

1.02
1.3
33.0
42.4
47.3

SURVEY REPORT

OKLAHOMA FISHERIES MANAGEMENT PROGRAM



FISH MANAGEMENT SURVEY AND RECOMMENDATIONS

FOR

CADDO SITE 18

2005

Performance Report

State: Oklahoma

Grant. F-44-D-20

Project Title: Oklahoma Fisheries Management Program

Study Title: Surveys and Recommendations - Caddo Site 18

Period Covered: 1 January 2005 - 31 December 2005

Lake Caddo Creek Site 18 (Scott King)

ABSTRACT

Lake Caddo Site 18 was sampled by spring electrofishing in 2005 to determine fish population trends. Population levels of largemouth bass were adequate. Abundance of bass in all size groups except one were good. Body condition was satisfactory for all of the size groups. Bluegill abundance was adequate but has decreased from the previous sample. Intermediate size (75-149mm) fish were adequate, however few quality size (150 mm) were sampled. Body condition of bluegill was satisfactory for all size groups.

C. Florida bass were stocked in the lake in 2005 to help improve the genetics of the largemouth bass population.

Recommendations include: An electrofishing survey should be conducted in 2009 to evaluate the sport fish population.

INTRODUCTION

Caddo Site 18 (Scott King) impounds a tributary of Caddo Creek, 9.6 km Northwest of Ardmore in Carter County, Oklahoma (Fig.1). Caddo Site 18 covers 100 surface hectares and was constructed in 1971 by Soil Conservation Service. Caddo Site 18 has a mean depth of 2.4 m and a maximum depth of 7.1 m, and a secchi disc visibility of around 60 cm in the main pool in August; turbidity is primarily from clay. Fish habitat consists primarily of aquatic vegetation, rock and some flooded timber.

Florida largemouth bass were stocked in 2005 (Table 1). A fishing dock and a boat dock were installed on the lake in 1992 as part of a boating and fishing access cooperative project with the City of Ardmore. The lake has a 356 mm minimum length limit on all black bass.

Caddo Site 18 lake was sampled in 2005 by spring electrofishing to evaluate the largemouth bass population.

RESULTS

Largemouth Bass

- 1. Largemouth bass abundance from 2005 spring electrofishing (C/f= 73.3) was above the minimum acceptable value for a quality fishery (C/f \geq 40). The total bass C/f has decreased from the most recent sample (Table 2).**
- 2. The abundance of bass in <200 mm, \geq 300 mm and \geq 356 mm size groups were satisfactory, while the 200-299 mm size group was below acceptable values. The abundance of bass in \geq 300 mm and \geq 356 mm size groups increased in recent sample years.**
- 3. Body condition values (W_r) were generally satisfactory for all size groups. Condition values for \geq 300 mm and \geq 356 mm size groups have declined from the most recent sample.**
- 4. The bass abundance in all size groups were good The overall bass population has somewhat since 1998 decreased but this could be reflective of the new minimum of 1.5 hours of electrofishing on the lake in 2005. The lake has a good population of bass over \geq 356 mm in length, this should make excellent fishing for quality size bass in the future. The overall body condition in bass was good indicating better utilization of the forage population in the lake.**

Bluegill

- 1. Bluegill abundance from 2005 spring electrofishing (C/f=62.7) was above the minimum acceptable value for a quality forage supply. The total bluegill C/f has decreased from the most recent sample (Table 3).**
- 2. The abundance of bluegill ≤ 75 mm, 75-149 mm was satisfactory, while those ≥ 150 mm were below acceptable values. The abundance of bluegill in all size groups decreased from the most recent sample.**
- 3. Body condition values (W_t) were satisfactory for all size groups. Condition values for all size groups have improved from the most recent sample.**
- 4. The lower abundance of the bluegill population could be reflective of the new minimum of 1.5 hours of electrofishing on the lake in 2005. Most of the bluegill sampled were below 150 mm in length.**

RECOMMENDATIONS

Fish Survey

A spring electrofishing survey should be conducted in 2009 to evaluate the sport fish population in the lake.

Habitat Enhancement

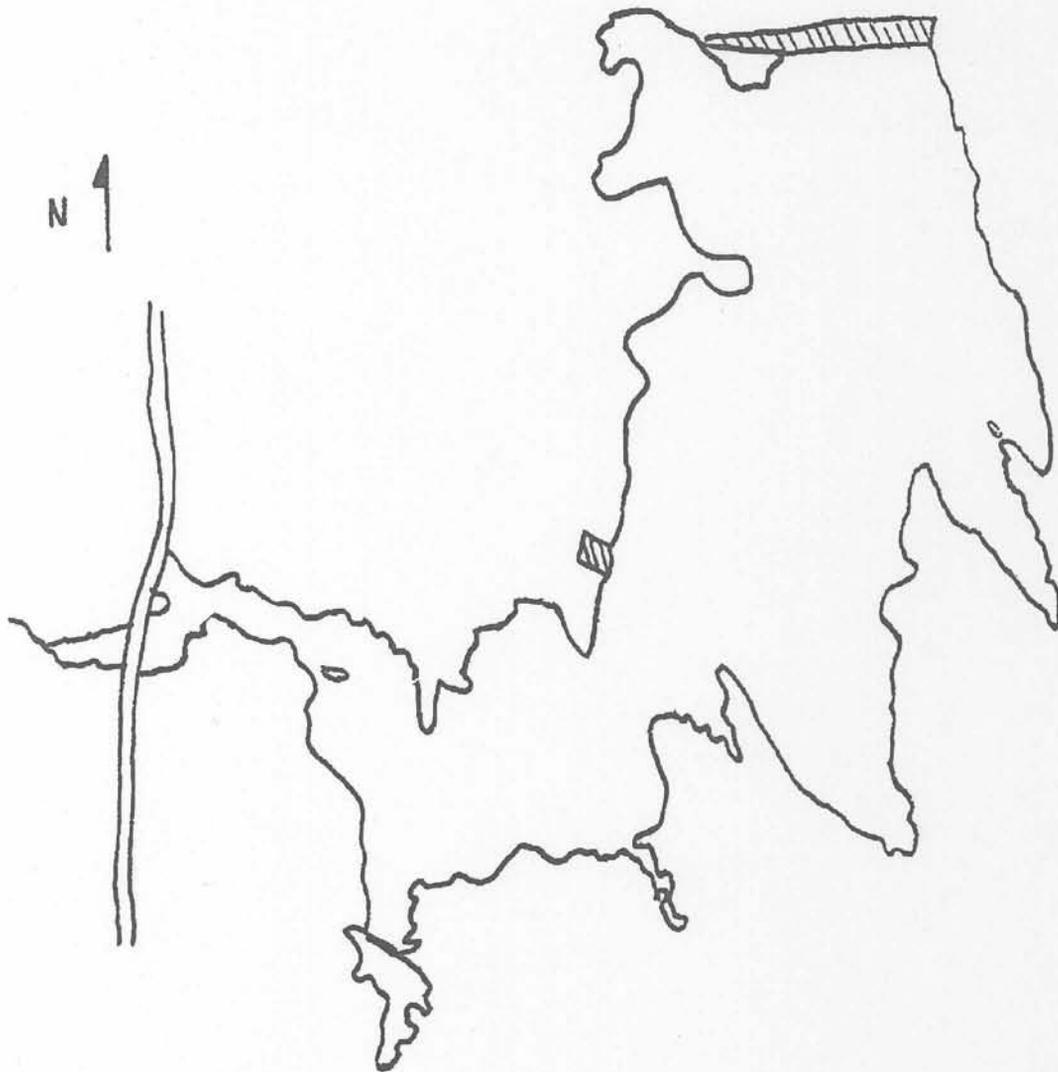
The marked brush fish attractors should be refurbished as needed and the buoys inspected each year.

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Figure 1.



Electrofished all of
the Lake

Table 1. Species, number and size of fish stocked in Lake Caddo Site 18 Lake 1986 - 2005.

DATE	SPECIES	NUMBER	SIZE
1986	Channel catfish	12,412	Fingerlings
1988	Florida LMB	24,960	Fingerlings
1989	Florida LMB	24,700	Fingerlings
1990	Florida LMB	24,800	Fingerlings
1992	Threadfin shad	2,000	Adults
2003	C. Florida bass	22,116	Fingerlings
2005	C. Florida bass	5,004	Fingerlings

Table 2. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of largemouth bass collected by spring electrofishing and seining from Lake Caddo Site 18. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r values are ≥ 90 .

Year	No.	Total ¹ (≥ 40)	<200 mm ¹ (15-45)		200-299 mm ¹ (15-30)		≥ 300 mm ¹ (≥ 15)		≥ 356 mm ¹ (≥ 10)		Age 0 ² (≥ 1.0)
		C/f	C/f	W _r	C/f	W _r	C/f	W _r	C/f	W _r	C/f
1985	72	14.4	6.6	-	6.4	-	1.0	-	0.6	-	-
1993	132	58.7	16.0	106	14.2	103	28.4	105	21.3	103	-
1998	108	108	27.0	74	47.0	81	34.0	95	20.0	98	-
2005	110	73.3	18.7	101	13.3	90	41.3	86	28.7	86	-

2005 started a new minimum of 1.5 hours of electrofishing on Caddo 18.

¹ Spring electrofishing

² Seining

Table 3. Total number (No.), catch rates (C/f), and relative weights (W_r) by size groups of bluegill collected by spring electrofishing and seining from Lake Caddo Site 18. Numbers in parentheses represent acceptable C/f values for a quality fishery. Acceptable W_r values are ≥90.

Year	Total ¹ (≥45)		<75 mm ¹ (≥10)		75-149 mm ¹ (20-100)		≥150 mm ¹ (≥15)		<100 mm ² -	
	No.	C/f	C/f	W _r	C/f	W _r	C/f	W _r	No.	C/f
1985	561	112	20.4	-	83.8	-	8.0	-	-	-
1993	177	78.7	13.8	-	62.7	59	2.2	88	-	-
1998	110	110	24.0	-	80.0	78	6.0	91	-	-
2005	94	62.7	20.0	-	38.7	94	4.0	92	-	-

2005 started a new minimum of 1.5 hours of electrofishing on Caddo 18.

¹ Spring electrofishing

² Seining