JOB COMPLETION REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-7-R-10

FISHERIES INVESTIGATIONS AND SURVEYS OF THE WATERS OF REGION 1-A

Job No. E-6 Experimental Management of the Fishery of Lake McClellan

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July 23, 1963

ABSTRACT

During this segment 168 flathead catfish fingerlings were stocked in Lake McClellan to increase predation on undesirable species. Approximately 40 channel catfish spawning devices were installed to increase reproduction of this species. Efforts to remove overabundant white crappie, as well as other undesirable species, were for the most part unsuccessful.

JOB COMPLETION REPORT

State of Texas

Project No. F-7-R-10 Name: Fisheries Investigations and Surveys of the Waters of Region 1-A

Job No. E-6 Title: Experimental Management of the Fishery of Lake McClellan

Period Covered January 1, 1962 - December 31, 1962

Objectives:

To initiate and conduct management practices at Lake McClellan to restore a balance in the fish population by control of excessive populations of black bullhead catfish, carp, and white crappie.

Techniques Used:

Most of the work planned for this job was not accomplished because of a shortage of personnel, due to the inability to hire a qualified Assistant Project Leader. Portions of the work outlined, including the stocking of flathead catfish, population surveys, and installation of catfish spawning devices, were accomplished, however.

Findings:

Flathead catfish were stocked from state fish hatcheries to provide predation on problematical species. The first stocking of flatheads was on January 20, 1962 when 38 fingerlings, ranging from 92 to 110 mm were released. In July an additional 130 fingerlings were released.

Catfish spawning devices, of the type described in job completion report F-7-R-10, Job E-3, were installed to promote the reproduction of channel catfish. Approximately 40 of these devices were placed in the lake in five general localities.

On three occasions attempts were made to reduce the overabundant crappie population by seining. The first attempt, in March, failed probably because of the cool water temperature which caused crappie to be in deeper, unseinable areas. The second attempt, in July, was unsuccessful because a recent heavy runoff had spread the lake surface greatly, flooding areas that had a heavy growth of smartweed. At this time, the crappie, although in shallow areas, could not be seined due to the thick vegetation. A third attempt, in October, also failed because of high water.

Two gill net surveys were made to obtain population data. The first survey, made in early March, produced 52.46 per cent carp (average weight 1.41 lb.), and 27.87 per cent white crappie (average weight 0.08 lb.). The total desirable fish population accounted for 10.65 per cent. In mid-December a second gill net survey produced 29.09 per cent carp (average weight 1.32 lb.),

10.91 per cent white crappie (average weight 0.11 lb.), and 50.00 per cent black bullheads. The percentage of desirable fish on this survey was only 6.36 per cent of the total number taken. Tables 1 and 2 give the percentage composition by number and weight for the March and December surveys respectively.

Recommendations:

On the basis of data collected during this and previous segments, the fishery of Lake McClellan is comprised of predominately undesirable species. Three species, carp, bullheads, and white crappie, constitute the major problem. The white crappie in Lake McClellan are extremely overabundant and stunted, and are of little or no value to the sport fishery.

Lake McClellan has a recent history of poor fishing, however, the lake is potentially very productive. It is doubtful that a management program, employing manual controls for undesirable species would provide the degree of control needed to maintain a good sport fishery. In view of this, Lake McClellan should be scheduled for a total-kill renovation.

At present, Lake McClellan is subject to periodic rapid rises in water level because of its relatively large watershed. There are about 106 square miles of watershed which is in excess of 67,000 acres. Lake McClellan covers only 376 acres at spillway crest. The spillway flow has been recorded as high as 8700 cfs.

Of a total of 16 recorded spillway flows at Lake McClellan, 10 occurred in either May or June which are the primary months for spawning in this area. The influx of large volumes of very muddy water and the subsequent rapid rise in lake level has probably had a detrimental effect on the spawning of game species.

At present there are no check dams on the Lake McClellan watershed, however, a series of nine dams are planned and when completed they will aid in controlling flood waters and siltation. A more stable water level during the spawning season should increase game fish production. The check dams planned for McClellan Creek will not be completed for about 2 to 3 years, and since Lake McClellan is subject to reinfestation from downstream areas during periods of overflow, development work on the lake should be delayed until the watershed dams are completed in order to lessen the chance of rough fish getting back into the lake from downstream areas. In the meantime, the lake should be periodically surveyed to determine the condition of the overall fishery, and the status of experimentally stocked flathead catfish in particular.

Table 1 Percentage Composition by Number and Weight and Average Weight of Fish Taken from Lake McClellan, March 1, 1962

Species	No.	% by No.	T. Wt.	% by Wt.	Av. Wt.
Carp	64	52.46	90.29	71.45	1.41
River Carpsucker	2	1.64	10.87	8.60	5.44
Channel Catfish	5	4.10	0.93	0.74	0.19
Black Bullhead	9	7.38	4.39	3.47	0.49
Largemouth Bass	1	0.82	3.20	2.54	3.20
White Bass	7	5.73	14.14	11.18	2.02
White Crappie	34	27.87	2.56	2.02	0.08
Totals	122	100.00	126.38	100.00	
Game Fish	47	38.53			
Rough Fish	75	61.47			

Table 2 Percentage Composition by Number and Weight and Average Weight of Fish Taken from Lake McClellan , December 11, 1962

Species	No.	% by No.	T. Wt.	% by Wt.	Av. Wt.
Carp	32	29.09	42.32	61.98	1.32
River Carpsucker	2	1.82	9.25	13.55	4.63
Channel Catfish	4	3.64	0.38	0.56	0.10
Black Bullhead	55	50.00	10.31	15.11	0.19
Bluegill Sunfish	2	1.82	0.13	0.19	0.07
White Bass	3	2.72	4.56	6.68	1.52
White Crappie	12	10.91	1.32	1.93	0.11
Totals	110	100.00	68.27	100.00	
Game Fish	21	19.09			
Rough Fish	89	80.91			

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Date June 23, 1963

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