

JOB PROGRESS REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-5-R-16

REGION I-B FISHERIES STUDIES

Job No. 11 Preinundation Investigation for Robert Lee Reservoir

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April 17, 1969

SUMMARY

As required by

Robert Lee Dam and related facilities have been completed and are ready for impoundment. The 4.2 mile dam will impound all runoff water for municipal use with a normal capacity of 488,760 acre-feet.

Five public park areas, totaling 2,000 acres, are being developed by the Colorado River Municipal Water District and will be partially completed later this year.

Fish population sampling in the basin area shows a continued dominance by undesirable species. Stocking of brood game fish as the reservoir fills is being done in an effort to partially alleviate this problem.

A job was initiated to introduce striped bass in the new reservoir. Striper fry will be obtained from other agencies and reared to fingerling size before being released.

Recommendations were made to terminate this job and to include future information of this nature under other studies of this project.

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## JOB PROGRESS REPORT

State: Texas Name: Region I-B Fisheries Studies  
Project No.: F-5-R-16 Title: Preinundation Investigation for  
Job No.: 11 Robert Lee Reservoir  
Period Covered: March 1, 1968 to February 28, 1969

### Objectives:

To continue the development of a preinundation management program for Robert Lee Reservoir and associated waters.

### Procedures:

Liaison with the Colorado River Municipal Water District was continued. Information collected and discussions held concerned construction progress, closure date, project estimates of capacities, water usages and public recreational usages.

The existing waters in and near the reservoir basin were sampled with gill nets and seines. Fish species and population relative abundance were recorded.

The rearing of brood game fish in available waters was continued. Some of these fish were transferred to permanent water in the lake basin. Additional stocking plans were made for other species.

A checklist of scientific names is presented so that common names may be used in this report. The names are specified in "A list of Common and Scientific Names of Fishes from the United States and Canada", Second Edition, American Fisheries Society, Special Publication Number 2, 1960.

### Findings:

#### Basic Reservoir Information

Construction of the Robert Lee Dam and its related facilities were completed in the latter part of March 1969. Only minor cleanup operations remain to be finished. Impoundment will begin with the first runoff.

The 4.2 mile earthen dam will impound 488,760 acre-feet of water (14,950 surface acres) at normal level. The reservoir will have a maximum depth of 108 feet with an average depth of 33 feet, and the shoreline will be approximately 135 miles in length. According to historical records, the average annual runoff into the reservoir is 140,00 acre-feet per annum.

The Colorado River Municipal Water District owns the land up to elevation 1,900 feet above mean sea level and has a flood easement to elevation 1,912 feet. Property owners retain the rights of the adjacent property with restrictions concerning sanitation and developing.

The district is developing 5 public parks adjacent to the lake (Figure 1), totaling almost 2,000 acres. Each area will contain 25 to 40 picnicking and camping units, restrooms, one large improved boat ramp and a privately operated concession. These public areas will be partially completed and in operation by late summer 1969. There will be a small fee for the recreational usage.

This reservoir will serve primarily as a municipal water supply for cities of Odessa, Big Spring, Snyder, Midland, and San Angelo. The district is not required to release any flood water; therefore, all runoff will be impounded. However, the normal flow of the river, which is insignificant at this location, will not be interrupted.

#### Fish Population

According to survey results during this segment, the fish population of the existing water in the river channel is very similar to that recorded previously. The only change was a slight increase in the number of largemouth bass collected in gill nets. This is hopefully due to the stocking of this species during the spring of 1968. Rough fish accounted for 92.58 per cent by number and 90.40 per cent by weight of the compiled netting collections (Table 1). Although not revealed in nets or seines, small channel catfish continue to be plentiful when checked by hook and line, rotenone, and electro shocking. Forage species were not as abundant as last year; however, low water condition could have been the cause.

Rare or endemic species were not found during this study; therefore, measures to preserve such fish were not necessary.

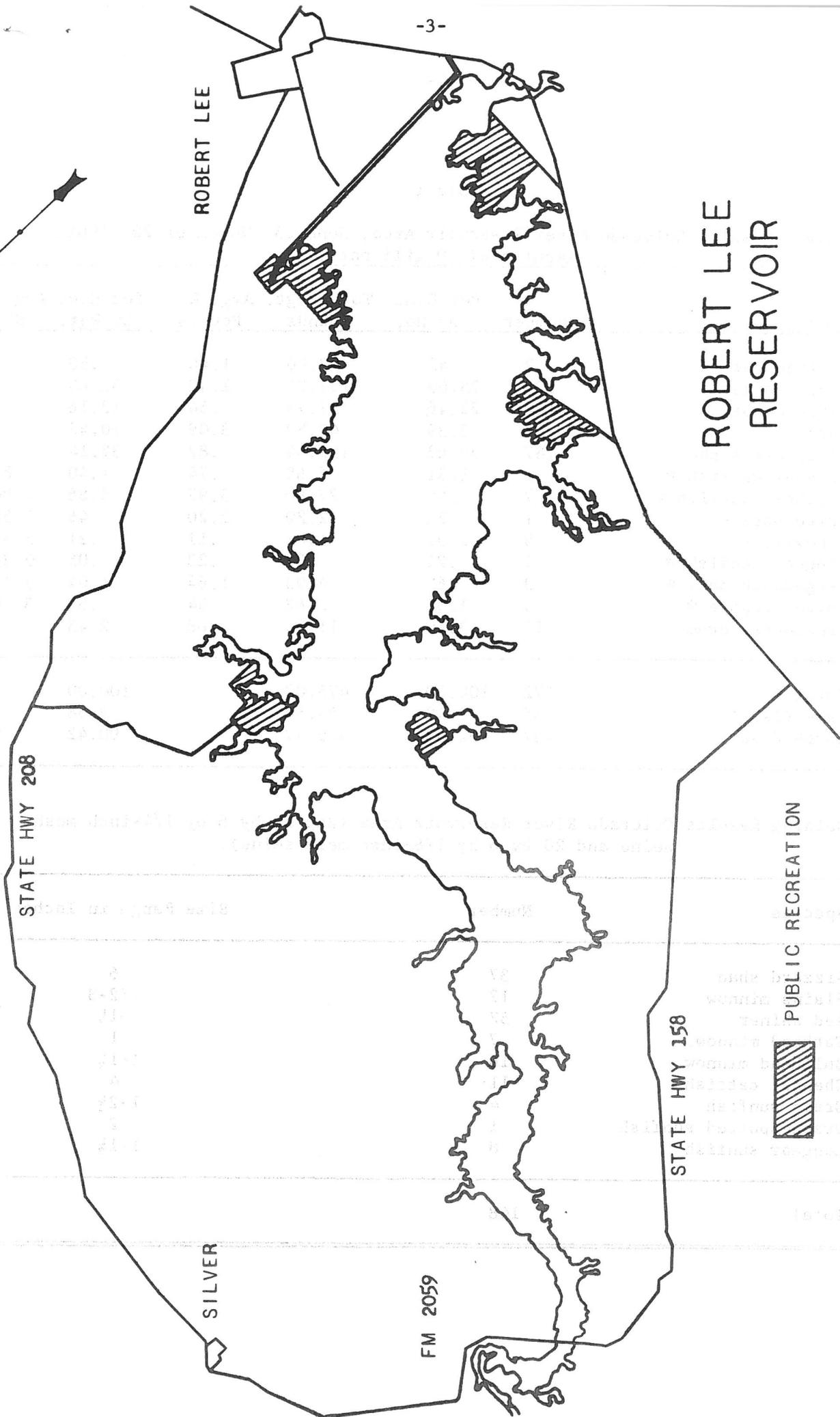
#### Stocking

Brood game fish were reared in nearby ranch tanks as discussed in the past 2 completion reports. This effort was made to insure adequate stocking of the new reservoir and to control some of the undesirable species present in the river. About one-half of the rearing ponds have been seined and approximately 1,500 adult and sub-adult largemouth bass and 1,000 adult sunfish have been released in the 1,200 acre-feet of permanent water in the lake basin. The remainder of the adult fish will be collected from holding ponds and released in the reservoir when addition water is impounded.

Also, 3,000, 6- to 8-inch blue catfish were acquired from another hatchery and are being held in local hatchery ponds. These fish will be added to the reservoir when sufficient water is caught. This species is not native in Region 1-B and should be of great benefit if it can be established.

During the past hatchery stocking season, 13,700 fingerling bass and 138,000 fingerling channel catfish were released in the river above and in the

Figure 1



STATE HWY 208

SILVER

FM 2059

STATE HWY 158

PUBLIC RECREATION

ROBERT LEE

ROBERT LEE  
RESERVOIR

Table 1

Survey Results Colorado River Reservoir Area, June 25, November 20, 1968.  
Results of 10 gill nets.

Species	Number	Per Cent by No.	Total Wgt. Pounds	Avg. Wgt. Pounds	Per Cent by Wgt.	Avg. "K"
Spotted gar	2	.42	2.80	1.40	.58	
Longnose gar	109	23.09	155.28	1.42	32.69	
Gizzard shad	106	22.46	57.75	.54	12.16	
Carp	16	3.39	49.50	3.09	10.42	
River carpsucker	187	39.62	152.64	.82	32.14	
Channel catfish *	9	1.91	6.68	.74	1.40	1.83
Flathead catfish *	7	1.49	27.80	3.97	5.86	1.84
White bass *	1	.21	2.20	2.20	.46	3.59
Bluegill *	9	1.91	1.01	.11	.21	5.33
Longear sunfish *	1	.21	.23	.23	.05	5.26
Largemouth bass *	3	.63	4.93	1.64	1.04	3.15
White crappie *	5	1.06	2.68	.54	.56	3.60
Freshwater drum	17	3.60	11.50	.68	2.43	
Total	472	100.00	475.00		100.00	
Game Fish *	35	7.42	45.53		9.58	
Rough Fish	437	92.58	429.47		90.42	

Seining Results Colorado River Reservoir Area (Bag 26 by 6 by 1/4-inch mesh seine and 20 by 6 by 1/8-inch mesh seine).

Species	Number	Size Range in Inches
Gizzard shad	37	6
Plains minnow	12	1/2-3
Red shiner	52	1-1½
Fathead minnow	7	1
Bullhead minnow	16	1-1½
Channel catfish	11	4
Green sunfish	4	1-2½
Orangespotted sunfish	1	2
Longear sunfish	8	1-1½
Total	148	

reservoir area.

Plans were made and a job was initiated to introduce striped bass in Robert Lee Reservoir. Striper fry will be purchased from other state agencies and reared to fingerlings before being released in the new reservoir. This new job under F-21-D proposes up to 500,000 fry per year for a 5-year period. Since the striped bass is extremely predaceous, it is expected to assist in the control of rough fish and add an excellent sport species if this introduction is successful.

Recommendations:

It is recommended that this job be terminated and Robert Lee Reservoir be included under Job No. 13 (Fisheries Management Recommendations) of this project. The introduction of striped bass will be conducted under Project F-21 (Game and Forage Fish Introductions). Public access and facility information will be collected and reported under Job No. 12 (Public Water Access and Facilities Survey).

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Project Leader

Approved by Marion Toole  
Coordinator

Date April 17, 1969

Leo D. Lewis  
Inland Fisheries Supervisor

A Checklist of Common and Scientific Names Used In This Report

COMMON NAMES

Spotted gar  
Longnose gar  
Gizzard shad  
Carp  
Plains minnow  
Red shiner  
Fathead minnow  
Bullhead minnow  
River carpsucker  
Blue catfish  
Channel catfish  
Flathead catfish  
White bass  
Striped bass  
Green sunfish  
Orangespotted sunfish  
Bluegill  
Longear sunfish  
Largemouth bass  
White crappie  
Freshwater drum

SCIENTIFIC NAMES

Lepisosteus oculatus  
Lepisosteus osseus  
Dorosoma cepedianum  
Cyprinus carpio  
Hybognathus placita  
Notropis lutrensis  
Pimephales promelas  
Pimephales vigilax  
Carpionodes carpio  
Ictalurus furcatus  
Ictalurus punctatus  
Pylodictis olivaris  
Roccus chrysops  
Roccus saxatilis  
Lepomis cyanellus  
Lepomis humilis  
Lepomis macrochirus  
Lepomis megalotis  
Micropterus salmoides  
Pomoxis annularis  
Aplodinotus grunniens