

SURVEY REPORT
OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION



FISH MANAGEMENT SURVEY AND RECOMMENDATIONS
FOR
KAW LAKE
2025

SURVEY REPORT

State: Oklahoma

Project Title: Kaw Lake Fish Management Survey Report

Period Covered: This report discusses survey results from 2025.

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Kaw Lake

ABSTRACT

Kaw Lake was surveyed using fall trap nets to determine the status of the crappie populations during the 2025 fall sampling season. Data from the 2025 sample will be compared to previous standardized sampling efforts to monitor trends in population dynamics.

Recommendations include trap netting in fall of 2027 for crappie, gillnetting fall of 2028 for Hybrid Striped Bass and White Perch, and using fall night electrofishing to evaluate Walleye.

Current Management Practices

Evaluate and Maintain Stocked Moronid and Percid Fish Populations

Hybridized fish species like Hybrid Striped Bass do not have the capability to reproduce and sustain their populations as other game fish can. These put and take fisheries are subject to greater control by fisheries managers who must request annual introductions to maintain their abundances in satisfactory levels for the angling public. Populations must be monitored closely to ensure this limited resource is used most efficiently. The Kaw Lake hybrid fishery has been increasingly utilized by anglers. The Walleye fishery at Kaw Lake has always been of interest as it has been challenging to determine the amount of natural reproduction taking place in the lake. The maintenance of current data on these species is vital to gauging success of these management strategies and communicating about them with constituents.

Evaluation of Historically Stunted and High-Profile Crappie Populations

Crappie was the second most sought after species in Oklahoma according to the most recent angler survey. It is important to keep a finger on the pulse of high profile crappie fisheries in the region, especially with the recent developments in fish finding technology. Forward-facing sonar allows anglers to single out and harvest the largest fish in a school. As this technology becomes more affordable and more widespread in use, it will be important to have baseline information on high profile crappie fisheries.

2025

Kaw Lake was sampled during the fall with trap nets to assess the crappie population. Trap nets were deployed around the lake in chosen areas to have the highest catch rates. Trap nets were deployed perpendicular to the bank and anchored at the point where the net started at the water's edge. Max depth of the nets did not exceed 15ft were checked daily and moved to another location if catch was deemed too low. 5 nets were set for 4 days for a total of 20 net nights of fishing. Catch Per Unit Effort (CPUE) was not calculated due to sample sites being nonrandom sites.

White Crappie:

Catch Per Unit Effort (CPUE) was not calculated due to sample sites not being random. 702 White Crappie were collected. Fish were measured (mm) and weighed (g). A subsample of White Crappie had their otoliths removed for aging. A total of 137 otoliths were collected and aged for analysis. White Crappie length frequencies had a notable peak at 100mm - 124mm (Figure 1). Proportional size distributions significantly decreased for quality size (PSD) and preferred (PSD-P) sized fish compared to the 2024 sample but not significantly different from 2020 (Table 1). Relative weight (Wr) significantly increased from the 2024 sample but significantly decreased from the 2020 sample (2020 Wr = $97.39 \pm .67$, 2024 Wr = 91.61 ± 1.31 , and 2025 Wr = $95.17 \pm .81$). Age frequencies show a majority of the fish sampled were age 0 (Figure 2). Mean length at age significantly increased for age 1 and 2 White Crappie compared to 2024 (Figure 3, Table 2).

White Crappie in Kaw Lake displayed typical boom and bust recruitment with large age 0 year class. While quality and preferred sized fish significantly decreased, they are not significantly different from 2020 this may be due to the smaller sample size taken in 2024. While relative weights significantly increased Kaw comes in just above the 50th percentile compared to White Crappie statewide. Kaw Lake White Crappie proportional size distribution values were around the 50th percentile for PSD, PSD-P, and PSD-M sized fish compared statewide. This survey confirmed recruitment in Kaw Lake has been down in recent years. The large number of age 0 White Crappie indicate that a large year class hatched the spring of 2025 as almost 80% of fish aged were age 0 (Figure 2). Sampling in the fall of 2027 would allow NCR staff check how this age 0 year class has grown and if subsequent years have good recruitment classes.

RECOMMENDATIONS

1. Trap Net Kaw Lake fall 2027 to check for recruitment and assess the older Crappie population.
2. Continue stocking Hybrid Striped Bass at the same rates. Work with guides and anglers to determine sizes of hybrids harvested, potentially a question in a future Kaw Lake creel if deemed appropriate.
3. Determine if Walleye could be better sampled using alternate gears like fall night electrofishing.
4. Continue monitoring the White Perch population to check for changes. Gillnetting recommended in 2028.

Figures and Tables

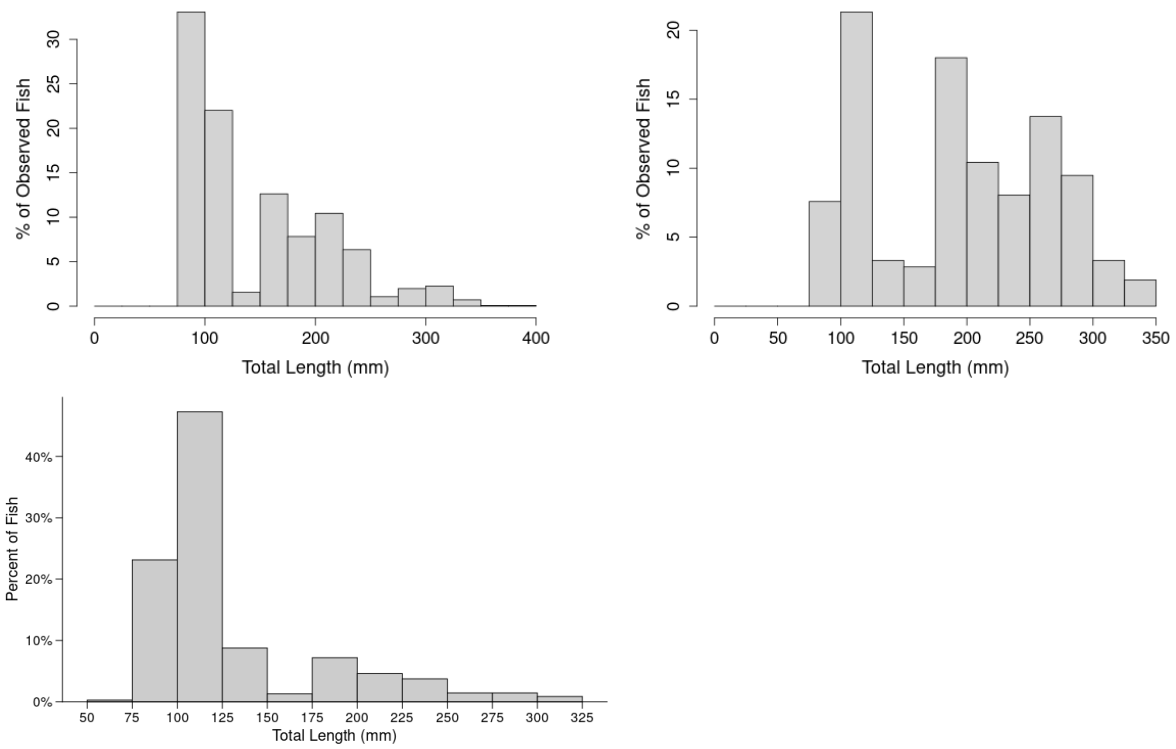


Figure 1. Length frequencies of White Crappie in Kaw Lake 2020 (top left), 2024 (top right) and 2025 (bottom left).

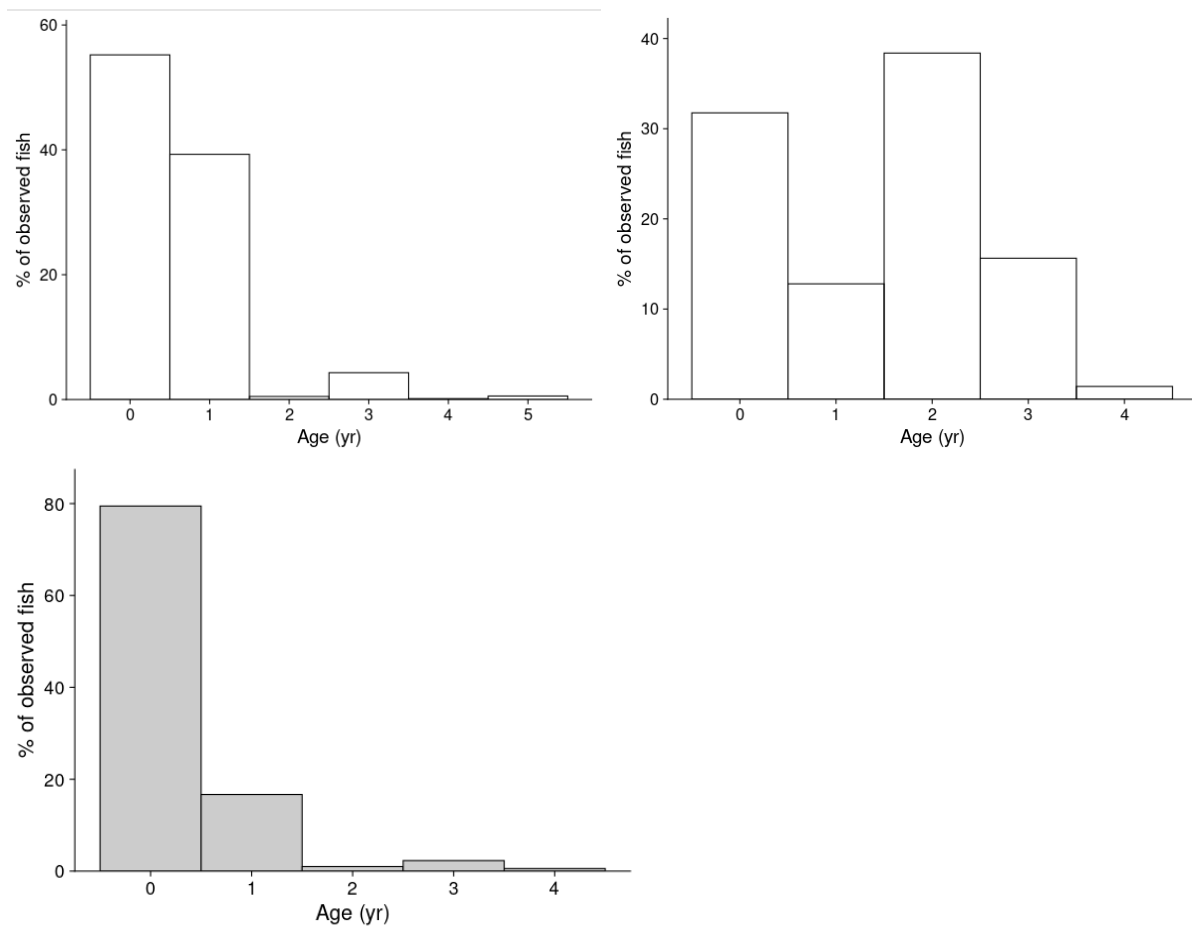


Figure 2. Age frequencies of White Crappie in Kaw Lake 2020 (top left), 2024 (top right) and 2025 (bottom left).

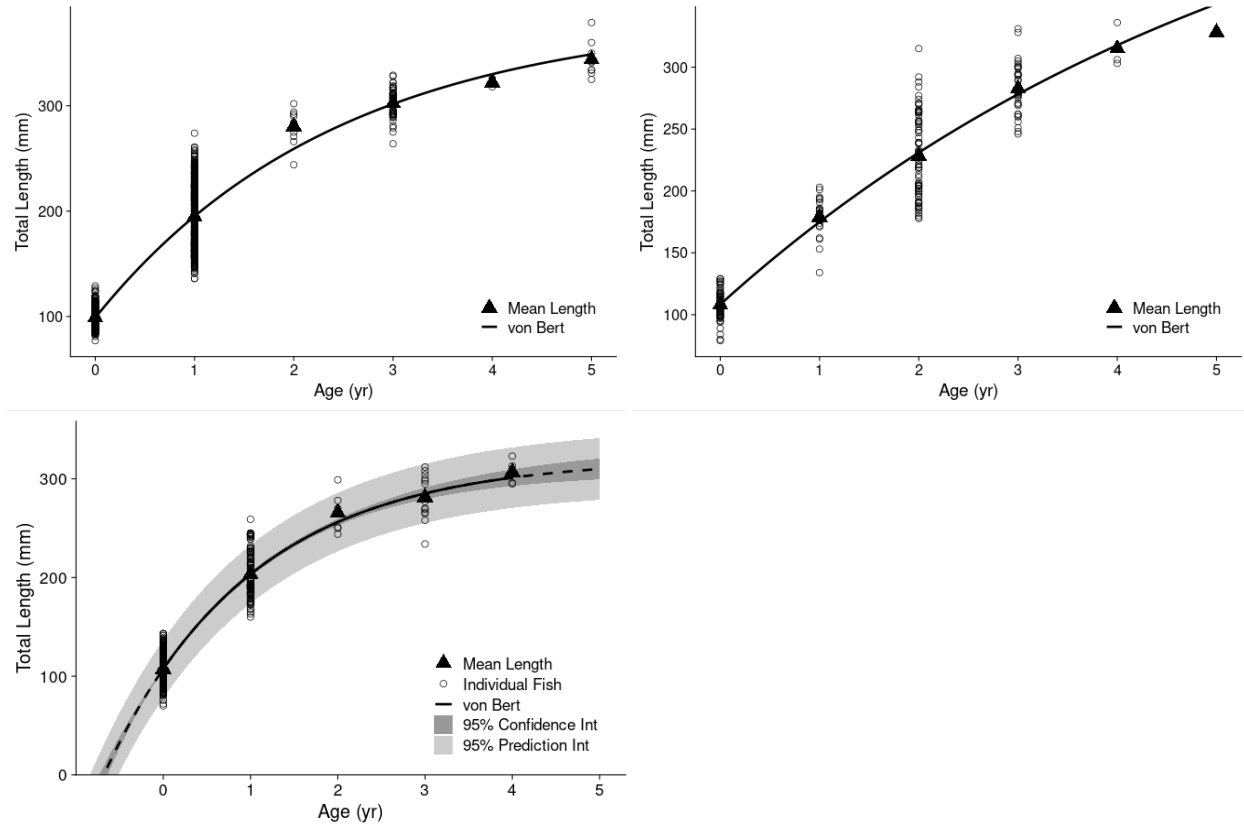


Figure 3. Mean Length at age and von Bertalanffy growth equation of White Crappie in Kaw Lake sampled in 2020 (top left), 2024 (top right) and 2025 (bottom left).

Table 1. Proportional Size Distributions of White Crappie in Kaw Lake.

Year	PSD	PSD – P	PSD – M
2020	52 ± 6	14 ± 4	7 ± 3
2024	71 ± 10	42 ± 12	9 ± 7
2025	47 ± 10	15 ± 7	3 ± 3

Table 2. Mean Length at age of White Crappie collected from Kaw Lake. Mean length at age was only calculated for age groups that had at least 5 individuals

Year	Sample Size (N)	Age-0	Age-1	Age-2	Age-3	Age-4	Age-5
2020	1418	98.91± .5	194.62± 2.51	281.29± 15.48	301.33± 3.94	-	347.25± 11.12
2024	211	108.01± 2.7	178.89± 5.51	228.22± 7.19	282.68± 7.04	-	-
2025	702	107.33± 1.06	203.42± 4.09	269.00± 14.65	281.25± 10.26	-	-