

**SURVEY REPORT**

**OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION**



**FISH MANAGEMENT SURVEY AND RECOMMENDATIONS**

**FOR**

**LEGION PARK POND**

**2022**

**State:** Oklahoma

**Project Title:** Legion Park Pond Survey Report

**Operating Authority:** City of El Reno

**Period Covered:** January 1, 2022 - December 31, 2022

**Prepared by:** OFRL

**Date Prepared:** February 2023

### **ABSTRACT**

Legion Park Pond was surveyed by the Oklahoma Department of Wildlife Conservation with an electrofisher boat and baited hoop nets in 2022. Baseline data of the fish populations as well as assessment of previous fish stockings was needed. Fish species sampled included Largemouth Bass, White Crappie, Bluegill Sunfish, Green Sunfish, Channel Catfish and Black Bullhead. The pond is part of the agency's Close to Home Fishing Program (CTHFP). Current regulations include a 3 fish limit per person for sunfish species and Channel Catfish. There are no size limits in effect. All other species fall under regular statewide limits. Largemouth Bass numbers and size structure remained low and unchanged compared to the previous survey in 2013. Sunfish numbers increased dramatically compared to the 2013 count. Good numbers of catchable sized Bluegill Sunfish should be available to anglers. Low numbers of Channel Catfish were observed during the summer sample. Recommendations include maintaining the current rules and regulations, perform a clean out of the pond to improve water quality, stabilize the shoreline with riprap, and monitoring the fishery again in 4 years. An annual fishing event for families should continue to be held with the El Reno Parks and Recreation Department.

## INTRODUCTION

**Physical description** - Legion Park Pond is owned by the City of El Reno. The maximum pond depth is 5 feet. The total shoreline length measure 0.6 miles. The water surface covers a total of 2 acres. Legion Park Pond is adjacent to a swimming pool, 4 regulation-sized tennis courts, 2 baseball fields, a concrete walking trail, and a covered pavilion. Most of the pond's shoreline is barren with little to no grass. There are several large trees along the shore. The pond has spider block fish attractors scattered throughout the pond. The park is known for large numbers of ducks and geese. Several park benches have been added around the pond for anglers to use. The pond can be found at 620 S. Reno Avenue in El Reno, Oklahoma.



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**History** - The pond was added to the Close to Home Fishing Program in 2013. The MOU between the ODWC and the City of El Reno is currently up for renewal. The agreement has worked well El Reno maintaining the park grounds and the ODWC managing the pond. Issues discussed in the past between both parties include a cleanout, the addition of rock to protect the banks, and remove Canada geese. The pond has been stocked with Hybrid Bluegill, Redear Sunfish and Channel Catfish intermittently since 1988.

**Strategies** - Close to Home Fishing Program ponds are managed as put and take fisheries. Sampling has three goals. First, to determine if fish introductions are adequate. The second is to collect as much baseline data for each pond. Lastly, to determine the most effective gear to evaluate sunfish and crappie metrics. Current management practices for the pond include stocking Channel Catfish and Hybrid Bluegill (Appendix 1). Close to Home fishing ponds have an aggregate limit of 3 Channel Catfish and/or sunfish. Only rod and reel fishing are allowed per angler. There is a limit of three fishing poles per angler as well. All other regulations fall under statewide regulations.

**Habitat** - There is a small center island with tree roots that bass and sunfish hide in. Two fishing jetties hold fish as well. The overflow bowl on the north end attracts good numbers of sunfish because of cooler, deeper water.

**Surveys** - Legion Park Pond has been sampled two times by Oklahoma Fishery Research Laboratory crews. In 2013, the pond was electrofished with one unit (10 min) of effort due to low water conditions. In 2022, 3 units of electrofishing covered the entire pond's available shoreline area. Three tandem hoop nets were used over a 72-hour period in 2022 to sample catfish. The 2022 survey was performed to start the collection of baseline data to compare to future surveys for trend analysis.

## RESULTS

### Largemouth Bass

Spring electrofishing was performed in April of 2022. Fish were weighed and measured and returned to the pond. Bass abundance at Legion Park Pond increased compared to the 2013 survey (Table 1). The pond is managed as a put and take fishery. Largemouth Bass are incidental to the pond's fishery. Bass numbers are dependent on adequate habitat of which there is little. Harvest of bass is allowed with a 6 fish per day limit of which only one may be over 16 inches in length. Bass occupied mostly stock or sub stock categories (Table 2). Length frequency stayed relatively the same from 2013 to 2022 (Figures 1 and 2). The largest bass weighed 2.4 pounds. Relative weights (Wr), a condition measurement, were good for all length group categories (Figure 3). Values above 90 are acceptable. A circuit around the pond covered 3 units (30 minutes) and produced the results in the tables and figures below.

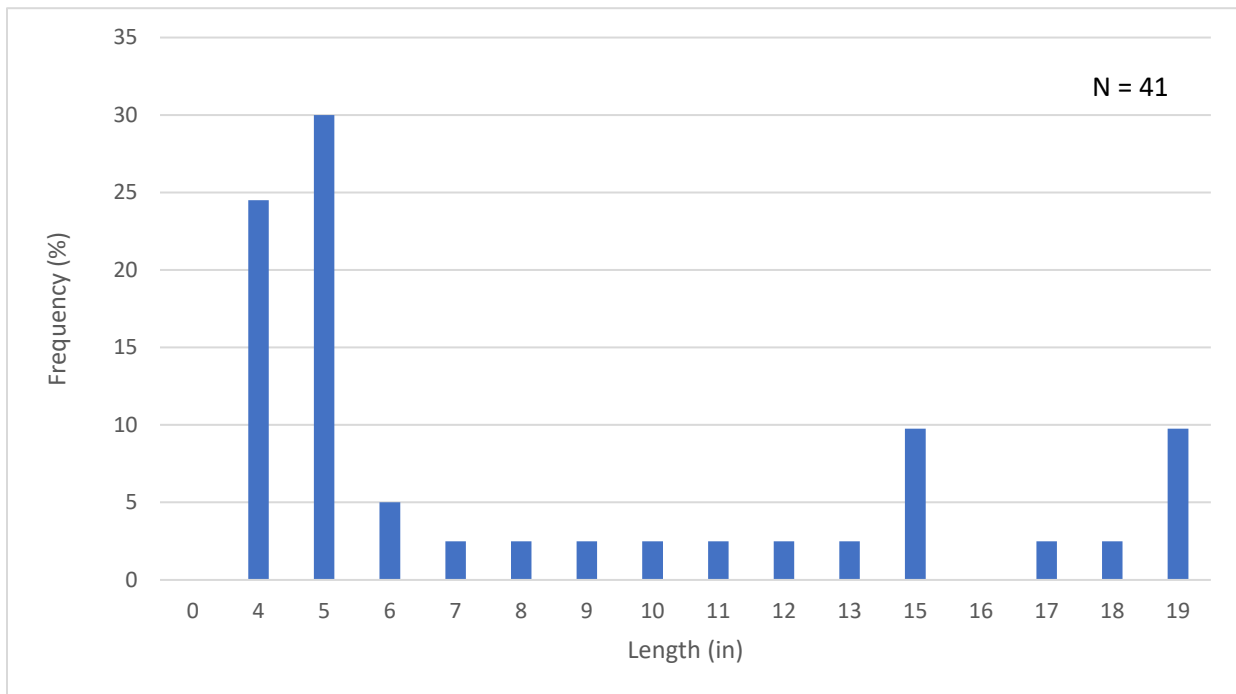
**Table 1.** Total number (N), catch per unit effort (CPUE), relative weights (Wr) and CPUE by size group for Largemouth Bass during Spring electrofishing in 2022 and 2013.

		Total CPUE	Substock ≤ 8 in	Stock 8in		Quality 12 in		Preferred 15 in		Memorable 20 in		Trophy 25 in	
Year	No.	CPUE	CPUE	CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr
2022	41	82	50	8	91	4	104	20	107	-	-	-	-
2013	14	84	-	8	97	12	96	15	101	20	-	25	95

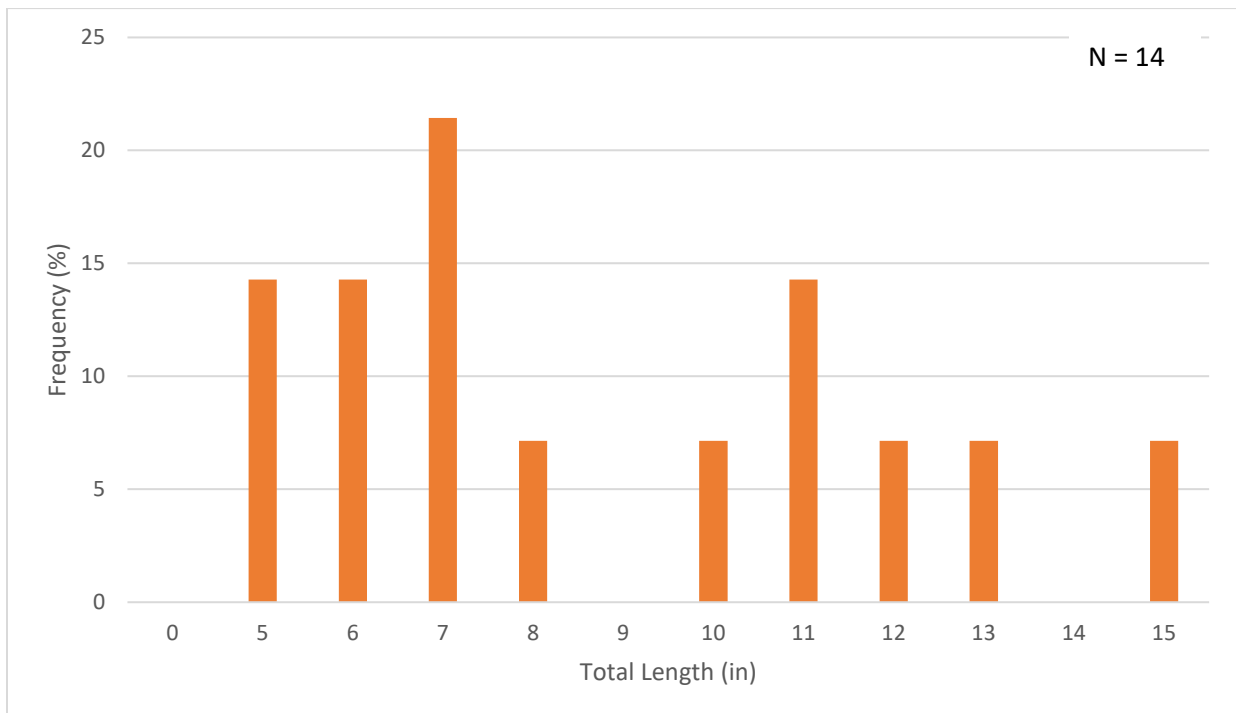
**Table 2.** Proportional Size Distribution (PSD) of Largemouth bass. Quality (PSD-Q) preferred (PSD-P) and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes.

Year Surveyed	PSD (8 in)	PSD-Q (12 in)	PSD-P (15 in)	PSD-M (20 in)
2022	75	12	62	-
2013	43	29	14	-

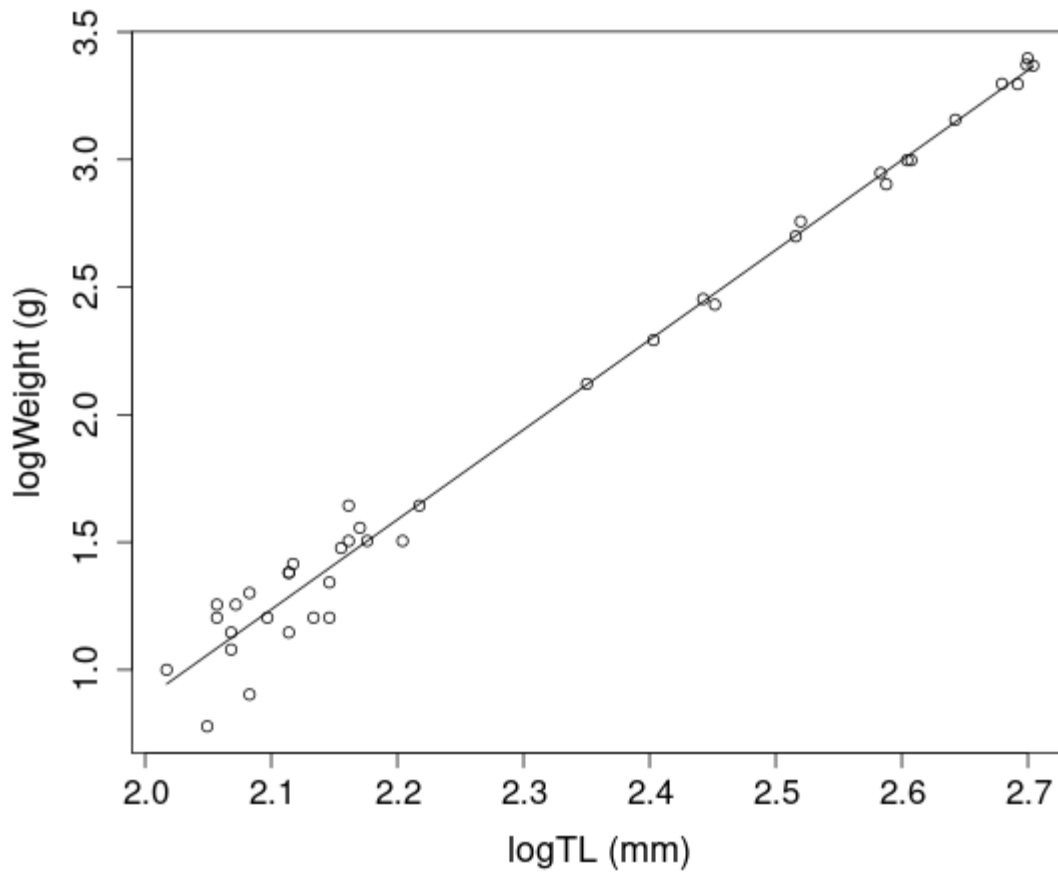
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**Figure 1.** Largemouth Bass length frequency distribution for 2022 via spring electrofishing



**Figure 2.** Largemouth Bass length frequency distribution for 2013 via spring electrofishing



**Figure 3.** Condition values (Wr) for Largemouth Bass in 2022 via electrofishing

**Bluegill sunfish**

Bluegill Sunfish were collected via Spring electrofishing which produced very good numbers in 2022 (Table 2). The majority of Bluegill Sunfish sampled were quality in size (Table 4). Sunfish are stocked at this size by ODWC and there are few predators that can eat them at Legion Pond.

**Table 3.** Total number (N), catch per unit effort (CPUE), and relative weights (Wr) by size groups of Bluegill Sunfish collected by Hoop nets in 2022. Acceptable Wr values are  $\geq 90$ .

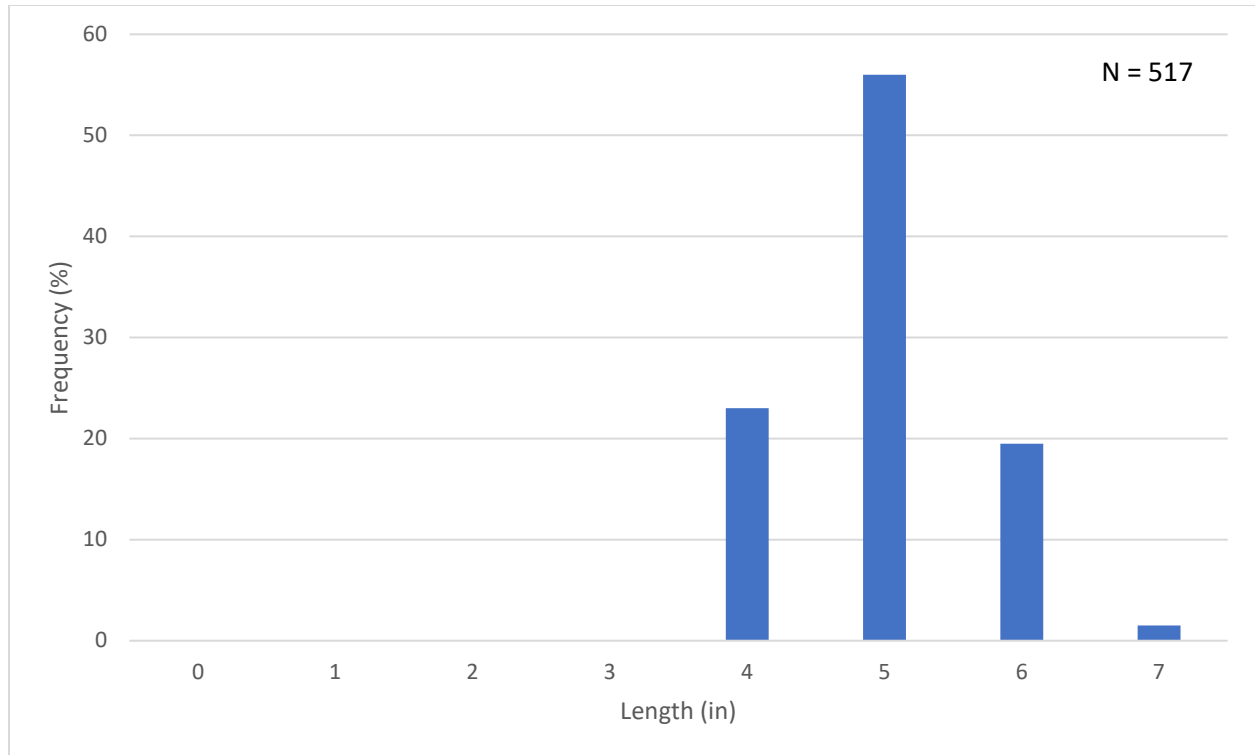
		Total CPUE	<u>Stock</u> 3 in		<u>Quality</u> 6 - 8 in		<u>Preferred</u> 6 in		<u>Memorable</u> 10 in	<u>Overall</u>
Year	No.	CPUE	CPUE	Wr	CPUE	Wr	CPUE	Wr	CPUE	Wr
2022	517	4,136	2,936	97	1,200	91	-	-	-	95

**Table 4.** Proportional Size Distribution (PSD) of Bluegill Sunfish. Stock (PSD), Quality (PSD-Q) preferred (PSD-P) and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes.

<u>Year Surveyed</u>	<u>Stock</u> (3 in)	<u>Preferred</u> (6 in)	<u>Quality</u> (6 - 8 in)	<u>PSD-M</u> (10 in)
2022	-	29	71	-



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**Figure 3.** Bluegill Sunfish length frequency distribution for 2012 via tandem hoop nets.

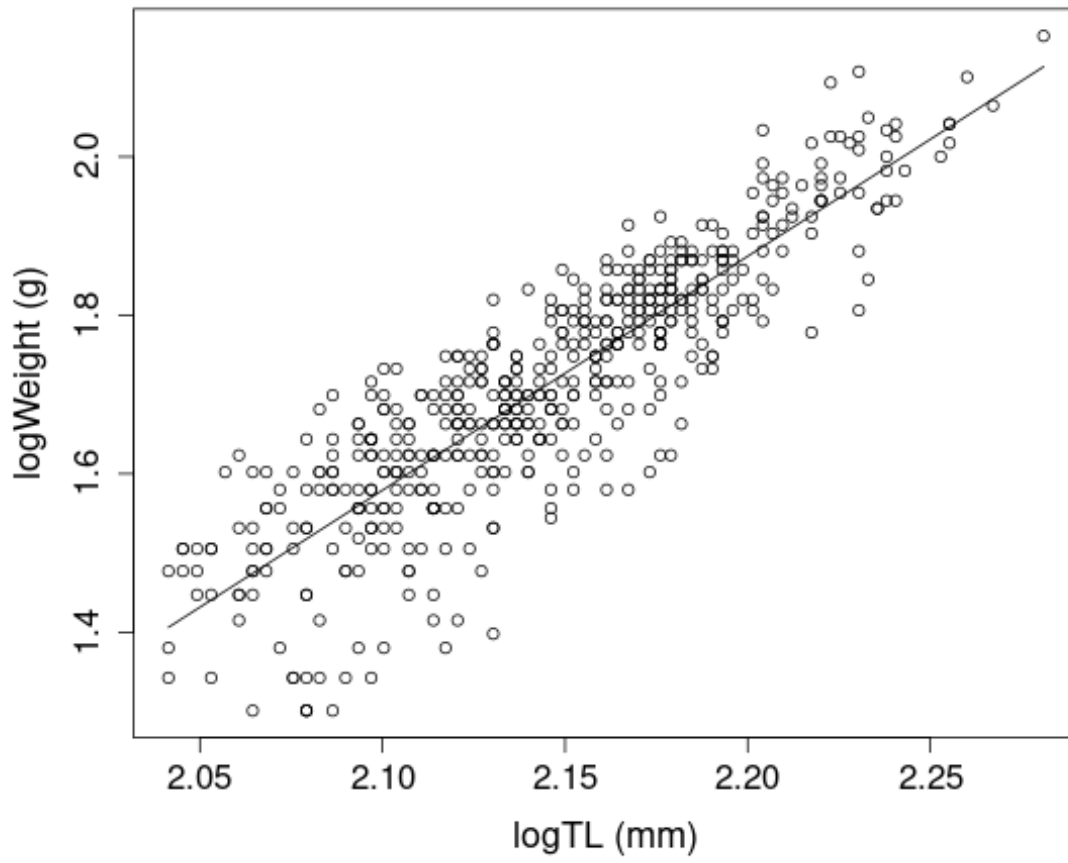


Figure 4. Condition values (Wr) of Bluegill Sunfish via hoop net survey in 2022.

### **Channel Catfish**

Baited hoop nets were set out at Legion Park Pond over a 3-day period. The nets were baited with Sportsman's Choice floating and sinking, pelleted food. Channel Catfish number were low. Catfish size groups ranged from 13 - 18 inches (Figure 5). The total catch rate was 16 (Table 5). Channel Catfish in the sample were in good shape (Figure 7). Wr values above 90 are considered good. Legion Park Pond was not stocked in 2022 (Appendix 1). Catfish that are stocked on occasion are in the two-pound range and are highly sought after by anglers. These are market size fish usually going to Dallas or Oklahoma City restaurants. They are caught out quickly by anglers. The stocking rate for Legion Park Pond 25 fish per acre. The largest Channel Catfish weighed 2 ¼ lbs. The overall Wr was 98.

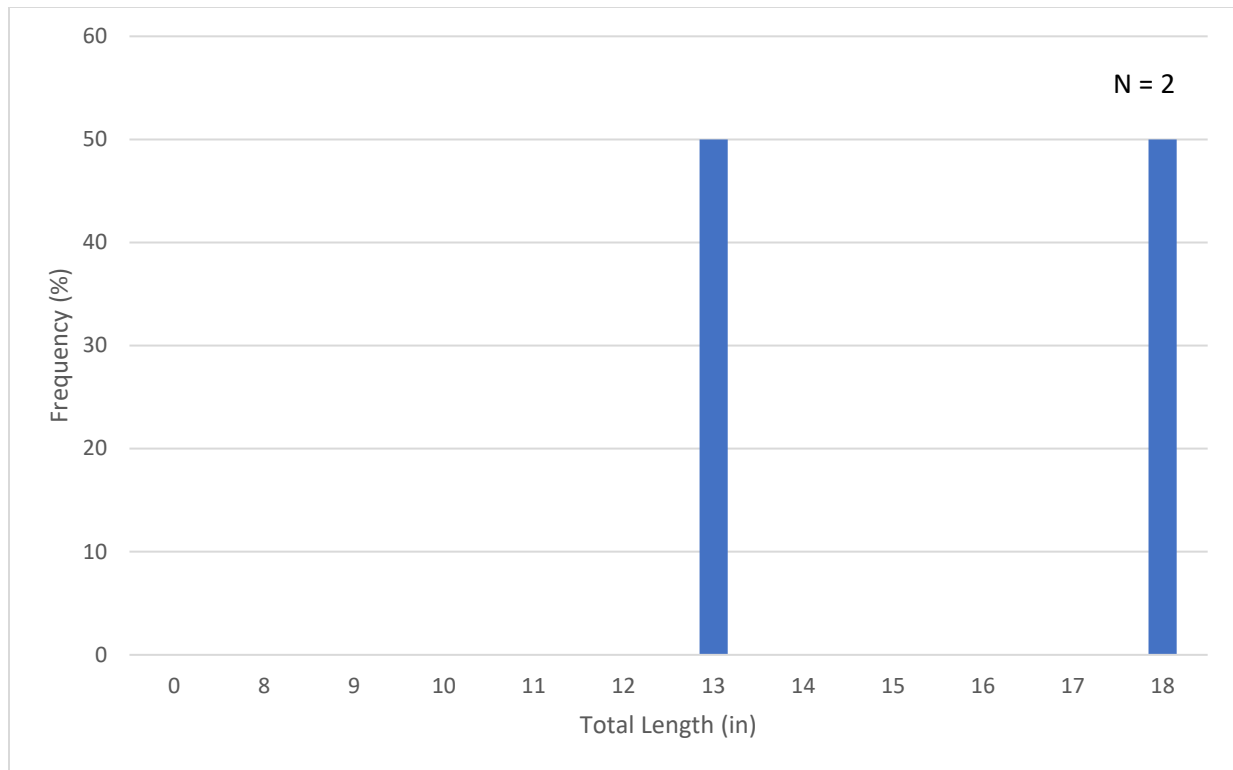
**Table 5.** Total number (No.), catch per unit of effort (CPUE), and relative weights (Wr) by size groups of Channel catfish collected by hoop net. Acceptable Wr values are  $\geq 90$ .

		Total CPUE	<u>Stock</u> 11 in		<u>Quality</u> 16 in		<u>Preferred</u> 24 in		<u>Memorable</u> 28 in		<u>Trophy</u> 36 in	
<u>Year</u>	<u>No.</u>	<u>CPUE</u>	<u>CPUE</u>	<u>Wr</u>	<u>CPUE</u>	<u>Wr</u>	<u>CPUE</u>	<u>Wr</u>	<u>CPUE</u>	<u>Wr</u>	<u>CPUE</u>	<u>Wr</u>
2022	2	16	8	102	8	95	-	0.0	-	-	-	-

**Table 6.** Proportional Size Distribution (PSD) of Channel catfish. Quality (PSD-Q) preferred (PSD-P) and memorable (PSD-M) lengths. PSD values indicate the proportion of fish in or above the quality, preferred or memorable size classes.

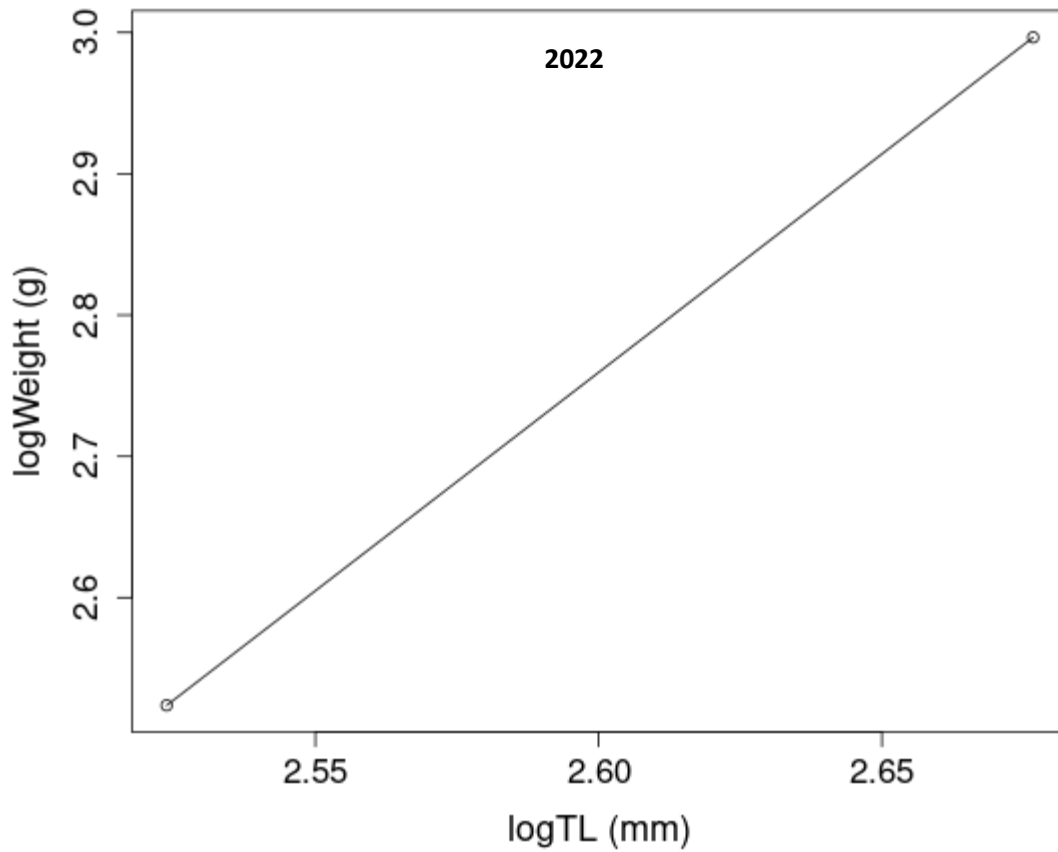
<u>Year</u>	<u>PSD</u>	<u>PSD-Q</u> (16 in)	<u>PSD-P</u> (24 in)	<u>PSD-M</u> (28 in)
2022	50	50	-	-

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**Figure 6.** Channel Catfish length frequency distribution via baited hoop nets in 2022.

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**Figure 7.** Condition (Wr) of Channel Catfish at Legion Park Pond.

## White Crappie

Crappie were removed during survey outings when possible. Crappie are not conducive to a healthy fishing pond. Forty-seven individuals were observed during the survey. Seventy five percent of the crappie were at or below 8 inches.

### **DISCUSSION**

The pond is showing its age and is slowly filling in with sediment. Neighborhood grass and leaf litter entering the creek fills up the pond. Sloughing of the pond bank at the upper end makes fishing difficult and holds few fish. Three- and one-half times more sunfishes were observed with hoop nets than with Spring electrofishing. Baited hoop nets appear to be the most affective gear type for sunfish and catfish sampling. Harvest of Channel Catfish appears to be high.

### **RECOMMENDATIONS**

Riprap should be placed around the shoreline to reduce erosion. Increased Channel catfish stocking should occur especially before aquatic education events scheduled with the city. Fish population surveys by the AODWC should continue every few years. Structures such as spider blocks should be added to the pond for fish cover. A pond bottom cleanout would help with poor water quality issues and improve fish growth. Annual family fishing events should continue. Recruit local civic groups to make park / pond improvements. Boy Scouts could pick up trash, install fish habitat and plant grass.

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**Appendix 1** - Stocking Reports for the past ten years at Legion Park Pond

<b>Year/Month</b>	<b>Species</b>	<b>Count</b>	<b>Weight (lbs.)</b>	<b>Size (in.)</b>
23-Apr	Hybrid Sunfish	500		5-7
23-Apr	Channel Catfish	60	180	18-22
21-Oct	Hybrid Sunfish	200	33.3	6
21-May	Redear Sunfish	40	20	7
20-Sep	Hybrid Sunfish	173	31.4	5.5
19-Jul	Hybrid Sunfish	200	36	5
17-Apr	Channel Catfish	151	36	9
16-Jul	Channel Catfish	400	133	9.3
16-Apr	Channel Catfish	206	137.33	13
14-Jul	Channel Catfish	150	50	11
14-Apr	Redear Sunfish	12	10	7
14-Apr	Bluegill	500	2.8	2.5
14-Feb	Bluegill	500	2.8	2