Eagle Mountain 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

Prepared by:

Thomas Hungerford, Assistant District Management Supervisor,

Cynthia Holt, Assistant District Management Supervisor,

and

Raphael Brock, District Management Supervisor

Inland Fisheries Division

Dallas/Fort Worth District, Fort Worth, Texas

David Yoskowitz, Ph.D.
Executive Director

Timothy Birdsong
Director, Inland Fisheries

July 31, 2025

Contents

Survey and Management Summary

Fish populations in Eagle Mountain Reservoir were surveyed in 2024 using trap nets and electrofishing, and in 2025 using gill nets. Historical data are presented with the 2024-2025 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: Eagle Mountain Reservoir is an 8,504-acre impoundment constructed on the West Fork Trinity River by the Tarrant Regional Water District (TRWD) in 1932 for municipal and industrial purposes. The reservoir is located in northwest Fort Worth, is approximately 10 miles long and 3.5 miles wide (widest point), drains 1,970 square miles of watershed, and has 93.5 miles of shoreline. Conservation pool elevation is 649 feet above mean-sea-level resulting in a storage capacity at conservation pool of 179,880 acre-feet. Water level remained near conservation pool from 2015 through 2021. Boat access is good but shoreline angling access is limited. There is one ADA compliant fishing pier on the reservoir. Fishery habitat consisted primarily of natural banks, rocky shorelines, and boat docks. Eagle Mountain was deemed as infested with Zebra Mussels in 2016.

Management History: Important sport fishes include Largemouth Bass, crappies, White Bass, and Blue Catfish. All species are managed with statewide regulations. Lone Star Bass were stocked in 2025.

Fish Community

- **Prey species:** Gizzard and Threadfin Shad were in high relative abundance in the reservoir. Bluegill and Longear Sunfish are also available as prey. Some Bluegill over 6 inches are available for anglers.
- **Catfishes:** Blue Catfish relative abundance remained high and produced some large individuals. The relative abundance of Channel Catfish was variable during the past three surveys but remained low. Although present, no Flathead Catfish were sampled during 2025 gill netting.
- **White Bass:** White Bass catch rates remained relatively stable compared to the two previous surveys.
- **Black basses:** The Spotted Bass catch rate increased since the previous survey. The Largemouth Bass population increased in abundance since the last survey. Two legacy class fish have been donated since the previous report including a new waterbody record of 16.00 pounds in February of 2022.
- **Crappies:** The relative abundance of crappies decreased since the 2022 survey. The majority of the crappies sampled were under 10 inches in length.

Management Strategies: Monitor zebra mussels in Eagle Mountain Reservoir. Conduct a year-long, annual creel survey in 2027/2028 to assess angling effort and catch statistics for Eagle Mountain Reservoir to compare to 2016/2017 results. General monitoring with gill netting, trap netting, and electrofishing will be conducted in 2024-2025.

Introduction

This document is a summary of fisheries data collected from Eagle Mountain Reservoir in 2024-2025. 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 2024-2025 data for comparison.

Reservoir Description

Eagle Mountain Reservoir is an 8,504-acre impoundment constructed on the West Fork Trinity River by the Tarrant Regional Water District (TRWD) in 1932 for municipal and industrial purposes. The reservoir is located in northwest Fort Worth, is approximately 10 miles long and 3.5 miles wide (widest point), drains 1,970 square miles of watershed, and has 93.5 miles of shoreline. Conservation pool elevation is 649 feet above mean-sea-level resulting in a storage capacity at conservation pool of 179,880 acre-feet. Water level has fluctuated widely but has remained near conservation pool since 2015 (Figure 1). Eagle Mountain Reservoir was eutrophic with a mean TSI chl-*a* of 57.56 (Texas Commission on Environmental Quality 2024). Texas Parks and Wildlife Department sold a tract of land that was proposed to be developed into a state park on the reservoir to the TRWD in 2008. TRWD has developed some hiking and biking trails but no angler access was incorporated in order to maintain the natural state of the area. Fishery habitat consisted primarily of natural banks, rocky shorelines, and boat docks. Other descriptive characteristics for Eagle Mountain Reservoir are in Table 1.

Angler Access

Eagle Mountain Reservoir has 9 public boat ramps. Several are not useable during periods of low water. Extension of the ramps may not be feasible unless dredging takes place. The TRWD renovated the park at Twin Points beginning in the fall of 2009. A two-lane boat ramp with parking for approximately 60 vehicles opened in May of 2013. In 2015, a larger park opened to the public allowing shoreline angling as well. There is one ADA compliant fishing pier on the reservoir. Additional boat ramp characteristics are in Table 2. Shoreline access is very limited and restricted to the public boat ramp areas.

Management History

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

1. Cooperate and communicate with TRWD regarding opportunities to improve existing fish habitat in Eagle Mountain Reservoir.
   Action: Preliminary discussions were had, and some dredging occurred on the western side of the reservoir to reduce siltation to improve boating access to portions of the reservoir.

2. Communicate with TRWD regarding posting of signs to educate the public about the spread of aquatic nuisance species. Contact marina operators and emphasize the importance of cleaning, draining, and drying vessels when leaving all reservoirs to reduce risk of spreading zebra mussels.
   Action: Signs were distributed to TRWD for distribution at public access points. We made a speaking point, when talking to the public, about the importance of cleaning, draining, and drying vessels prior to launching at other reservoirs.

Harvest regulation history: Sport fish populations in Eagle Mountain Reservoir have always been managed with statewide regulations (Table 3).

Stocking history: The last stocking of Eagle Mountain Reservoir occurred in May of 2025 and consisted of Lone Star Bass. The complete stocking history is in Table 4.

Vegetation/habitat management history: Eagle Mountain Reservoir has limited aquatic vegetation and consists primarily of native emergent species such as lotus, cattail, and some *Scirpus*.

Water transfer: Eagle Mountain is directly downstream of Bridgeport Reservoir on the West Fork of the Trinity River. Water can be transferred to Eagle Mountain via a pipeline of mixed water from Cedar Creek and Richland Chambers Reservoirs in East Texas (all within the Trinity River watershed).

Zebra mussels: Since 2016, Eagle Mountain Reservoir has been considered infested with zebra mussels.

Methods

Surveys were conducted to achieve survey and sampling objectives in accordance with the objective-based sampling (OBS) plan for Eagle Mountain Reservoir (Hungerford et al. 2021). Primary components of the OBS plan are listed in Table 5. All survey sites were randomly selected, and 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 – Black Basses, Sunfishes, Gizzard Shad, and Threadfin Shad were collected by nighttime electrofishing (1.5 hours at 18, 5-min stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing. Electrofishing in 2024 was conducted using a Smith-Root Apex electrofisher, while previous surveys used GPP 5.0 electrofisher.

Trap netting – Crappies were collected using trap nets (10 net nights at 10 stations). Catch per unit effort (CPUE) for trap netting was recorded as the number of fish caught per net night (fish/nn).

Gill netting – Blue and Channel Catfish and White Bass were collected by gill netting (10 net nights at 10 stations). CPUE for gill netting was recorded as the number of fish caught per net night (fish/nn).

Genetics – Genetic analysis of Largemouth Bass was conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2022). Genetic composition of individual Largemouth Bass was estimated using Micro-satellite DNA analysis beginning in 2005 and using electrophoresis prior to 2005.

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 Anderson and Neumann (1996). Index of Vulnerability (IOV) was calculated for Gizzard Shad (DiCenzo et al. 1996). Standard error (SE) was calculated for structural indices and IOV. Relative standard error (RSE = 100 X SE of the estimate/estimate) was calculated for all CPUE.

Habitat –A structural habitat survey was last conducted in 2008 (Hungerford and Brock 2009). No large-scale changes to structural habitat were observed during the study period, thus a structural habitat survey was not conducted. A vegetation survey was not conducted during the study period.

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

Results and Discussion

Prey species: The 2024 electrofishing catch rates of Gizzard Shad and Bluegill were 658.7/h and 314.7/h, respectively. The total CPUE of Gizzard Shad was higher than the previous two surveys. Index of Vulnerability for Gizzard Shad was excellent, indicating that 96% of Gizzard Shad were available to existing predators; this was a higher IOV estimate than in previous years (Figure 2). Total CPUE of Bluegill (314.7/h) in 2024 was higher than the total CPUE from the previous two surveys (Figure 3). The CPUE of Bluegill over 6 inches was 58.0/h which is similar to the previous survey, indicating some opportunities for panfish anglers. Total CPUE of Threadfin Shad in 2024 decreased (224.7/h) as compared to previous surveys (Appendix A).

Catfishes: The gill net catch rate of Blue Catfish was 21.9/nn in 2025, which is similar to the previous two surveys (Figure 4). Blue Catfish body condition (Wr) declined from the 2021 survey. The population size

structure shifted slightly towards larger individuals as evidenced by the PSD increasing from 20 to 28. Eagle Mountain continues to support an excellent population of Blue Catfish.

The gill net catch rate of Channel Catfish was 4.2/nn in 2025. The Channel Catfish population increased slightly from the 2021 survey, but remains in relatively low abundance (Figure 5).

Temperate Basses: The gill net catch rate of White Bass (4.1nn) in 2025, was lower than the two previous surveys (Figure 6). Mean relative weights were near optimal, exceeding 90 for all inch classes.

One Yellow Bass was collected during the 2013 gill netting survey marking the first record of the species in Eagle Mountain Reservoir. The most likely source of introduction is the TRWD pipeline that moves water from Richland-Chambers and Cedar Creek Reservoirs in East Texas. This pipeline also moves water to Benbrook and Arlington Reservoirs which also now have established populations of Yellow Bass. The gill netting catch rate of Yellow Bass was 8.4/nn in 2025 (Appendix C) and has increased every survey since 2013.

Black Basses: The electrofishing catch rate of Spotted Bass was 18.0/h in 2024, which was higher than the two previous surveys (Figure 7). Mean relative weights were good with all but one inch-class being 100 or better. Spotted Bass continue to persist as a low-density fishery in the rocky areas of Eagle Mountain Reservoir.

The total electrofishing catch rate of Largemouth Bass of 106.7/h in 2024 was higher than the previous two surveys, but stock CPUE was lower than the previous two samples (25.3/h; Figure 8). Body condition in 2024 was variable for legal-length fish, but 90 or better for all size classes of fish, except for the 13-inch fish. Florida Largemouth Bass influence has increased as Florida alleles have ranged from 29% to 72% and Florida genotype has ranged from 0 to 3% (Table 6). In March 2021, a new waterbody record Largemouth Bass was caught and donated as a legacy class fish to the Toyota Sharelunker Program at the Texas Freshwater Fisheries Center in Athens. The fish weighed 13.08 pounds and was determined to be a pure Florida Largemouth Bass. In February of 2022, a 16.00-pound fish was caught and also entered as a legacy class Toyota Sharelunker currently ranking as the 33rd largest Largemouth Bass caught in Texas.

Crappies: The trap net catch rate of crappies (species combined) was 10.1/nn in 2024 (Figure 9), which was lower than in 2020 (18.7/nn) and higher than in 2016 (2.7/nn). Catch per unit effort of crappies 10 inches and larger was lower (1.2/nn) in 2024 as compared to 2020 (Figure 9). The PSD (45) decreased from the previous surveys, but mean relative weights appeared to be good.

Fisheries Management Plan for Eagle Mountain Reservoir, Texas

Prepared – July 2025

ISSUE 1: Eagle Mountain contains a good Largemouth Bass fishery. The reservoir has a history of producing trophy Largemouth Bass, with 38 lunker class (8.00-9.99 pounds) entries, 16 elite class (10.00-12.99 pounds) entries, and 2 legacy class lunkers (13.00+ pounds) in the Toyota ShareLunker Program since 2018. The current waterbody record of 16.00 pounds was caught in February 2022.

MANAGEMENT STRATEGIES

1. Continue to manage the Largemouth Bass population with the statewide 14-inch minimum length limit.
2. Stock Lone Star Bass fingerlings, which are 2nd generation offspring of pure (13 lb. or larger) Florida strain ShareLunker Largemouth Bass, at a rate of 1,000/km of shoreline in 2029. Lone Star Bass were stocked in 2025 during the preparation of this management plan.
3. Collect fin clips from 30 Largemouth Bass in fall of 2028 to assess genetic composition in Eagle Mountain Reservoir.
4. Anecdotally, since the first legacy class ShareLunker was caught in 2022, angling pressure for Largemouth Bass has increased. Conduct a year-long, annual creel survey in 2027/2028 to assess angling effort and catch statistics for Eagle Mountain Reservoir to compare to 2016/2017 results.

ISSUE 2: Many invasive species threaten aquatic habitats and organisms in Texas and can adversely affect the state ecologically, environmentally, and economically. For example, zebra mussels (*Dreissena polymorpha*) can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches, and plugging engine cooling systems. Eagle Mountain has been infested with zebra mussels since 2016. Giant salvinia (*Salvinia molesta*) and other invasive vegetation species can form dense mats, interfering with recreational activities like fishing, boating, skiing, and swimming. 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 TRWD to maintain appropriate signage at access points around the reservoir.
2. Contact and educate marina owners about invasive species, and provide them with posters, literature, etc… so that they can in turn educate their customers.
3. Educate the public about invasive species through the use of media and the internet.
4. Make a speaking point about invasive species when presenting to constituent and user groups.
5. Keep track of (i.e., map) existing and future inter-basin water transfers to facilitate potential invasive species responses.

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

Sport fish, forage fish, and other important fishes

Important sport fishes in Eagle Mountain Reservoir include Largemouth Bass, Blue Catfish, White Bass, and crappie species. Known important forage species include Bluegill, Longear Sunfish, and Threadfin and Gizzard Shad.

Low density fisheries

Spotted Bass: Spotted Bass are present in rocky areas of Eagle Mountain Reservoir, however, according to an annual creel survey conducted in 2016/2017, there was no directed effort for them. We will record CPUE and size structure data from all Spotted Bass coincidentally captured by electrofishing surveys directed at Largemouth Bass.

Channel Catfish: Channel Catfish had just 1.7% directed effort during the 2016/2017 year-long creel survey and relative abundance is low. The past three gill netting surveys have produced an average CPUE-stock of just 4.2 fish/nn with highly variable RSEs. Catch per unit effort and body condition data will be collected from all Channel Catfish coincidentally captured in gill netting surveys conducted for White Bass and Blue Catfish.

Flathead Catfish: Flathead Catfish are present in Eagle Mountain Reservoir, however, there was no directed effort for them in the 2016/2017 creel survey. We will record CPUE and size structure data from all Flathead Catfish coincidentally collected by gill nets targeting White Bass and Blue Catfish.

Survey objectives, fisheries metrics, and sampling objectives

Blue Catfish: Blue Catfish were the second most sought-after sport fish during the 2016/2017 year-long creel survey at Eagle Mountain Reservoir. Total harvest of Blue Catfish was 783 fish during that same period. Historically, 10 random gill net nights have provided good relative abundance and size structure data with RSEs very near to the target objective of 25. A standard gill net survey with 10 net nights will be conducted in spring 2029 and we will calculate all CPUE and body condition data. Based on past catch rates, this should be adequate to obtain an RSE of CPUE-S $\leq$ 25 for Blue Catfish (PSD; 50 fish minimum at 10 stations with 80% confidence). If RSE objectives are not met no additional gillnetting will be conducted. No objective will be set for size structure information. Creel statistics for Blue Catfish will be calculated following a year-long creel survey to be conducted in 2027/2028.

White Bass: Data on White Bass will be collected when the gill net survey is conducted in the spring of 2029 using 10 gillnet net nights at 10 randomly selected stations throughout Eagle Mountain Reservoir. Sampling objectives will be limited to general monitoring trend data (without precision or sample size requirements). Creel statistics for White Bass will be calculated following a year-long creel survey to be conducted in 2027/2028.

Largemouth Bass: Largemouth Bass are the most sought-after species at Eagle Mountain Reservoir according to the 2016/2017 year-long creel survey. Tournament angling accounted for about 20% of total angling effort at Eagle Mountain during that same period. Trend data on CPUE, size structure, and body condition have been collected often since 1986 with fall nighttime electrofishing. Since two legacy-class Toyota ShareLunkers have been caught since 2021, effort by anglers targeting Largemouth Bass has appeared to increase. Continuation of trend data every four years in this reservoir with night electrofishing in the fall will allow for determination of any large-scale changes in the Largemouth Bass population that may spur further investigation. A minimum of 18 randomly selected 5-min electrofishing sites will be sampled in every other year beginning in 2026 (Bass-only electrofishing in non-report years). Specific targets for RSE will not be set and no additional effort will be expended. Creel statistics for Largemouth Bass will be calculated following a year-long creel survey to be conducted in 2027/2028.

Crappie: Crappie relative abundance is variable according to recent trap netting surveys, and anglers were targeting and catching them. A 2016/2017 creel survey revealed that Crappie are the sixth most sought-after sport fish in Eagle Mountain Reservoir, accounting for 2.1% of all directed effort. We would like to collect information allowing us to monitor size structure. We feel single-cod, shoreline trap nets set are adequate for obtaining these data and will set 10 random trap nets in 2028. Creel statistics will be calculated following a year-long creel survey to be conducted 2027/2028.

Prey species: Bluegill, Longear Sunfish, Threadfin Shad, and Gizzard Shad are the primary forage at Eagle Mountain Reservoir. Like Largemouth Bass, trend data on CPUE and size structure of all four species have been collected often since 1986. Continuation of sampling, as per Largemouth Bass above, will allow for monitoring of large-scale changes in Bluegill, Longear Sunfish, Threadfin Shad, and Gizzard 8 Shad relative abundance and size structure. Sampling effort based on achieving sampling objectives for Largemouth Bass will result in sufficient numbers of Bluegill, Longear Sunfish, Threadfin Shad, and Gizzard Shad for size structure estimation (IOV for Gizzard Shad only; 50 fish minimum at 5-12 stations with 80% confidence). No specific objectives of sampling error will be set for prey species. No additional effort will be expended.

Literature Cited

Anderson, R. O., and R. M. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-482 in B. R. Murphy and D. W. Willis, editors. Fisheries techniques, 2nd edition. American Fisheries Society, Bethesda, Maryland.

DiCenzo, V. J., M. J. Maceina, and M. R. Stimpert. 1996. Relations between Reservoir trophic state and gizzard shad population characteristics in Alabama reservoirs. North American Journal of Fisheries Management 16: 888-895.

Guy, C. S., R. M. Neumann, D. W. Willis, and R. O. Anderson. 2007. Proportional Size Distribution (PSD): a further refinement of population size structure index terminology. Fisheries 32(7):348.

Hungerford, T. and R. Brock 2009. Statewide freshwater fisheries monitoring and management program survey report for Eagle Mountain Reservoir, 2008. Texas Parks and Wildlife Department, Federal Aid Report F-30-R, Austin.

Hungerford, T., C. Holt, and R. Brock 2021. Statewide freshwater fisheries monitoring and management program survey report for Eagle Mountain Reservoir, 2020. Texas Parks and Wildlife Department, Federal Aid Report F-30-R, Austin.

Page, L. M., K. E. Bemis, T. E. Dowling, H. S. Espinosa-Perez, L. T. Findley, C. R. Gilbert, K. E. Hartel, R. N. Lea, N. E. Mandrak, M. A. Neighbors, J. J. Schmitter-Soto, and H. J. Walker, Jr. 2023. Common and scientific names of fishes from the United States, Canada, and Mexico. American Fisheries Society, Special Publication 37, Bethesda, Maryland.

Texas Commission on Environmental Quality. 2024. Trophic classification of Texas reservoirs. 2024 Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d), Austin. 17 pp.

United States Geological Society (USGS). 2025. National water information system: Web interface. Available: http://waterdata.usgs.gov/tx/nwis (May 2025).

Tables and Figures

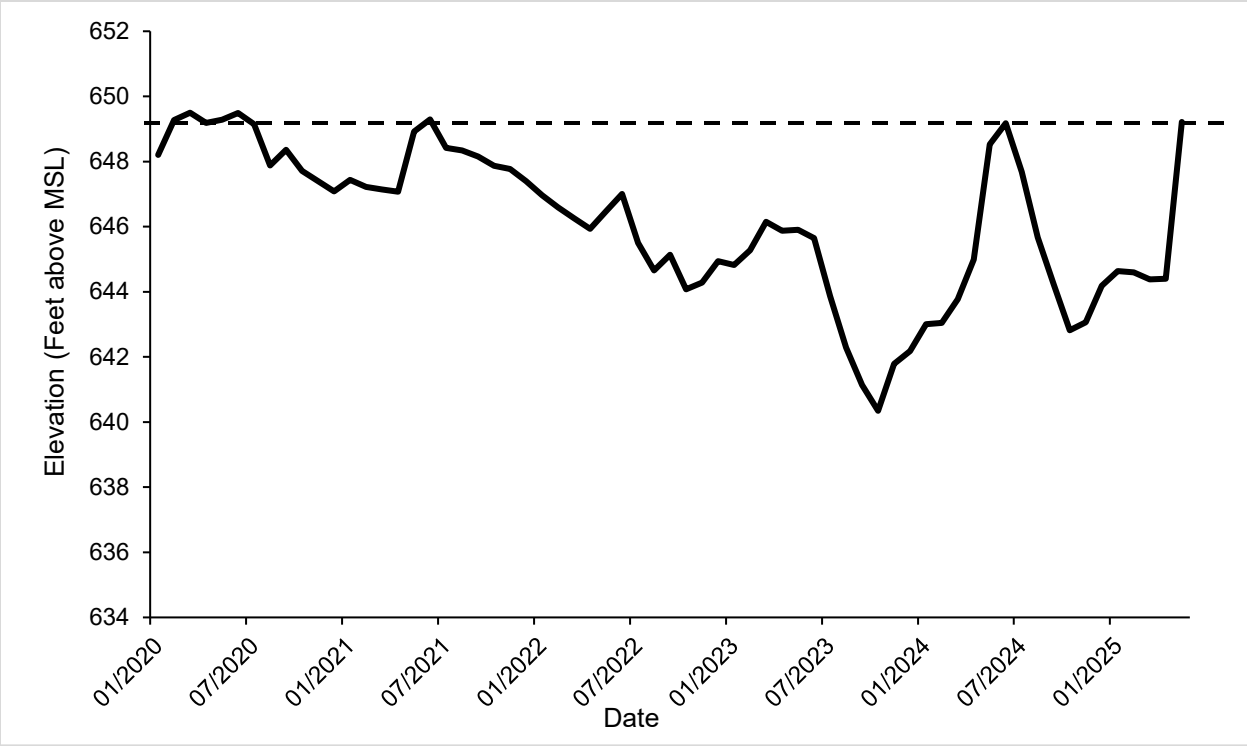


Figure 1. Mean monthly water level elevations in feet above mean sea level (MSL) recorded for Eagle Mountain Reservoir, Texas from January 2020 - May 2025. Conservation pool is 649 feet above MSL (dashed line).

Table 1. Characteristics of Eagle Mountain Reservoir, Texas.

Characteristic	Description
Year constructed	1932
Controlling authority	Tarrant Regional Water District
Counties	Tarrant, Wise
Reservoir type	Mainstream Trinity River (West Fork)
Conductivity	330 µS/cm

Table 2. Boat ramp characteristics for Eagle Mountain Reservoir, Texas, fall 2024. Reservoir elevation at time of survey was 649.1 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
West Bay Marina	32.93417 -97.51397	Y	50	640.1	Good.
Lakeview Marina	32.94834 -97.50889	Y	20	636.1	Good.
Shady Grove Park	32.90811 -97.52989	Y	35	644.2	Poor. Very shallow area
Pelican Bay Ramp	32.91081 -97.51864	Y	25	642.9	Poor. Very shallow area.
Eagle Mountain Marina	32.86758 -97.50506	Y	125	638.5	Good.
Augie's	32.87235 -97.49708	Y	50	643.2	Good.
Twin Points	32.87562 -97.49323	Y	60	639.1	Good.

Table 3. Harvest regulations for Eagle Mountain Reservoir, Texas.

Species	Bag Limit	Length Limit (inches)
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (only 10 ≥ 20 inches)	none
Catfish, Flathead	5	18-minimum
Bass, White	25	10-minimum
Bass: Spotted	5[a] (in any combination)	none
Bass: Largemouth		14-minimum
Crappie: White and Black Crappie, their hybrids and subspecies	25 (in any combination)	10-minimum

[a] Daily bag for Largemouth Bass, Spotted Bass, and Guadalupe Bass = 5 fish in any combination.

Table 4. Stocking history for Eagle Mountain Reservoir, Texas. Life stages are fry (FRY), fingerlings (FGL), advanced fingerlings (AFGL), adults (ADL) and unknown (UNK). Life stages for each species are defined as having a mean length that falls within the given length range. For each year and life stage the species mean total length (Mean TL; in) is given. For years where there were multiple stocking events for a particular species and life stage the mean TL is an average for all stocking events combined.

Species	Year	Number	Life Stage	Mean TL (in)
Blue Catfish	1991	92,147	FGL	2.1
	Total	92,147		
Channel Catfish	1969	48,000	AFGL	7.9
	1970	60,000	AFGL	7.9
	1971	10,964	AFGL	7.9
	1972	9,000	AFGL	7.9
	1973	200	UNK	
	1979	10,095	AFGL	7.9
	Total	138,259		
Florida Largemouth Bass	1988	333,148	FRY	1.0
	1993	373,642	FGL	1.0
	1994	148,628	FGL	1.1
	2000	232,424	FGL	1.1
	2006	425,660	FGL	1.6
	2007	426,963	FGL	1.5
	2014	427,802	FGL	1.7
	2015	508,235	FGL	1.8
	Total	2,876,502		
Green Sunfish x Redear Sunfish	1970	8,000	UNK	
	Total	8,000		
Largemouth Bass	1969	300,000	UNK	
	1971	100,000	UNK	
	1978	275	UNK	
		400,275		

Table 4, continued.

Species	Year	Number	Life Stage	Mean TL (in)
Lone Star Bass[a]	2025	134,264	FGL	1.8
	Total	134,264		
Mixed Largemouth Bass	1988	127,095		1.0
	Total	127,095		
ShareLunker Largemouth Bass	2021	10,042	FGL	1.7
	2022	8,947	FGL	1.7
	Total	18,989		
Smallmouth Bass	1978	84,800	UNK	0.0
	1979	34,460	UNK	0.0
	1980	1,200	UNK	0.0
	1999	197,905	FGL	1.5
	Total	318,365		
Threadfin Shad	1984	2,985	AFGL	3.0
	Total	2,985		
Walleye	1973	1,400,000	FRY	0.2
	1974	3,100,090	FRY	0.2
	1975	2,150,090	FRY	0.2
	Total	6,650,180		
White Crappie	1969	20,000	UNK	0.0
	Total	20,000		

[a]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.

Table 5. Objective-based sampling plan components for Eagle Mountain Reservoir, Texas 2024–2025.

Gear/target species	Survey objective	Metrics	Sampling objective
Electrofishing			
Largemouth Bass	Abundance	CPUE – stock	RSE-Stock ≤ 25
	Size structure	PSD, length frequency	N ≥ 50 stock
	Condition	W_r	10 fish/inch group (max)
Bluegill [a]	Abundance	CPUE – Total	RSE ≤ 25
	Size structure	PSD, length frequency	N ≥ 50
Gizzard Shad [a]	Abundance	CPUE – Total	RSE ≤ 25
	Size structure	PSD, length frequency	N ≥ 50
Trap netting			
Crappie	Size structure	PSD, length frequency	N = 50
Gill netting			
Blue Catfish	Abundance	CPUE	N≥50
	Size structure		N ≥ 50 stock
Channel Catfish[b]	Abundance	CPUE– stock	RSE-Stock ≤ 25
White Bass	Abundance	CPUE-stock	N≥50
	Size structure	PSD, length frequency	N≥50 stock

[a] No additional effort will be expended to achieve an RSE ≤ 25 for CPUE of Bluegill and Gizzard Shad if not reached from designated Largemouth Bass sampling effort. Instead, Largemouth Bass body condition can provide information on forage abundance, vulnerability, or both relative to predator density.
[b]No additional effort will be expended to achieve an RSE ≤ 25 for CPUE of Channel Catfish if not reached from designated Blue Catfish sampling effort.

Gizzard Shad

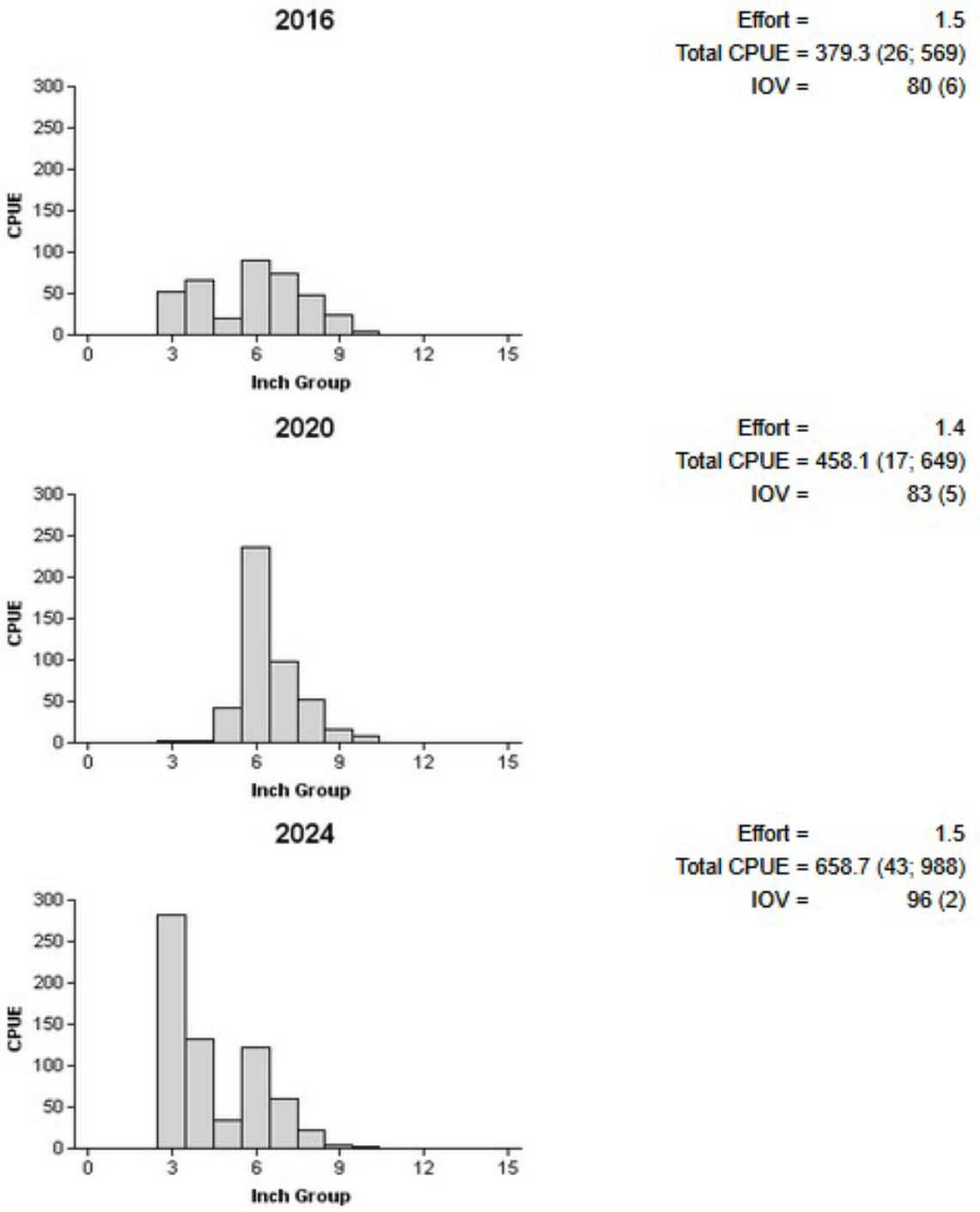


Figure 2. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2016, 2020, and 2024.

Bluegill

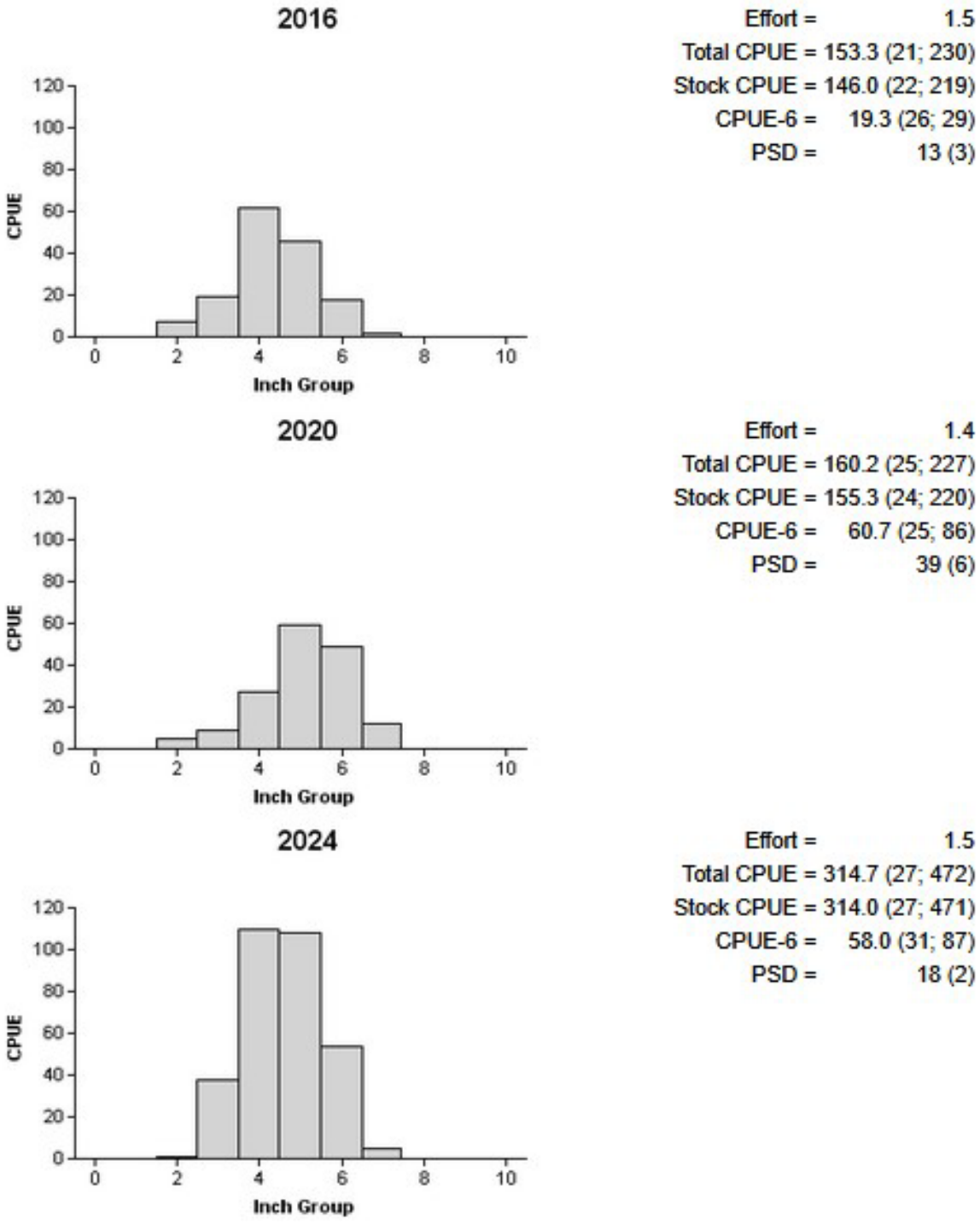


Figure 3. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2016, 2020, and 2024.

Blue Catfish

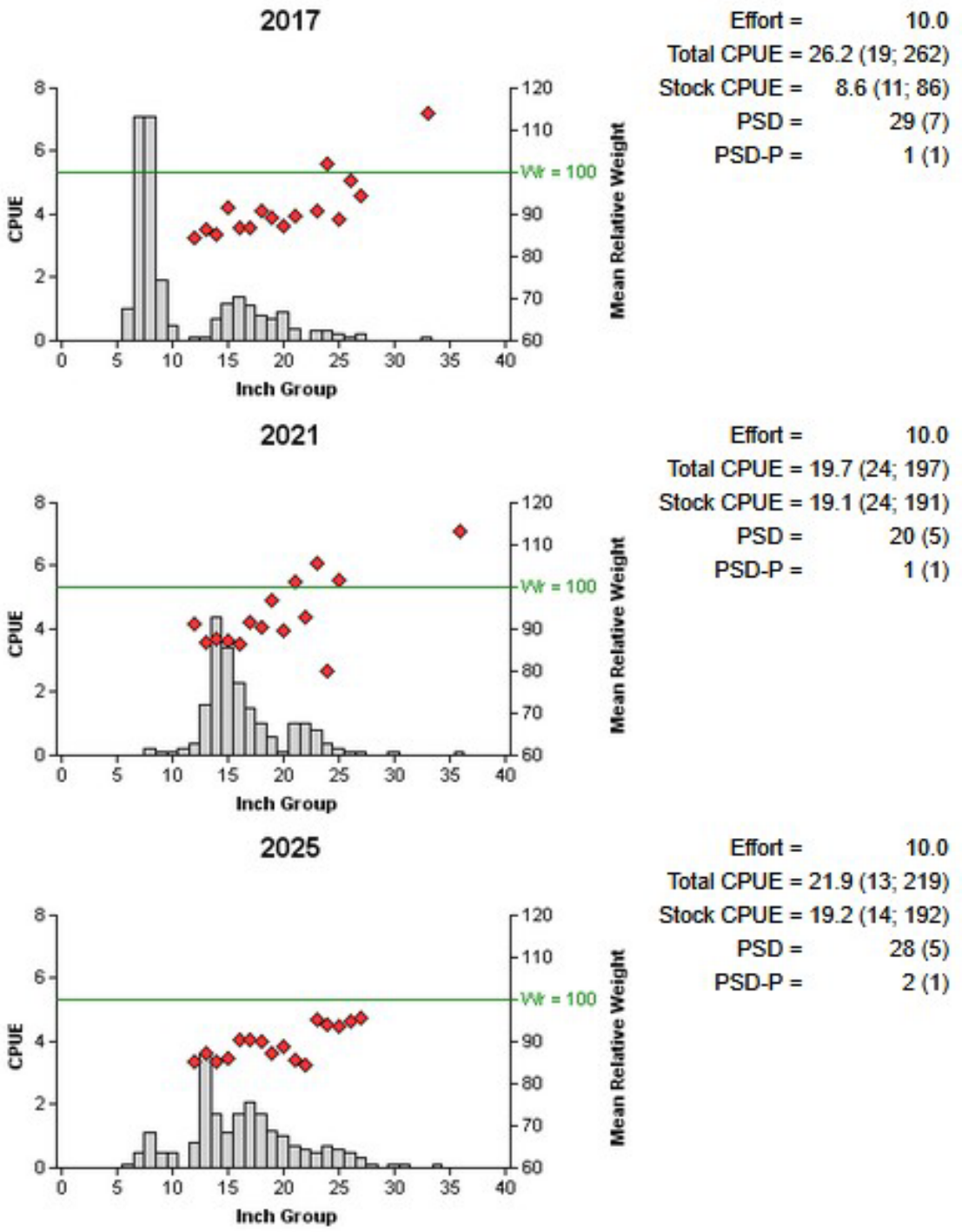


Figure 4. Number of Blue Catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Eagle Mountain Reservoir, Texas, 2017, 2021, and 2025.

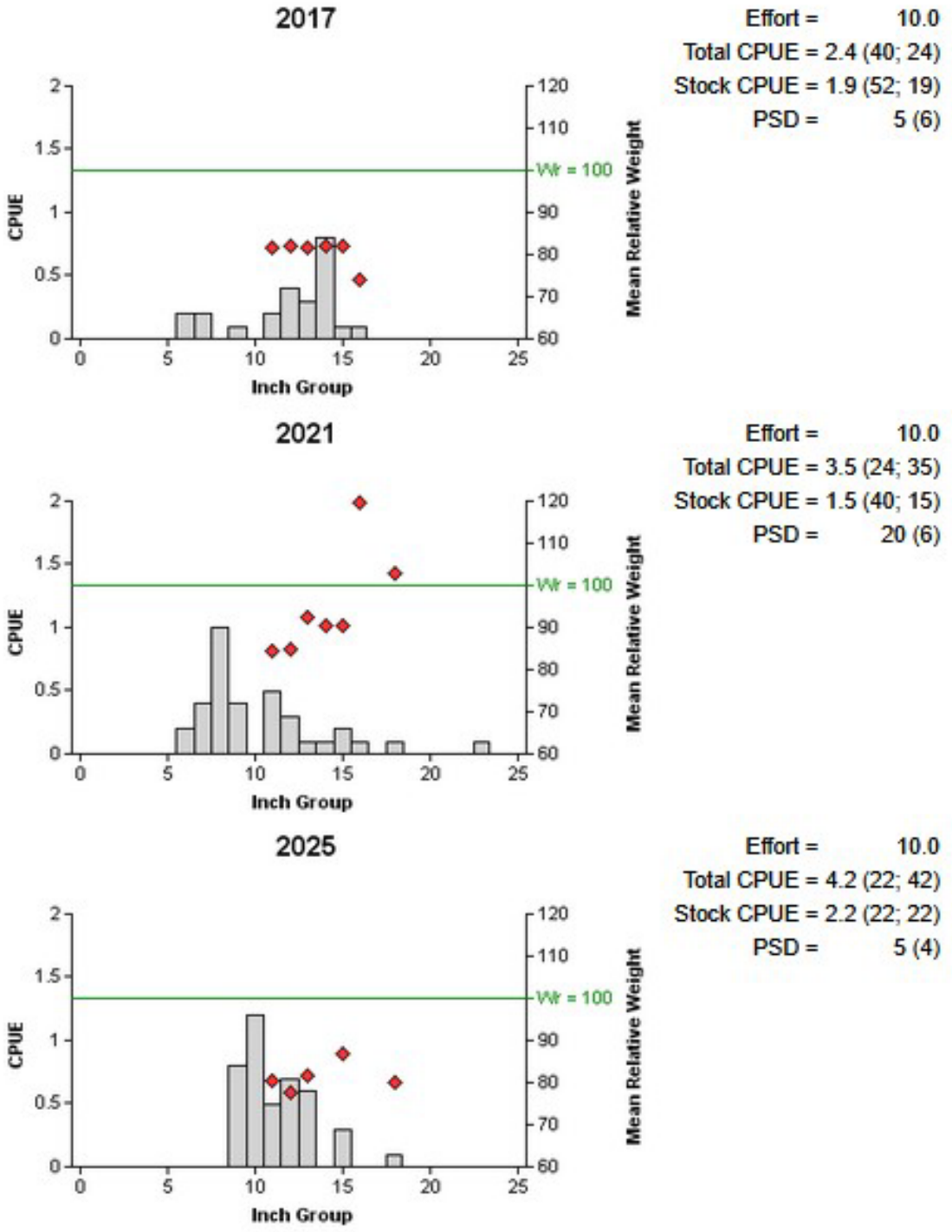


Figure 5. Number of Channel Catfish caught per net night (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Eagle Mountain Reservoir, Texas, 2017, 2021, and 2025.

White Bass

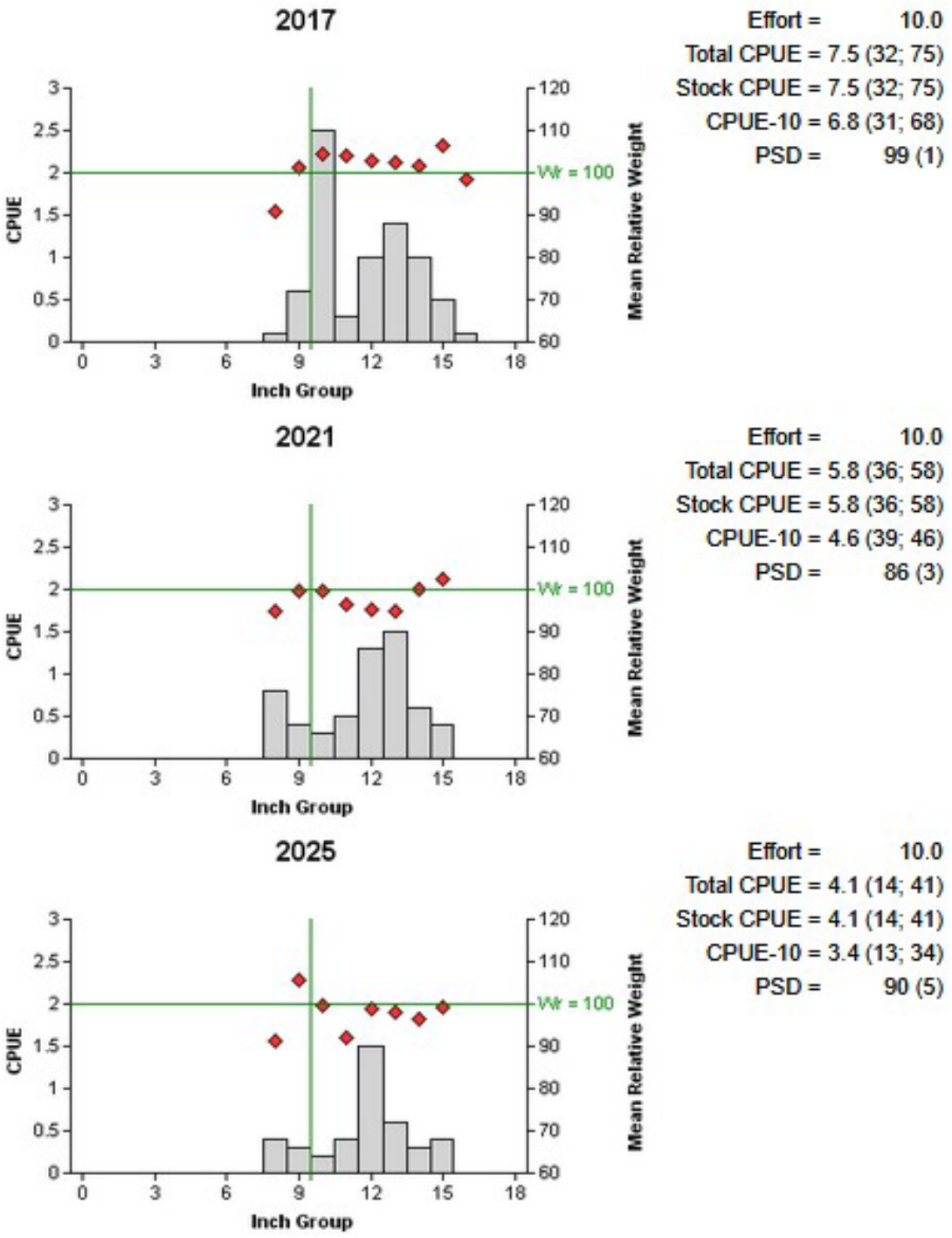


Figure 6. Number of White Bass caught per net night (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Eagle Mountain Reservoir, Texas, 2017, 2021, and 2025. Solid vertical lines indicate minimum length limit at time of sampling.

Spotted Bass

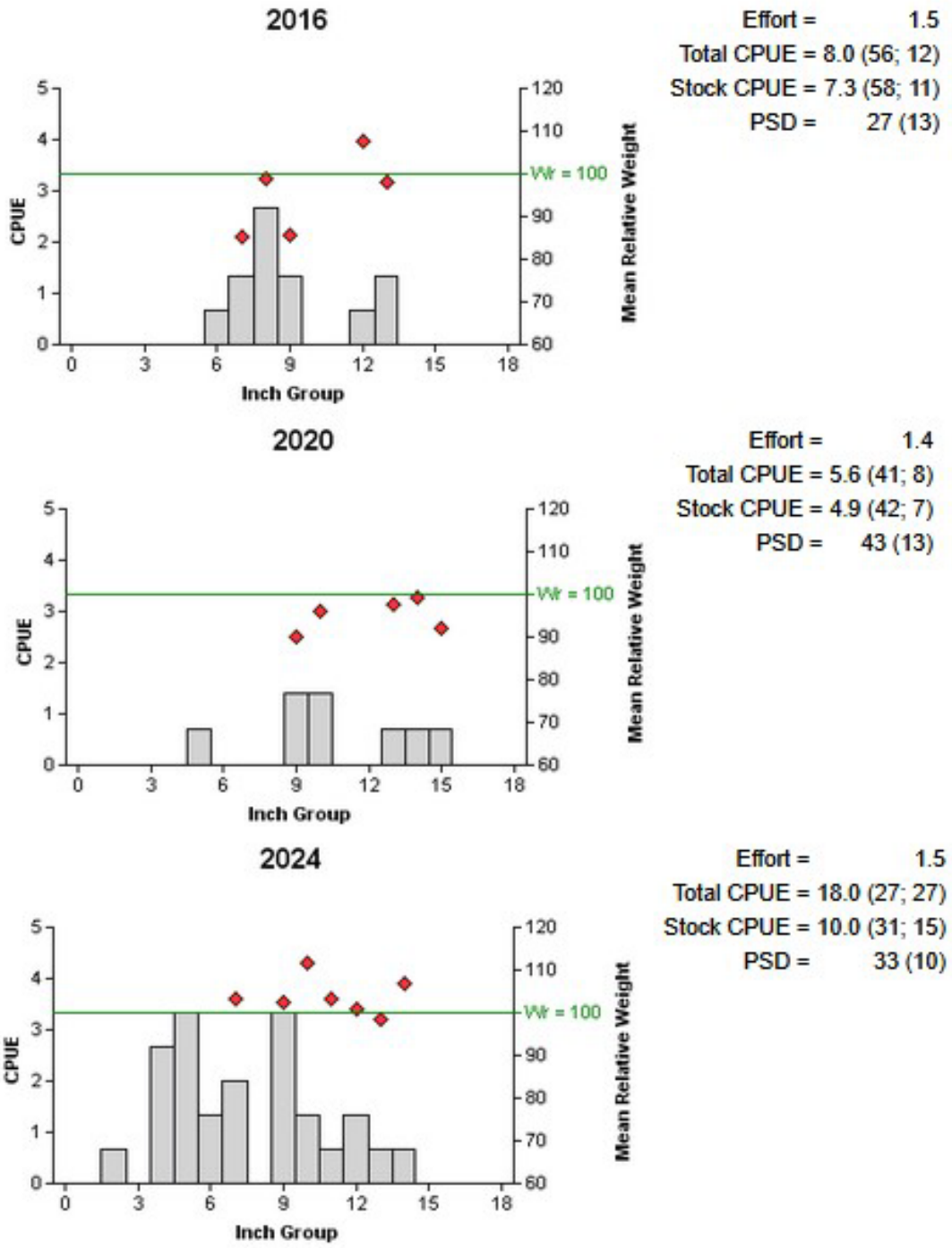


Figure 7. Number of Spotted Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2016, 2020, and 2024.

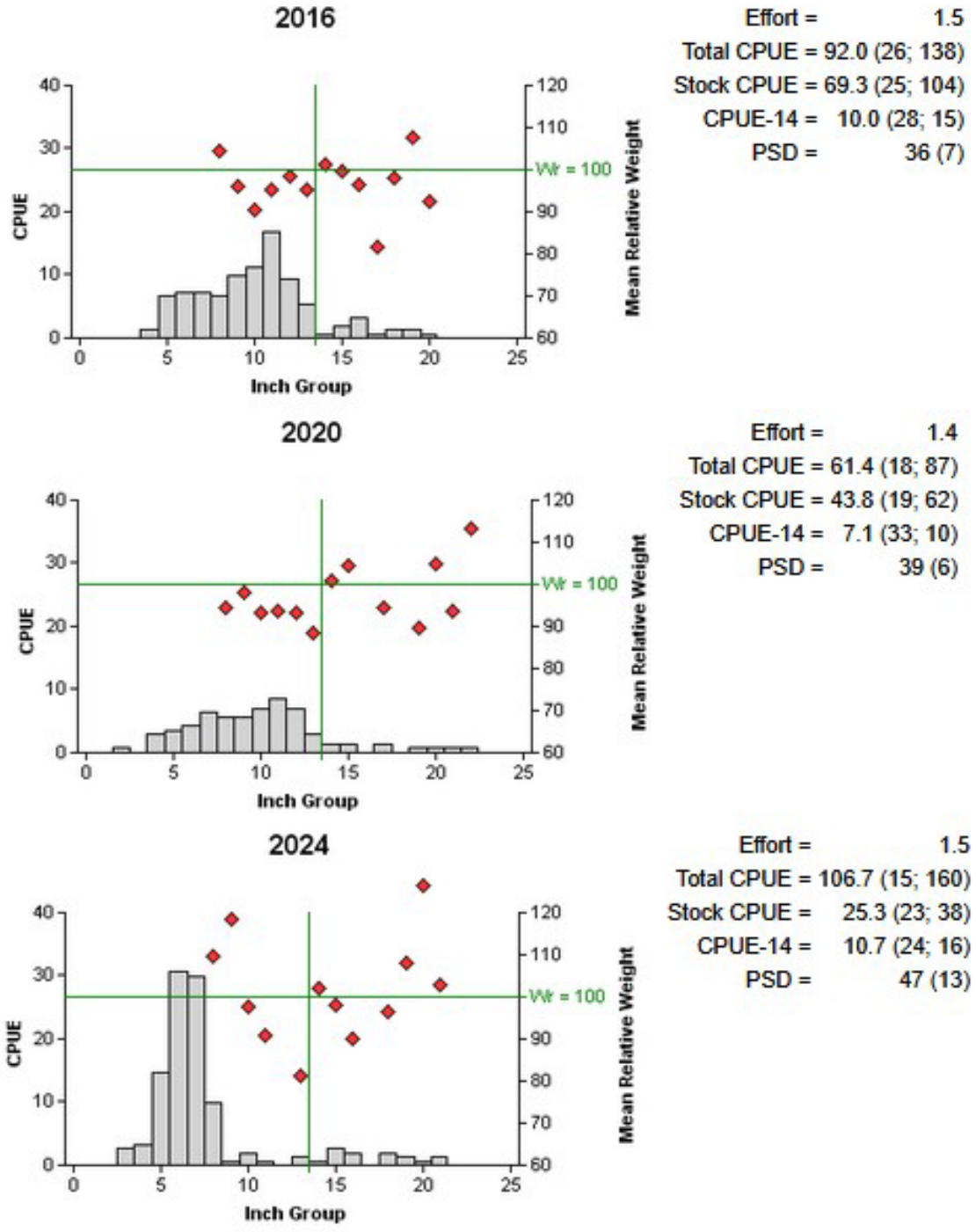
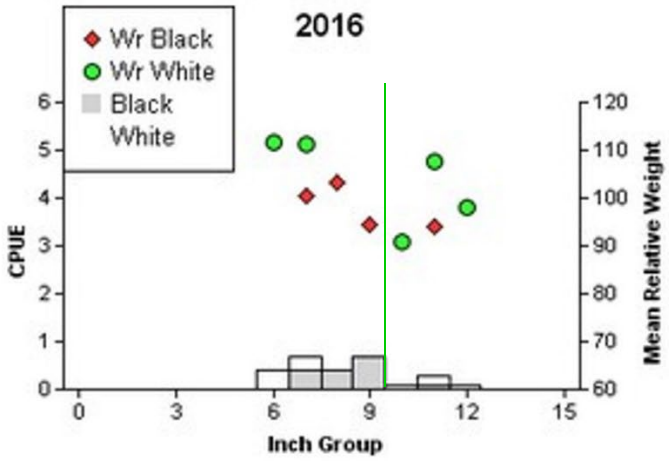


Figure 8. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2016, 2020, and 2024. Solid vertical lines indicate minimum length limit at time of sampling.

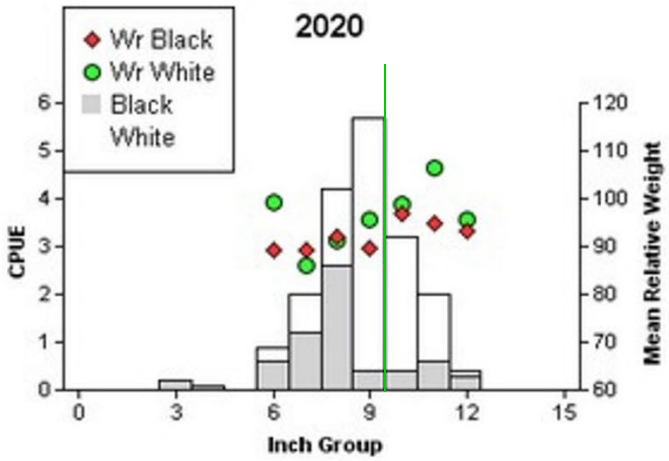
Table 6. Results of genetic analysis of Largemouth Bass collected by fall electrofishing, Eagle Mountain Reservoir, Texas, 2004, 2012, 2016, and 2024. FLMB = Florida Largemouth Bass, NLMB = Northern Largemouth Bass, Intergrade = hybrid between a FLMB and a NLMB. Genetic composition was determined by electrophoresis prior to 2005 and with micro-satellite DNA analysis since 2005.

Year	Sample size	Number of fish			% FLMB alleles	% pure FLMB
		FLMB	Intergrade	NLMB		
2004	30	1	21	8	29.2	3.3
2012	30	0	30	0	44.0	0.0
2016	30	1	28	1	43.0	3.3
2024	29	0	29	0	72.0	0.0

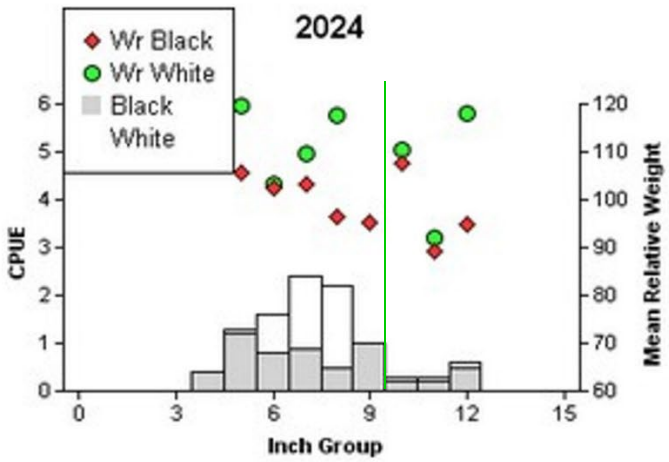
Crappies



Effort =	10.0
Total CPUE =	2.7 (48; 27)
Stock CPUE =	2.7 (48; 27)
CPUE-10 =	0.5 (54; 5)
PSD =	59 (12)



Effort =	10.0
Total CPUE =	18.7 (28; 187)
Stock CPUE =	18.4 (28; 184)
CPUE-10 =	5.6 (23; 56)
PSD =	84 (3)



Effort =	10.0
Total CPUE =	10.1 (40; 101)
Stock CPUE =	9.7 (40; 97)
CPUE-10 =	1.2 (49; 12)
PSD =	45 (6)

Figure 9. Number of White Crappie caught per net night (CPUE, white bars), mean relative weight (green circles), and Black Crappie (CPUE, gray bars), mean relative weight (red diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Eagle Mountain Reservoir, Texas, 2016, 2020, and 2024. Vertical line indicates minimum length limit.

Proposed Sampling Schedule

Table 7. Proposed sampling schedule for Eagle Mountain Reservoir, Texas. Survey period is June through May. Gill netting surveys are conducted in the spring, while electrofishing and trap netting surveys are conducted in the fall.

	Survey year			
	2025-2026	2026-2027	2027-2028	2028-2029
Angler Access				X
Structural Habitat				X
Vegetation				
Electrofishing – Fall				X
Trap netting				X
Gill netting				X
Creel survey			X	
Report				X

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

Number (N) and catch rate (CPUE; RSE in parentheses) of all target species collected from all gear types from Eagle Mountain Reservoir, Texas, 2024-2025. Sampling effort was 10 net nights for gill netting, 10 net nights for trap netting, and 1.5 hours for electrofishing.

Species	Gill Netting		Trap Netting		Electrofishing	
	N	CPUE	N	CPUE	N	CPUE
Gizzard Shad					988	658.7 (43)
Threadfin Shad					337	224.7 (43)
Blue Catfish	219	21.9 (13)				
Channel Catfish	42	4.2 (22)				
White Bass	41	4.1 (14)				
Bluegill					472	314.7 (27)
Longear Sunfish					119	79.3 (25)
Redear Sunfish					1	0.7 (100)
Spotted Bass					27	18.0 (27)
Largemouth Bass					160	106.7 (15)
White Crappie			44	4.4 (36)		
Black Crappie			57	5.7 (46)		

APPENDIX B – Map of sampling locations

Location of sampling sites, Eagle Mountain Reservoir, Texas, 2024-2025. Trap net, gill net, and electrofishing stations are indicated by T, G, E, and L, respectively. Boat ramps are indicated with a B. Water level was near full pool at time of sampling.

APPENDIX C – Historical Catch Rates of Target Species

Historical catch rates of targeted species by gear type for Eagle Mountain Reservoir, Texas, for specified years. GN represents gill netting (reported as number of fish/net night), EF represents electrofishing (reported as number of fish/hour), TN represents trap netting (reported as number of fish/net night), and LFE represents low-frequency electrofishing (reported as number of fish/h).

		Year														
Gear	Species	1988	1990	1992	1995	1998	2000	2001	2002	2004	2005	2008	2009	2010	2011	2012
GN	Blue Catfish			0.0	0.9	0.6		0.9			7.9		10.3			
	Channel Catfish	8.0	5.0	7.0	11.8	3.8		2.3			6.5		9.3			
	White Bass	7.0	9.0	3.0	10.3	11.1		3.7			6.1		25.0			
	Yellow Bass															
EF	Gizzard Shad	214.0	291.0	328.7	274.0	589.3	711.3		500.5	437.4		506.0	497.3	484.7	765.3	612.7
	Threadfin Shad	387.0	37.0	155.3	115.3	579.3	670.0		107.3	528.7		633.3	342.0	366.7	1156.0	1008.7
	Bluegill	273.0	212.0	276.0	132.0	47.3	140.0		259.1	264.0		267.3	181.3	272.7	150.7	226.7
	Longear Sunfish	109.0	145.0	0.0	98.0	52.7	148.0		92.5	143.3		219.3	149.3	140.0	92.0	121.3
	Redear Sunfish	32.0	5.0	36.7	18.7	2.0	4.7		15.5	1.3		28.0	37.3	10.0	22.0	8.7
	Spotted Bass	25.0	21.0	54.7	48.0	42.0	18.7		30.4	21.3		31.3	13.3	12.0	16.7	13.3
	Largemouth Bass	173.0	110.0	222.7	150.0	93.3	105.3		64.9	116.0		142.0	96.0	211.3	160.0	171.3
TN	White Crappie	4.0	9.0	4.8	1.4	3.4	3.2			3.7		0.9				
	Black Crappie	0.0	0.0	0.0	0.5	6.4	0.7			2.2		1.6				

Appendix C, continued

Gear	Species	Year									
		2012	2013	2016	2017	2018	2020	2021	2024	2025	Average
GN	Blue Catfish		20.1		26.2			19.7		21.9	**10.9**
	Channel Catfish		6.8		2.4			3.5		4.2	**5.9**
	White Bass		7.5		7.5			5.8		4.1	**8.3**
	Yellow Bass		0.1		2.1			7.7		8.4	**4.6**
EF	Gizzard Shad			379.3			458.1		658.7		**481.8**
	Threadfin Shad			1052.7			429.9		224.7		**487.1**
	Bluegill			153.3			160.2		314.7		**208.1**
	Longear Sunfish			76.0			45.9		79.3		**107.0**
	Redear Sunfish			1.3			0.7		0.7		**14.0**
	Spotted Bass			8.0			5.7		18.0		**23.7**
	Largemouth Bass			92.0			61.4		106.7		**129.7**
TN	White Crappie			1.1			12.3		4.4		**4.4**
	Black Crappie			1.6			6.4		5.7		**2.3**
LFE	Blue Catfish					275.5	64.5				**170.0**

Life's better outside.®

In accordance with Texas State Depository Law, this publication is available at the Texas State Publications Clearinghouse and/or Texas Depository Libraries.