

Texoma Reservoir

2024 Fisheries Management Survey Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-221-M-5

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

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Survey and Management Summary

Fish populations in Texoma Reservoir were surveyed in 2023 using bass-only electrofishing and low-frequency electrofishing. Annual gill netting occurred in 2022 through 2025. Historical data are presented with the 2022-2025 data for comparison. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

Reservoir Description: Texoma Reservoir is a 74,686-acre impoundment on the Red and Washita Rivers on the Texas and Oklahoma border with a conservation elevation of 617 feet above mean sea level (msl). The water level fluctuates often and reached flood stage in May 2025. Texoma Reservoir typically exhibits high productivity, which can vary throughout the reservoir. Habitat features consisted mainly of natural features, rocky and gravel shoreline, and boat docks. Aquatic vegetation is typically limited. A small amount of yellow floating heart (<1 acre) has occurred near Sunset Camp Public Use area in Oklahoma since the early 2000's. Buttonbush and flooded terrestrial vegetation provide fish cover during periods of high water.

Management History: Important sport fish included Blue and Channel Catfish, White Bass, Striped Bass, Smallmouth Bass, Spotted Bass, Largemouth Bass, and Black and White Crappie. Striped Bass were stocked between 1965 and 1985 and have been managed with a 10-fish bag limit, of which no more than two can be longer than 20-inches since 1996. In 2009, a special regulation was implemented for catfish. In September 2020, minimum length limits for Blue, Channel, and Flathead Catfish were removed to better align with Oklahoma statewide regulations. Since 2022, the harvest of Alligator Gar has been closed during May. Smallmouth Bass were introduced through four separate stockings from 1981 to 1987. Zebra mussels were first identified in the reservoir in 2009, and are monitored in cooperation with other resource agencies, the U.S. Army Corps of Engineers (USACE), and North Texas Municipal Water District (NTMWD).

Fish Community

- **Prey species:** Threadfin Shad and Gizzard Shad provide an abundant forage base for sport fish and support numerous live-bait guides. Bluegill and other sunfish species also contribute to a diverse prey base.
- **Catfishes:** Blue Catfish and Channel Catfish are abundant. Many large Blue Catfish support a trophy fishery.
- **Temperate basses:** White Bass abundance fluctuates from year to year, and gill net catch rate of Striped Bass increased in 2025.
- **Black basses:** Smallmouth Bass, Spotted Bass, and Largemouth Bass are present in Texoma Reservoir and support popular recreational and tournament fisheries.
- **Crappie:** White Crappie and Black Crappie provide a popular fishery at Lake Texoma. Crappie sampling was discontinued due to inadequate catch rates in 2024.

Management Strategies: Based on current information, Texoma Reservoir should continue to be managed with existing harvest regulations. Sampling will include annual gill netting at set locations to monitor Striped Bass in cooperation with the Oklahoma Department of Wildlife Conservation (ODWC), and low-pulse electrofishing (LFE) for Blue Catfish will be conducted every three years in August. A joint electrofishing survey will be conducted with ODWC in spring 2026, and trap netting will be conducted in fall 2028 at randomly selected sites. A passive gear creel survey will be conducted with ODWC in winter 2025/2026. Lone Star Bass embayment stockings will be requested to improve trophy bass potential of the reservoir. Continue to inform the public about the negative impacts of aquatic invasive species.

Introduction

This document is a summary of fisheries data collected from Texoma Reservoir from 2021-2025. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. While information on other species of fishes was collected, this report deals primarily with major sport fishes and important prey species. Historical data are presented with the 2021-2025 data for comparison.

Reservoir Description

Texoma Reservoir is a 74,686-acre impoundment with 580 miles of shoreline constructed in 1944 on the Red and Washita Rivers along the border between Texas and Oklahoma. Denison Dam impounds waters of the upper Red River basin and the entire Washita River basin for a total watershed of 40,000 square miles in west Texas and central and western Oklahoma. Texoma Reservoir is operated and controlled by the USACE for flood control, hydropower, municipal, industrial, and agricultural water supply, and recreation. Water level is managed according to the Seasonal Pool Elevation Management Plan developed by the Lake Texoma Advisory Committee and adopted in 1992 by the USACE. The plan varies from the conventional reservoir conservation elevation (617 ft-MSL; Figure 1 and Figure 2). This unique plan attempts to minimize negative impacts of extreme high and low water conditions. The water level fluctuates often, and flooding occurred in May 2025. Fish habitat consists primarily of natural features, rocky and gravel shoreline, and boat docks. Aquatic vegetation is seldom present. Texoma Reservoir was mesotrophic with a mean trophic state index (TSI) of 49.42 based on Secchi disc readings (Texas Commission on Environmental Quality 2024). However, primary productivity can vary throughout the reservoir. Other descriptive characteristics for Texoma Reservoir are listed in Table 1.

Angler Access

Boat access is adequate with 39 public boat ramps at 21 sites on the Texas side of the reservoir, which also have bank angling access available (Table 2). Some public facilities are leased to private operations which charge a fee for access. Access to facilities for the physically challenged are provided. Two fishing piers (one lighted) are located at Eisenhower State Park.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Bennett and Cummings 2021) included:

1. Continue annual monitoring of Striped Bass along with ODWC.
Action: Annual monitoring of the Striped Bass population has been conducted in February each year.
2. Conduct a spring, bass-only electrofishing survey in 2023 in conjunction with ODWC to improve precision and efficiency of Black Bass monitoring efforts.
Action: A daytime electrofishing survey targeting Black Bass was conducted in spring 2023. Sampling methods were aligned with ODWC so data could be combined.
3. Coordinate with ODWC to conduct a passive gear creel survey to supplement catfish effort, catch, and harvest information.
Action: A pilot study to evaluate passive gear users will be conducted in the winter of 2025/2026. This will provide data to determine if a year-long survey is needed.
4. Continue our public awareness campaign about invasive species .

Action: Maintenance of zebra mussel signage has taken place as needed. Staff answer questions from the public and media periodically regarding zebra mussel status. Information about zebra mussels, invasive carp, and other issues have been placed on social media and signage below the Denison Dam.

Harvest regulation history: Smallmouth Bass, Spotted Bass, and Largemouth Bass in Texoma Reservoir are currently managed with statewide regulations. Other sport fishes are managed with exceptions to statewide regulations in partnership with ODWC (Table 3). For Striped Bass, the current 10-fish bag limit with only two fish over 20-inches has been in effect since 1996. Minimum length limits for Blue Catfish, Channel Catfish, and Flathead Catfish were dropped in 2020 to align Texas and Oklahoma statewide regulations and reduce exemptions in both states. In 2020, ODWC passed a regulation prohibiting the harvest of Alligator Gar statewide (including Texoma Reservoir) during the month of May. In 2022, TPWD modified its harvest regulation on Alligator Gar to align with Oklahoma, closing the entire reservoir and Red River to Alligator Gar harvest in May. Also in 2022, TPWD modified harvest regulations for Walleye in Texoma reservoir to return to statewide regulations. Walleye are no longer stocked in the reservoir, but rare catches occur due to fish migrating from upstream reservoirs in Oklahoma.

Stocking history: Texoma's first stocking occurred in 1944 with 67,000 Channel Catfish fingerlings; 2,400 Coppernose Bluegill fingerlings; 225,000 Largemouth Bass fingerlings; and 18,000 Redear Sunfish fingerlings (Table 4). Striped Bass were first introduced in 1965, and Smallmouth Bass were introduced through four stockings occurring between 1981 and 1987. Threadfin Shad have been stocked periodically following large winter die-offs, and Channel Catfish have been stocked following youth fishing events at Eisenhower State Park.

Water transfer: With the discovery of zebra mussels in Texoma Reservoir in 2009, NTMWD ceased water transfer activity to Lavon Reservoir via a tributary (Sister Grove Creek). A direct pipeline to the NTMWD water treatment facility was constructed and became operational in 2014. Raw water is also directly transferred into Randell Lake, a water supply reservoir for the City of Denison, which drains into the Red River below Denison Dam. A damaged raw water pipeline under Dean Gilbert Lake (a 45-acre community fishing lake in Sherman, Texas) resulted in the establishment of zebra mussels in the small waterbody in 2015.

Methods

Surveys were conducted to achieve survey and sampling objectives in accordance with the objective-based sampling (OBS) plan for Texoma Reservoir (Bennett and Cummings 2021). Primary components of the OBS plan are listed in Table 5. Gill netting has been conducted annually in February at 30 fixed sites since 1993, primarily targeting Striped Bass. Survey sites for bass-only electrofishing and low-frequency electrofishing were biologist-selected. All surveys were conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2022).

Common names of fishes and their hybrids in this report are used following Page et al. (2023) with an exception for Largemouth Bass. While we recognize recent changes to black bass names, Texas reservoirs contain a mix of Florida Bass, Largemouth Bass, and their intergrade offspring. Therefore, Largemouth Bass is used in this report for simplicity as well as consistency with previous reports.

Electrofishing – Largemouth Bass, Spotted Bass, and Smallmouth Bass were collected during spring, daytime electrofishing in 2023 (7.2 hours at 43, 10-min stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing. Ages for Largemouth Bass were determined by using otoliths from 166 fish (range 6.3 to 21.5 inches).

Trap netting – Trap netting was attempted in 2024 but abandoned due to inadequate catch rates. Data from previous surveys are included in this report. Crappie surveys have used fall, single-cod trap nets (15 net nights at 15 stations). Since 2016, trap nets have been stratified (5 each in upper, middle, and lower lake) to improve catch rate. Catch per unit effort for trap netting was recorded as the number of fish caught per net night (fish/nn).

Gill netting – Blue Catfish, Channel Catfish, White Bass, and Striped Bass were collected by gill netting (30 net nights at 30 stations). Gill netting CPUE was recorded as the number of fish caught per net night (fish/nn). Ages for Striped Bass were determined using otoliths from 10 randomly selected fish per inch-group in 2025 and used to develop an age-length key to conduct a catch curve analysis.

Low-frequency electrofishing – Blue Catfish were collected by low-frequency electrofishing (1.7 hours at 20, 5-min stations) in August of 2023. Electrofishing CPUE was recorded as the number of fish caught per hour (fish/h) of actual electrofishing. Ages for Blue Catfish were determined using otoliths from 367 fish (range 5.0 to 38.0 inches) and used to develop an age-length key to conduct a catch curve analysis.

Statistics – Sampling statistics (CPUE for various length categories), structural indices [Proportional Size Distribution (PSD), terminology modified by Guy et al. 2007], and condition indices [relative weight (W_r)] were calculated for target fishes according to Neumann et al. (2012). Standard error (SE) was calculated for structural indices and IOV. Relative standard error ($RSE = 100 \times SE \text{ of the estimate/estimate}$) was calculated for all CPUE and creel statistics. Catch Curves and mortality estimates for Striped Bass and Blue Catfish were calculated using the Oklahoma Fishery Analysis Application (Carl and Shoup 2018).

Habitat – A structural habitat survey was conducted in 2024. Aquatic vegetation status was assessed during fieldwork in 2023 through 2025. Habitat was assessed with the digital shapefile method (TPWD, Inland Fisheries Division, unpublished manual revised 2022).

Water level – Source for water level data was the United States Geological Survey (USGS 2025).

Results and Discussion

Habitat: Structural and littoral zone habitat availability varies widely at Texoma Reservoir due to water level fluctuations (Figure 1). Structural habitat was surveyed in 2024 and has not changed significantly since previous surveys. Approximately two-thirds of shoreline habitat consisted of natural shoreline, and the remainder was dominated by gravel or rocky shoreline (Table 6). Approximately 490 acres of floating piers, boat docks, and marinas also provide habitat. Less than one-acre of yellow floating heart was present near Sunset Cove Campground in Oklahoma during fieldwork from 2023 to 2025. Yellow floating heart has been present in this area since the early 2000's yet has not expanded. Lake levels above the seasonal pool elevation (Figure 2) occasionally provide beneficial littoral habitat in the form of inundated buttonbush and terrestrial vegetation during the spring and early summer.

Prey species: Standard fall electrofishing surveys have been discontinued in favor of spring, bass-only surveys to estimate catch rates of black basses and combine efforts with ODWC. The primary forage species in Lake Texoma are Gizzard Shad and Threadfin Shad. Historical catch rates are variable and littoral electrofishing is not representative of abundance. Gizzard Shad and Threadfin Shad were observed during sampling for sport fishes, although not enumerated. Sunfish have been observed in previous fall electrofishing surveys including Bluegill Sunfish, Longear Sunfish, Redear Sunfish, and Green Sunfish (Appendix C). Body condition of sport fish was adequate (≥ 85) for most species, indicating sufficient prey.

Catfish: Gill net CPUE of Blue Catfish is not typically representative of population abundance in Texoma Reservoir. Thirty-one individuals were collected in 2025, which was slightly higher than the two previous surveys (Figure 3). Two fish over 30-inches were collected, including one 47-inch fish. Body condition of Blue Catfish collected in gill nets was variable, with relative weights ranging from 79 to 118. Low-frequency electrofishing in August 2017, 2020, and 2023, indicated an abundance of Blue Catfish available for harvest by Texoma anglers. Stock CPUE gradually increased with 130.8/h in 2017, 216.6/h in 2020, and 221.4/h in 2023 (Figure 4). The abundance of larger individuals (> 30 inches) and PSD declined in 2020 (PSD = 16) but recovered somewhat in 2023 (PSD = 28). Recruitment was evident in all three samples and OBS objectives were met. Age data indicated that a 20-inch Blue Catfish was between 9 and 10 years old, and it took approximately 18 years to reach 30 inches (Sager et al. 2024). Catch-curve analysis conducted in 2023 indicated overall total annual mortality of Blue Catfish was 19%, and the theoretical maximum age in Texoma Reservoir was 25.4 years (Appendix F).

Channel Catfish and Flathead Catfish are present in the reservoir but are infrequently collected during gill-netting or targeted low-frequency electrofishing for Blue Catfish (Appendix C). Gill net CPUE of Channel Catfish (1.8/nn; Figure 5) remained low and matched the long-term catch rate. Body condition of Channel Catfish was adequate and generally increased with size.

Temperate Basses: White Bass abundance is cyclical at Texoma Reservoir (Appendix C). The catch rate of White Bass in 2025 was 6.9/nn, the highest in the last three years (Figure 6). Large White Bass from 12- to 15-inches were collected in gillnets with relative weights above 100. All OBS objectives for temperate basses were met.

Catch rates of Striped Bass have decreased since the record catches between 2019 and 2021 but are still above the long-term average (Appendix C). The 2025 gill net survey recorded an increase in Total CPUE (23.0/nn) from both the 2023 (19.4/nn) and 2024 (18.9/nn) surveys (Figure 7). Stock CPUE in 2025 (19.6/nn) also increased since 2023 (16.6/nn) and 2024 (16.5/nn). The catch rate of Striped Bass over 20-inches in length has decreased over the last three surveys and was below our target of 20% in 2025 (Appendix D). Increased recruitment, evidenced by fish between 8 and 9 inches, could be contributing to that lower value. The PSD has decreased over the last three surveys as well, indicating a trend toward smaller fish. However, there are many fish over 20 inches available to anglers. Growth varies from year to year, and is density dependent, but most Striped Bass reached 20-inches by age 4 in 2025 (Appendix E). Catch-curve analysis conducted in 2025 indicated overall total annual mortality of Striped Bass was 57%, and the theoretical maximum age in Texoma was 9.2 years.

Black Basses: Largemouth Bass CPUE was 44.5/h during the 2023 spring electrofishing survey, slightly lower than the 56.4/h in 2021 (Figure 8). Legal-length bass (≥ 14 inches) increased from 18.0/h in 2021 to 28.3/h in 2023. Nineteen bass over 18-inches were collected in 2023. The PSD of Largemouth Bass increased from 79 in 2021 to 92 in 2023, indicating a trend toward larger fish. Relative weight was good (> 90) for most size classes. Age data indicated that a 14-inch bass was between two and three years old. All OBS objectives for black basses were met.

Electrofishing catch rates of Smallmouth Bass are highly dependent on water temperatures and lake level. Further, the combined sampling with ODWC increased the overall effort three-fold, so relative abundance estimates in 2023 were more precise. The spring 2023 bass-only electrofishing survey catch rate for Smallmouth Bass was 10.5/h, lower than the 12.8/h in 2021 (Figure 9). The catch rate of legal-length bass decreased from 7.6/h in 2021 to 2.9/h in 2023, and PSD decreased from 96 in 2021 to 47 in 2023. Relative weight indices for Smallmouth Bass ranged from 74 to 88.

Spotted Bass electrofishing catch rates declined from 15.6/h in 2021 to 11.7/h in 2023 (Figure 10). The largest Spotted Bass sampled in both 2021 and 2023 were 15 inches in length. Body condition of Spotted Bass was good ($W_r > 90$) for most size classes.

White Crappie: White Crappie are markedly more abundant than Black Crappie, although both provide a popular fishery. Trap netting was attempted in 2024 but abandoned due to inadequate catch rates. Catch rates have declined over the last several sampling surveys. The trap net catch rate of Crappie was 5.5/nn in 2020, down from a record CPUE of 19.3/nn in 2016 (Figure 11). The catch rate of legal-length crappie (0.7/nn) has also steadily declined since 2012 (4.2/nn). Declining catch rates have been documented by ODWC as well, which were attributed to inconsistent recruitment, especially for the 2020 year-class (Sager et al. 2024). That year did not correspond to a significant drop in lake level, but fluctuating water levels are a factor in recruitment success. For Texas, trap netting the lower section of the reservoir has yielded low catch rates for crappie. Stratification was implemented in 2016 to limit the number of sites in that area.

Fisheries Management Plan for Texoma Reservoir, Texas

Prepared – July 2025

ISSUE 1: Texoma Reservoir supports a popular and valuable Striped Bass fishery that support hundreds of fishing guides and contributed more than \$40 million to the local regional economy (Dudensing et al. 2021). It is important for fisheries managers in Texas and Oklahoma to annually monitor the population especially since extreme water level fluctuations can significantly impact fish populations.

MANAGEMENT STRATEGIES

1. Conduct annual gill netting surveys at 30 established stations. Personnel from ODWC will sample 15 stations, and TPWD personnel will sample 15 stations.
2. Resulting data will be shared, analyzed, and presented annually at a Texoma Reservoir management meeting and Lake Texoma Stakeholder meetings.

ISSUE 2: Passive gear effort and harvest is believed to be considerable for catfish at Lake Texoma. Recent creel surveys and economic impact surveys have systematically avoided passive gear anglers.

MANAGEMENT STRATEGY

1. Coordinate with ODWC to conduct a winter quarter passive gear creel survey in 2025/2026. This will serve as a pilot study to determine if a year-long survey is necessary.

ISSUE 3: The proportion of Texoma anglers targeting black basses has tripled, and tournament activity has increased (Bennett and Cummings 2021). The last TPWD stocking of Florida Largemouth Bass into Texoma Reservoir was in 2000. Embayment stockings from 1996 to 2000 had promising results with increased percentage of Florida alleles in the Big Mineral arm, Little Mineral arm, and lake wide (Hysmith et al. 2000). Florida Largemouth Bass were stocked periodically by ODWC since the 1970s and more frequently since 1996 (Sager et al. 2024). Texoma Reservoir has a history of producing trophy bass (≥ 8 pounds). The lake record is 11.9 pounds, and four Lunker Class entries have been approved in the ShareLunker program since 2018. Bass over eight pounds have been documented in ODWC tournament data (Sager et al. 2024).

MANAGEMENT STRATEGIES

1. Conduct a genetic analysis of (N=30) randomly selected bass during the spring 2026 bass-only electrofishing survey to provide a baseline of current Florida Largemouth Bass introgression.
2. Request Lone Star Bass fingerlings in spring 2026 at a rate of 1,000 per shoreline kilometer for the Big Mineral arm of the reservoir (120,000). Lone Star Bass are 2nd generation offspring of pure Florida strain ShareLunker Largemouth Bass that have proven to be able to grow to ≥ 13 pounds.
3. Request a similar number of Lone Star Bass every year and rotate the embayment they are stocked in.
4. Conduct a genetic analysis of (N=30) randomly selected bass during the spring 2029 bass-only electrofishing survey to analyze success of stockings.

ISSUE 4: Many invasive species threaten aquatic habitats and organisms in Texas and can adversely affect the state ecologically, environmentally, and economically. For example, zebra mussels can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches, and plugging engine cooling systems. The financial costs of controlling and/or eradicating these types of invasive species are significant. Additionally, the potential for invasive species to spread to other river drainages and reservoirs via watercraft and other means is a serious threat to all public waters of the state.

MANAGEMENT STRATEGIES

1. Cooperate with the USACE to maintain appropriate signage at access points around the reservoir and below Denison Dam.
2. Educate the public about invasive species through social media and local news outlets.
3. Make a speaking point about invasive species when presenting to user groups.
4. Continue to work with ODWC, The U.S. Fish and Wildlife Service, and others to monitor and control invasive carp in the Red River below Denison Dam.
5. Keep track of (i.e., map) existing and future inter-basin water transfers to facilitate potential invasive species responses.
6. Continue to implement clean, drain, and dry protocols for office equipment.

Objective-Based Sampling Plan and Schedule (2025-2029)

Sport fish, forage fish, and other important fishes

Sport fishes in Texoma Reservoir include Striped Bass, White Bass, Blue Catfish, Channel Catfish, crappies, Largemouth Bass, Spotted Bass, and Smallmouth Bass. Important forage species include Bluegill, Gizzard Shad, and Threadfin Shad. A complete sampling schedule is listed in Table 6.

Survey objectives, fisheries metrics, and sampling objectives

Temperate Basses: Striped Bass are the most sought-after sport fish in Texoma Reservoir. General monitoring trend data has been collected annually since 1993 through cooperative sampling efforts with the ODWC Fisheries team. Routine monitoring will be conducted via winter gill netting at 30 fixed sampling stations. Data collected will be used to evaluate relative abundance, size structure, and body condition with high precision ($RSE \leq 25$ for CPUE-S; minimum 50 stock-length fish). Age-and-growth data will be periodically collected to estimate growth, mortality, and recruitment.

White Bass are abundant in Texoma Reservoir and provide a popular fishery. White Bass are frequently targeted and harvested by anglers also targeting Striped Bass. Long term monitoring trend data for White Bass will be collected along with gill netting to monitor the Striped Bass fishery. Gill netting conducted at 30 fixed sampling stations typically yields high precision data for evaluating White Bass relative abundance, size structure, and body condition ($RSE \leq 25$ for CPUE-S; minimum 50 stock-length fish). No additional effort will be expended to collect White Bass beyond that needed to reach sampling objectives for Striped Bass.

Catfishes: Blue Catfish and Channel Catfish are both present in Texoma Reservoir, and data for both species will be collected annually using gill nets while sampling for Striped Bass. Sampling precision is

highly variable for both species during targeted sampling for Striped Bass, thus no specific sampling objectives using gillnets will be set for Blue Catfish or Channel Catfish.

Low-frequency electrofishing will be conducted every third summer in cooperation with ODWC to collect additional, high-precision trend data ($RSE \leq 25$ for CPUE-S; minimum 50 stock-length fish) for Blue Catfish to monitor relative abundance, size structure, and body condition. A minimum of 20 sites (5-minute stations) will be sampled in the upper river arms of the reservoir.

Black Basses: Largemouth Bass, Spotted Bass, and Smallmouth Bass are present in Texoma Reservoir, and these species provide a popular fishery. General monitoring trend data has been collected once every four years with fall, nighttime electrofishing; however, we have suspended fall sampling in an effort to improve efficiency and precision ($RSE \leq 25$ for CPUE-S; minimum 50 stock-length fish) for Largemouth Bass by partnering with ODWC to conduct a joint, daytime, spring electrofishing survey. A minimum of 36 sites (10-minute stations) will be sampled. This level of effort should provide high precision data for all black bass species and provide a robust data set to monitor trends in abundance and size structure over time. Trend data on CPUE and body condition for stock-size and larger Largemouth Bass and Smallmouth Bass will be collected. Body condition of Spotted Bass will also be determined. Relative weight of Largemouth Bass, Smallmouth Bass, and Spotted Bass will be determined from their length/weight data (maximum of 10 fish weighed and measured per inch class for each species). Age-and-growth data will be periodically collected for Largemouth Bass to estimate growth, mortality, and recruitment. Genetic samples will be collected from thirty randomly selected Largemouth Bass during the electrofishing survey. For Spotted Bass, effort beyond that necessary to meet objectives for Largemouth Bass and Smallmouth Bass will not be conducted.

Crappie: Both White and Black Crappie are present in Texoma Reservoir; however, Black Crappie are lower in abundance. To monitor for any large-scale changes in the White Crappie population, we will collect trend data to evaluate relative abundance, size structure, growth to the MLL, and body condition with fall, single-cod shoreline trap nets every four years. We estimate that we can collect a minimum of 50 stock-length White Crappie, with an RSE of CPUE-S ≤ 25 , with 15 to 19 net nights. A minimum of 15 stratified, random sample sites will be determined along the upper, middle, and lower Texas shoreline of Texoma Reservoir; however, additional sample sites will be prepared if it is determined our objectives can be met with reasonable additional effort. This level of sampling should provide a sufficient number of White Crappie between 9.0 and 10.9 inches to estimate mean age at legal length (10 inches). Data on Black Crappie will be collected along with White Crappie; however, no additional effort will be expended beyond that which is necessary to achieve sampling objectives for White Crappie.

Bluegill and shad: Sampling of forage species will be suspended to accommodate intensive bass-only spring electrofishing surveys with ODWC. Predator body condition will provide information on forage abundance, vulnerability, or both relative to predator density, and determine if additional monitoring is needed.

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Tables and Figures

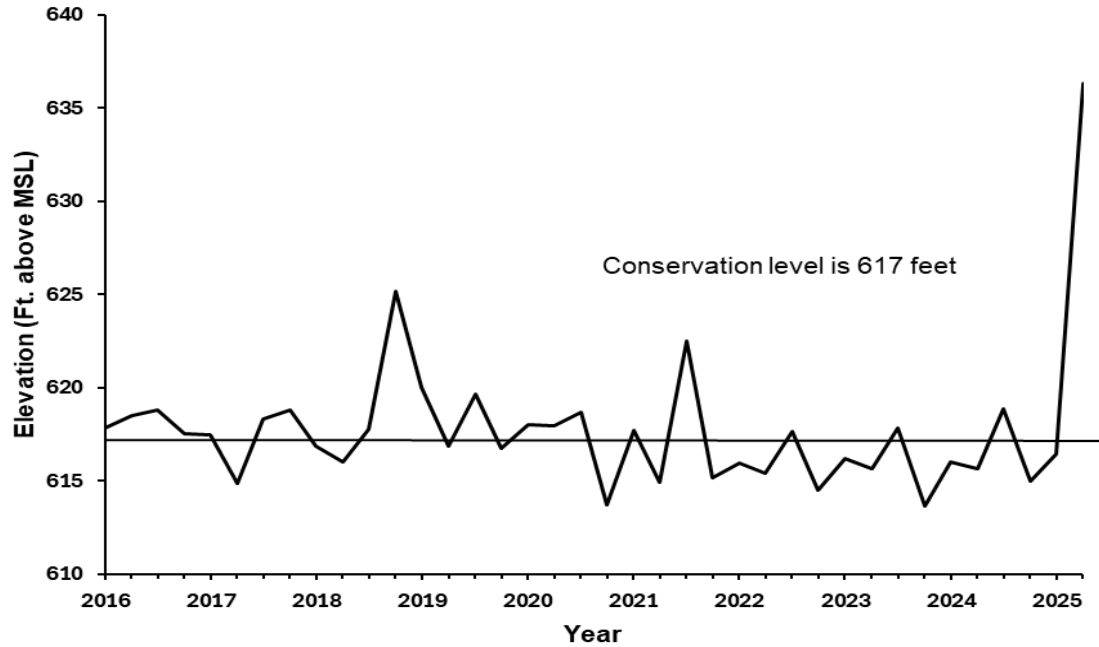


Figure 1. Quarterly water level elevations in feet above mean sea level (MSL) recorded for Texoma Reservoir, Texas.

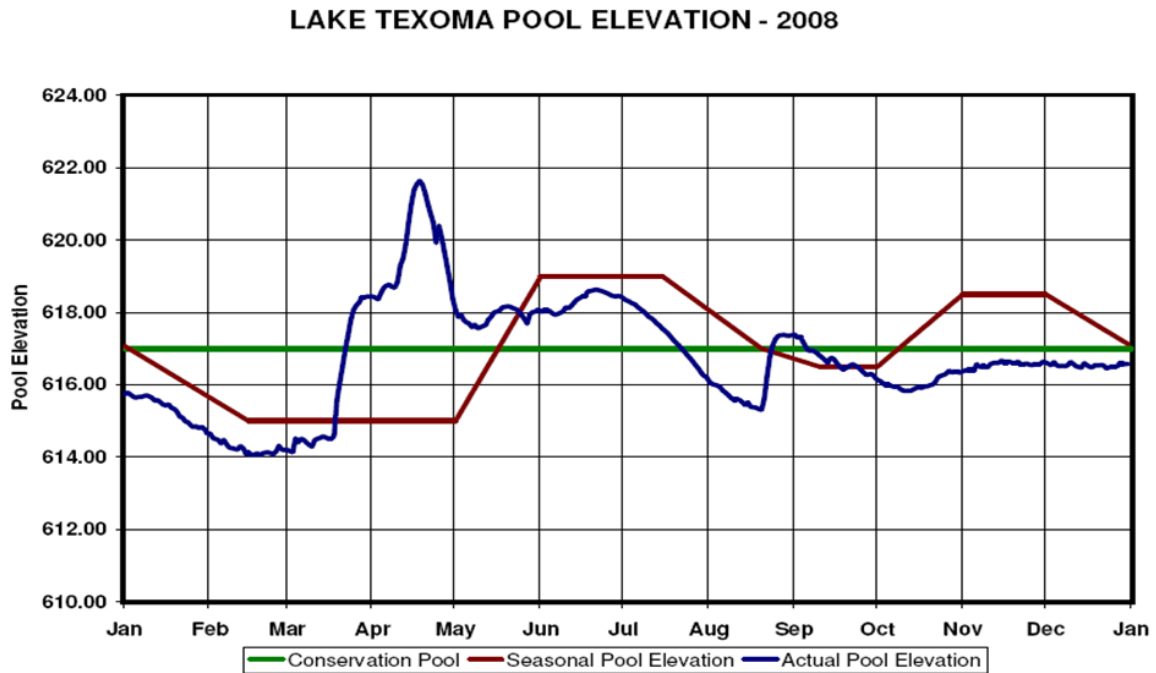


Figure 2. Example of the seasonal pool elevation management plan for Texoma Reservoir 2008.

Table 1. Characteristics of Texoma Reservoir, Texas.

Characteristic	Description
Year constructed	1944
Controlling authority	U.S. Army Corps of Engineers
County	Grayson and Cooke, Texas; Bryan, Marshall, and Love, Oklahoma
Reservoir type	Mainstem
Shoreline Development Index	13.9
Conductivity	1,000-2,000 $\mu\text{S}/\text{cm}$

Table 2. Boat ramp characteristics for Texoma Reservoir, Texas, August 2024. Reservoir elevation at time of survey was 618 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
Dam site	33.8165 -96.5764	90	607	Excellent
Eisenhower State Park West	33.8141 -96.6080	30	611	Adequate
Eisenhower State Park East	33.8141 -96.6079	30	604	Excellent
Grandpappy Point	33.8580 -96.6446	5	606	Excellent
Preston Bend Recreation Area	33.8745 -96.6440	10	612	Adequate
Little Mineral Marina	33.8716 -96.6474	10	605	Excellent
Lighthouse Marina North	33.8608 -96.6607	10	605	Adequate
Lighthouse Marina South	33.8598 -96.6601	10	608	Adequate
Preston Shores	33.8438 -96.6691	5	607	Excellent
Simmons Shores	33.8242 -96.6680	20	609	Excellent
Walnut Creek	33.8107 -96.8340	20	608	Excellent
Big Mineral Camp	33.7865 -96.8061	20	610	Adequate
Cedar Mills Marina	33.8294 -96.8115	10	604	Adequate
Flowing Wells Resort	33.7773 -96.7712	15	610	Excellent
Highport Marina	33.8263 -96.7050	84	604	Excellent
Mill Creek Marina	33.8201 -96.7712	10	612	Adequate
Juniper Point East	33.8614 -96.8294	25	613	Adequate
Juniper Point West	33.8619 -96.8351	16	607	Excellent
Texoma Marina and Resort	33.8683 -96.8914	15	606	Excellent
Cedar Bayou Marina	33.8440 -96.8527	10	607	Excellent
Paradise Cove	33.7871 -96.7841	20	610	Adequate

Table 3. Harvest regulations for Texoma Reservoir, Texas.

Species	Bag limit	Length limit
Catfish: Channel and Blue Catfish, their hybrids and subspecies	15 (in any combination)	No minimum (only one Blue Catfish $\geq$ 30 inches)
Catfish, Flathead	5	None
Bass, White	25	None
Bass, Striped: its hybrids and subspecies	10 (in any combination)	None (only 2 $\geq$ 20 inches)
Bass, Largemouth, Spotted, and Smallmouth	5 (in any combination)	14-inch minimum for Largemouth and Smallmouth Bass
Crappie: White and Black crappie, their hybrids and subspecies	37 (in any combination)	10-inch minimum
Alligator Gar	1 (closed to harvest in May)	None

Table 4. Stocking history of Texoma Reservoir, Texas (TPWD-only). Life stages are fry (FRY), fingerlings (FGL), advanced fingerlings (AFGL), sub-adults (SADL), and adults (ADL).

Year	Number	Size	Year	Number	Size
<u>Threadfin Shad</u>			<u>Channel Catfish</u>		
1979	31,181	AFGL	1944	67,000	FGL
1982	1,500	AFGL	1945	104,500	FGL
1984	19,176	AFGL	1946	43,000	FGL
1985	271,959	AFGL	1947	18,000	FGL
2010	<u>2,000</u>	ADL	1948	6,000	FGL
Species Total	325,816		1949	9,000	FGL
<u>Bluegill</u>			1974	30,000	FGL
1945	22,400	AFGL	1979	12,200	FGL
1948	15,500	AFGL	2002	67,000	FGL
1949	18,000	AFGL	2012	200	ADL
1951	4000	AFGL	2013	200	ADL
1979	<u>20,400</u>	AFGL	2014	200	ADL
Species Total	80,300		2015	200	ADL
<u>Coppernose Bluegill</u>			2023	205	ADL
1944	2,400	AFGL	2024	<u>204</u>	ADL
<u>Redear Sunfish</u>			Species Total	357,909	
1944	18,000	FGL	<u>Kemp's Largemouth Bass</u>		
1945	220,500	FGL	1975	80,000	FGL
1946	116,000	FGL	<u>Largemouth Bass</u>		
1947	16,000	FGL	1944	225,000	FGL
1948	82,500	FGL	1945	61,000	FGL
1949	87,000	FGL	1946	7,000	FGL
1951	<u>4,000</u>	FGL	1947	14,500	FGL
Species Total	544,000		1948	28,000	FGL
<u>Warmouth</u>			1949	34,000	FGL
1947	4,000	FGL	1949	425,000	FRY
<u>Other sunfishes</u>			1951	34,000	FGL
1945	14,000	FGL	1953	142,000	FGL
			1954	8,000	FGL
			1980	<u>30,976</u>	FGL
			Species Total	1,009,476	

Table 4. Stocking history continued.

Year	Number	Size	Year	Number	Size
<u>Florida Largemouth Bass</u>			<u>Walleye</u>		
1975	200,000	FGL	1968	50,400	FGL
1975	112,000	FRY	1968	400	FRY
1976	25,000	FGL	1969	500,000	FGL
1977	23,748	FGL	1970	3,219,891	FRY
1977	200,000	FRY	1975	8,398,000	FRY
1986	231,850	FGL	1976	98,000	FGL
1997	109,950	FGL	1976	180,000	FRY
1998	110,500	FGL	1977	<u>2,261,000</u>	FRY
1999	327,191	FGL	Species Total	14,707,691	
2000	<u>324,444</u>	FGL			
Species Total	1,664,683		<u>Striped Bass</u>		
<u>Smallmouth Bass</u>			1965	138	FGL
1981	576,655	FGL	1967	200,000	FRY
1982	452,372	FGL	1968	5,000	FGL
1983	48,104	FGL	1969	284,614	FGL
1987	<u>6,800</u>	FGL	1970	77,640	FGL
Species Total	1,083,931		1971	96,839	FGL
<u>Paddlefish</u>			1972	208,340	FGL
1999	5,757	SADL	1973	141,612	FGL
2000	20,846	SADL	1974	548,898	FGL
2001	770	SADL	1977	1,600	FGL
2002	16,792	SADL	1984	490	FGL
2003	4,421	SADL	1985	<u>500</u>	FGL
2004	26,330	SADL	Species Total	1,565,671	
2005	30,478	SADL	<u>White Crappie</u>		
2006	10,920	SADL	1945	3,000	FGL
2007	<u>2,029</u>	SADL	1946	28,000	FGL
Species Total	118,343		1948	11,100	FGL
<u>Rock Bass</u>			1953	<u>12,000</u>	FGL
1945	21,000	FGL	Species Total	54,100	
1947	<u>4,000</u>	FGL			
Species Total	25,000				

Table 5. Objective-based sampling plan components for Texoma Reservoir, Texas 2022 – 2025.

Gear/target species	Survey objective	Metrics	Sampling objective
<i>Electrofishing</i>			
Smallmouth Bass	Abundance	CPUE – stock	exploratory
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Condition	W_r	10 fish/inch group (max)
Spotted Bass	Abundance	CPUE – stock	exploratory
	Condition	W_r	10 fish/inch group (max)
Largemouth Bass	Abundance	CPUE – stock	$RSE\text{-}Stock \leq 25$
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Age-and-growth	Age at 14 inches	10 fish/inch group (max)
	Condition	W_r	10 fish/inch group (max)
<i>Low-frequency electrofishing</i>			
Blue Catfish	Abundance	CPUE – stock	$RSE\text{-}Stock \leq 25$
	Size structure	Length frequency	$N \geq 50$ stock
<i>Trap netting</i>			
White Crappie	Abundance	CPUE – Total	$RSE \leq 25$
	Size structure	PSD, length frequency	$N = 50$
	Age-and-growth	Age at 10 inches	$N = 13, 9.0 - 10.9$ inches
<i>Gill netting</i>			
Striped Bass	Abundance	CPUE – stock	$RSE\text{-}Stock \leq 25$
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Age-and-growth	Mean length at age	10 fish/inch group (max)
	Condition	W_r	10 fish/inch group (max)
White Bass	Abundance	CPUE – stock	$RSE\text{-}Stock \leq 25$
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Condition	W_r	10 fish/inch group (max)
Blue and Channel Catfish	Abundance	CPUE– Total	exploratory
	Size structure	PSD, length frequency	exploratory

Table 6. Survey of structural habitat types, Texoma Reservoir, Texas, 2024. Shoreline habitat type units are in miles and other habitats are delineated in acres.

Habitat type	Estimate	% of total
Bulkhead	0.4 miles	<0.1
Natural	398.4 miles	68.7
Rocky	49.7 miles	8.5
Gravel	131.5 miles	22.7
Open water	74,181 acres	99.9
Standing timber	15 acres	<0.1
Piers, Boat Docks, Marinas	490 acres	<0.1

Blue Catfish

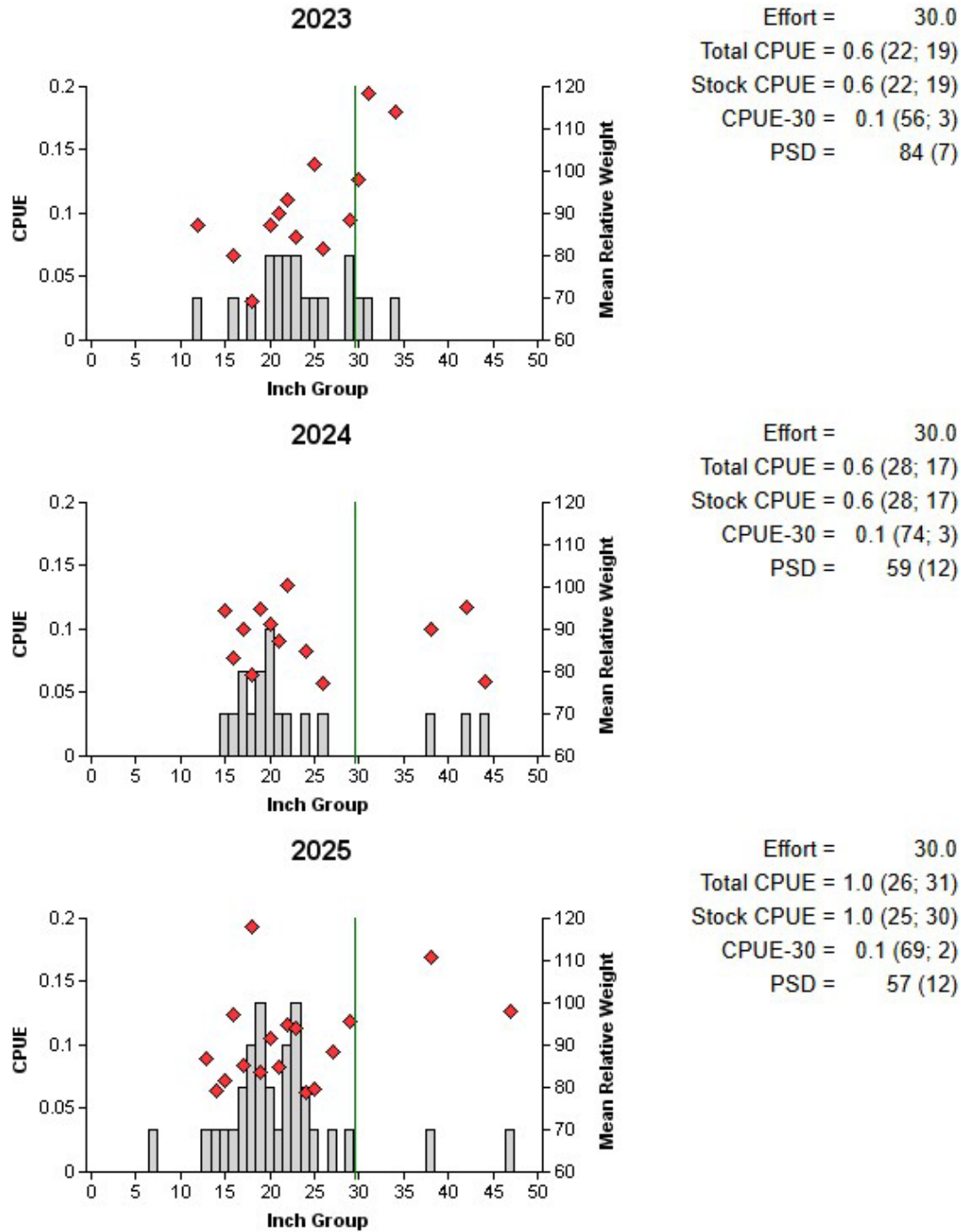
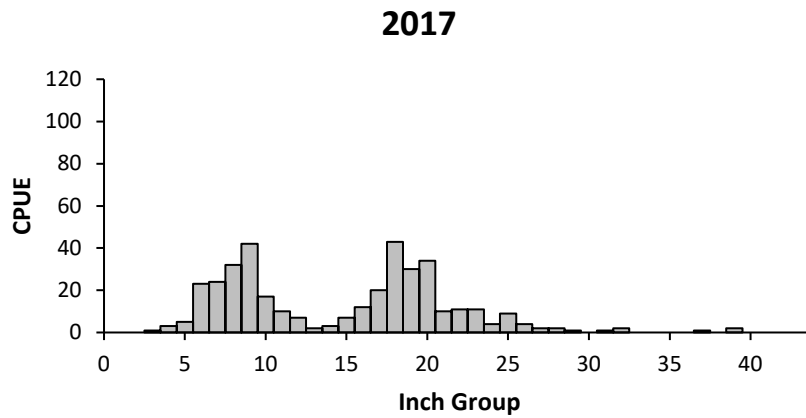
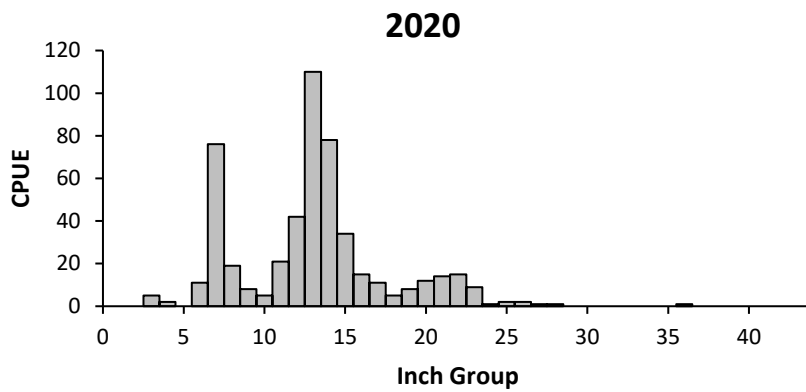


Figure 3. Number of Blue Catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Texoma Reservoir, Texas, 2023, 2024, and 2025. Vertical line indicates 30-inch graduated bag length limit.

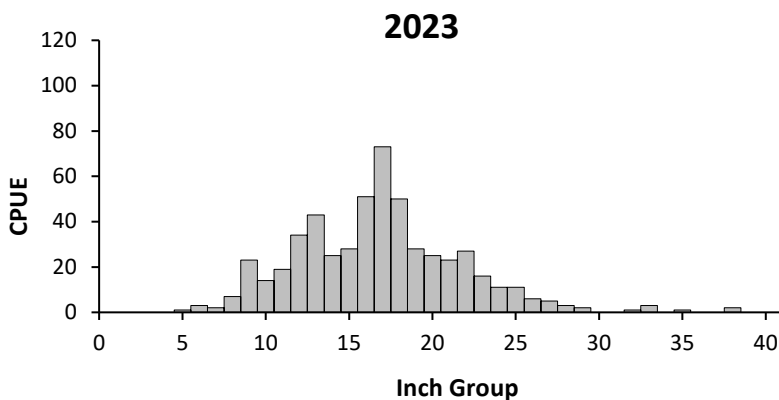
Blue Catfish



Effort = 1.6
 CPUE = 225.6 (17; 375)
 Stock CPUE = 130.8 (16; 218)
 PSD = 43
 CPUE-30 = 3.6 (43; 6)



Effort = 1.7
 CPUE = 304.8 (15; 508)
 Stock CPUE = 216.6 (10; 361)
 PSD = 16
 CPUE-30 = 0.6 (100; 1)



Effort = 1.7
 CPUE = 255.6 (18; 426)
 Stock CPUE = 221.4 (19; 368)
 PSD = 28
 CPUE-30 = 3.0 (49; 7)

Figure 4. Number of Blue Catfish (CPUE, bars) caught with summer low-pulse electrofishing survey, Texoma Reservoir in 2017, 2020, and 2023. Survey conducted by Oklahoma Department of Wildlife Conservation and Texas Parks and Wildlife Department.

Channel Catfish

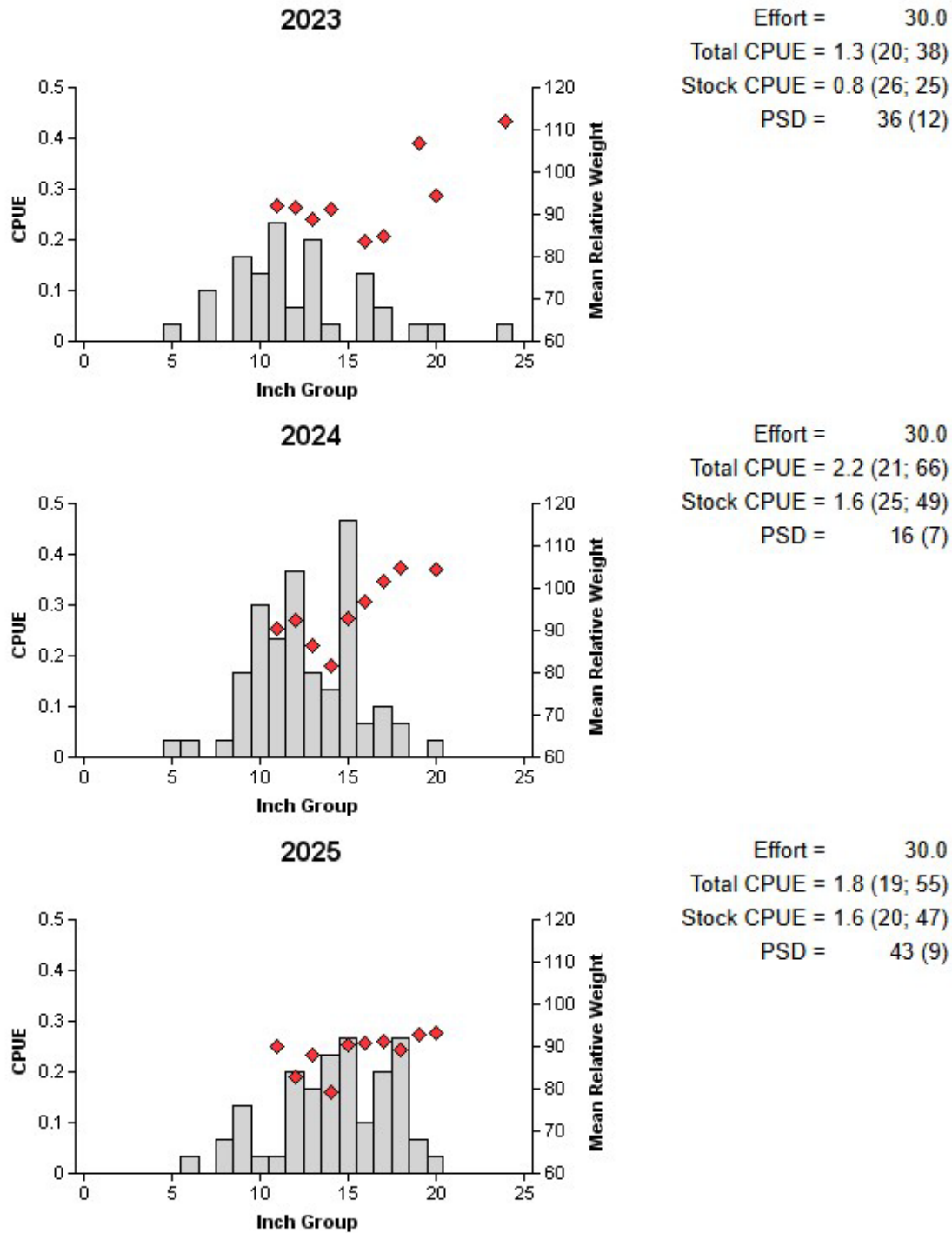


Figure 5. Number of Channel Catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Texoma Reservoir, Texas, 2023, 2024, and 2025.

White Bass

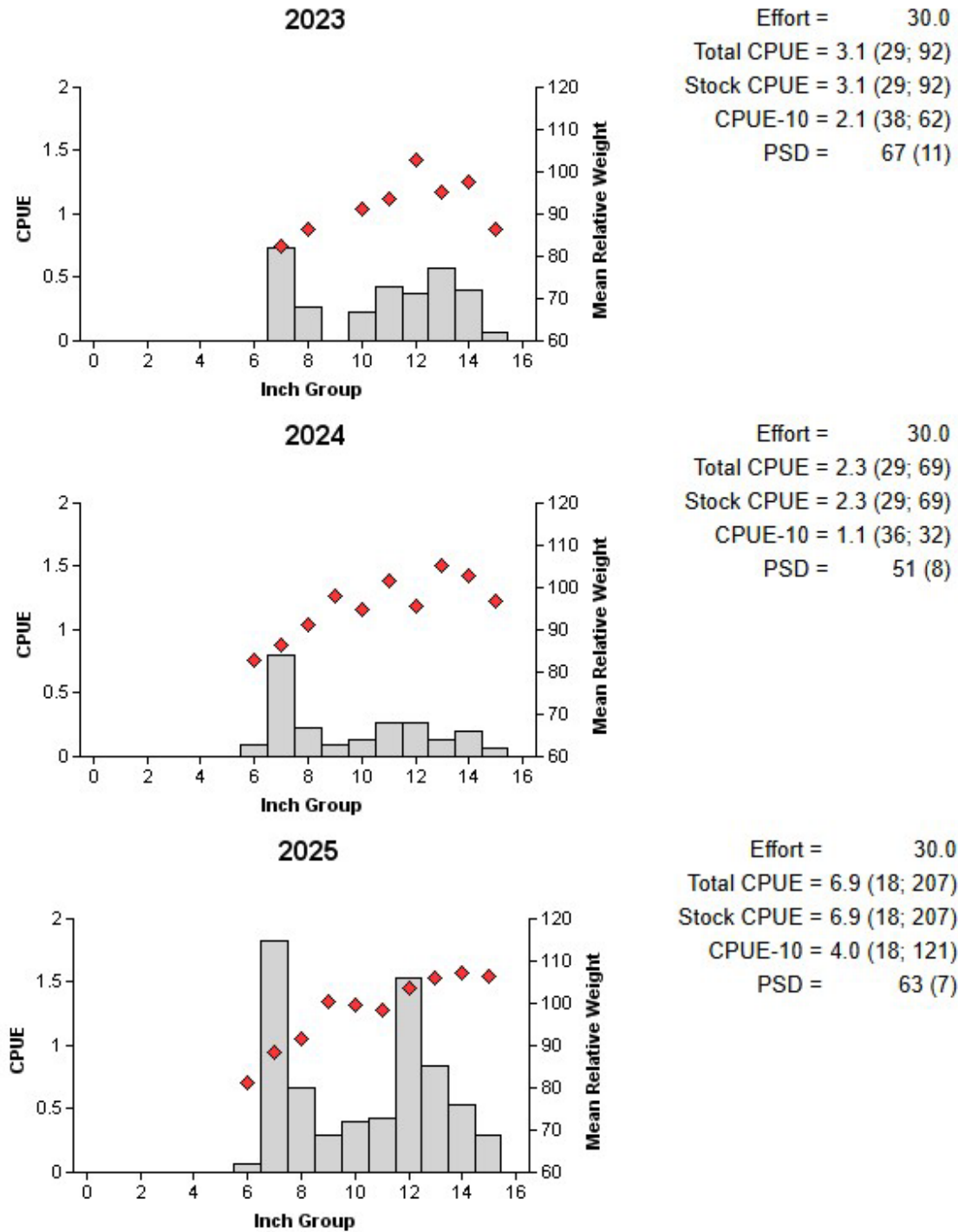


Figure 6. Number of White Bass caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Texoma Reservoir, Texas, 2023, 2024, and 2025.

Striped Bass

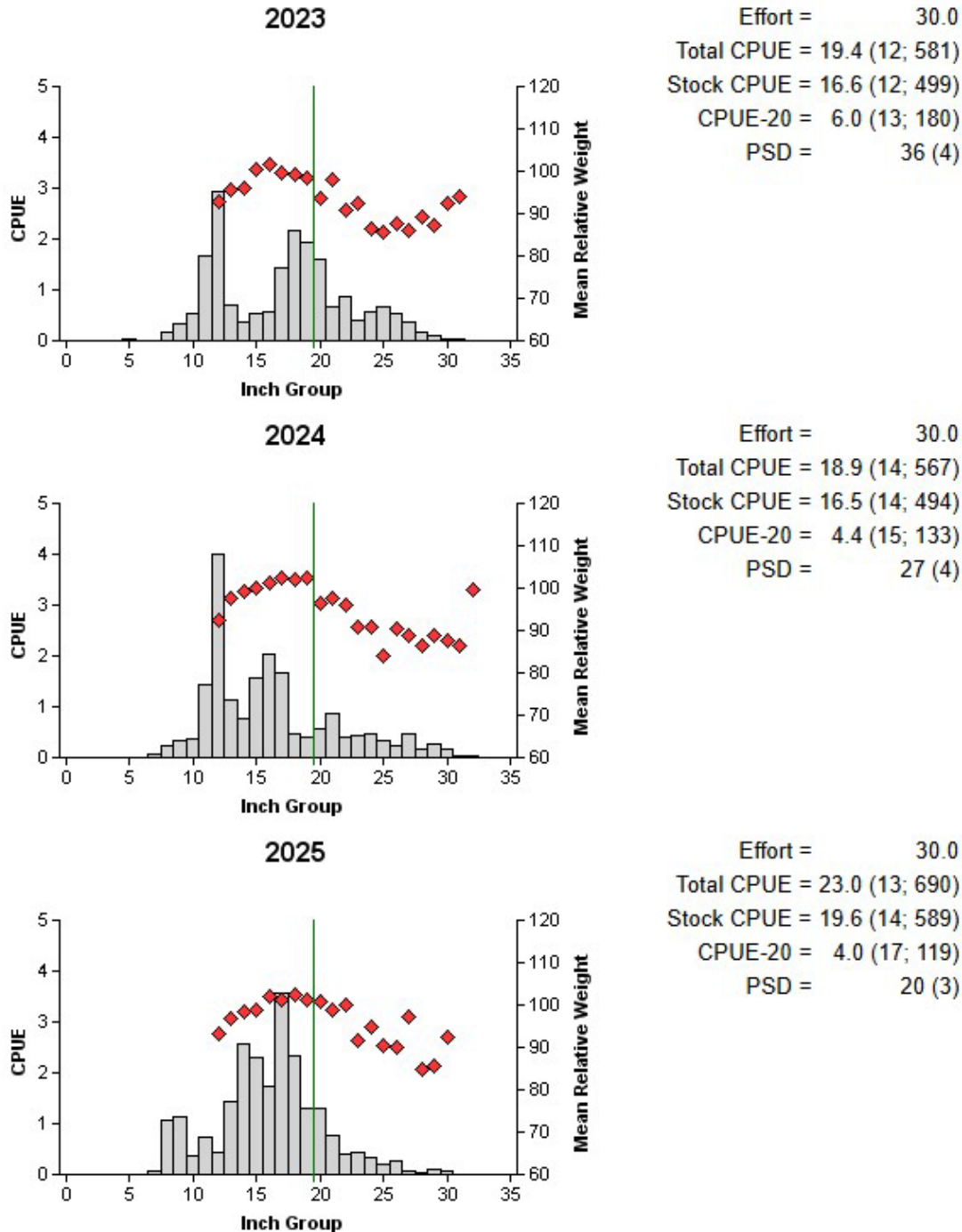


Figure 7. Number of Striped Bass caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Texoma Reservoir, Texas, 2023, 2024, and 2025. Vertical line indicates graduated bag length limit.

Largemouth Bass

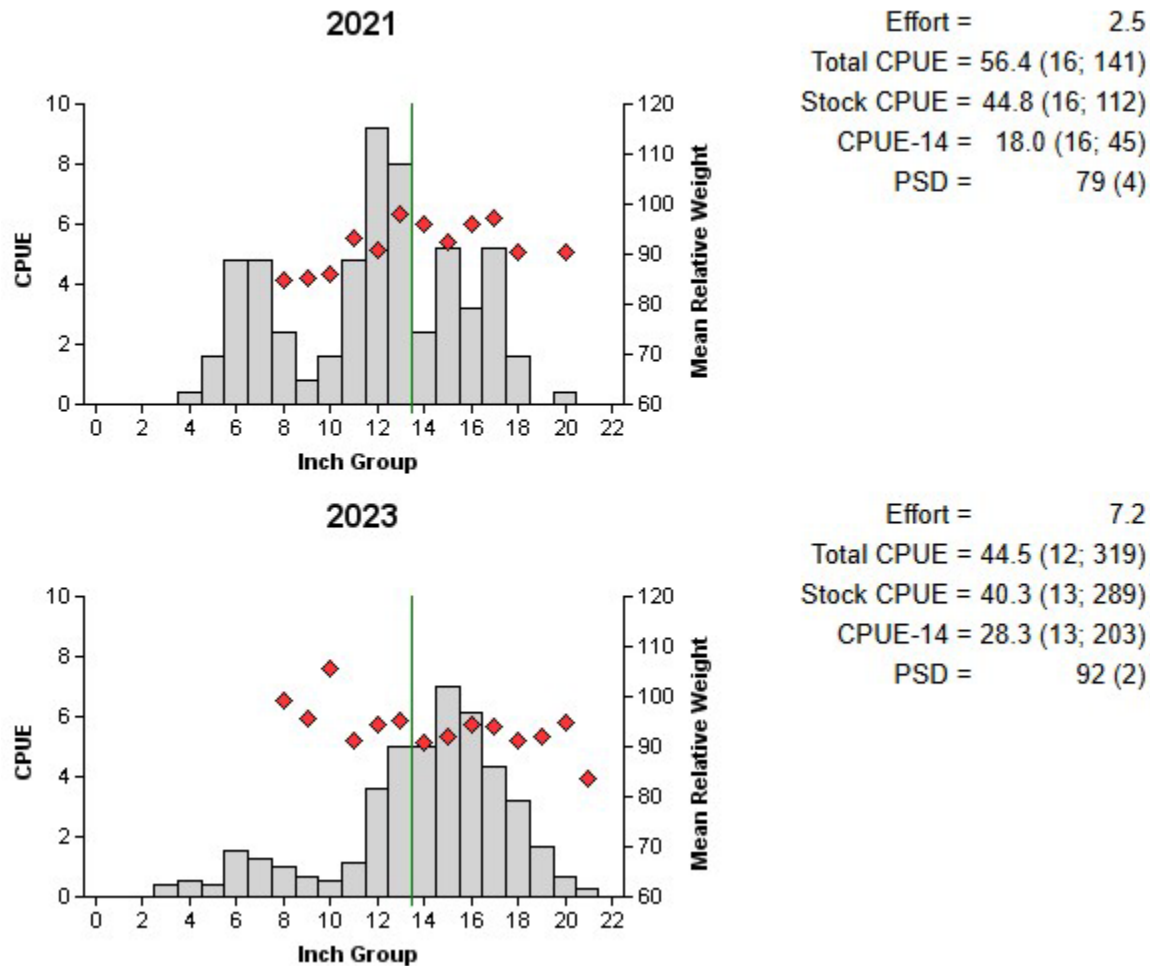


Figure 8. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring electrofishing surveys, Texoma Reservoir, Texas, 2021 and 2023. Vertical line represents minimum length limit.

Smallmouth Bass

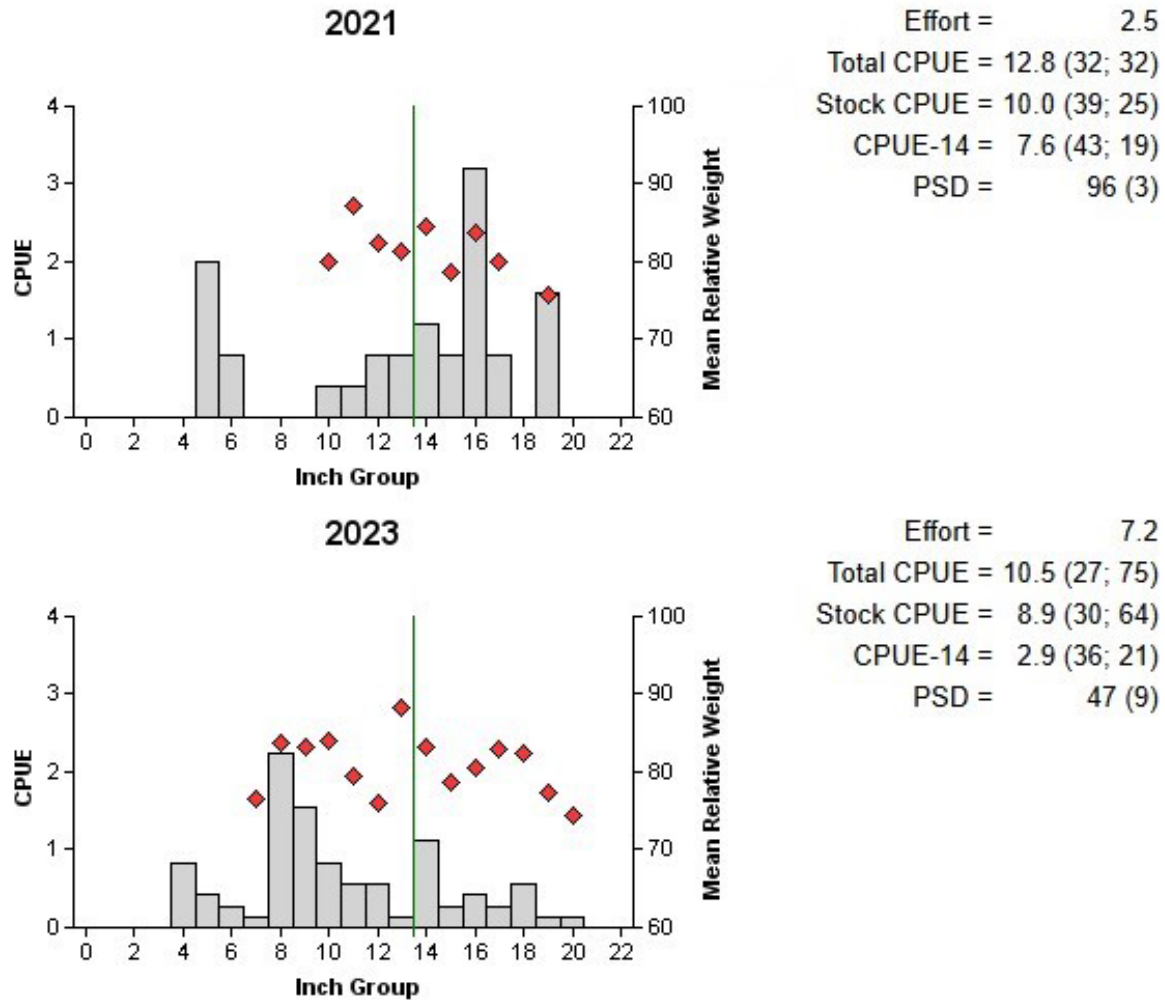


Figure 9. Number of Smallmouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring electrofishing surveys, Texoma Reservoir, Texas, 2021 and 2023. Vertical line represents minimum length limit.

Spotted Bass

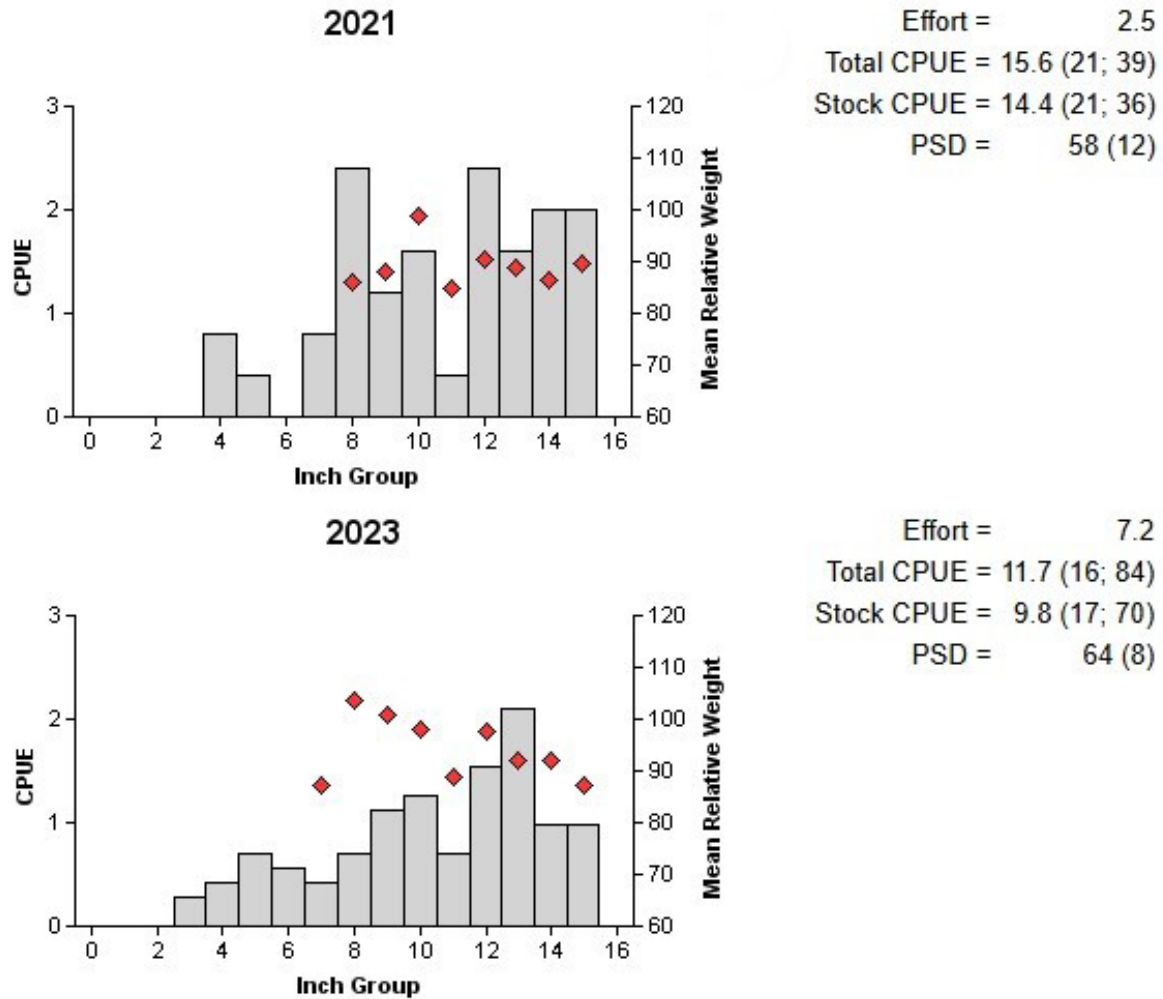


Figure 10. Number of Spotted Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring electrofishing surveys, Texoma Reservoir, Texas, 2021 and 2023.

Crappies

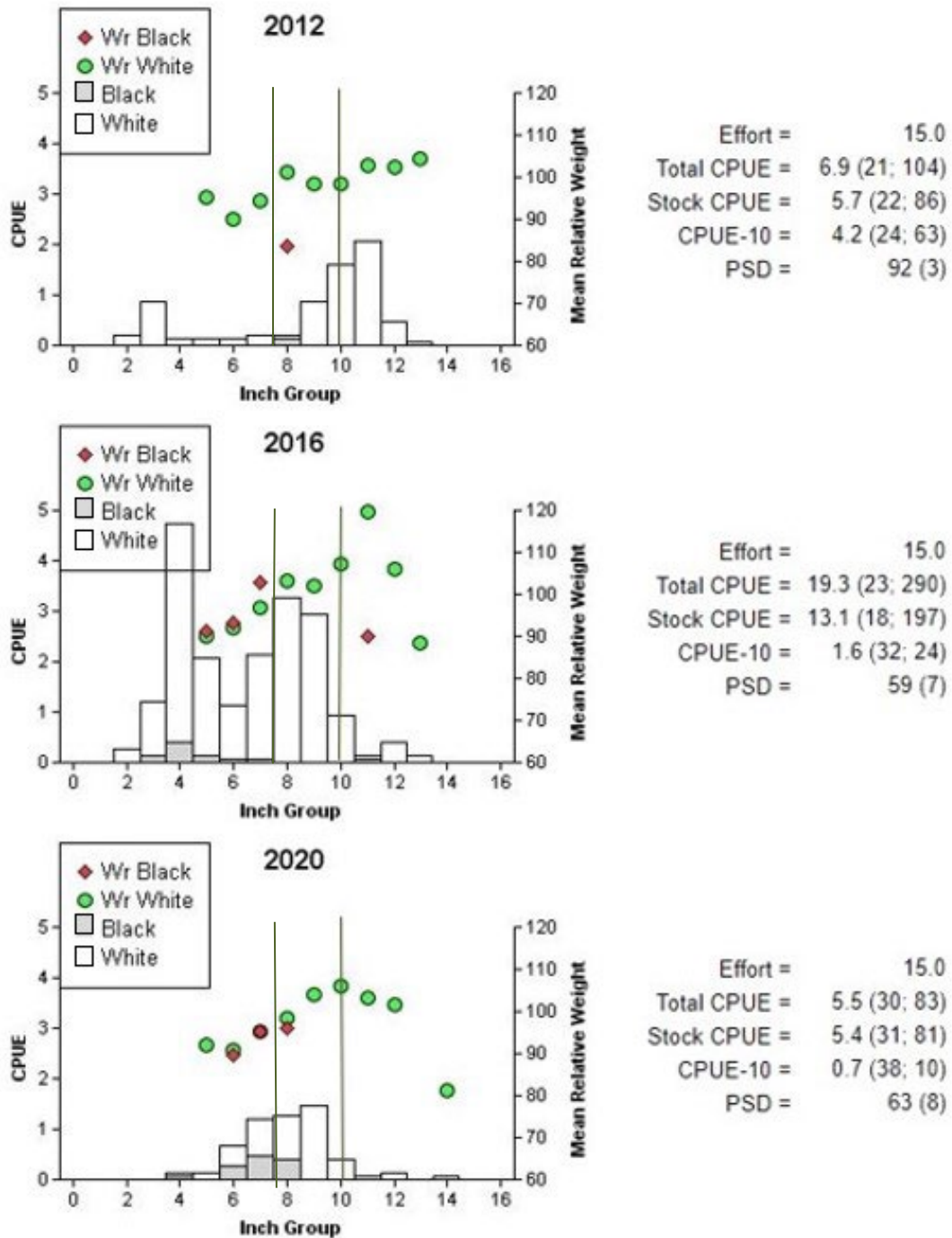


Figure 11. Number of crappie caught per net night (CPUE, bars), mean relative weight (red diamonds and green circles), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Texoma Reservoir, Texas, 2012, 2016, and 2020. Trap netting was attempted but abandoned in 2024. Vertical line indicates minimum length limit.

Proposed Sampling Schedule

Table 6. Proposed sampling schedule for Texoma Reservoir, Texas. Survey period is June through May. Gill netting surveys are conducted in February, electrofishing is conducted in spring for black basses, low frequency electrofishing is conducted in August, and trap netting surveys are conducted in the fall.

	Survey year			
	2025-2026	2026-2027	2027-2028	2028-2029
Angler Access				X
Vegetation				X
Electrofishing – Spring		X		
Electrofishing – Low frequency		X		
Trap netting				X
Gill netting	X	X	X	X
Creel survey – Passive gear	X			
Report				X

APPENDIX A – Catch rates for all species from all gear types

Number (N) and catch rate (CPUE) (RSE in parentheses) of all target species collected from all gear types from Texoma Reservoir, Texas, 2023-2025. Sampling effort was 30 net nights for gill netting, 7.2 hours for bass-only electrofishing, and 1.7 hours for low-frequency electrofishing.

Species	Gill Netting		Bass-only Electrofishing		Low-frequency Electrofishing	
	N	CPUE	N	CPUE	N	CPUE
Blue Catfish	31	1.0 (26)			426	255.6 (18)
Channel Catfish	55	1.8 (19)			1	0.6 (100)
Flathead Catfish					7	4.2 (52)
White Bass	207	6.9 (18)				
Striped Bass	690	23.0 (13)				
Largemouth Bass			319	44.5 (12)		
Spotted Bass			84	11.7 (16)		
Smallmouth Bass			75	10.5 (27)		

APPENDIX B – Map of sampling locations



Location of sampling sites, Texoma Reservoir, Texas, 2023-2025. Gill net, spring electrofishing, and low-frequency electrofishing stations are indicated by G, E, and L respectively. Water level was near full pool at time of sampling.

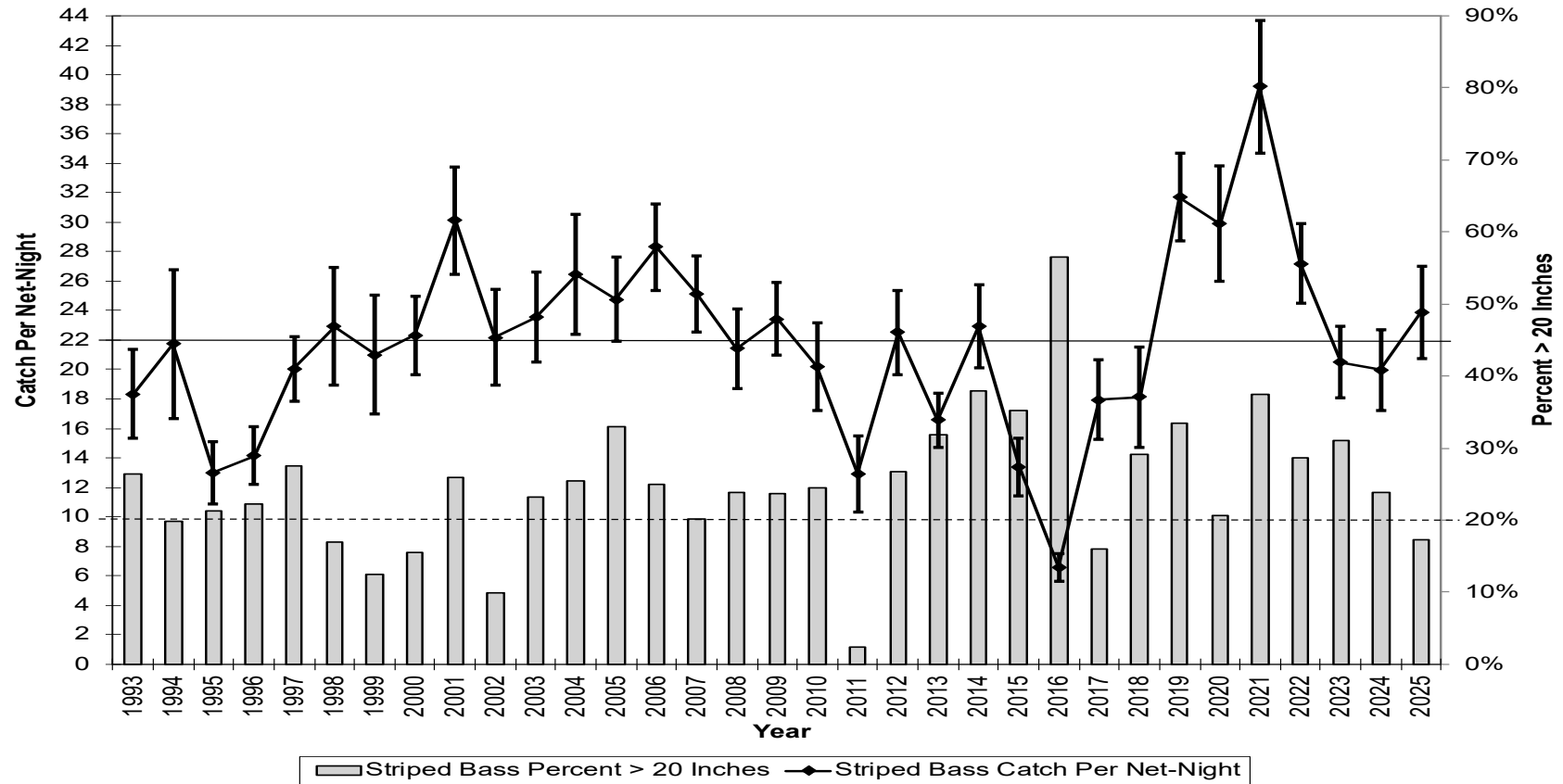
APPENDIX C – Long-term Catch Rates

Catch rates (CPUE) of targeted species by gear type and year for Texoma Reservoir.

Gear	Species	Year											Average (1993-2025)
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Gill Netting	Blue Catfish	0.7	3.3	1.9	1.8	0.8	1.3	0.3	0.6	0.6	0.6	1.0	0.8
	Channel Catfish	1.9	1.9	1.4	2.6	1.8	2.4	0.7	1.7	1.3	2.2	1.8	1.8
	Flathead Catfish	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1
	White Bass	1.3	11.8	13.2	7.9	1.7	7.0	9.5	7.6	3.1	2.3	6.9	5.0
	Striped Bass	12.8	6.4	16.3	16.9	29.6	27.4	37.7	26.2	19.4	18.9	23.0	18.3
Electrofishing	Gizzard Shad		219.0										194.1
(Fall and spring)	Threadfin Shad		21.0										111.6
	Green Sunfish		15.5										16.4
	Warmouth		0.5										3.5
	Bluegill Sunfish		263.5										207.6
	Longear Sunfish		30.0										36.6
	Redear Sunfish		2.0										6.0
	Smallmouth Bass		13.0	121.1				12.8		10.5			22.7
	Spotted Bass		22.0					15.6		11.7			26.1
	Largemouth Bass		44.5					56.4		44.5			56.1
Low-frequency	Blue Catfish			225.6			304.8			255.6			240.7
Electrofishing	Channel Catfish			6.3			1.8			0.6			5.7
	Flathead Catfish			7.2			9.6			4.2			6.5
Trap Netting	White Crappie		18.5				4.3						8.2
	Black Crappie		0.9				1.2						0.4

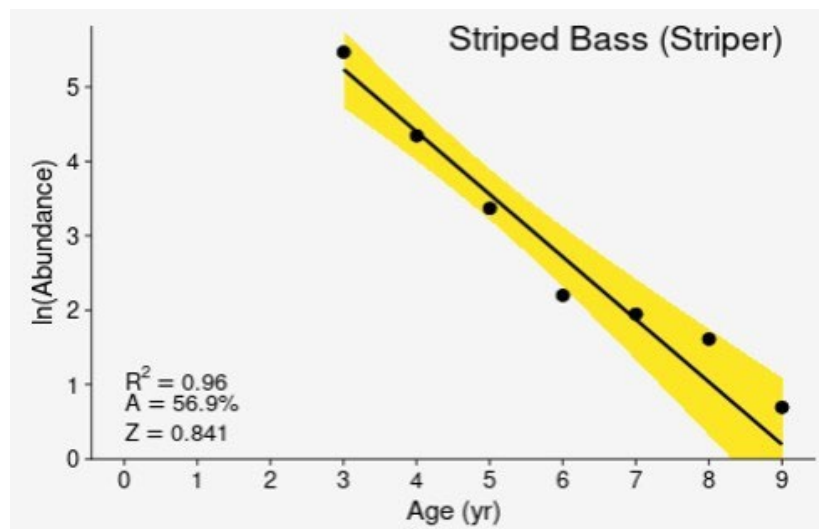
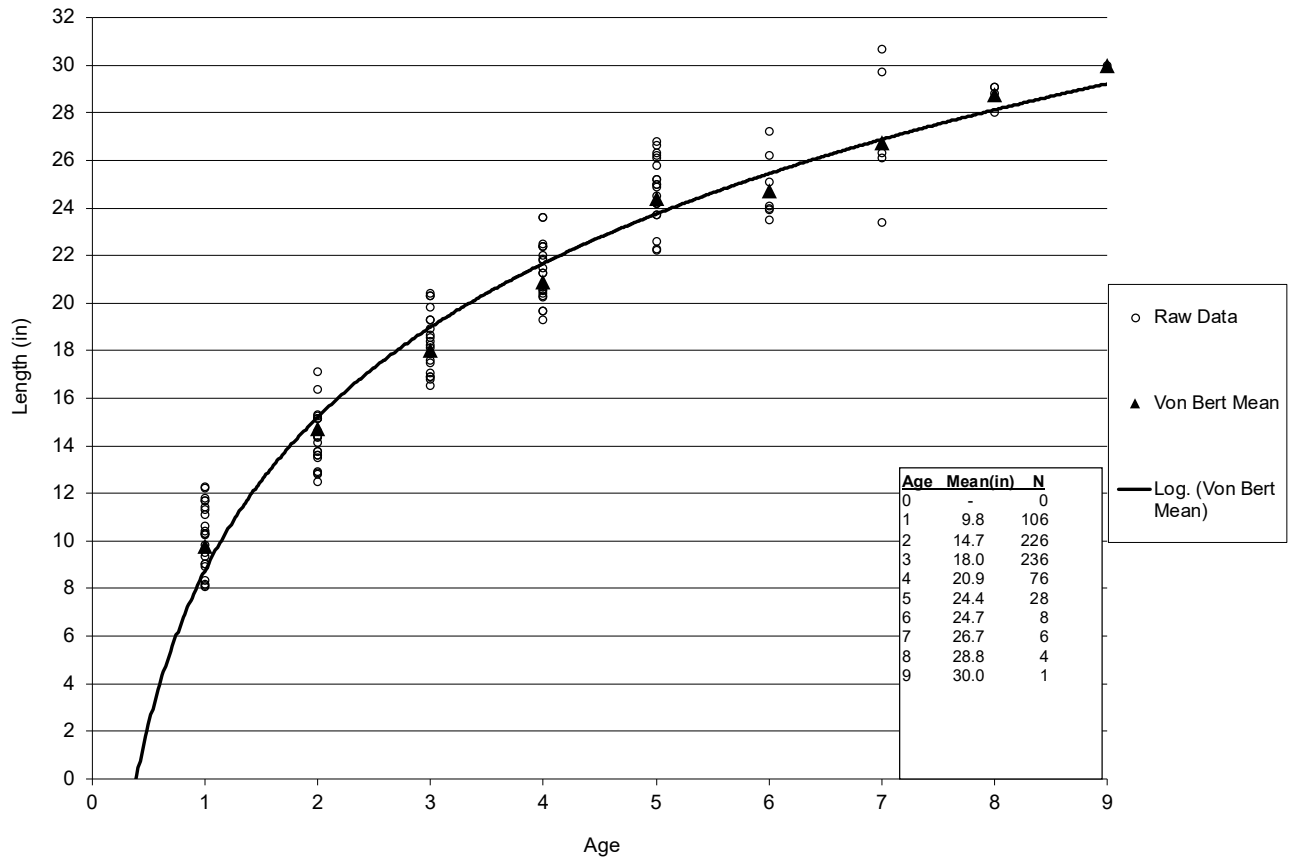
*Objective based sampling started in 2016.

APPENDIX D – Striped Bass Catch per unit effort (1993 – 2025)



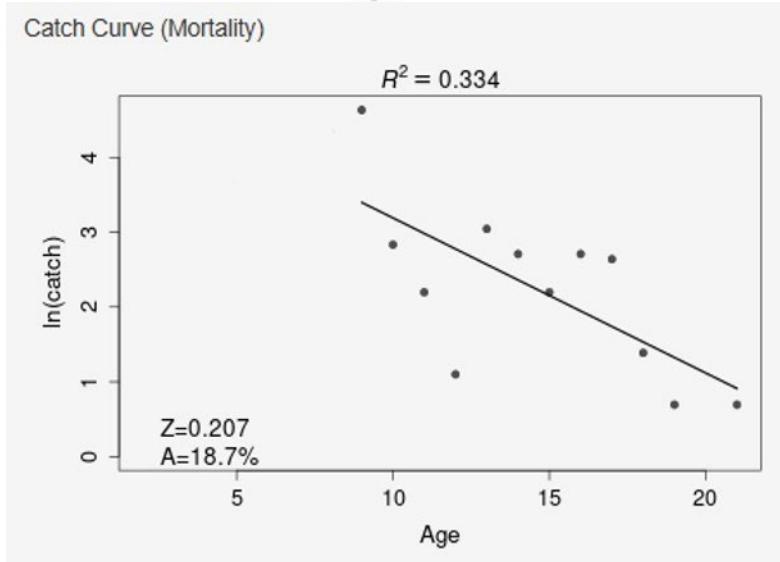
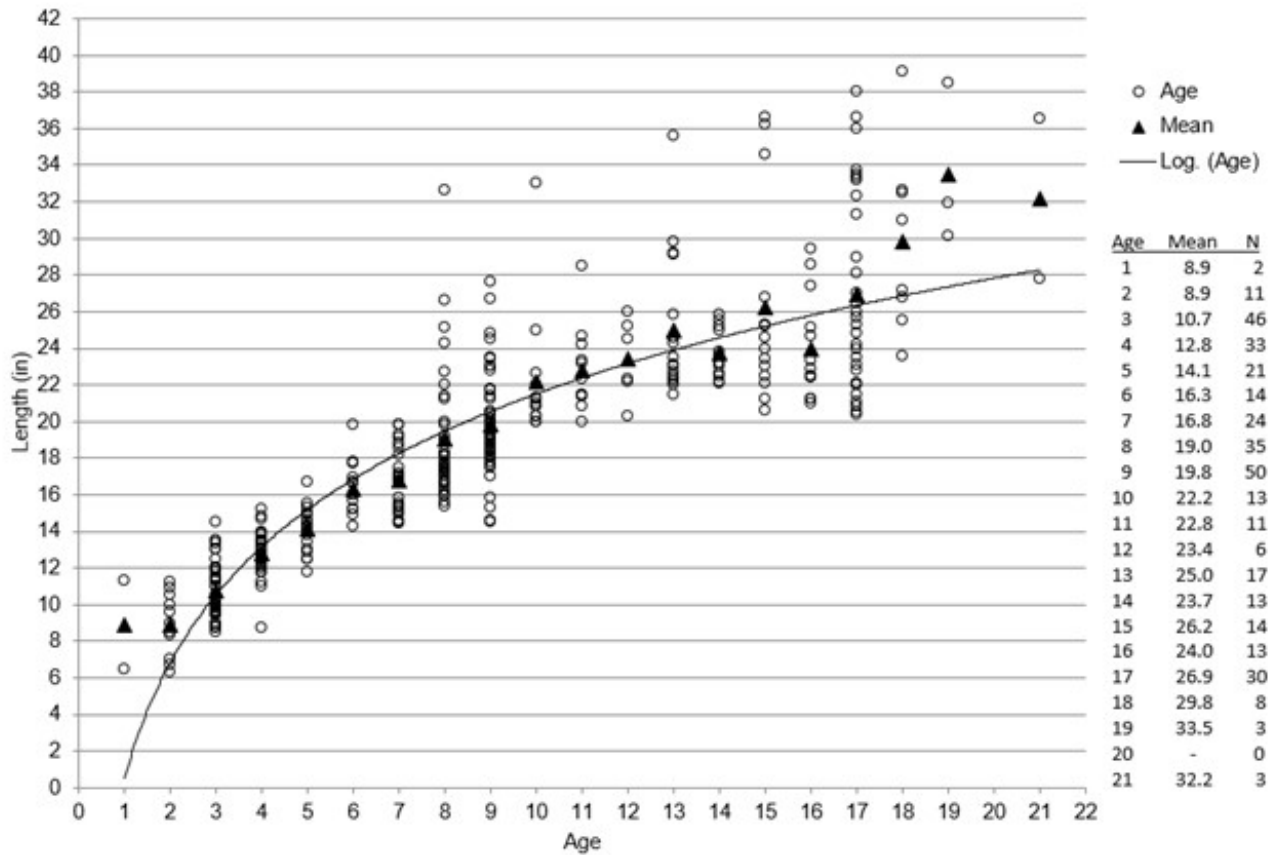
Catch rate of Striped Bass sampled in gill nets on Texoma Reservoir from 1993 to 2025. Line data represents overall CPUE (with standard error bars), and columns represent the proportion of catch that was ≥ 20 inches in length.

APPENDIX E – Striped Bass Age & Mortality



Weighted catch-curve regression for age 3 to 9 Striped Bass (N=359) collected at Lake Texoma February 2025. An age-length key was used to assign ages to unaged fish in the sample. Shaded band in figure is 95% confidence interval for the slope. True slope (mortality) could be any angle within shaded range.

APPENDIX F – Blue Catfish Age & Mortality



Weighted catch-curve regression for age 9 to 21 Blue Catfish (N=181) collected at Lake Texoma August 2023. An age-length key was used to assign ages to unaged fish in the sample.



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