miles downstream. It was caused by the introduction of a large volume of untreated sewage into the river. The decomposition of this sewage caused an oxygen depletion resulting in the kill. The oxygen content of the river at the time of the investigation was 1.2 mg/l. An estimated 500 fishes of the following species were killed: white bass, bluegill, green sunfish, largemouth bass, longear sunfish, white crappie, spotted bass, redear sunfish, freshwater drum, carp, smallmouth buffalo, river carpsucker, gizzard shad, yellow bullhead, black bullhead, and red shiner.

The sewage was introduced into the river because of the mechanical failure of a pump which transferred sewage from primary to tertiary treatment tanks. The discharge into the river was stopped and the pump was fixed. No enforcement action was recommended.

Clear Fork of the Brazos River

On April 27, 1974, a fish kill was investigated in the Clear Fork of the Brazos River in Young County. The exact extent of this kill was not determined. Dead fish were observed in a 14-mile section of the river extending from F.M. 701 crossing at Eliasville downstream to the confluence of the Clear Fork with the Salt Fork of the Brazos River. No dead fish were found past the confluence of the two forks. Due to a lack of access, no additional observations were made upstream from Eliasville.

In the 14 miles of river that were investigated, an estimated 10,600 fishes were killed. These were composed of 67% gizzard shad, 12% smallmouth buffalo, 1% freshwater drum, and 1% white bass. The fishes appeared to have been dead for five to six days.

Prior to the investigation, the river was subjected to high flow (approximately five foot above normal) because of rain on the watershed. At the time of the investigation, the flow was back to normal.

Water samples were taken and analyzed but no causative agent for the kill was found. A toxic agent could have washed into the river during the rain on the watershed.

Cooper Creek

On April 28, 1974, an investigation of pollution was made on Cooper Creek, a tributary of the Elm Fork of the Trinity River, in Denton County. The source of pollution was a by-pass outlet from a sewage lift station located on the bank of Cooper Creek on North Mayhill Road. An electrode designed to operate the main lift pumps had failed to work. This resulted in the overflow of 175,000 gallons of untreated sewage into the creek creating an oxygen depletion and causing a fish kill.

Fishes effected were bluegill, green sunfish, longear sunfish, largemouth bass, river carpsucker, carp, and black bullhead. An estimated 400 fish were killed in the two miles of creek effected.

A landowner in the area indicated that this type of discharge had occurred several times in the past year. Law enforcement personnel and the Texas Water Quality Board were notified. Further investigations indicated that the city of Denton has a permit from the Texas Water Quality Board to discharge such waste. No further action was taken.

Sycamore Creek

On April 29, 1974, a fish kill was investigated on Sycamore Creek, a tributary of the Trinity River in Fort Worth, Tarrant County. The kill originated approximately $\frac{1}{2}$ mile above the Felix Street bridge crossing and extended from that point downstream approximately one mile. The kill was caused by the discharge of a large volume of untreated sewage into the stream. A sewage line near the creek had overflowed. At the time of the investigation, a Fort Worth Water Works crew was trying to repair the line.

An estimated 4,000 fishes composed of 60% carp, 35% bullhead catfish, and 5% bluegills were killed. The problem with the sewage line was fixed.

Marine Creek

On June 5, 1974, an oil spill was investigated on Marine Creek in the City of Fort Worth, Tarrant County. The spill originated from a pinhole leak in an underground oil line. The oil covered the creek from the Portland Cement plant downstream to the North Main Street bridge. Crews from the Permian Oil Company found the leak and cleaned the effected area. No dead fish were observed along the two miles of creek effected by the spill.

III. Significant Deviation:

None

IV. Recommendations:

It is recommended that this job be continued under Project F-30-R, State Wide Fisheries Management Recommendations.

V. Cost:

\$1,500.00

VI. Prepared by: Allen Forshage and Robert B. Gamble
Project Leader Assistant Project Leader

Date: November 12, 1974 Robert L. Bounds
Region II Inland Fisheries Director

Approved by: David L. Pritchard
Dingell-Johnson Coordinator

