JOB COMPLETION REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-5-R-13

REGION I-B FISHERIES STUDIES

Job No. 7 Warden Creel Census

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ABSTRACT

Four Parks and Wildlife Department employees interviewed and completed creel census cards on 84 fishing parties. These interviews were conducted at five public lakes. Represented by these 84 census cards are 189 anglers who fished an average of 5.92 hours each. Total man hours of fishing was 1,118.5.

Fishing success ranged from .28 fish per man hour at Twin Buttes Reservoir to .84 fish per man hour at New Winters Lake.

It was concluded that the sample collected during this segment was too small to be statistically significant. A recommendation was made that the job be temporarily discontinued until ample manpower is available to obtain a more reliable sample.

JOB COMPLETION REPORT

State of Texas

Project No. F-5-R-13 Name: Region I-B Fisheries Studies

Job No. 7 Title: Warden Creel Census

Period Covered: March 1, 1965 through February 28, 1966

Objective:

To determine gross changes in fishing success.

Procedures:

Creel census cards were designed and printed (Appendix A). These were placed in small loose leaf binders and distributed to the six Region I-B game wardens with major public reservoirs in their districts. They were asked to fill out as many cards as possible during routine fishing license checks. These cooperators were instructed to interview fishing parties at ramdom, and not to select only those fishermen who were seen to have good catches.

Findings:

Response was erratic. One warden returned 29 cards processed within an eight day period. Another interviewed 10 fishing parties within nine days. A warden working two different lakes returned 28 cards filled out over a period of four months. Three wardens returned no cards. Of these three, one was transferred to another district soon after the cards were issued, one quit working for the Department and the third filled out some cards but misplaced them. The regional chemist cooperated by filling out 17 cards at Lake Winters on September 14, 1965. This was the opening date for fishing at that lake following a renovation and restocking program.

One warden complained that many of the boats left the area while he was interviewing his initial party. These may have been people without fishing licenses. Supposedly, the additional time necessary to check the creel along with the licenses enabled these alleged violators to flee.

The four employees returning completed cards interviewed 84 fishing parties, representing 189 anglers. There were 1,118.5 man hours of fishing sampled. This averaged 5.92 hours per fisherman.

Fishing success ranged from .28 fish per man hour to .84 fish per man hour. These extremes represented Twin Buttes Reservoir, which has had a very low water level since its creation, and New Winters Lake, respectively. The findings for individual lakes are presented in Tables 1, 2, 3, 4 and 5.

Table 1. Results of Creel Checks Made at Twin Buttes Reservoir and Its Tributaries from March 1, 1965 to February 28, 1966.

Dates fishing parties checked: 8 on 4-10-65; 7 on 4-11-65; 1 on 4-14-65 and 13 on 4-18-65.

Total parties checked: 29

Number of parties catching fish: 23

Number of fishermen involved: 77

Man hours of fishing: 498.5

Game Species Caught	Number	Average Length (inches)	Length Range (inches
Sunfish	87	5.65	4-9
White crappie	0	--	- -
Largemouth bass	24	7.79	5-10
White bass	1	7.00	7
Channel catfish	4	11.25	9-14
Flathead catfish	2	9.00	9
Rough Species Caught			
Bullhead catfish	19	7.89	7-10
Carp	2	10.50	9-12

Number of game fish caught per man hour of fishing: .24

Number of rough fish caught per man hour of fishing: .04

Number of all species caught per man hour of fishing: .28

Table 2. Results of Creel Checks at New Winters Lake from March 1, 1965 to February 28, 1966.

Dates fishing parties checked: 17 on 9-14-65

Total parties checked: 17

Number of parties catching fish: 17

Number of fishermen involved: 30

Man hours of fishing: 140

(Table 2 cont.)

Game Species Caught	Number	Average Length (inches)	Length Range (inches)
Sunfish	8	4.88	4-6
White crappie	5	7.80	7-8
Largemouth bass	18	7.94	6-10
White bass	0	- -	- -
Channel catfish	72	12.51	7-18
Flathead catfish	0	- -	- -
Rough Species Caught			
Bullhead catfish	14	10.00	8-12
Carp	0	- -	- -

Number of game fish caught per man hour of fishing: .74

Number of rough fish caught per man hour of fishing: .10

Number of all species caught per man hour of fishing: .84

Table 3. Results of Creel Checks Made at Lake Abilene from March 1, 1965 to February 28, 1966.

Dates fishing parties checked: 1 on 5-1-65; 4 on 5-2-65 and 5 on 5-9-65

Total parties checked: 10

Number of parties catching fish: 9

Number of fishermen involved: 23

Man hours of fishing: 49.5

Game Species Caught	Number	Average Length (inches)	Length Range (inches)
Sunfish	12	3.00	3
White crappie	7	8.28	6-10
Largemouth bass	1	14.00	14
White bass	0	- -	- -
Channel catfish	6	9.33	6-14
Flathead catfish	0	- -	- -
Rough Species Caught			
Bullhead catfish	0	- -	- -
Carp	6	10.33	9-14

(Table 3 cont.)

Number of game fish caught per man hour of fishing: .53

Number of rough fish caught per man hour of fishing: .12

Number of all species caught per man hour of fishing: .65

Table 4. Results of Creel Checks Made at Champion Creek Lake from March 1, 1965 to February 28, 1966.

Dates fishing parties checked: 1 on 4-27-65; 1 on 6-25-65; 1 on 6-26-65; 5 on 6-27-65; 2 on 7-2-65; 1 on 7-4-65 and 8 on 8-5-65

Total parties checked: 19

Number of parties catching fish: 17

Number of fishermen involved: 39

Man hours of fishing: 258.5

Game Species Caught	Number	Average Length (inches)	Length Range (inches)
Sunfish	125	7.06	3-9
White crappie	0	- -	- -
Largemouth bass	38	11.47	4-26
White bass	0	- -	- -
Channel catfish	2	24.00	22-26
Flathead catfish	0	--	- -
Rough Species Caught			
Bullhead catfish	4	10.00	10
Carp	0	- -	- -

Number of game fish caught per man hour of fishing: .64

Number of rough fish caught per man hour of fishing: .02

Number of all species caught per man hour of fishing: .66

Table 5. Results of Creel Checks Made at Lake Colorado City from March 1, 1965 to February 28, 1966.

Dates fishing parties checked: 1 on 5-18-65; 5 on 5-19-65 and 3 on 8-8-65

Total parties checked: 9

Number of parties catching fish: 5

Number of fishermen involved: 20

Man hours of fishing: 172

Game Species Caught	Number	Average Length (inches)	Length Range (inches)
Sunfish	4	4.00	4
White crappie	61	6.48	5-16
Largemouth bass	3	20.00	16-24
White bass	0	- -	- -
Channel catfish	6	9.50	5-12
Flathead catfish	0	- -	- -
Rough Species Caught			
Bullhead catfish	0	- -	- -
Carp	0	- -	- -

Number of game fish caught per man hour of fishing: .43

Number of rough fish caught per man hour of fishing: 0

Number of all species caught per man hour of fishing: .43

Discussion:

Data collected were insufficient to project a yearly fishing product for any of the lakes involved. The continuance of this program for several years with the same annual volume of cards obtained during this segment, would probably still not be statistically significant. Samples need to be collected in greater volumes and on a wider range of census dates. With the assistance of statistical consultation, expanded data could probably be used to estimate gross changes in fishing success. Statistical counsel would be necessary because there are inherent variables that need to be weighted. As an example, if one lake's fishing product could be compared with that of another, it would be possible to make a wise decision on the expenditure of limited management funds. However, varying fishing regulations between the two lakes would influence the creel findings. If trotlines were permitted in one lake but not in the other, a comparison of the fish per man hour indices would be distorted. Trotline fishermen would be reporting 30 or 40 hours of fishing for three or four fish. Panfish anglers might catch 25 fish in only two hours. This type of distortion was noted in the small sample collected during this segment.

Although the data collected under this segment are insufficient, the idea of having game wardens collect creel information is still feasible under more ideal conditions. If the census were established on a regional or state-wide basis, and supervised by enforcement personnel, it would probably work. The department's limited warden force is occupied with many miscellaneous duties. They currently have little time for additional responsibilities. However, if the wardens considered the collection of creel data cards part of their regular duties, rather than personal aid to the biologists, a greater volume of census reports could probably be expected.

Another solution to the problem would be to have fishery crews travel from lake to lake, on a regular schedule, and collect the data. The costs of such an undertaking would be much greater than the almost nil costs of the procedure used during this segment. The advantages of having larger samples obtained on a scheduled basis might outweigh this increased expense.

Recommendations:

This job should be temporarily discontinued. When ample manpower is available, either in the enforcement or the fisheries divisions, consideration should be given to resuming the program.

Prepared by James Wilcox
Project Leader

Approved by Marion Toole
Coordinator

Date March 30 1966

Leo D. Lewis
Inland Fisheries Supervisor

APPENDIX A

Creel Census Card

Lake_____ Date_____ No. in party____ Names_____

Hometowns_____

Hours fished (circle) ½ 1 ½ 2 ½ 3 ½ 4 ½ 5 ½ 6 ½ 7 ½ 8 ½ 9 ½ 10 ½ 11 ½ 12 ½ 13 ½ 14 ½ 15 ½ 16 ½ 17 ½ 18 ½ 19 ½ 20 ½ 21 ½ 22 ½ 23 ½

Species caught (write number under estimated length)	3″	4″	5″	6″	7″	8″	9″	10″	12″	14″	16″	18″	20″	22″	24″	
sunfish																
crappie																
l.m. bass																
w. bass																
c. catfish																
y. catfish																
bullheads																
carp																

Type of fishing: boat____ shore____ dock____ nat. bait____ artf. bait____ setline____

1 2 3 4 5 6