

OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION



FISH MANAGEMENT SURVEY REPORT

ARDMORE CITY LAKE

2025

EXECUTIVE SUMMARY

Electrofishing was conducted in spring of 2025 to evaluate the status of the black bass fishery at Ardmore City Lake. Ardmore City Lake contains both largemouth and spotted bass.

Overall catch rates for largemouth bass and largemouth > 16 inches increased significantly in 2025 compared to the last two surveys in 2018 and 2022. The overall catch rate of 159 fish/hr is well above acceptable levels (Table 1, Figure 1). Relative weight was 88 and is slightly below the acceptable level of 90 for overall fish condition. Spotted bass catch rates have consistently been relatively low and highly variable however, zero spotted bass were collected in 2025 (Figure 2).

Overall size distribution for largemouth bass is indicative of a balanced population with good recruitment (Figure 3) and PSD values exceed acceptable levels (Table 2). Largemouth growth was last evaluated in 2022 with age-3 fish averaging 13.2 inches (Table 3, Figure 4). The annual mortality estimate from 2022 had high variability and may not accurately reflect overall mortality rates for largemouth at Ardmore City Lake (Table 4). Florida bass were last stocked in 2024. Historical stocking records are included in Table 5.

Table 1. Effort, overall fish per hour (CPUE), variability, relative weights (Wr), and CPUE by size groups of black bass collected by electrofishing from Ardmore City Lake.

Year	# Samples	# Fish	Total CPUE	Range (U/L 95% CI)	RSE	Samples needed RSE = 20	Wr	CPUE < 8 in	CPUE ≥ 8 in	CPUE ≥ 14 in	CPUE ≥ 16 in
2008	6	104	69.3	±23.9	17.6	5	91	3.3	66.0	23.3	12.0
2013	6	120	120	±31.3	13.3	3	90	9.0	111.0	34.0	15.0
2018	6	72	72	±34.4	24.3	9	89	7.0	65.0	30.0	19.0
2022	6	71	71	±10.3	7.4	1	92	7.0	64.0	33.0	19.0
2025	6	159	159	±33.4	10.7	2	88	60.0	99.0	59.0	33.0

Figure 1. Fish per hour (CPUE) trend data for largemouth bass and largemouth bass greater than 16 inches collected by electrofishing from Ardmore City Lake. Error bars represent standard error estimates.

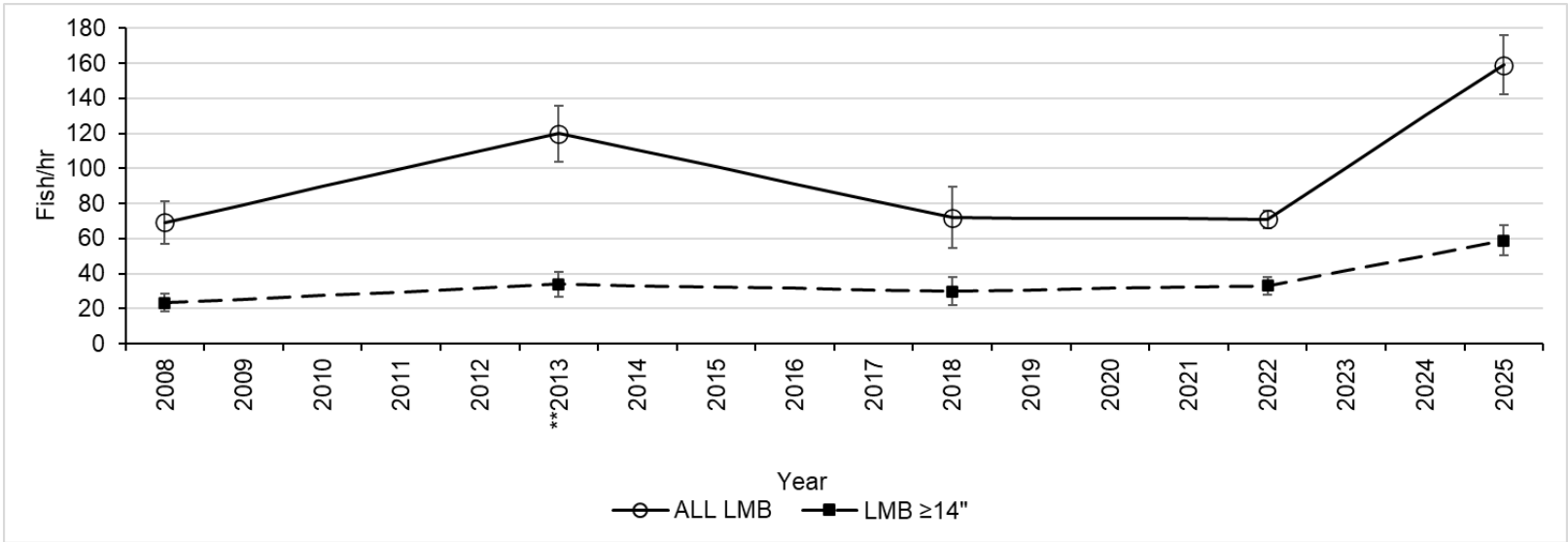


Figure 2. Fish per hour (CPUE) trend data for spotted bass and spotted bass greater than 16 inches collected by electrofishing from Ardmore City Lake. Error bars represent standard error estimates.

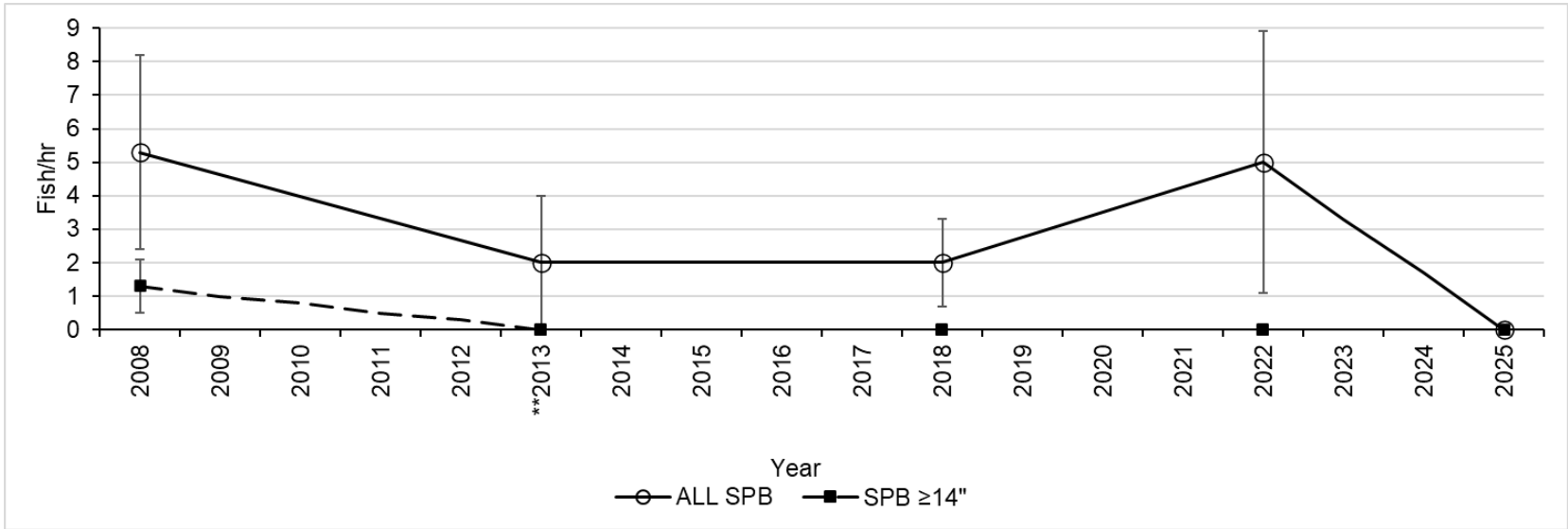


Figure 3. 2025 length frequency distribution for largemouth bass collected by electrofishing at Ardmore City Lake. N = 159.

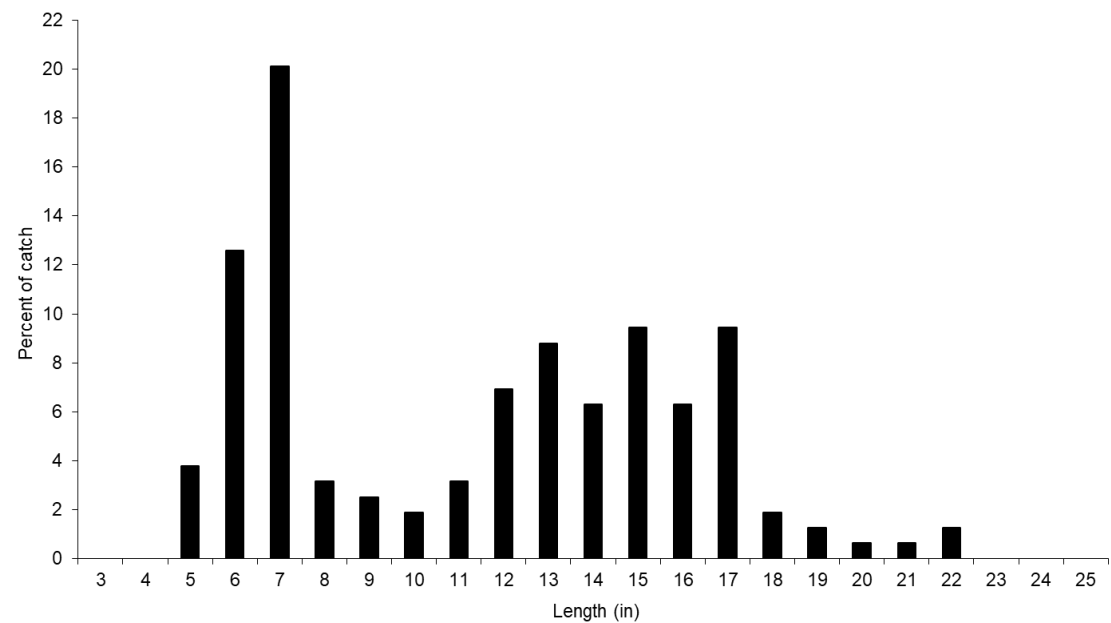


Table 2. Proportional Stock Density (PSD) categories and PSD metrics and variability for largemouth bass collected by electrofishing from Ardmore City Lake.

Category	Stock	Quality	Preferred	Memorable	Trophy
Size (in)	7.9	11.8	15.0	20.1	24.8

Year	PSD	Range (U/L 95% CI)	PSD-P	Range (U/L 95% CI)	PSD-M	Range (U/L 95% CI)	PSD-T	Range (U/L 95% CI)
2008	68	±13	25	±12	1	±3	-	-
2013	67	±12	23	±11	2	±3	-	-
2018	68	±17	37	±17	3	±6	-	-
2022	84	±10	46	±14	9	±8	1	±3
2025	83	±10	47	±14	3	±4	-	-

Table 3. Number of largemouth bass, mean length at age, and variability of largemouth bass collected by electrofishing from Ardmore City Lake.

Year	# Aged	# Fish with Length-Age Key	Age-1 (N)	Range (U/L 95% CI)	Age-2 (N)	Range (U/L 95% CI)	Age-3 (N)	Range (U/L 95% CI)	Age-4 (N)	Range (U/L 95% CI)	Age-5 (N)	Range (U/L 95% CI)	Age-6 (N)	Range (U/L 95% CI)	Age-7 (N)	Range (U/L 95% CI)
2022	118	121	5.4 (4)	±1.0	10.0 (23)	±0.7	13.2 (22)	±0.5	15.0 (38)	±0.4	16.2 (2)	±0.1	17.5 (10)	±1.1	17.7 (11)	±0.8

Figure 4. 2022 Length at age data for largemouth bass collected from Ardmore City Lake by electrofishing.

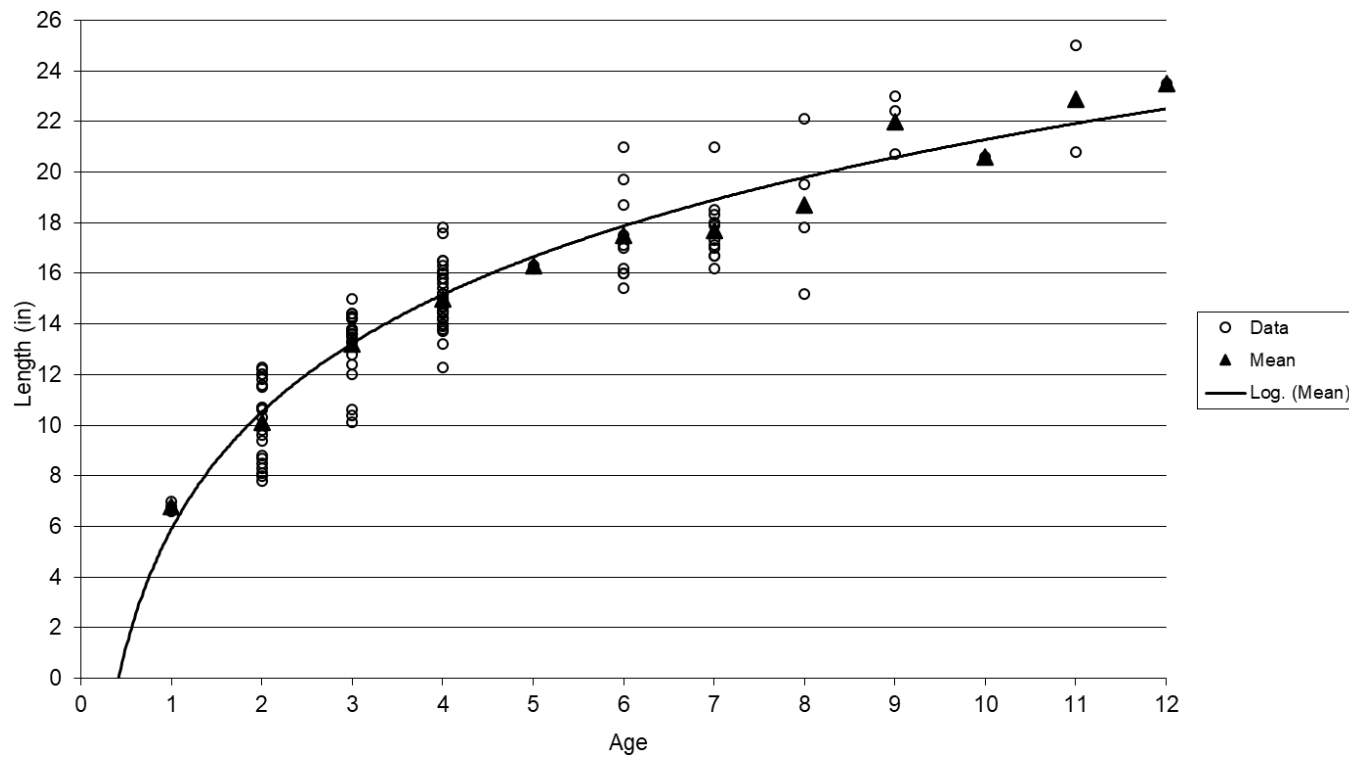


Table 4. Mortality estimates, variability, and maximum observed age of largemouth bass collected by electrofishing from Ardmore City Lake.

Year	Annual Mortality	Lower 95% CI	Upper 95% CI	Observed Max Age
2022	25	1	43	12

Table 5. Species, number and size of fish stocked in Ardmore City Lake from 1967 to 2025.

DATE	SPECIES	NUMBER	SIZE
1981	Channel catfish	6,606	Fingerlings
1983	Largemouth bass	3,667	Fingerlings
1983	Channel catfish	10,000	Adults
1984	Threadfin shad	1,000	Adults
1987	Channel catfish	3,700	Fingerlings
1990	Channel catfish	2,900	Fingerlings
1992	Threadfin shad	2,000	Adults
1995	Threadfin shad	1,500	Adults
1996	Certified Florida LMB	4,100	Fingerlings
2003	Certified Florida LMB	16,872	Fingerlings
2005	Certified Florida LMB	3,753	Fingerlings
2011	Certified Florida LMB	4,440	Fingerlings
2013	Certified Florida LMB	78,910	Fry
2014	Certified Florida LMB	75,009	Fry
2015	Certified Florida LMB	72,400	Fry
2018	Certified Florida LMB	75,600	Fry
2019	Certified Florida LMB	24,444	Fingerlings
2020	Certified Florida LMB	30,834	Fingerlings
2024	Certified Florida LMB	30,053	Fingerlings
2024	Channel catfish	530	Adults