

Tradinghouse Creek Reservoir

2024 Fisheries Management Survey Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

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INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

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Survey and Management Summary

Fish populations in Tradinghouse Creek Reservoir were surveyed in 2024 using electrofishing, and in 2025 using trap netting and gill netting. 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: Tradinghouse Creek Reservoir is a 1,793-acre reservoir located 15 miles east of Waco in McLennan County, Texas. The reservoir contains good bank and boat access. There is not a publicly available source for water level, but the lake can get quite low during late summer through winter and is slow to fill in spring. Habitat features were dominated by natural shorelines, with some gravel and riprap, as well as native emergent and submerged vegetation.

Management History: Important sport fish include Largemouth Bass, Channel Catfish, White Bass, and crappies. The Red Drum fishery was completely lost between 2009 and 2010 due to the dismantling of the power plant and consequent loss of artificially warm winter water temperatures. Red Drum stockings were discontinued, and Red Drum regulations were removed. The management plan from 2012 included annual monitoring of hydrilla and giant reed; both were monitored through 2014 but never required control efforts. More recent management efforts focused on posting appropriate aquatic invasive species (AIS) signage at access points and providing technical support and informational materials for the Texas Parks and Wildlife Department's (TPWD) "Clean, Drain and Dry" campaign. Approximately 20 Bamboo Crappie Condos were placed into the reservoir as part of an artificial fish habitat addition project during 2015. Management efforts from 2020-2021 include the addition of 5 PVC Cube artificial fish habitat structures into the reservoir and aquatic vegetation, boater access, electrofishing, and gill netting surveys. Aquatic vegetation, boater access, electrofishing, trap netting, and gill netting surveys were conducted as part of management efforts in 2024-2025.

Fish Community

- **Prey species:** Collected prey species included Gizzard Shad, Bluegill, Longear Sunfish, Redear Sunfish, and Green Sunfish. Catch rates for most prey species were below historical averages, while Longear and Green Sunfish were collected above historical rates. A majority of Gizzard Shad were available as prey to sport fish.
- **Catfish:** Channel Catfish catch rates were well above historical average and mean relative weights were good to excellent. No Blue or Flathead Catfish were observed in surveys.
- **Temperate Bass:** White Bass were collected at a rate slightly below the historical average and body conditions were slightly below average.
- **Largemouth Bass:** Largemouth Bass catch rates were below the historical average but catch rates of stock-sized Largemouth increased from the two previous surveys. Body conditions were average for most size classes.
- **Crappie:** Collected crappies included White Crappie and Black Crappie. White Crappie catch rates were well above average and body conditions were excellent across most length categories. Black Crappie were collected in very low numbers.

Management Strategies: The sport fishes in Tradinghouse Creek Reservoir will continue to be managed with statewide regulations. AIS efforts will continue to be maintained. Access, vegetation, and electrofishing surveys will be conducted in summer and fall 2028 and trap netting and gill netting surveys will be conducted in 2029. We will also work with interested partners to complete additional artificial fish habitat projects pending funding sources and reservoir priorities.

Introduction

This document is a summary of fisheries data collected from Tradinghouse Creek 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 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

Tradinghouse Creek Reservoir is a 1,793-acre reservoir located 15 miles east of Waco, McLennan County, Texas. The reservoir was constructed in 1968 by Texas Utilities Generating Company (TXU) to serve as a cooling-reservoir for electrical power generation; however, the power plant is no longer in use. McLennan County now operates the reservoir, boat ramps and park areas for recreation. The reservoir is eutrophic, with a Carlson's Trophic State Index Chl α of 60.16 (Texas Commission on Environmental Quality 2024). Habitat at the time of sampling consisted mainly of natural shoreline, rock riprap and aquatic vegetation. Vegetation is dominated by cattail, pondweed and bulrush. There is no USGS source for water level data in Tradinghouse Creek Reservoir, but the reservoir can very low during late summer through winter. Other descriptive characteristics for Tradinghouse Creek Reservoir are in Table 1.

Angler Access

There is good bank and boat access on Tradinghouse Creek Reservoir. Boat access consists of four ramps on the eastern side of the reservoir which are controlled by McLennan County. All four boat ramps were useable although low during the recent 2024/2025 surveys, and there are currently no access issues when the reservoir is full. Shoreline access is excellent along the eastern one-third of the reservoir. Additional boat ramp characteristics are in Table 2.

Management History

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

1. Test the effectiveness of spring trap netting for crappies on Tradinghouse Creek Reservoir in 2025 and review the effort for the 2024/2025 report period. Continue to collect data on crappies during gill netting efforts.

Action: White and Black Crappie were collected with trap netting in late February 2025 at an effort of 10 net-nights. White and Black Crappie were also collected via gill netting in March 2025.
2. Work with interested partners to install new artificial fish reefs in the reservoir. Take advantage of funding sources to purchase materials for artificial habitat when available.

Action: Bamboo Crappie Condo and PVC Cube artificial fish habitat structures were placed near the south end of Tradinghouse Creek Reservoir in 2015 and 2020, respectively.
3. Cooperate with McLennan County Parks and Recreation to post appropriate AIS signage at access points throughout the reservoir. Educate the public about AIS and make a speaking point about AIS when presenting to constituent and user groups. Keep track of (i.e., map) existing and future interbasin water transfer routes to facilitate potential invasive species responses.

Action: Invasive species signage was posted at Tradinghouse Creek Reservoir access points during summer 2013 and have been maintained as needed. District staff have made a speaking point about AIS, how to prevent their spread, and potential effects on Tradinghouse Creek Reservoir while speaking to anglers over the past several years. Interbasin water transfers will be updated as needed.

Harvest regulation history: Sportfish in Tradinghouse Creek Reservoir are currently managed with statewide regulations. The statewide regulation for Blue and Channel Catfish changed on September 1, 2021, and now the regulation is no minimum length limit; daily bag of 25 (in any combination – only 10 can be 20 inches or greater in length). Current harvest regulations are in Table 3.

Stocking history: Tradinghouse Creek Reservoir has historically been stocked with Blue and Channel Catfish, crappies, and Largemouth Bass. Single stockings of Striped Bass and Peacock Bass occurred in the 1980s. Stocking of Red Drum ceased in 2010. The complete stocking history is in Table 4.

Water Transfer: There are no interbasin transfers within Tradinghouse Creek Reservoir.

Vegetation/habitat history: Hydrilla was first discovered in Tradinghouse Creek Reservoir in 1996; see Baird and Tibbs (2017) for a synopsis on hydrilla coverage and management history. Water hyacinth was reported by a local fishing guide in January 2017. Waco District staff confirmed its presence between the two main boat ramps on the south end of the reservoir and manually removed all visible plants. A follow-up visit in March 2017 recovered an additional half-dozen or so smaller water hyacinth plants in the same vicinity of the reservoir. No additional water hyacinth plants were found during 2018 monitoring trips or during the summer 2020 and 2024 vegetation surveys.

Methods

Surveys were conducted to achieve survey and sampling objectives in accordance with the objective-based sampling (OBS) plan for Tradinghouse Creek Reservoir (Baird and Tibbs 2021). Primary components of the OBS plan are listed in Table 5. All survey sites were randomly selected, and surveys were conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2022). Trap netting of crappies took place in late February in accordance with the management plan for Tradinghouse Creek Reservoir (Baird and Tibbs 2021).

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, sunfishes, and Gizzard Shad were collected by daytime electrofishing (1.0 hour at 12, 5-min stations) in 2024. 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 a GPP 7.5 electrofisher.

Trap netting – White Crappie and Black Crappie were collected by late-winter (February) trap netting (10 net nights at 10 stations) in 2025. The 2025 survey is the first trap netting survey completed on Tradinghouse Creek Reservoir since 2012. Catch per unit of effort (CPUE) for trap netting was recorded as the number of fish caught per net night (fish/nn).

Gill netting – Channel Catfish and White Bass were collected by gill netting (8 net nights at 8 stations in spring). Catch per unit effort (CPUE) for gill netting was recorded as the number of fish caught per net night (fish/nn).

Genetics – Genetic analysis of Largemouth Bass and all temperate bass was conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2022). Micro-satellite DNA analysis was used to determine genetic composition of individual fish from 2005 to present, and by electrophoresis for previous years.

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). 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 and creel statistics.

Habitat – The 2010 structural habitat survey was conducted according to Tibbs and Baird (2009). The 2016, 2020, and 2024 vegetation surveys were conducted using an adaptation of the point method (TPWD, Inland Fisheries Division, unpublished manual revised 2022). Vegetation points were randomly generated on the shoreline at the minimum required number of 100. Aquatic vegetation has always been found close to the shore in Tradinghouse Creek Reservoir, so stratifying the random points to exclude deep-water areas increased precision and resulted in better data.

Results and Discussion

Habitat: The 2010 structural habitat survey estimated 14.9 miles of natural shoreline, 2.3 miles of rock shoreline, and 1.9 miles of gravel shoreline (Table 6; Tibbs and Baird 2009). The littoral zone vegetation encountered during summer 2024 consisted mostly of American pondweed, bulrush, and cattail. The complete summer 2024 vegetation survey is in Table 7.

Prey species: The fall 2024 electrofishing catch rate of Gizzard Shad (Figure 1) was 63.0/h. This marks a severe decline from previous surveys. No Threadfin Shad were collected (Appendices A and B). The index of vulnerability (IOV) for Gizzard Shad declined from 2020 and 52% of the population was available to existing predators as forage. Bluegill CPUE improved from the three previous surveys and size structure has remained consistent (Figure 2; Appendices A and B). Other important forage species collected were Redear Sunfish (39.0/h) and Longear Sunfish (42.0/h; Figures 3 and 4; Appendices A and B).

Channel Catfish: Channel Catfish were collected with gill nets at 13.1/nn in 2025, below the previous rate of 15.4/nn in 2021, but well above the historical average of 9.3/nn (Figure 5; Appendices A and B). One hundred one stock-length individuals were collected so the size structure objective (i.e., minimum of 50 stock-length fish) was easily met. The abundance objective of achieving an RSE equal to or less than 25, was also met since the RSE_{Stock} was 19 (Figure 5). Size distribution has fluctuated but remains good since 2017 (PSD = 59-80), and the population is dominated by stock-size or larger fish. Mean relative weight (i.e., body condition) remained excellent overall and improved with increasing length, like previous surveys.

White Bass: The gill net catch rate for White Bass was 3.0/nn in 2025 compared to 2021 (3.6/nn) and 2017 (1.6/nn) (Figure 6; Appendices A and B). This catch rate equates to only 24 stock-length fish with an RSE of 32, so neither the size structure nor abundance objective was met. Relative weights of collected individuals were slightly below average (Figure 6).

Largemouth Bass: Largemouth Bass were collected by electrofishing at 121.0/h in 2024. This was a drop from the 2020 survey (157.0/h) and below the historical average (CPUE = 178.7/h, Figure 7; Appendices A and B). The objectives for Largemouth Bass abundance ($CPUE_{Stock}$ with an $RSE \leq 25$) and size structure ($N_{Stock} \geq 50$) were achieved with 71 stock-length fish collected and an RSE of 19 (Figure 7). Size distribution has improved slightly since 2016, but the population is dominated by sub-legal fish. The catch of legal-length bass did increase from 21.0/h in 2020 to 24.0/h in 2024. Mean relative weight was generally good across length classes (Figure 7). Genetic samples analyzed in 2024 showed an improved Florida allele percentage (76%; Table 8) with all individuals ($N = 7$) coming back as integrate.

Crappie: White Crappie were collected at a rate of 9.0/nn by late winter trap netting, which was well above the historical average (CPUE = 1.8/nn, Figure 8; Appendices A and B). The size-structure objective ($N \geq 50$ stock) was met ($N = 56$; Figure 8), but the abundance objective ($RSE \leq 25$) was not ($RSE = 32$; Figure 8). Mean relative weight was excellent for most size classes and PSD was 91% (Figure 8). A small number of Black Crappie were collected during trap netting ($N = 17$; Appendices A and B).

Fisheries Management Plan for Tradinghouse Creek Reservoir, Texas

Prepared – July 2025

ISSUE 1: Largemouth Bass catch rates during electrofishing surveys have been below average since 2008. However, condition of Largemouth Bass collected in the fall 2024 survey was at or above average for most size classes, and PSD and % Florida alleles have increased over the last three surveys. Florida Largemouth Bass were stocked in 2017 and 2018 and represented the first Largemouth Bass stockings in Tradinghouse Creek Reservoir since 1986. The reservoir has a history of producing trophy Largemouth Bass, with 4 lunger class (8.00-9.99 pounds) entries and 1 legend class lunger (13.00+ pounds) in the Toyota ShareLunker Program since 2018. The current waterbody record of 13.00 pounds was caught in March 2018. The Largemouth Bass population in Tradinghouse Creek Reservoir could benefit from additional stockings.

MANAGEMENT STRATEGIES

1. Request Lone Star Bass fingerlings, which are 2nd generation offspring of Lonestar Largemouth Bass, at a rate of 1,000/km shoreline, two additional years before the next report.
2. Sample Largemouth Bass with fall electrofishing surveys and continue to collect fin clips for genetic analysis to monitor the influence of Florida alleles. Consider age and growth assessment.

ISSUE 2: Although emergent vegetation can provide good fisheries habitat at full conservation pool elevation, it is much less available at lower water elevations. Artificial fish structures deployed into Tradinghouse Creek Reservoir in 2015 and 2020 received a lot of good publicity and created new areas for anglers to fish. The fishery at Tradinghouse Creek Reservoir could benefit from more projects like this.

MANAGEMENT STRATEGIES

1. Work with interested partners to install new artificial fish reefs built with natural materials in the reservoir.
2. Take advantage of funding sources such as largemouth conservation license plate funds or those from the Habitat and Angler Access Program to purchase materials for habitat construction.

ISSUE 3: Many AIS 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. Giant salvinia 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 AIS are significant. Additionally, the potential for AIS 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 McLennan County Parks and Recreation to maintain AIS signage at access points around the reservoir.
2. Educate the public about AIS through the use of media and the internet.
3. Make a speaking point about AIS when presenting to constituent and user groups.

4. Keep track of (i.e., map) existing and future inter-basin water transfers to facilitate potential AIS responses.

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

Sport fish, forage fish, and other important fishes

Sport fishes in Tradinghouse Creek Reservoir include Largemouth Bass, White Bass, Channel Catfish, and White Crappie. Important forage fish species include Gizzard Shad, Threadfin Shad, Bluegill, Redear Sunfish and Longear Sunfish.

Low-density fisheries

Spotted Bass, Flathead Catfish, and Black Crappie occur in very low abundance in Tradinghouse Creek Reservoir and are generally caught incidentally to other targeted species. We will continue collecting and reporting data for these species while conducting surveys and upgrade their status if appropriate.

Survey objectives, fisheries metrics, and sampling objectives

Fall Electrofishing: This survey will be used to monitor Largemouth Bass and primary forage species (Bluegill, Longear Sunfish, Redear Sunfish, Gizzard Shad and Threadfin Shad). A minimum of 12, random five-minute daytime electrofishing stations will be sampled in fall 2028. The objectives of the electrofishing survey will be general monitoring (i.e., CPUE, size structure, and mean relative weight) and prevalence of Northern and Florida Largemouth Bass alleles (i.e., fin clips from 30 random individuals) to characterize the Largemouth Bass population and make comparisons with historical and future data. Abundance target precision will be a $RSE \leq 25$ for $CPUE_{Total}$ and $CPUE_{Stock}$, and target sample size for size structure will be $N \geq 50$ stock, allowing us to calculate PSDs with 80% confidence. Mean relative weight will be determined by measuring and weighing at least 5 fish per represented inch group $\geq$ stock-length. If objectives are not met in 12 stations, but catch rates indicate they are attainable, sampling will continue at random stations until the objectives are met. Most primary forage species objectives are exploratory, but a goal will be to collect ≥ 50 Gizzard Shad for IOV calculation; additional sampling will not be necessary beyond that which is done for Largemouth Bass.

Late winter trap netting: This survey will be used to monitor White Crappie. A minimum of 10 randomly selected trap net stations will be sampled on Tradinghouse Creek Reservoir in February/March 2029. The objectives of the spring trap netting survey will be to collect baseline monitoring data (i.e., CPUE, size structure, and mean relative weight) to characterize the population and make comparisons with future springtime data sets. Abundance target precision will be a $RSE \leq 25$ for $CPUE_{Total}$ and $CPUE_{Stock}$, and target sample size for size structure will be $N \geq 50$ stock, allowing us to calculate PSDs with 80% confidence. Mean relative weight will be determined by measuring and weighing at least 5 fish per represented inch group $\geq$ stock-length. If objectives are not met in 10 stations, but catch rates indicate they are attainable, sampling will continue at random stations until the objectives are met.

Spring gill netting: This survey will be used to monitor Channel Catfish and White Bass. OBS objectives were met for Channel Catfish but not for White Bass. A minimum of 8 randomly selected gill net stations will be sampled in spring 2029. The objectives of the spring gill netting survey will be general monitoring (i.e., CPUE, size structure, and mean relative weight) to characterize populations and make comparisons with historical and future data. Abundance target precision will be a $RSE \leq 25$ for $CPUE_{Total}$ and $CPUE_{Stock}$, and target sample size for size structure will be $N \geq 50$ stock, allowing us to calculate PSDs with 80% confidence. Mean relative weight will be determined by measuring and weighing at least 5 fish per represented inch group $\geq$ stock-length. If objectives are not met in 8 stations, but catch rates indicate they are attainable, sampling will continue at random stations until the objectives are met.

Literature Cited

- Baird, M. S. and J. Tibbs. 2021. Statewide freshwater fisheries monitoring and management program survey report for Tradinghouse Creek Reservoir, 2021. Texas Parks and Wildlife Department, Federal Aid Report F-221-M-4, Austin.
- Baird, M. S., and J. Tibbs. 2017. Statewide freshwater fisheries monitoring and management program survey report for Tradinghouse Creek Reservoir, 2016. Texas Parks and Wildlife Department, Federal Aid Report F-221-M-2, Austin.
- 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.
- Neumann, R. M., C. S. Guy, and D. W. Willis. 2012. Length, weight, and associated indices. Pages 637-676 in A. V. Zale, D. L. Parrish, and T. M. Sutton, editors. *Fisheries techniques*, 3rd edition. American Fisheries Society, Bethesda, Maryland.
- 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. 18 pp.
- Tibbs, J., and M. S. Baird. 2009. Statewide freshwater fisheries monitoring and management program survey report for Tradinghouse Creek Reservoir, 2008. Texas Parks and Wildlife Department, Federal Aid Report F-30-R-34, Austin.

Tables and Figures

Table 1. Characteristics of Tradinghouse Creek Reservoir, Texas.

Characteristic	Description
Year Constructed	1965
Controlling authority	McLennan County Parks and Recreation
County	McLennan
Reservoir type	Tributary of Brazos River
Shoreline Development Index (SDI)	5.0
Conductivity	177 $\mu\text{S/cm}$

Table 2. Boat ramp characteristics for Tradinghouse Creek Reservoir, Texas 2024.

Boat ramp	Latitude/Longitude (dd)	Parking capacity (N)	Condition
Number 1	31.5499/-96.9637	10	Short, Steep
Number 2	31.5509/-96.9619	16	Extended in 2020
Number 3	31.5554/-96.9415	8	Fair, Shallow
Number 4	31.5746/-96.9335	12	Fair, Shallow

Table 3. Harvest regulations for Tradinghouse Creek Reservoir, Texas.

Species	Bag Limit	Length limit
Catfish: Channel Catfish, Blue Catfish, their hybrids and subspecies ¹	25 (only 10 $\geq$ 20 inches)	No minimum
Catfish, Flathead	5	18 – inch minimum
Bass, White	25	10 – inch minimum
Bass, Largemouth	5 ^a	14 – inch minimum
Bass, Spotted, Guadalupe and hybrids ²	5 ^a	No minimum
Crappie: White Crappie, Black Crappie, their hybrids and subspecies	25 (in any combination)	10 – inch minimum

^a Daily bag for all black bass (Largemouth, Smallmouth, Spotted, Guadalupe and hybrids) = 5 in any combination.

Table 4. Stocking history of Tradinghouse Creek Reservoir, Texas. Life stages are 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	1986	21,122	FGL	2.0
	Total	21,122		
Channel Catfish	1968	10,600	AFGL	7.9
	Total	10,600		
Black Crappie x White Crappie	1995	101,848	FRY	0.9
	1996	201,132	FRY	0.9
	Total	302,980		
White Crappie	1992	2,224	FGL	1.4
	1992	10,494	FRY	0.7
	Total	12,718		
Florida Largemouth Bass	1985	59,294	FGL	2.0
	1985	98,338	FRY	1.0
	1986	100,566	FRY	1.0
	2017	100,214	FGL	1.6
	2018	93,519	FGL	1.8
	2018	97,350	FRY	0.3
	Total	549,281		
Largemouth Bass	1969	100,000	UNK	UNK
	Total	100,000		
Lone Star Bass	2025	178,126	FRY	0.3
		178,126		
Striped Bass	1980	240,700	UNK	UNK
	Total	240,000		
Peacock Bass	1982	1,600	UNK	UNK
	Total	1,600		
Red Drum	1975	53,161	UNK	UNK
	1981	200,000	UNK	UNK
	1983	198,500	UNK	UNK
	1984	153,783	FRY	1.0
	1985	408,532	FRY	1.0
	1986	671	ADL	15.0
	1986	245,800	FRY	1.0
	1987	768,810	FRY	1.0
	1989	8,000	FGL	1.2

Table 4. (Continued)

Species	Year	Number	Life Stage	Mean TL (in)
Red Drum	1990	69	ADL	11.0
	1990	9,500	FGL	1.1
	1991	224,000	FGL	1.7
	1991	114,066	FRY	1.0
	1991	75,136	UNK	UNK
	1992	90	ADL	13.1
	1992	77,010	FGL	1.8
	1992	125,466	FRY	1.0
	1993	206,434	FGL	1.2
	1994	184,000	FGL	1.4
	1995	217,188	FRY	1.0
	1996	197,399	FGL	1.3
	1997	202,378	FGL	1.1
	1999	268,643	FGL	1.1
	2000	251,815	FGL	1.1
	2001	290,905	FGL	1.1
	2002	4,158	ADL	11.3
	2002	175,964	FGL	1.3
	2003	344,657	FGL	1.3
	2004	370,011	FGL	1.5
	2005	345,238	FGL	1.5
	2006	750	ADL	10.0
	2006	145,847	FGL	1.5
	2007	391,145	FGL	1.4
	2008	358,080	FGL	1.3
	2009	376,104	FGL	1.4
	2010	203,661	FGL	1.3
	Total	7,196,971		

Table 5. Objective-based sampling plan components for Tradinghouse Creek Reservoir, Texas 2021 – 2025.

Gear/target species	Survey objective	Metrics	Sampling objective
<i>Electrofishing</i>			
Largemouth Bass	Abundance	CPUE-Stock	RSE-Stock ≤ 25
	Size structure	PSD, length frequency	N ≥ 50 stock
	Condition	W_r	5/inch group (min)
	Genetics	% FLMB	N = 30, any age
Bluegill	Exploratory	Presence/Absence	Practical Effort
Longear Sunfish	Exploratory	Presence/Absence	Practical Effort
Gizzard Shad	Size Structure	IOV	N ≥ 50
Threadfin Shad	Exploratory	Presence/Absence	Practical Effort
<i>Trap Nets</i>			
White Crappie	Abundance	CPUE-Stock	RSE-Stock ≤ 25
	Size structure	PSD, length frequency	N ≥ 50 stock
	Condition	W_r	5/inch group (min)
<i>Gill Nets</i>			
Channel Catfish	Abundance	CPUE-Stock	RSE-Stock ≤ 25
	Size Structure	PSD, length frequency	N ≥ 50 stock
	Condition	W_r	5/inch group (min)
White Bass	Abundance	CPUE-Stock	RSE-Stock ≤ 25
	Size Structure	PSD, length frequency	N ≥ 50 stock
	Condition	W_r	5/inch group (min)

Table 6. Survey of structural habitat types, Tradinghouse Creek Reservoir, Texas, 2010. The survey was conducted using 2010 NAIP, 1-meter resolution satellite imagery. Shoreline habitat type units are in miles. Eleven (11) boat docks and piers were observed during the survey.

Habitat Type	Estimate	% of Total
Gravel Shoreline	1.88	9.7
Boulder/riprap shoreline	2.29	11.8
Natural shoreline	14.94	77.2

Table 7. Survey of aquatic vegetation, Tradinghouse Creek Reservoir, Texas, 2012, 2016, 2020 and 2024. Percentage of total reservoir surface area is listed for 2012, while percentage of randomly selected points where species occurred is listed for 2016, 2020 and 2024. The number of points where species occurred is in parentheses. Tier III is watch status.

Vegetation	2012	2016	2020	2024
<u>Native submerged</u>				
American pondweed		76% (19 of 25)	50% (25 of 50)	62% (62 of 100)
Southern naiad		12% (3 of 25)	2% (1 of 50)	
Muskgrass		4% (1 of 25)		
Coontail		8% (2 of 25)		
<u>Native floating-leaved</u>				
American lotus		8% (2 of 25)	2% (1 of 50)	
White water lily		4% (1 of 25)		
<u>Native emergent</u>				
Bulrush		52% (13 of 25)	48% (24 of 50)	28% (28 of 100)
Common buttonbush		8% (2 of 25)		
Cattail		80% (20 of 25)	54% (27 of 50)	49% (49 of 100)
<u>Non-native</u>				
Hydrilla (Tier III)	3.8 (0.2)	4% (1 of 25)		
Giant Reed (Tier III)	0.6 (0.03)	4% (1 of 25)		2% (2 of 100)
Water Hyacinth				

Gizzard Shad

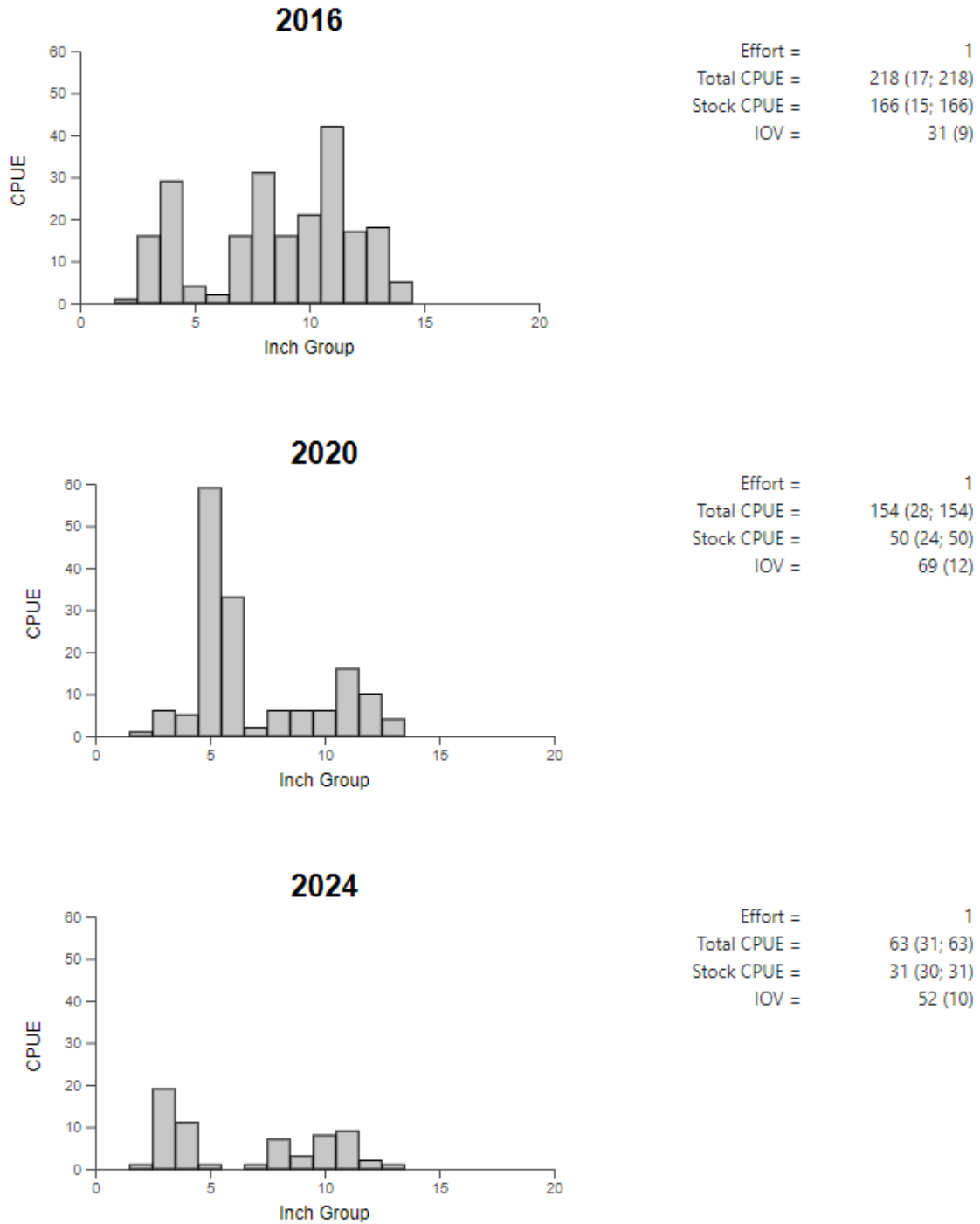


Figure 1. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Tradinghouse Creek Reservoir, Texas 2016, 2020, and 2024.

Bluegill

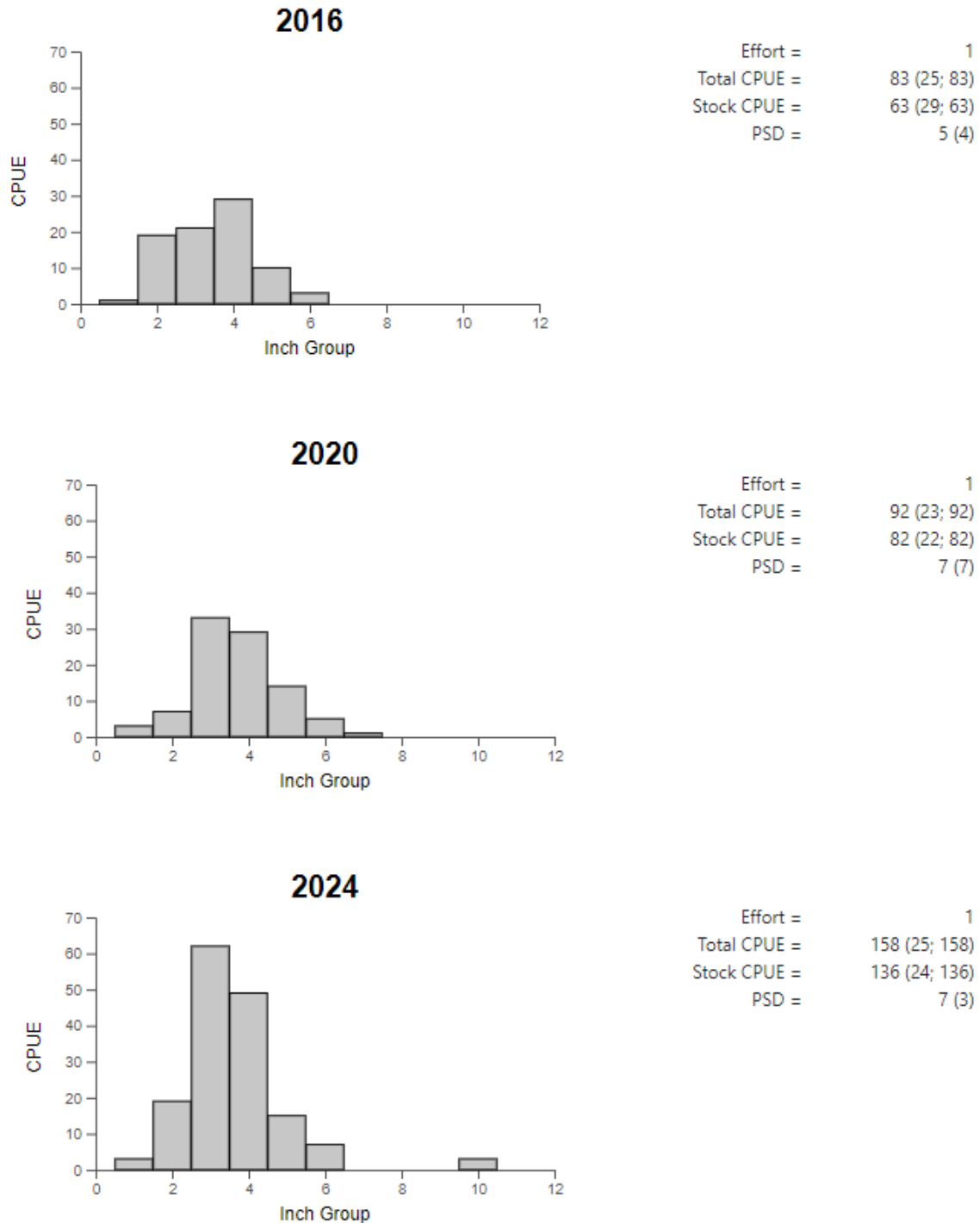


Figure 2. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Tradinghouse Creek Reservoir, Texas 2016, 2020, and 2024.

Longear Sunfish

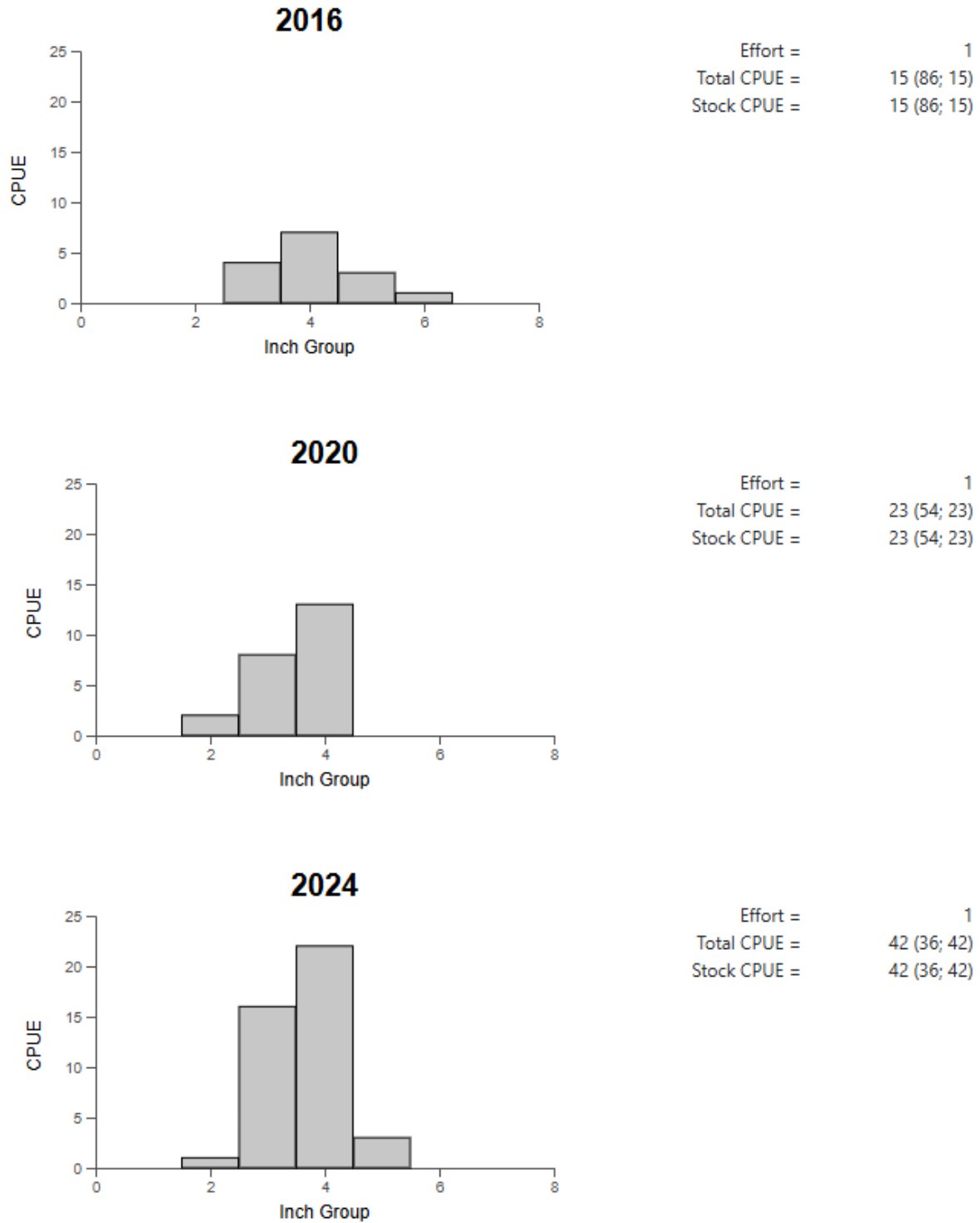


Figure 3. Number of Longear Sunfish caught per hour (CPUE) and population indices (RSE and N for CPUE are in parantheses) for fall electrofishing surveys, Tradinghouse Creek Reservoir, Texas 2016, 2020, and 2024.

Redear Sunfish

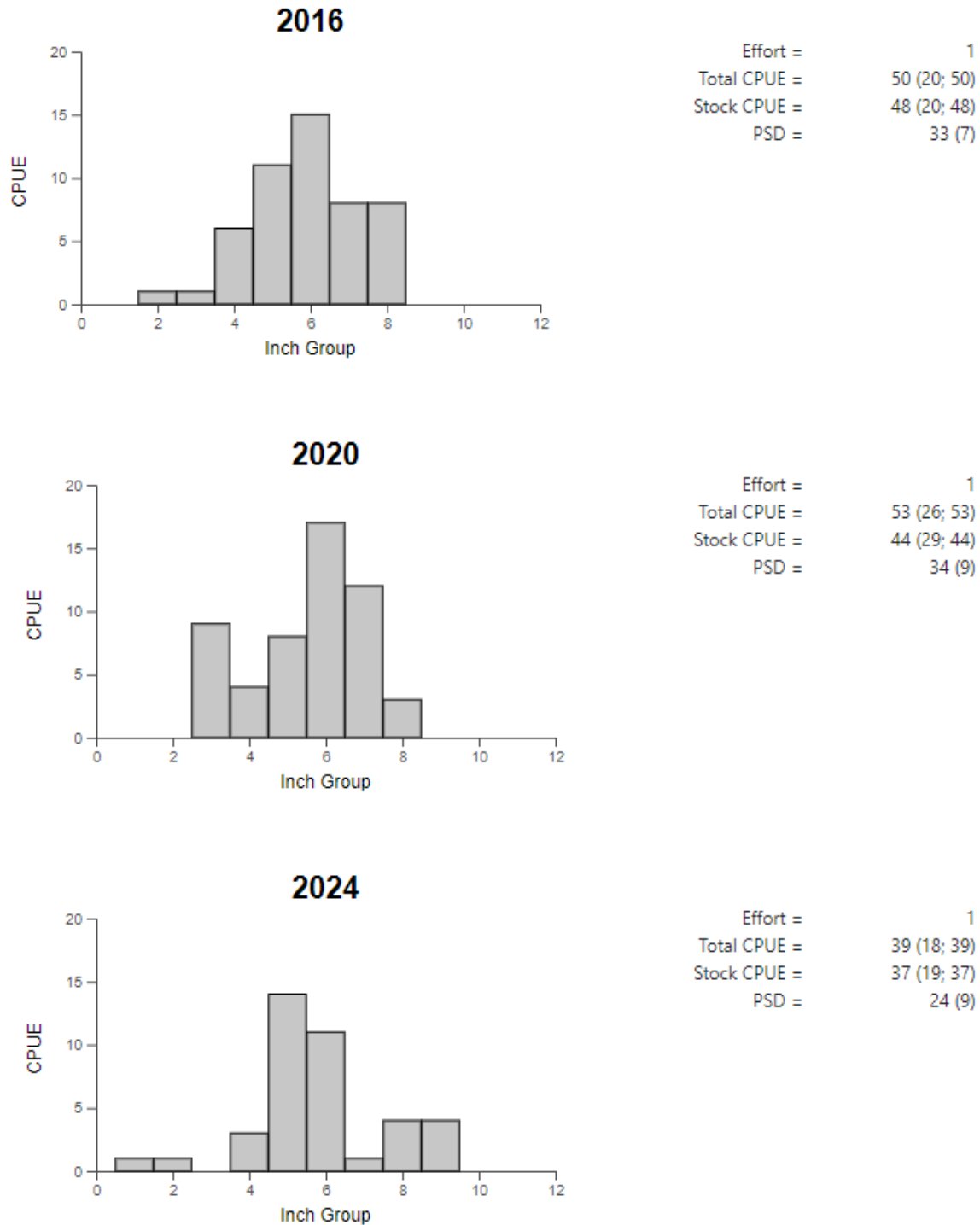


Figure 4. Number of Redear Sunfish caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Tradinghouse Creek Reservoir, Texas 2016, 2020, and 2024.

Channel Catfish

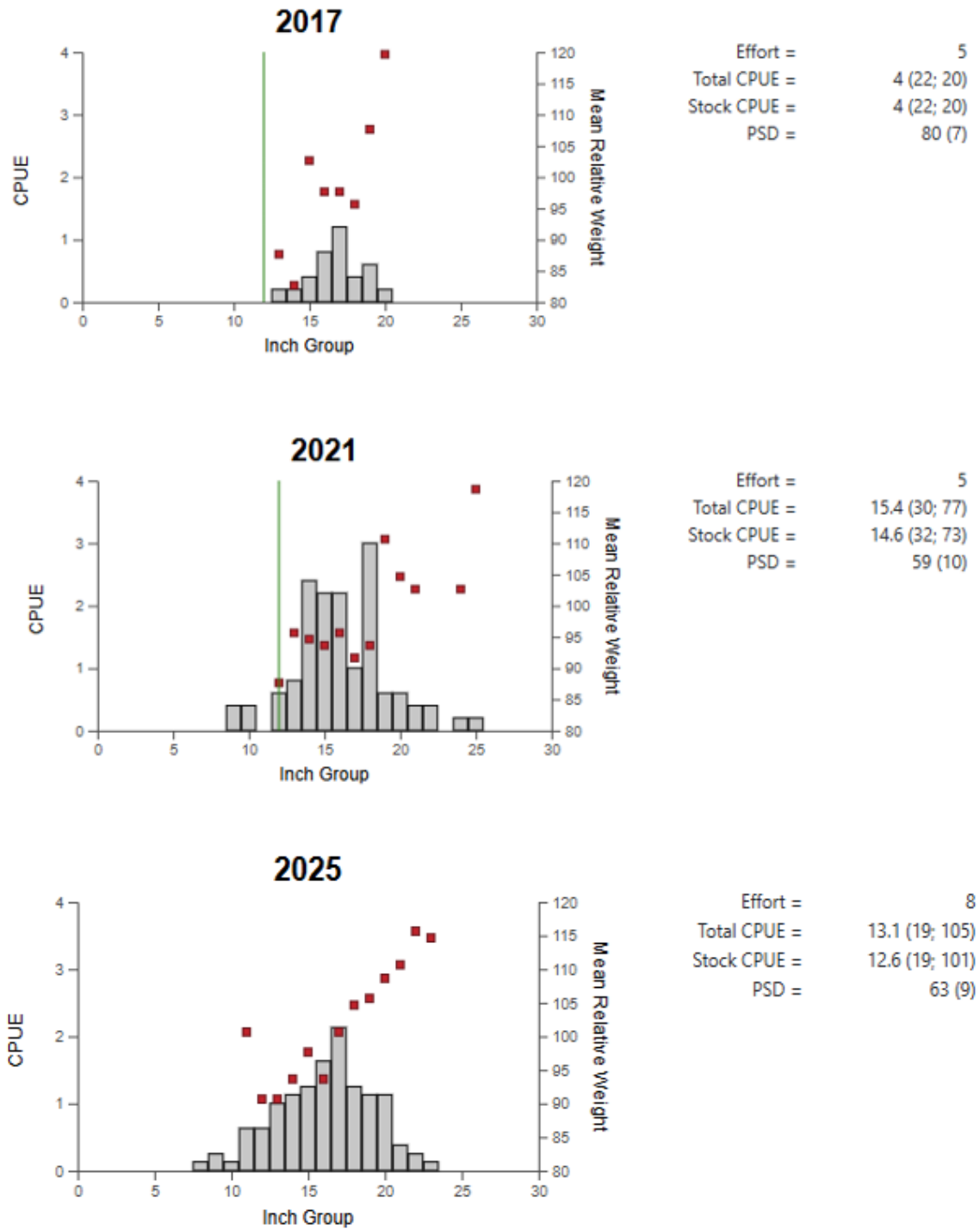


Figure 5. Number of Channel Catfish caught per net night (CPUE, bars), mean relative weights (squares) and population indices (RSE and N for CPUE and SE for size structure in parentheses) for spring gill net surveys, Tradinghouse Creek Reservoir, Texas, 2017, 2021, and 2025. The minimum length limit (vertical line) for Channel Catfish was 12-inches during 2017 and 2021; there was none after September 1, 2021.

White Bass

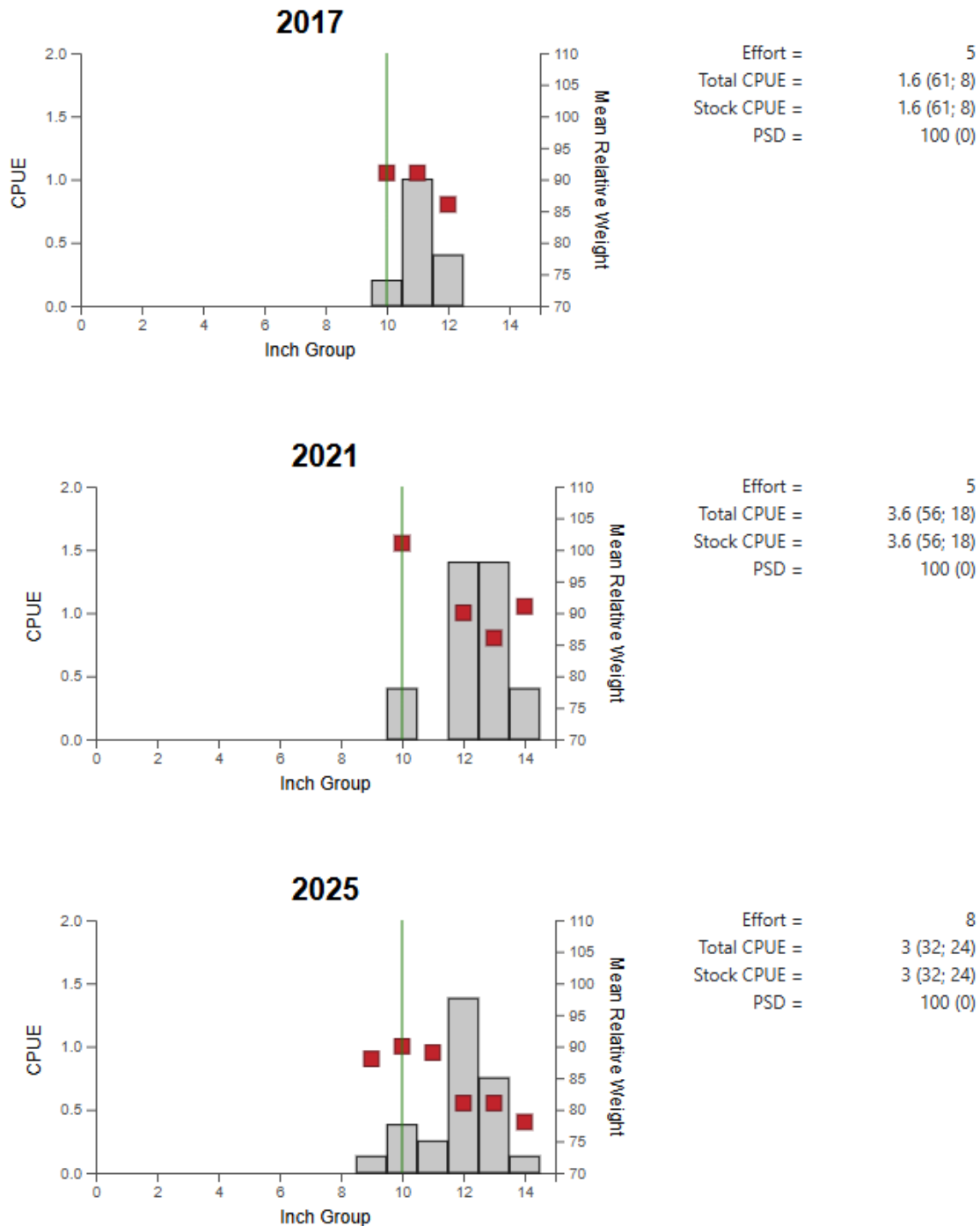


Figure 6. Number of White Bass caught per net night (CPUE, bars), mean relative weight (squares), and population indices (RSE and N for CPUE and SE for size structure in parentheses) for spring gill netting surveys, Tradinghouse Creek Reservoir, Texas, 2017, 2021, and 2025. The minimum length limit (vertical line) for White Bass was 10-inches for all three survey periods.

Largemouth Bass

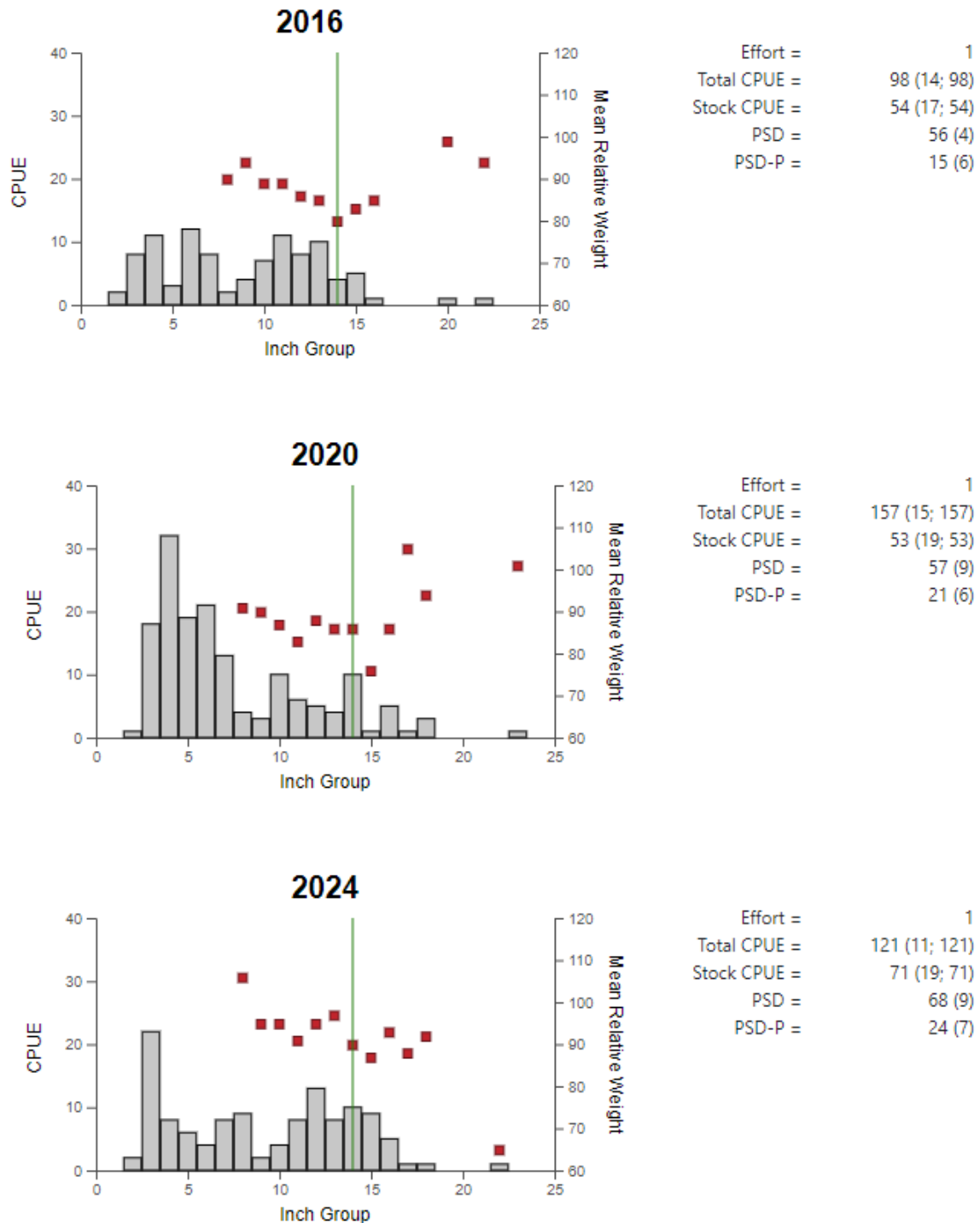


Figure 7. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weights (squares) and population indices (RSE and N for CPUE and SE for size structure in parentheses) for fall electrofishing surveys, Tradinghouse Creek Reservoir, Texas 2016, 2020 and 2024. The minimum length limit (vertical line) for Largemouth Bass was 14-inches for all three survey periods.

Table 8. Results of genetic analysis of Largemouth Bass collected by fall electrofishing, Tradinghouse Creek Reservoir, Texas, 2008, 2016 and 2024. FLMB = Florida Largemouth Bass, NLMB = Northern Largemouth Bass, Hybrid = hybrid between a FLMB and a NLMB. Genetic composition was determined with micro-satellite DNA analysis.

Year	Sample size	Number of fish			% FLMB alleles	% FLMB
		FLMB	Hybrid	NLMB		
2008	15	0	13	2	33	0
2016	30	0	30	0	67	0
2024	27	0	27	0	76	0

White Crappie

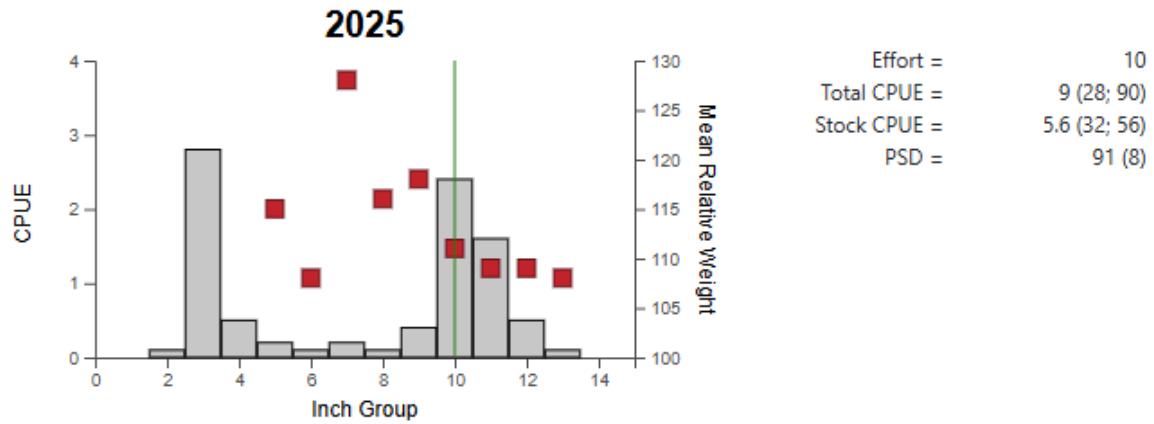


Figure 8. Number of White Crappie caught per net night (CPUE, bars), mean relative weight (squares), and population indices (RSE and N for CPUE and SE for size structure in parentheses) for trap netting surveys, Tradinghouse Creek Reservoir, Texas, 2025. Trap netting was not conducted on Tradinghouse Creek in 2020 or 2016. The minimum length limit (vertical line) for White Crappie was 10-inches.

Proposed Sampling Schedule

Table 9. Proposed sampling schedule for Tradinghouse Creek Reservoir, Texas. Survey period is June through May. Gill net surveys are conducted in the spring while electrofishing and trap netting surveys are conducted in the fall and late winter, respectively. Scheduled surveys are denoted by X.

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

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

Number (N), relative standard error (RSE), and catch per unit effort (CPUE) of all target species collected from all gear types from Tradinghouse Creek Reservoir, Texas, 2024-2025. Sampling effort was 8 net nights for gill netting, 5 net nights for trap netting, and 1 h for electrofishing.

Species	Gill Netting		Trap Netting		Electrofishing	
	N (RSE)	CPUE	N (RSE)	CPUE	N (RSE)	CPUE
Gizzard Shad					63 (31)	63.0
Channel Catfish	105 (19)	13.1				
White Bass	24 (32)	3.0				
Bluegill					158 (25)	158.0
Longear Sunfish					42 (36)	42.0
Redear Sunfish					39 (18)	39.0
Green Sunfish					7 (71)	7.0
Largemouth Bass					121 (11)	121.0
White Crappie	10 (39)	1.3	90 (28)	9.0		
Black Crappie	2 (65)	0.3	17 (50)	1.7		

APPENDIX B – Historical catch rates for targeted species

Catch rates (CPUE) of targeted species collected with electrofishing, trap netting and gill netting surveys on Tradinghouse Creek Reservoir, Texas 2000 to present. Electrofishing stations were sampled with a 5.0 Smith-Root GPP (Gas Powered Pulsator) until 2010, a 7.5 Smith-Root GPP from 2010 to 2019, and a Smith-Root Apex unit thereafter. Species averages are in bold. Dashes represent no data available. Beginning in 2024, trap netting surveys were conducted in late winter instead of late fall.

Electrofishing

	2000	2004	2008	2012	2016	2020	2024	Average
Gizzard Shad	441.0	183.0	134.0	107.0	218.0	154.0	63.0	185.7
Threadfin Shad	3.0	7.0	52.0	144.0	156.0	0.0	0.0	51.7
Bluegill	528.0	176.0	927.0	73.0	83.0	92.0	158.0	291.0
Longear Sunfish	41.0	57.0	80.0	8.0	15.0	23.0	42.0	38.0
Redear Sunfish	37.0	5.0	193.0	27.0	50.0	53.0	39.0	57.7
Warmouth	1.0	0.0	3.0	0.0	0.0	1.0	0.0	0.7
Green Sunfish	1.0	0.0	3.0	0.0	0.0	0.0	7.0	1.6
Largemouth Bass	277.0	289.0	169.0	140.0	98.0	157.0	121.0	178.7
Spotted Bass	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.3
Inland Silverside	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
White Crappie	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.6

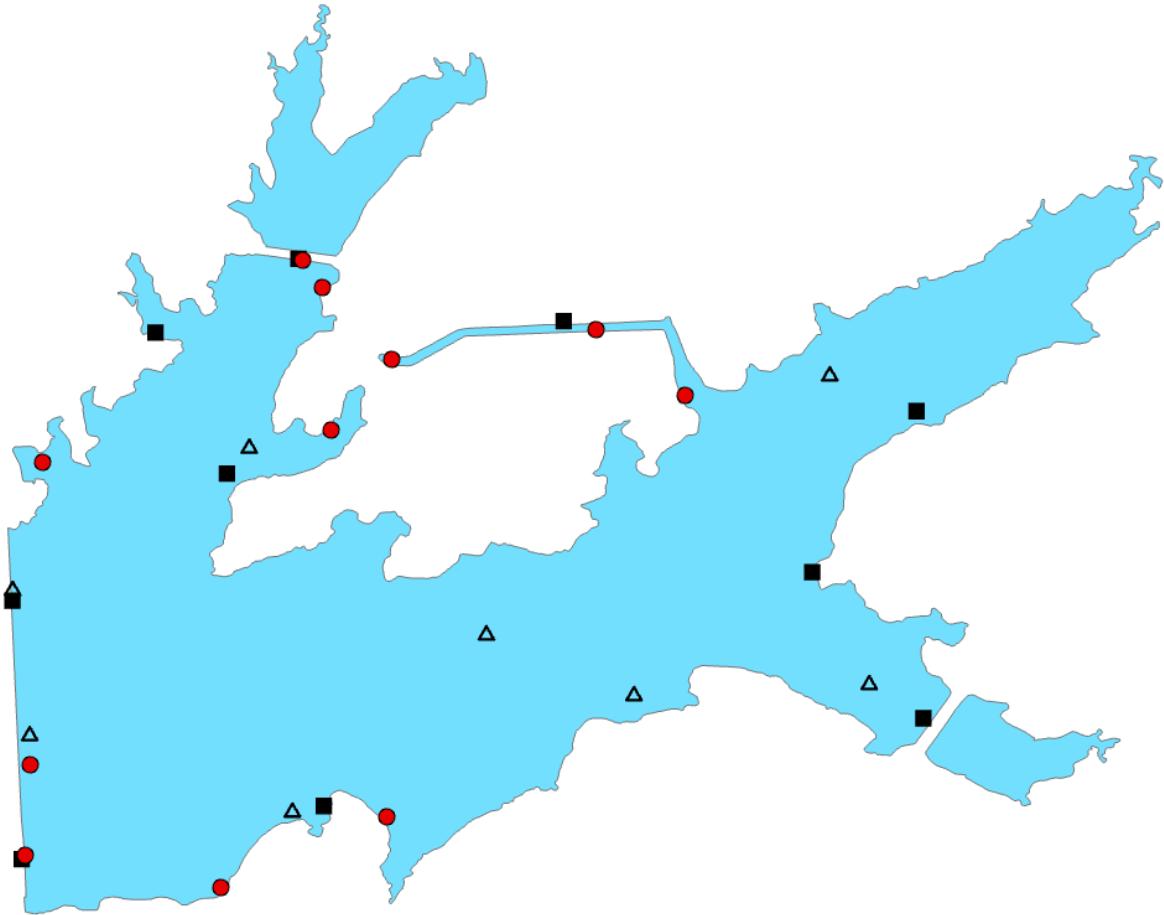
Trap netting

	2000	2004	2008	2012	2016	2020	2025	Average
White Crappie	2.3	0.2	0.0	0.8	---	---	9.0	1.8
Black Crappie	12.3	0.04	0.0	0.0	---	---	1.7	2.0

Gill netting

	2001	2005	2009	2013	2017	2021	2025	Average
Channel Catfish	4.8	3.0	15.6	9.0	4.0	15.4	13.1	9.3
White Bass	1.0	9.8	10.6	3.2	1.6	3.6	3.0	4.7
White Crappie	0.6	0.0	0.0	1.6	1.6	1.6	1.3	1.0
Black Crappie	0.2	0.0	0.0	1.8	1.2	1.0	0.3	0.6

APPENDIX C – Map of sampling locations



Location of sampling sites, Tradinghouse Creek Reservoir, Texas, 2024-2025. Electrofishing, trap netting and gill netting stations are indicated by circles, squares and triangles, respectively.



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