

SURVEY REPORT

OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION



FISH MANAGEMENT SURVEY AND RECOMMENDATIONS

FOR

ONAPA LAKE

2022

SURVEY REPORT

State: Oklahoma

Project Title: Onapa Lake Fish Management Survey Report

Period covered: 2022

Report written by: Jon West

Date: December 2023

ABSTRACT

Onapa lake was surveyed via fall gillnetting to determine fish population trends of Crappie, Channel catfish and forage species to inform potential stocking or future survey efforts. Black crappie were caught in low numbers in the 2022 gillnet survey and shad numbers were also low. Data is insufficient to make any conclusive management decisions.

Crappie and populations should be further assessed by trap netting or more intensive gill netting surveys. Catfish stocking is not recommended. As needed stockings of Threadfin Shad could help boost fish body conditions.

INTRODUCTION

Onapa lake is located 8 miles south and 1 mile west of Checotah off of Hwy 69 in McIntosh County, Oklahoma and is a small watershed lake that is also springfed. Onapa lake was constructed in 1936 for use as a water supply. Water clarity is clear with a secchi disk reading of up to 9ft. Onapa is a deep lake with a maximum depth near 40 and steeply sloped banks in all but the uppermost end of the lake. Primary fish habitat consists of a wreath of water willow, submerged vegetation including coontail, muskgrass, chara and spatterdock in the upper end. Other habitat includes rocky outcroppings, contour changes and man-made structures such as rip-rap and a cedar tree brushpile. Access is limited with only an earthen boat ramp and parking area that is deeply rutted and eroded.

Recent fish management activities have included stocking threadfin shad as a supplemental forage, stocking and evaluation of FLMB through fin clips, habitat enhancement work and routine standardized sampling. Recent Onapa stockings can be seen in Appendix 1.

ODWC fish attractors at Onapa consist of a cedar brushpile marked with a buoy (Appendix 2).

Onapa follows statewide creel, size and method of take regulations, with only a “no wake” regulation imposed by the city of Checotah.

Channel catfish

Channel catfish were sampled in 2016 and 2019 using baited hoopnetting with no success. No channel catfish were caught in either survey. The 2022 gillnetting survey was used as an alternative to baited hoop netting to try to identify population status. The 2022 survey was also met with zero individuals caught. These samples were conducted to gather baseline data on the catfish population in Onapa after the three successive years of stocking from 2000-2002 (Appendix 1). Natural reproduction of channel catfish in Onapa is apparently low to non-existent. Not known as a channel catfishery, stockings should cease indefinitely.

Crappie

Gillnet surveys indicated a low abundance of crappie with only four crappie caught in the 2022 gillnet survey. Total CPUE was 0.6 with a total Relative Weight (Wr) of 81 (Table 1) which is below acceptable levels. The low body condition coupled with a low abundance indicates a forage limited system. Onapa should be surveyed using trap nets to further understand the crappie population structure and age/growth information. However, success may be limited due to the topography of the lake.

Shad

The 2022 gillnet survey showed low abundance of both gizzard and threadfin shad (Tables 2 & 3). All gizzard shad captured were in the quality size range of ≥ 11 in. There are no size categories for threadfin shad. Optimal forage size for most species is six inches or less

Table 1. Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by size groups of Crappie collected by fall gill net from Onapa Lake. Acceptable Wr values are ≥ 90 .

Year	Total CPUE	Total Wr	Stock	Wr	Quality	Wr	Preferred	Wr	Memorable	Wr
			5.1 in.		7.9 in.		9.8 in.		11.8 in.	
2019	0.8	84	0.4	76			0.2	98	0.2	88
2022	0.6	81	0.45	81			0.15	81		

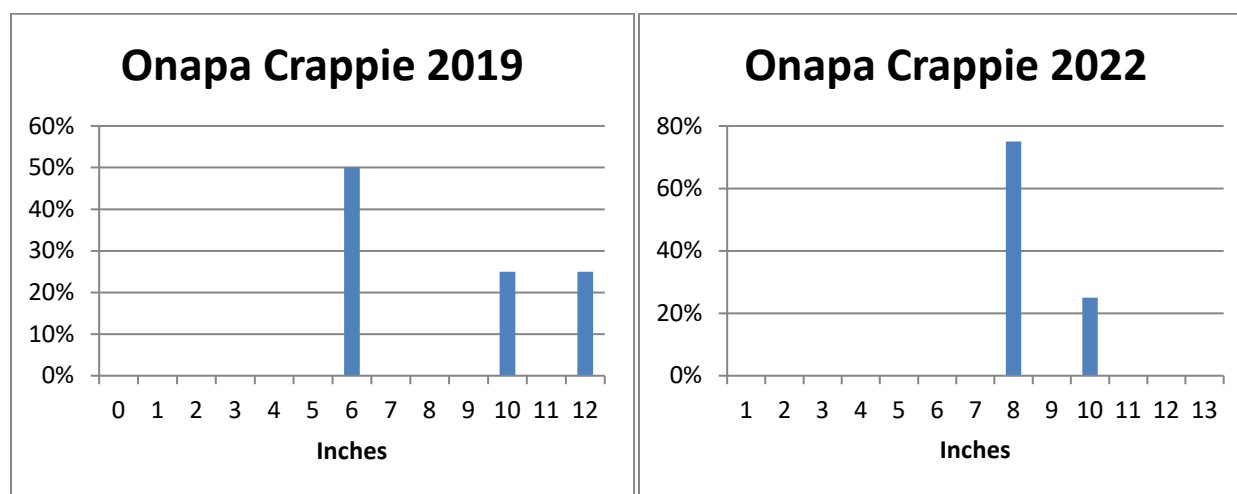


Figure 1. Onapa Crappie length frequencies

Year	No.	Total CPUE	Substock	Stock	Quality
			0 In.	7.1 In.	11 In.
2019	1	0.2			0.2
2022	9	1.34			1.34

Table 2. Total number (No.) and catch per unit of effort (CPUE) by size groups of Gizzard Shad collected by fall gill net from Onapa Lake.

2019		
2022	1	0.15

Table 3. Total number (No.) and catch per unit of effort (CPUE) by size groups of Threadfin Shad collected by fall gill net from Onapa Lake.

Appendix I. Onapa stocking history

YEAR	SPECIES	Number	Size (inches)
2000	Channel catfish	7250	7
2001	Channel catfish	7180	7
2002	Channel catfish	7315	6.25
2012	FLMB	6,201	1.5
2013	FLMB	130	6-7"
2015	FLMB	1000	3-4"
2015	Threadfin Shad	1000	3-4"
2016	FLMB	100	10"
2016	Threadfin Shad	3000	3"
2017	Threadfin Shad	500	4"
2018	FLMB	100	9.25"
2018	Threadfin Shad	2500	3"
2020	Threadfin Shad	1500	3-5"
2021	Threadfin Shad	1500	3"

Appendix II. Onapa habitat enhancement

Lake	Area	Habitat type	Latitude	Longitude	Date Installed
ONAPA	SE side of lake	6 large cedars	35.40029	-95.56589	10/31/2019