

JOB COMPLETION REPORT

FILE

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-4-R-13

**Fisheries Investigations and Surveys of the Waters of
Region 2-A**

**Job No. B-35: Evaluation of Walleye Fry Stocked in
Possum Kingdom Lake**

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ABSTRACT

The total stockings for 1964 and 1965 exceeded 600,000 walleye fry for Possum Kingdom Lake. In order to evaluate the walleye stocking an effort was made to recover some of the fish. Gill nets were used and set at various sites. Only one walleye was recovered by this method. The fish weighed 412 grams. Various reports of walleye catches were reported by fishermen, and one walleye (936 grams) was caught by a contract netter.

With only a few returns there seems to be survival and growth of the walleye but to date no reproduction has been noted.

Further evaluation is being conducted (Job B-35, F-4-R-14).

JOB COMPLETION REPORT

State of Texas

Project No. F-4-R-13

Name: Region 2-A Fisheries Study

Job No. B-35

Title: Evaluation of Walleye Fry Stocked in
Possum Kingdom Lake

Period Covered: November 1, 1965 - October 31, 1966

Objective:

To evaluate the results of the recent walleye stocking in Possum Kingdom Lake.

Techniques Used:

The original stocking of walleye fry (Stizostedion vitreum) in Possum Kingdom Lake was made in May 1964, with a total of 105,000 fry. On May 10, 1965, a total of 500,000 walleye fry was flown to Possum Kingdom from Iowa. This brings the two-year total to 605,000 fry.

Findings:

Gill nets were set in hopes of catching some of the larger fish to determine their growth and validate their survival. Seines were used in attempting to catch some of the released fry, therefore, determining if there had been a spawn from the two-year-old fish.

Bi-monthly water samples were taken and analyzed for dissolved oxygen, dissolved carbon dioxide, sodium chloride and pH.

Results:

A total of 4,350 feet of gill net was used to take 18 species of fish (Table 1). Net stations were located from the Carter Bend area (see map) to the dam.

Only one walleye was taken by gill nets (weight 412 grams), although numerous walleye were caught by fishermen and returned to the lake (there is no open season on walleye). Another walleye, caught by a contract netter, was given to project personnel. This fish weighed two pounds and one ounce. No walleye were caught by the use of seines.

No fry were stocked in Possum Kingdom Lake during this segment of work. With the one caught by Department netting, the one caught by a contract netter and various others caught by fishermen, there seems to be some growth and survival of walleye in the lake.

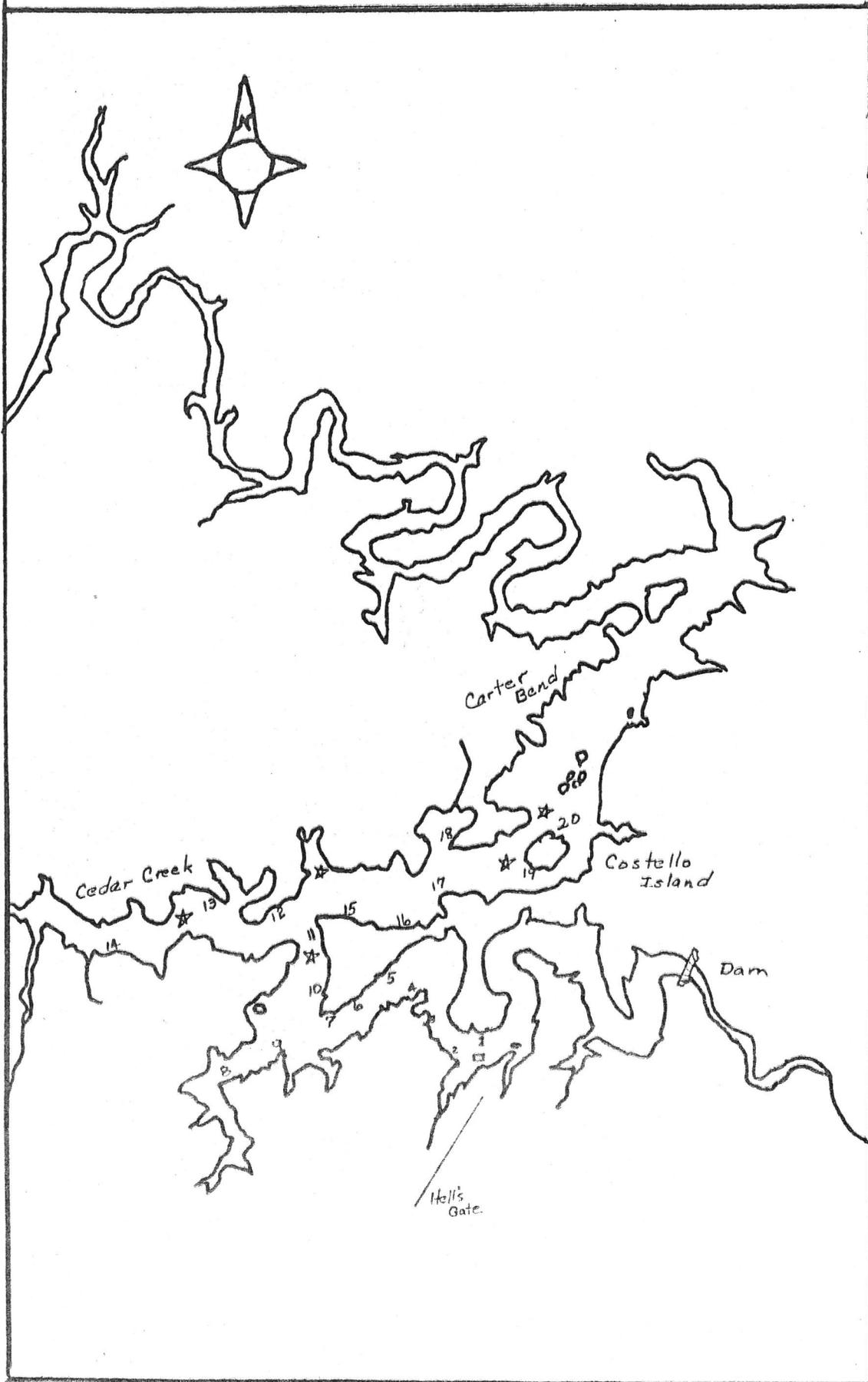
Chemical analysis was run for oxygen, carbon dioxide, pH and sodium chloride. The high chloride posed more concern than other chemicals. High chloride has long been a problem on the Brazos River; as a result, Possum Kingdom is high in chlorides.

Table No. 1, Netting results from Possum Kingdom Lake, Evaluation of Walleye Stocking in Possum Kingdom Lake. November 1965 - October 1966. (F-4-R-13).

<u>SPECIES</u>	<u>TOTAL NUMBER</u>	<u>PER CENT OF NUMBER</u>	<u>TOTAL LBS. WEIGHT</u>	<u>PER CENT OF WEIGHT</u>
Spotted gar	2	0.87	4.61	1.53
Longnose gar	10	4.37	18.58	6.19
Gizzard shad	60	26.19	33.23	11.06
Smallmouth buffalo	18	7.86	115.44	38.45
Carp	10	4.37	32.76	10.91
Carpsucker	6	2.62	13.92	4.63
Channel catfish	15	6.55	23.58	7.85
Flathead catfish	1	0.44	5.99	2.00
White bass	29	12.66	10.20	6.39
Ky. spotted bass	4	1.75	2.53	0.84
Largemouth bass	17	7.42	16.17	5.39
Green sunfish	1	0.44	0.28	0.09
Redear sunfish	9	3.93	2.43	0.81
Bluegill sunfish	33	14.41	6.99	2.33
Longear sunfish	3	1.31	0.91	0.30
White crappie	4	1.75	1.06	0.36
Walleye perch	1	0.44	0.90	0.30
Freshwater drum	6	2.62	1.71	0.57

TOTALS	229	100.00	291.29	100.00
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F-4-R-13 Job B-35 Possum Kingdom Walleye Evaluation. Nov. 1965 - Oct. 1966



★ Release Sites - □ Recovery Site

○ Net Stations

	HIGH	LOW
Dissolved Oxygen (ppm)	8.5	8.0
Carbon Dioxide (ppm)	5.0	0.0
Sodium Chloride (ppm)	1520.0	350.0
pH	8.5	8.0

Evaluation of the walleye stocking is being continued (Project F-4-R-14).

Prepared by Dwane Q. Smith Approved by Marion Toole
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Date February 20, 1967 FRED G. LOWMAN
Regional Supervisor