

Lake Wright Patman

2020 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 Lake Wright Patman were surveyed in 2020 using electrofishing and trap netting and in 2021 using gill netting. Historical data are presented with the 2020-2021 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: Lake Wright Patman is a 20,143-acre impoundment located on the Sulphur River. The reservoir is located in Bowie and Cass counties approximately 10 miles southwest of Texarkana.

Management History: Important sport fish include Blue and Channel Catfish, Largemouth Bass, and Crappie. All sport fish at Lake Wright Patman have historically been managed with statewide harvest regulations. Florida Largemouth Bass have been stocked in this reservoir to improve the quality of the Largemouth Bass fishery. Hydrilla, water hyacinth, and giant salvinia were discovered in the reservoir in 2000, 2005, and 2012, respectively. Giant Salvinia was eradicated, and water hyacinth and hydrilla do not pose any management concerns at this time. The last time any of these plant species were observed was 2017 when a trace amount of hydrilla was found.

Fish Community

- **Prey species:** Threadfin and Gizzard Shad were present in the reservoir. A majority of Gizzard Shad were available as prey to predators. Electrofishing catch of Bluegill was lower than in past years. Most Bluegill were less than 6-inches long and provided another source of forage for predatory species. Longear and Redear Sunfish were also present but in very low numbers.
- **Catfishes:** Blue Catfish catch rates increased from the last gill net survey in 2017. Channel Catfish catch rates were consistent from 2017 to 2021 but lower than 2013. A majority of Channel Catfish caught were available to anglers for harvest with the largest fish measuring 21 inches.
- **Temperate basses:** White Bass were present in the reservoir but at low numbers. Gill net catches decreased over the last two surveys.
- **Largemouth Bass:** Largemouth Bass electrofishing catch increased from the surveys in 2016 and 2012. However, there was a decrease in the proportion of legal harvest size fish available to anglers. Largemouth Bass were in good condition with fast growth (average age at 14 inches was 1.9 years).
- **Crappie:** Both White and Black Crappie were caught during the fall trap net surveys, with White Crappie having the higher catch rates. There were a high number of legal harvest size crappie available to anglers with good condition for most size classes.

Management Strategies: Conduct aquatic plant surveys annually to monitor the spread or new introduction of invasive aquatic plant species and recommend control measures to U.S. Army Corps of Engineers (USACE) as necessary. Maintain signage at the spillway to inform anglers of the threat of Asian carp (specifically Bighead and Silver Carp) and work with USACE to prevent movement of Asian carp upstream of the dam.

Introduction

This document is a summary of fisheries data collected from Lake Wright Patman from 2020-2021. 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 2020-2021 data for comparison.

Reservoir Description

Lake Wright Patman is a 20,143-acre impoundment constructed in 1956 on the Sulphur River. It is located in Bowie and Cass counties approximately 10 miles southwest of Texarkana. The controlling authority is the U.S. Army Corps of Engineers (USACE). Primary water uses included flood control, municipal and industrial water supply, and public recreation. It has a drainage area of approximately 3,443 square miles and a shoreline length of 170 miles. USACE manipulates downstream flow releases in an attempt to manage for a summer conservation pool of 227.5 msl and a winter conservation pool of 220.6 msl. Average annual water fluctuation is usually 7-8 feet (Figure 1), but fluctuations can exceed 20 feet. Other descriptive characteristics for Lake Wright Patman are in Table 1.

Angler Access

Lake Wright Patman has 14 public boat ramps available to anglers. There were no issues identified at any of the boat ramps. Additional boat ramp characteristics are in Table 2. Bank angling access is available at local parks including but not limited to Atlanta State Park and the USACE parks around the lake.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Bister and Lechelt 2017) included:

1. Monitor aquatic invasive plant species including giant salvinia, water hyacinth, and hydrilla. Recommend management for control as necessary.

Action: Aquatic vegetation surveys were conducted every August from 2017 through 2020 to monitor coverage of giant salvinia, water hyacinth, hydrilla, and other invasive aquatic plant species. Only trace amount of hydrilla were observed in 2017 but none since. No treatments were necessary.
2. Conduct low-frequency electrofishing to assess Flathead Catfish and Blue Catfish to supplement gill netting precision.

Action: Follow up attempts to evaluate low-frequency electrofishing during the summer were not completed. Gill netting surveys adequately sampled Blue Catfish with precision.
3. Promote awareness of Bighead Carp presence in the Sulphur River below the Lake Wright Patman spillway.

Action: Bighead Carp presence has been discussed during presentations. Signs have been erected near the spillway of Lake Wright Patman.

Harvest regulation history: All sport fishes in Lake Wright Patman have been managed with statewide regulations. Current regulations are found in Table 3.

Stocking history: Florida Largemouth Bass (FLMB) were introduced into Lake Wright Patman in 1978. Additional stockings have been conducted periodically, most recently in 2008, in an attempt to increase the frequency of FLMB alleles. Paddlefish were stocked in 1992 and 1994 as part of a restoration project. Palmetto Bass were stocked annually from 1994-1999 and in 2002, but stockings were discontinued in

2002. Walleye stockings in 1974 and 1975 were unsuccessful in establishing a viable population. The complete stocking history is in Table 4.

Vegetation/habitat management history: Historically, Lake Wright Patman has been characterized as having small quantities of aquatic vegetation. Relatively turbid water and seasonal water level fluctuations are major factors that limit plant growth. Some non-native aquatic vegetation species have been documented in Lake Wright Patman. Hydrilla was first observed in 2000 (Ryan and Brice 2001), water hyacinth in 2006, and giant salvinia in 2012. All non-native vegetation has been monitored and managed, though none have been observed since 2017 when only trace amounts of hydrilla were found. In 2019, artificial fish habitat structures were deployed around the lake in 5 different locations.

Water transfer: No interbasin transfers exist.

Methods

Surveys were conducted to achieve survey and sampling objectives in accordance with the objective-based sampling (OBS) plan for Lake Wright Patman (Bister and Lechelt 2017). 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 2017) with exception listed within methods below.

Electrofishing – Largemouth Bass, sunfishes, Gizzard Shad, and Threadfin Shad were collected by daytime electrofishing (1.3 hours at 16, 5-min stations) in 2016 and 2020. Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing. Mean age at harvest length for Largemouth Bass were determined using otoliths from 13 randomly selected fish (range 13.0 to 14.9 inches).

Trap netting – Crappie were collected using trap nets (10 net nights at 10 stations). CPUE for trap netting was recorded as the number of fish caught per net night (fish/nn). Mean age at harvest length for crappie were determined using otoliths from 14 randomly selected fish (range 9.0 to 10.9 inches).

Gill netting – Blue Catfish, 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).

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 ($RSE = 100 \times SE$ of the estimate/estimate) was calculated for all CPUE and creel statistics.

Habitat –Vegetation surveys were conducted in 2017–2021 to monitor coverage of water hyacinth and to detect any new introductions of other invasive aquatic plant species. Habitat was assessed with the digital shapefile method (TPWD, Inland Fisheries Division, unpublished manual revised 2017).

Water level – Source for water level data was the United States Geological Survey (USGS 2021)

Results and Discussion

Habitat: There has been no perceived changes in structural habitat since the 2004 survey. Ninety eight percent of Lake Wright Patman littoral zone structural habitat consisted primarily of natural shoreline with under two percent being rocky habitat (Brice 2005). There were only trace amounts of native floating and emergent vegetation observed in the fall of 2020 and no non-native vegetation was observed (Table 7). Vegetation in Lake Wright Patman is most likely limited by the annual water level fluctuations (Figure 1) as well as wind and wave action, turbidity, and bathymetry. Hydrilla was last observed in 2017 in trace amounts. No water hyacinth has been observed since the last report in 2017 (Bister and Lechelt 2017). Due to the lack of vegetation, Texas Parks and Wildlife partnered with USACE to deploy artificial fish “reef” habitat structures around the lake in 5 different locations. Artificial “reefs” consisted of Mossback structures, Georgia cubes, and PVC trees and were purchased with funding through the Conservation License Plate program. You can find the structure location at <http://bit.ly/WrightPatmanStructure>.

Prey species: Catch rates of Gizzard Shad and Threadfin Shad during the 2020 electrofishing survey were 633.0/h and 361.5/h, respectively (Appendix A). Catch rates of Gizzard Shad increased in 2020 from the 2016 (336.0/h) survey (Figure 2). The Index of Vulnerability (IOV) for Gizzard Shad was high in 2020 with 89% of fish available to existing predators. This is also higher compared to the last survey in 2016 (39%). Electrofishing catch rates of Bluegill decreased in the 2020 fall electrofishing survey (51.8/h) from the catch rate in 2016 (114.4/h). The size structure of Bluegill continued to be dominated by small individuals (PSD in 2020 = 11; Figure 3). Catch rates of Redear Sunfish were low (4.5/h), and similar to

the last survey (2016 = 6.4/h; Figure 4). Catch rates of sunfish are most likely low due to the lack of vegetation present in the reservoir.

Catfishes: Gill net catch rates of Blue Catfish have increased over the last three surveys. Catch rates in 2021 were 7.3/nn compared to 3.9/nn in 2017 and 3.4/nn in 2013 (Figure 5). While catch rates increased, the PSD decreased in 2021 to 25. Individual Blue Catfish 30 inches and greater were also observed during the gill net survey. The gill net catch rate of Channel Catfish was 9.2/nn in 2021. This was similar to catch rates in 2017 (8.0/nn) but lower than catch rates in 2013 (22.6/nn; Figure 6). While there has been a decrease in catch rates, there has been an increase in the PSD (2013 = 24; 2017 = 49; 2021 = 56; Figure 6). There were a high number of legal harvest sized fish available to anglers.

White Bass: White Bass were present in the reservoir, but sampling objectives were not met during the spring gill net survey. Catch rate for White Bass in 2021 was low (1.9/nn; Figure 7). This was lower than catch rates in 2013 (6.3/nn) and 2017 (2.3/nn). Fishing effort for White Bass has historically been low (Bister and Lechelt 2017).

Largemouth Bass: The electrofishing catch rate of Largemouth Bass was 89.3.0/h in 2020, which was higher than 52.8/h in 2016 (Figure 8). There has been a slight decrease in the catch rate of legal harvest size (≥ 14 inches) bass available for anglers at 6.8/h in 2020 compared to the survey in 2016 when it was 15.2/h. Lack of vegetation may have a role in low catch rates of Largemouth Bass. Growth of Largemouth Bass in Lake Wright Patman was moderate; average age at 14 inches (13.0 to 14.9 inches) was 1.9 years (N = 13; range = 1 – 4 years) and similar to the previous survey (2016 = 1.6 years). Body condition in 2020 was adequate (relative weight over 90) for nearly all size classes of fish and was similar to the previous survey (Figure 8). While catch rates of prey species was low, relative weights and good growth indicate that Largemouth Bass have sufficient prey available.

Crappie: Both Black and White Crappie were caught during the 2020 fall trap net survey. The trap net catch rate of White Crappie was 16.1/nn in 2020, which was higher than 2016 (7.6/nn) and similar to 2012 (19.4/nn; Figure 9). In 2020, the PSD was 88 and was similar to the PSD in 2012 (84) which were both higher than the PSD in 2016 (Figure 9). Body condition in 2020 was adequate with mean relative weights were over 90 for most size classes (Figure 9). The average age of 10-inch (9.0 to 10.9 inches) White Crappie in 2020 was 1.6 years (N = 14), which was similar to the last two surveys in 2016 (1.4 years) and 2012 (1.5 years).

The trap net catch rate for Black Crappie in 2020 (2.5/nn) was similar to catch rates in 2012 (2.1/nn) but lower than catch rates in 2016 (5.1/nn; Figure 10). There were only a few legal harvest length Black Crappie caught. In 2020, condition of Black Crappie increased from 2016 with all length classes having relative weights over 90. The target number of Black Crappie for age and growth during the trap net survey were not collected. Only three 10-inch (9.0 to 10.9 inches) Black Crappie were collected, and average age was 2.3 years (range = 2 - 3 years).

Fisheries Management Plan for Lake Wright Patman, Texas

Prepared – July 2021

ISSUE 1: An invasive Asian carp species, the Bighead Carp, is present in the Sulphur River downstream of Lake Wright Patman. The dam is a barrier to their upstream migration, but anglers must be informed of the threat of their expansion. A new regulation was enacted in 2012 to prevent the spread of Bighead and Silver Carp. This regulation made it illegal to transport live non-game fish from the Sulphur River downstream of the Wright Patman dam along with identical restrictions at two other areas in the state where Asian carp are also present.

MANAGEMENT STRATEGIES

1. Maintain signage at spillway to inform anglers of the threat of Bighead and Silver Carp.
2. Work with the USACE to ensure future actions at the spillway do not result in the possible movement of Bighead and Silver Carp upstream of the dam.

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 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 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. Giant salvinia, water hyacinth, and hydrilla have all been observed on Lake Wright Patman in the past, though recent survey have not observed any aquatic invasive vegetation.

MANAGEMENT STRATEGIES

1. Monitor the presence of invasive aquatic vegetation during annual inspections.
2. Cooperate with the controlling authority to post appropriate signage at access points around the reservoir.
3. Contact and educate marina owners about invasive species, and provide them with posters, literature, etc... so that they can in turn educate their customers.
4. Educate the public about invasive species through the use of media and the internet.
5. Make a speaking point about invasive species when presenting to constituent and user groups.
6. 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 (2021–2025)

Sport fish, forage fish, and other important fishes

Sport fishes in Lake Wright Patman include White Crappie, Black Crappie, Channel Catfish, Blue Catfish, White Bass, and Largemouth Bass. Important forage species include Bluegill, Gizzard Shad, and Threadfin Shad. The proposed sampling schedule can be found in Table 7.

Low-density fisheries

White Bass: White Bass relative abundance has been variable in Lake Wright Patman. Even though the White Bass fishery is negligible, we will collect population data during routine spring gill netting in 2025 although no additional effort will be expended to sample this species. While there will be no specific sampling objectives for White Bass. We will look for opportunities to inform the public about angling opportunities for White Bass when the population is abundant.

Survey objectives, fisheries metrics, and sampling objectives

Largemouth Bass: Trend data on relative abundance and size structure has been collected every 4 years. The Largemouth Bass population in Lake Wright Patman has exhibited consistently low abundance. The past three fall nighttime electrofishing surveys resulted in CPUE-S from 28.0 to 44.8 fish/h with just over 50 stock-size fish caught in each survey. In 2020, the daytime electrofishing survey had a CPUE-S of 45.8 fish/h and just over 50 stock-size fish. Daytime electrofishing will continue to be sufficient with 15 randomly-selected 5-minute stations to collect trend data to detect large-scale changes in the population size structure, condition, and age-and-growth during fall 2024. Sampling objectives for Largemouth Bass will include size structure (PSD and length frequency), growth (mean age at 14 inches using a sample size of 13 fish between 13.0 and 14.9 inches), and condition (mean W_r using lengths and weights from 10 fish per inch-group). The target sample size for Largemouth Bass is 50 stock-size fish. A maximum of 24 stations will be sampled.

Crappie: Black and White Crappie are both present in Lake Wright Patman. Sampling objectives will be based on catches of all crappie combined during the fall trap netting survey. Trend data on relative abundance, size structure, age-and-growth, and condition have been collected every 4 years. A minimum of 10 single-cod trap nets set for one night at random locations will be used to collect trend data on White Crappie and Black Crappie during fall 2024 to detect large-scale changes in the population that might require further investigation. An additional 5 nets will be set if 50 stock-size crappie are not collected in the first 10 nets. A maximum of 15 nets will be sampled. Due to past variability in CPUE, we will not increase sampling to achieve RSE of CPUE-S < 25.

Data collected will include size structure (PSD and length frequency), growth (mean age at 10 inches using a sample size of 13 fish between 9.0 and 10.9 inches), relative abundance (CPUE-total and CPUE-stock), and condition (mean W_r using lengths and weights of 10 fish per inch-group).

Catfish: Channel Catfish, Blue Catfish, and Flathead Catfish are present in Lake Wright Patman. Trend data has been collected every 4 years with spring gill netting (10-15 net nights). This level of effort has captured a sufficient number of Channel Catfish with acceptable precision. This year, Blue Catfish almost met our sampling objectives with just under 50 stock-size fish. However, catches of Blue Catfish and Flathead Catfish usually are not adequate to meet sampling objectives.

We will continue to use spring gill nets (10 nets minimum) to collect trend data on Channel Catfish to detect any large-scale changes in the population that might require further investigation. Sampling objectives will be to collect 50 stock-length fish for size structure and length frequency, with CPUE-S

(RSE \leq 25) for relative abundance. Fish body condition will be assessed using 10 fish per inch-group to calculate mean W_r . If sampling objectives are not met in the first 10 nets, we will set an additional 5 nets. A maximum of 15 nets will be sampled.

Blue Catfish will be sampled during the spring gill netting survey. Size structure, length frequency, and condition will be collected with the objective to collect 50 stock-length fish (RSE \leq 25) but no additional nets will be set once Channel Catfish objectives are met.

Prey Species: Trend data on relative abundance and size structure of sunfish, Gizzard Shad and Threadfin Shad have been collected every 4 years. Continuation of sampling, as per Largemouth Bass above, will allow for monitoring of large-scale changes in sunfish and shad relative abundance and size structure. No additional effort will be expended beyond effort necessary to achieve Largemouth Bass objectives. Instead, Largemouth Bass body condition can provide information on forage abundance, vulnerability, or both relative to predator density.

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Tables and Figures

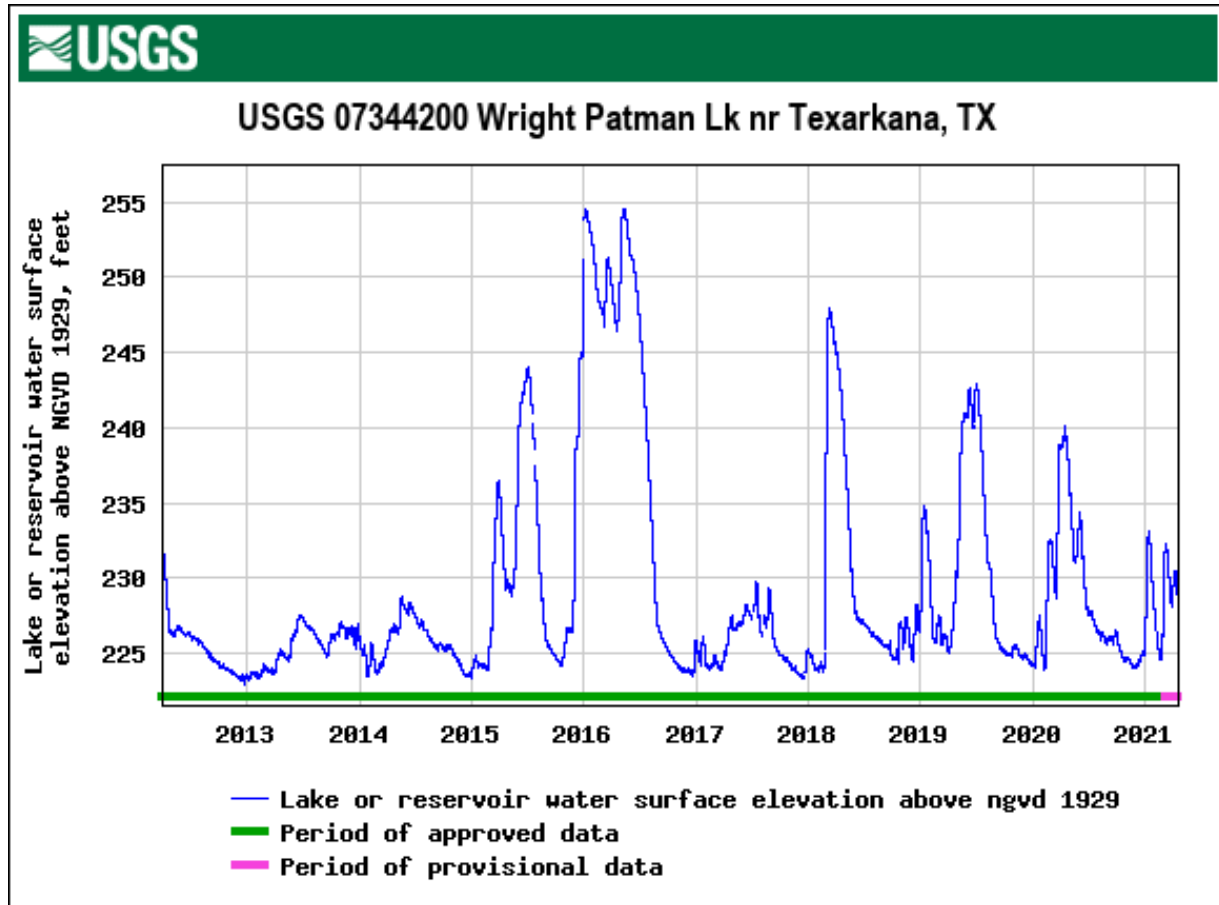


Figure 1. Water level elevations in feet above mean sea level (MSL) recorded for Lake Wright Patman, Texas. Conservation pool level is 220.6 ft-msl and summer pool level is 227.5 ft-msl.

Table 1. Characteristics of Lake Wright Patman, Texas.

Characteristic	Description
Year constructed	1956
Controlling authority	U.S. Army Corps of Engineers
County	Bowie and Cass
Reservoir type	Mainstem
Shoreline Development Index	8.5
Conductivity	190 μ S/cm

Table 2. Boat ramp characteristics for Lake Wright Patman, Texas, May 2021. Reservoir elevation at time of survey was 227.0 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
Malden Lake	33.26437 -94.34804	Y	40	217	Excellent, no access issues
Herron Creek	33.28753 -94.32867	Y	10	215	Excellent, no access issues
Berry Farm Park	33.26086 -94.26554	Y	10	217	Excellent, no access issues
Kelly Creek Marina	33.28784 -94.25136	Y	10	217	Excellent, no access issues
Big Creek Marina	33.31562 -94.24062	Y	10	220	Excellent, no access issues
Clear Springs	33.35441 -94.19717	Y	16	218	Excellent, no access issues
North Shore	33.35048 -94.17752	Y	35	216	Excellent, no access issues
Intake Hill	33.32087 -94.16454	Y	19	220	Excellent, no access issues
Cass County Park	33.26502 -94.19272	Y	10	221	Excellent, no access issues
Rocky Point	33.28580 -94.17209	Y	20	219	Excellent, no access issues
Piney Point	33.29993 -94.17267	Y	50	217	Excellent, no access issues
Overcup Landing	33.23769 -94.36632	Y	10	220	Excellent, no access issues
Jackson Creek	33.22491 -94.30289	Y	10	220	Excellent, no access issues
Atlanta State Park	33.23462 -94.25736	Y	30	220	Excellent, no access issues

Table 3. Harvest regulations for Lake Wright Patman, Texas.

Species	Bag limit	Length limit
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (in any combination)	12-inch minimum
Catfish, Flathead	5	18-inch minimum
Bass, White	25	10-inch minimum
Bass, Palmetto	5	18-inch minimum
Bass, Largemouth	5 ^a	14-inch minimum
Bass, Spotted	5 ^a	None
Crappie: White and Black crappie, their hybrids and subspecies	25 (in any combination)	10-inch minimum

^a Daily bag for Largemouth Bass and Spotted Bass = 5 fish in any combination.

Table 4. Stocking history of Lake Wright Patman, Texas. FRY= fry FGL = fingerling.

Species	Year(s) Stocked	Number of Years	Number Stocked	Size
Florida Largemouth Bass	1978		295,460	FGL
	1991-1994	3	981,317	FGL
	1991-1994	2	526,206	FRY
	2002-2008	3	1,503,977	FGL
	Total		3,306,960	
Paddlefish	1992-1994	2	16,967	FRY
	Total		16,967	
Palmetto Bass	1994-1999	6	1,272,078	FGL
	2002	1	100,444	FGL
	Total		1,372,522	
Walleye	1974-1975	2	672,317	FRY
	Total		672,317	

Table 5. Objective-based sampling plan components for Lake Wright Patman, Texas 2020–2021.

Gear/target species	Survey objective	Metrics	Sampling objective
<i>Electrofishing</i>			
Largemouth Bass	Abundance	CPUE–Stock	RSE–Stock ≤ 25
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Age-and-growth	Age at 14 inches	$N = 13, 13.0 - 14.9$ inches
	Condition	W_r	10 fish/inch group (max)
Bluegill ^a	Abundance	CPUE–Total	RSE ≤ 25
	Size structure	PSD, length frequency	$N \geq 50$
Gizzard Shad ^a	Abundance	CPUE–Total	RSE ≤ 25
	Size structure	PSD, length frequency	$N \geq 50$
	Prey availability	IOV	$N \geq 50$
<i>Trap netting</i>			
Crappie	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>			
Channel Catfish	Abundance	CPUE–stock	RSE–Stock ≤ 25
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Condition	W_r	10 fish/inch group
White Bass ^b	Abundance	CPUE - stock	RSE-stock ≤ 25
	Size structure	PSD, length frequency	$N \geq 50$ stock
	Condition	W_r	10 fish/inch group

^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 White Bass if not reached from designated catfish sampling effort.

Table 6. Survey of aquatic vegetation, Lake Wright Patman, Texas, 2017–2020. Surface area (acres) is listed with percent of total reservoir surface area in parentheses.

Vegetation	2017	2018	2019	2020
Native submersed				0
Native floating-leaved				<1 (trace)
Native emergent				<1 (trace)
Non-native				
Giant salvinia (Tier I)*	0	0	0	0
Hydrilla (Tier III)*	<1 (trace)	0	0	0
Water hyacinth (Tier III)*	0	0	0	0

*Tier I is immediate Response, Tier II is Maintenance, Tier III is Watch Status

Gizzard Shad

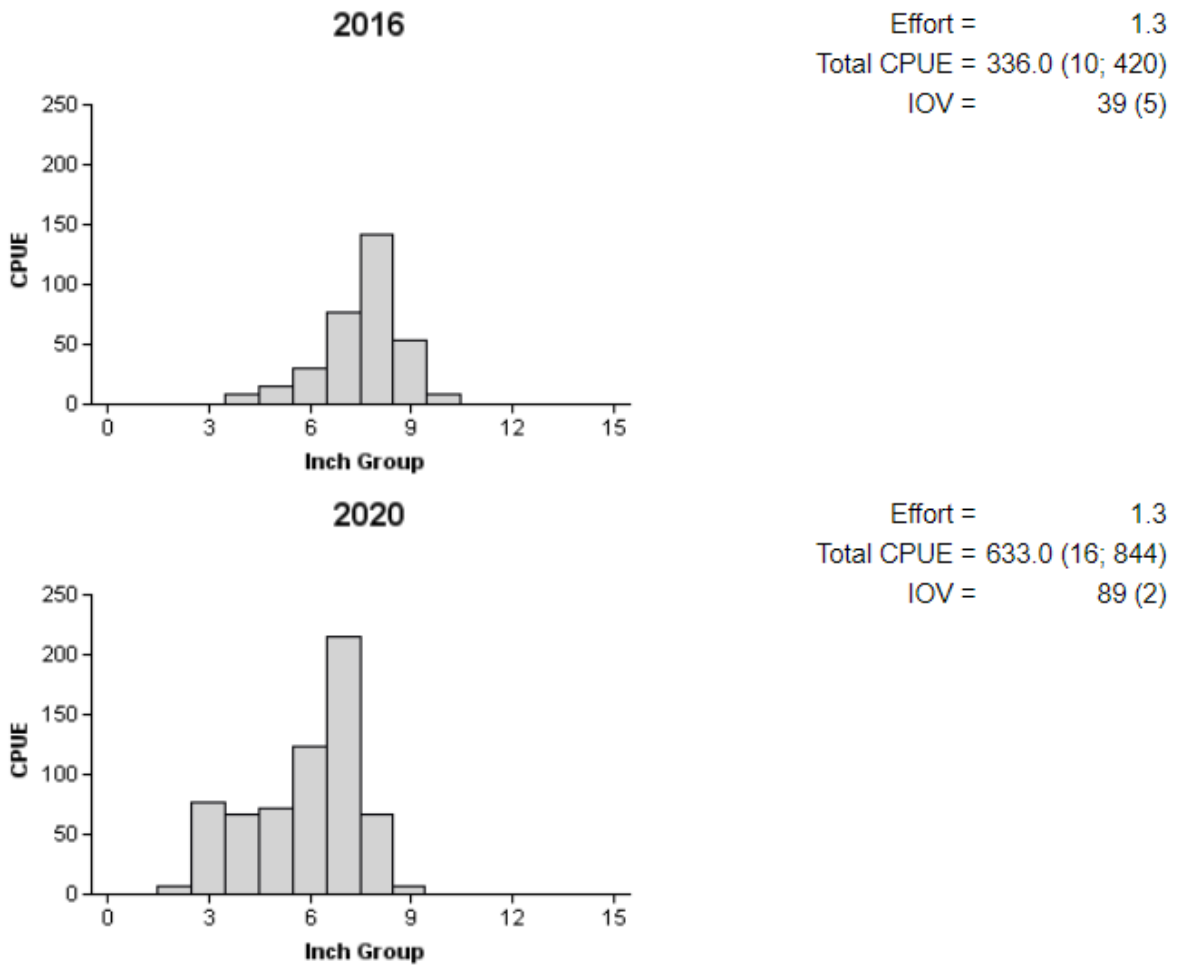


Figure 2. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall daytime electrofishing surveys, Lake Wright Patman, Texas, 2016 and 2020.

Bluegill

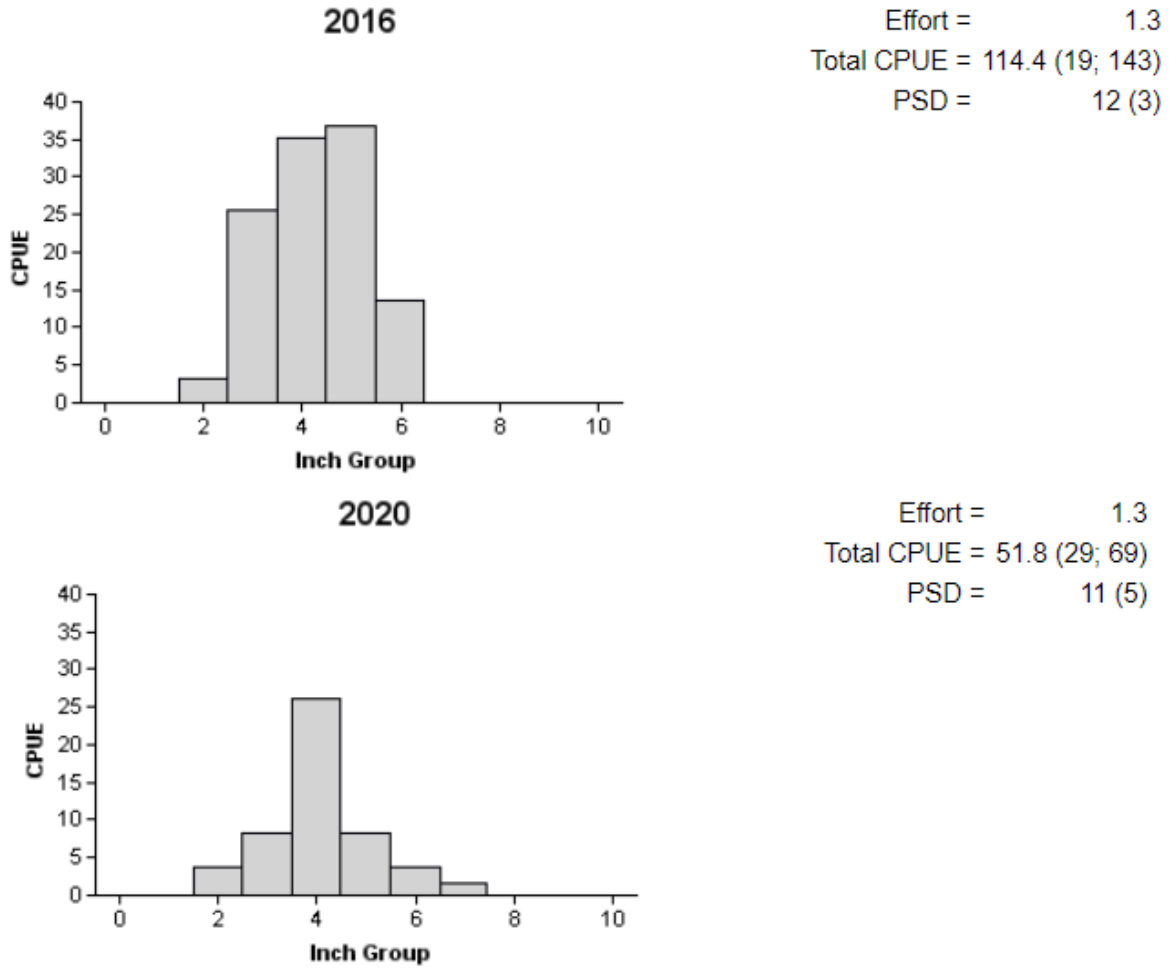


Figure 3. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall daytime electrofishing surveys, Lake Wright Patman, Texas, 2016 and 2020.

Redear Sunfish

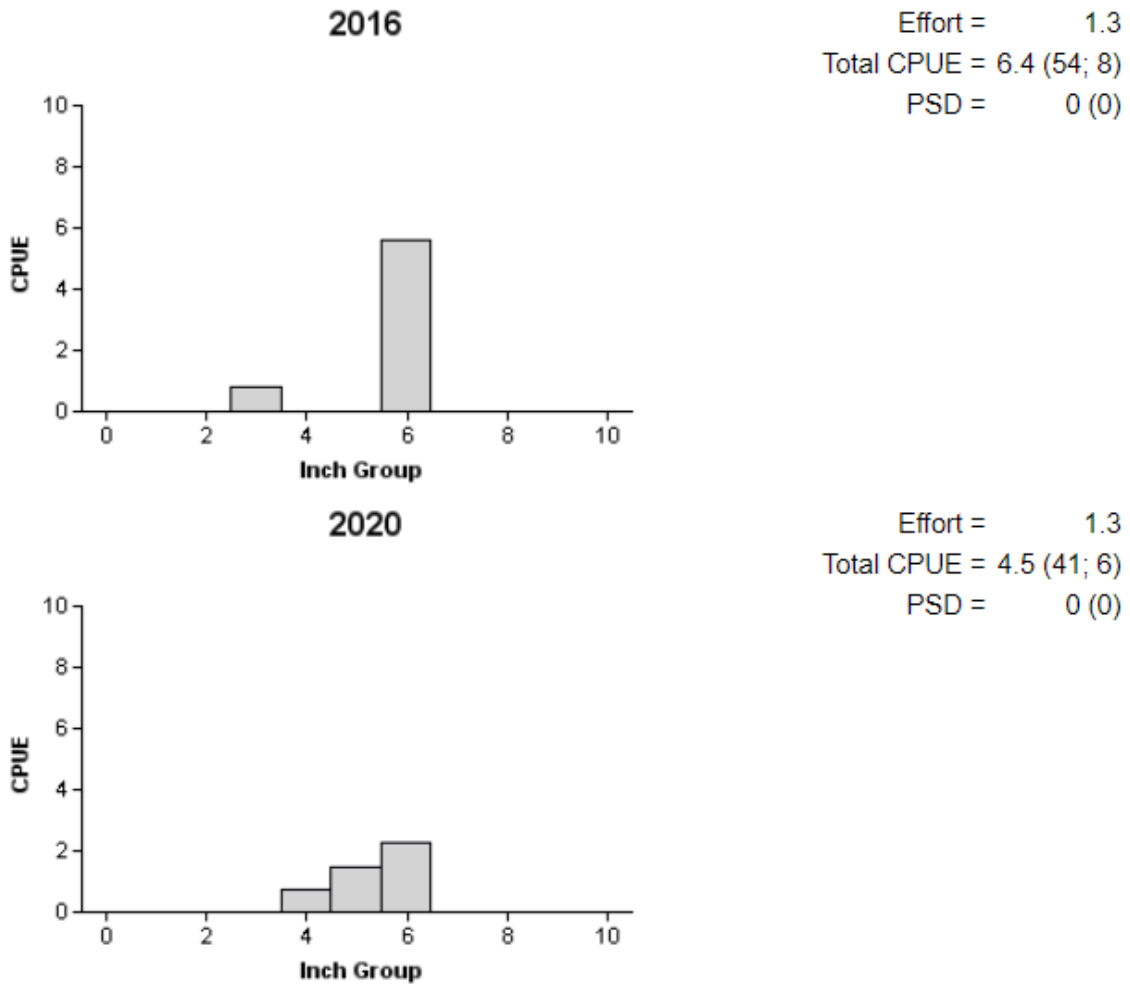


Figure 4. Number of Redear Sunfish caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall daytime electrofishing surveys, Lake Wright Patman, Texas, 2016 and 2020.

Blue Catfish

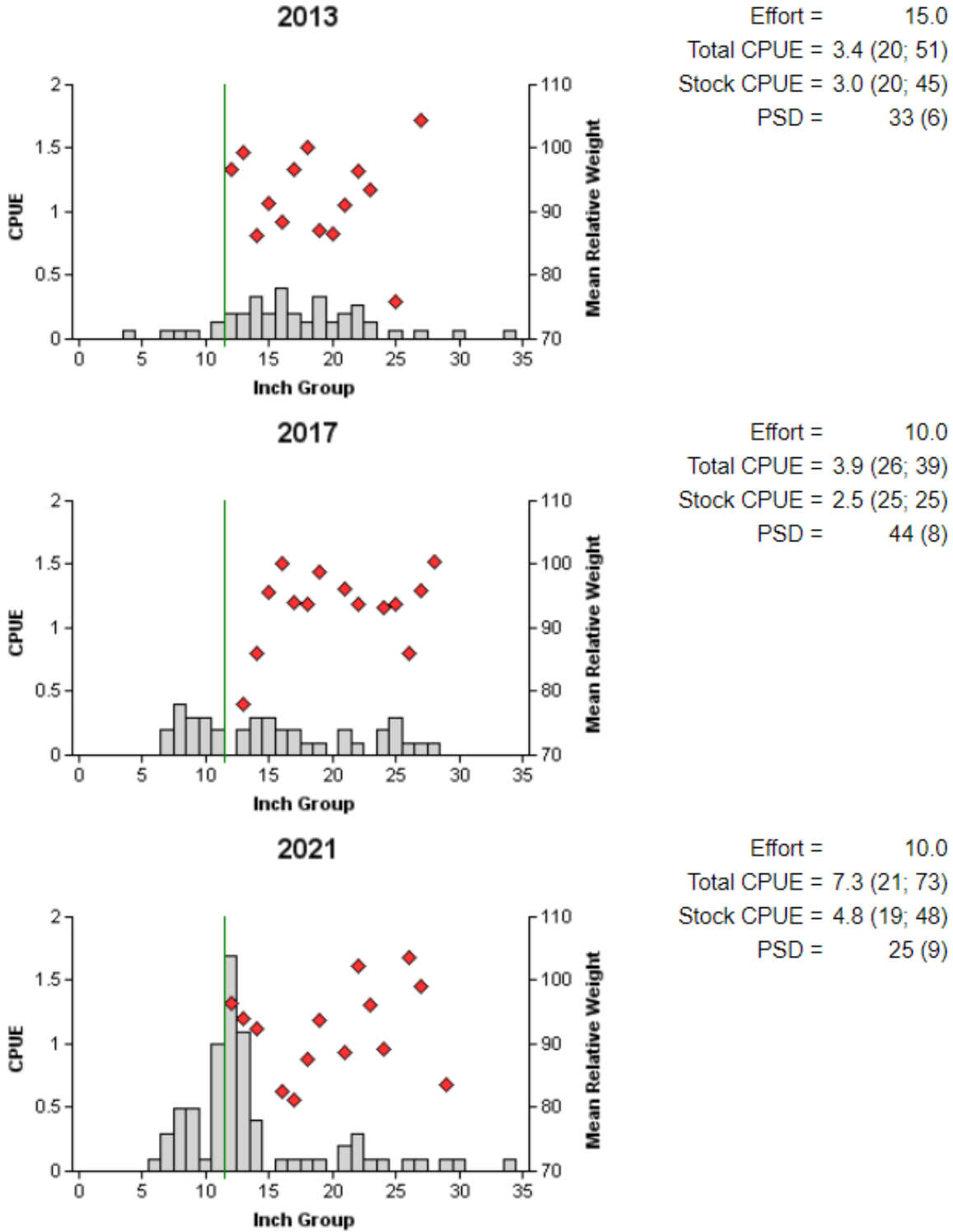


Figure 5. Number of Blue Catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lake Wright Patman, Texas, 2013, 2017, and 2021. Vertical line indicates minimum length limit.

Channel Catfish

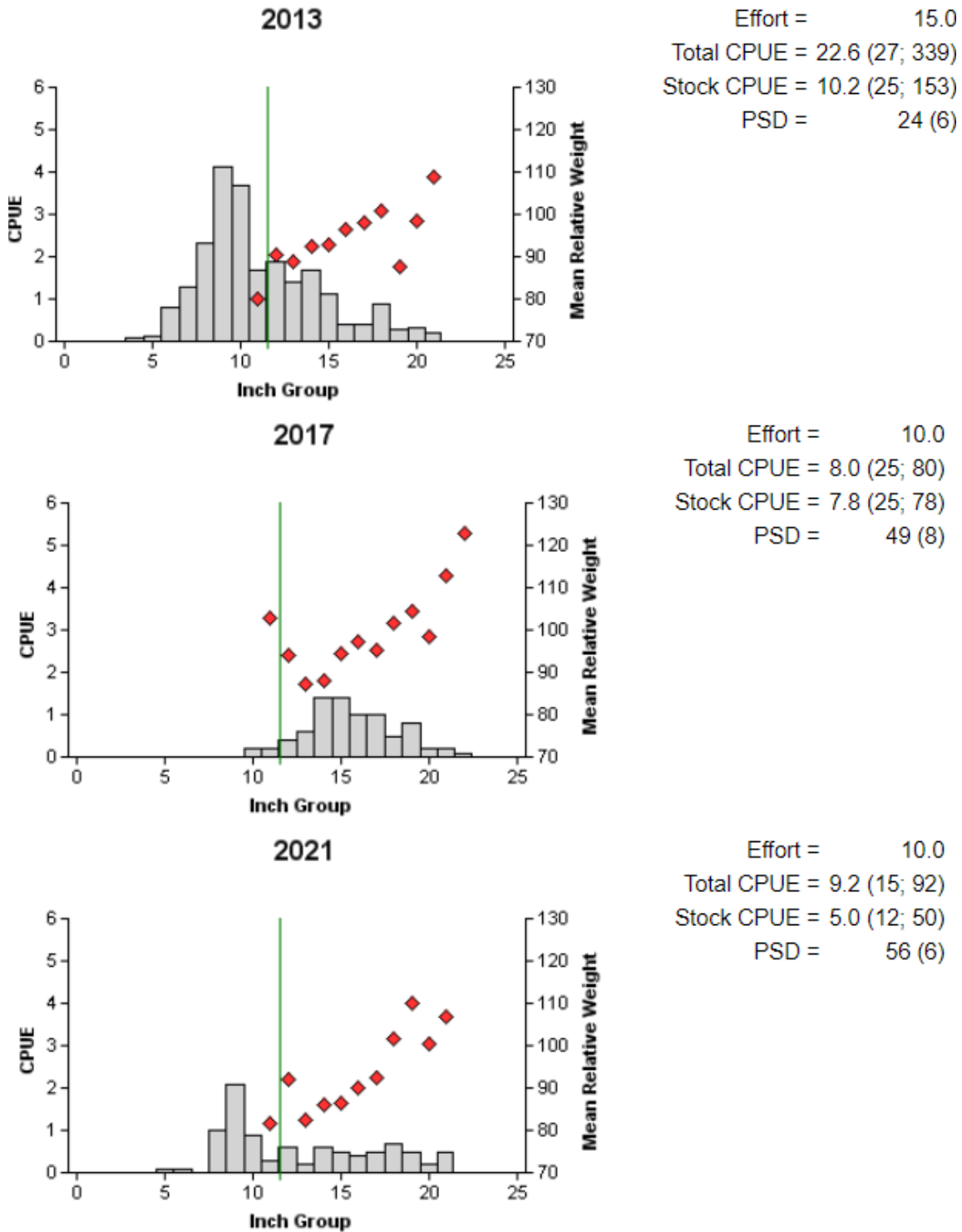


Figure 6. Number of Channel Catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lake Wright Patman, Texas, 2013, 2017, and 2021. Vertical line indicates minimum length limit.

White Bass

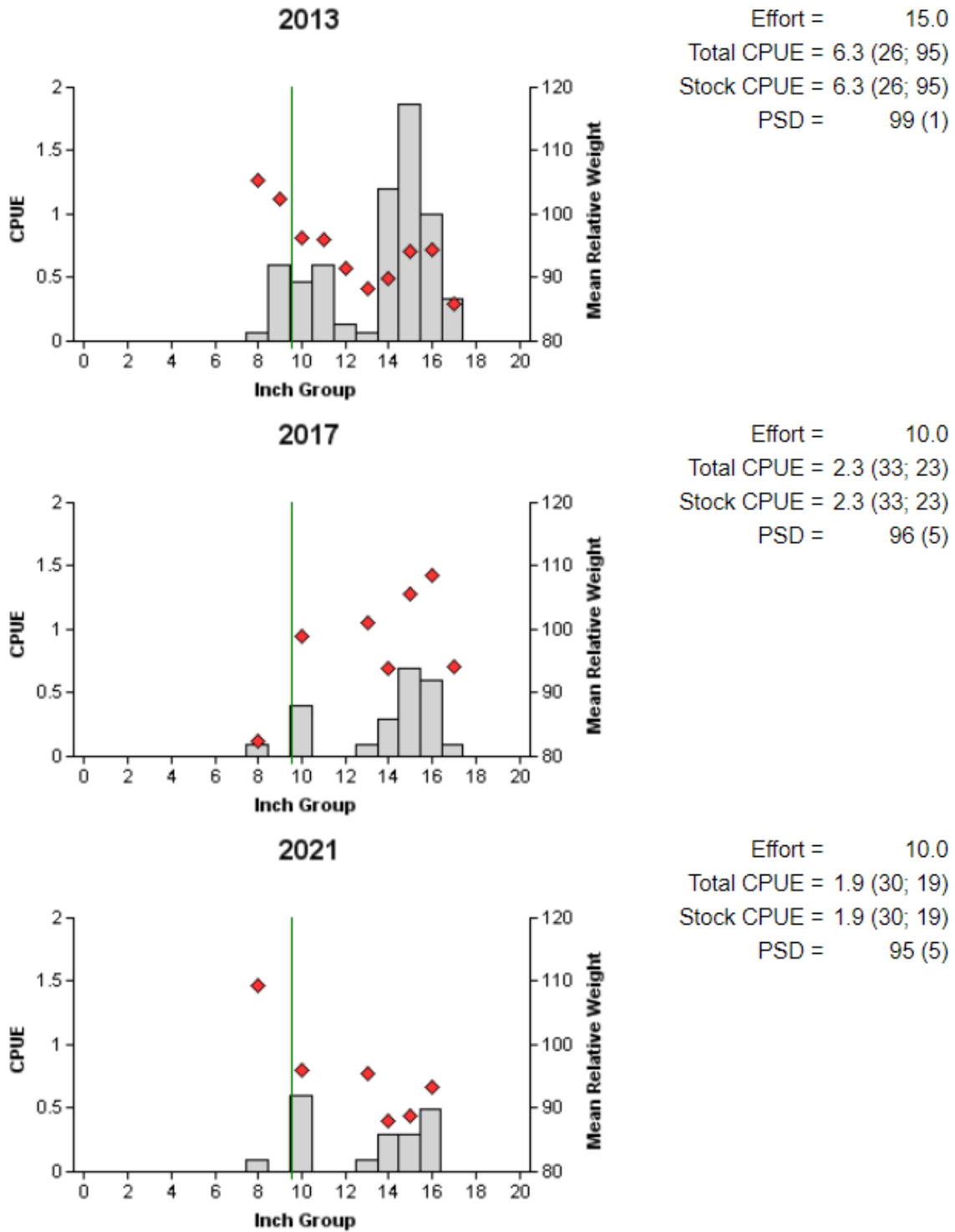


Figure 7. Number of White Bass caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lake Wright Patman, Texas, 2013, 2017, and 2021. Vertical line indicates minimum length limit.

Largemouth Bass

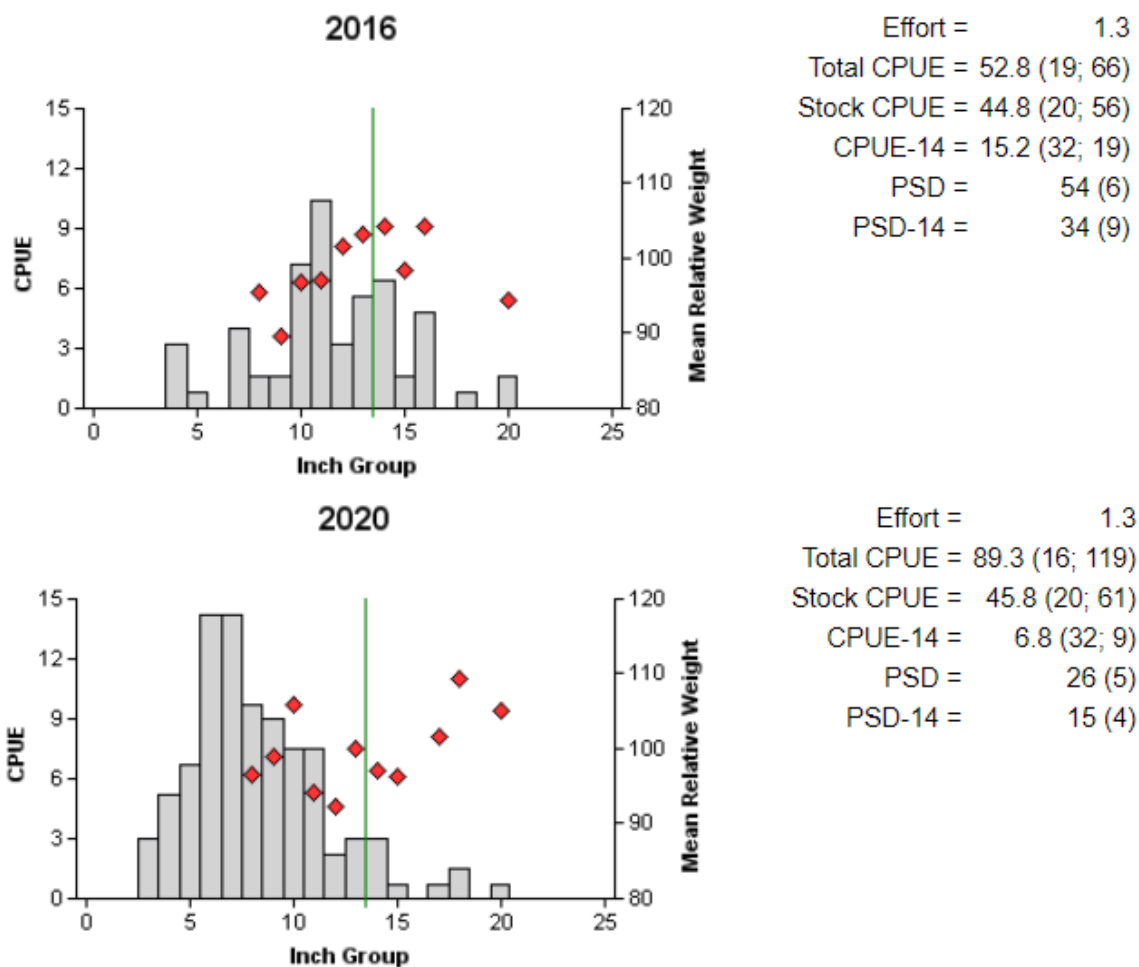


Figure 8. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall daytime electrofishing surveys, Lake Wright Patman, Texas, 2016 and 2020. Vertical line indicates minimum length limit.

White Crappie

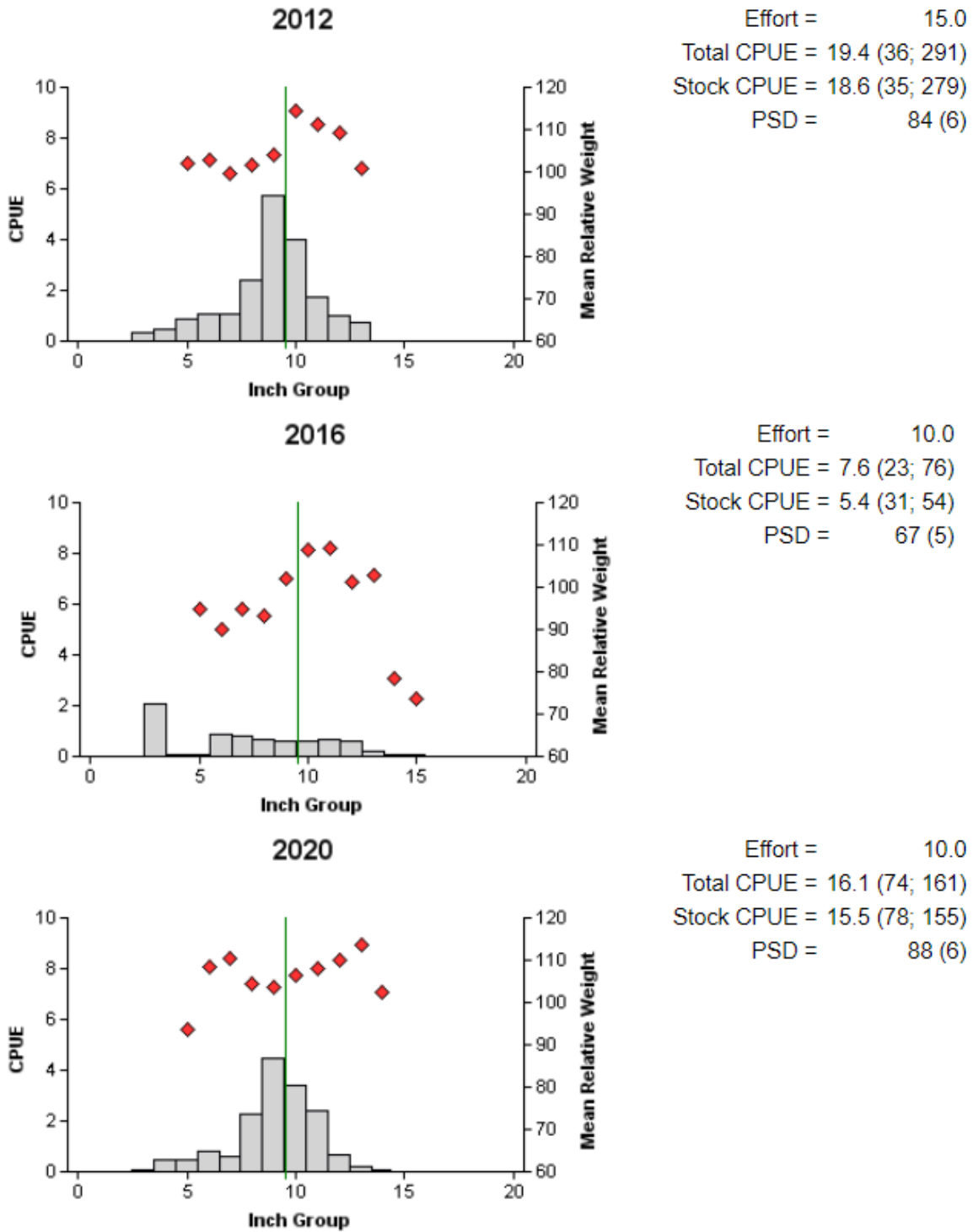


Figure 9. Number of White Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Lake Wright Patman, Texas, 2012, 2016, and 2020. Vertical line indicates minimum length limit.

Black Crappie

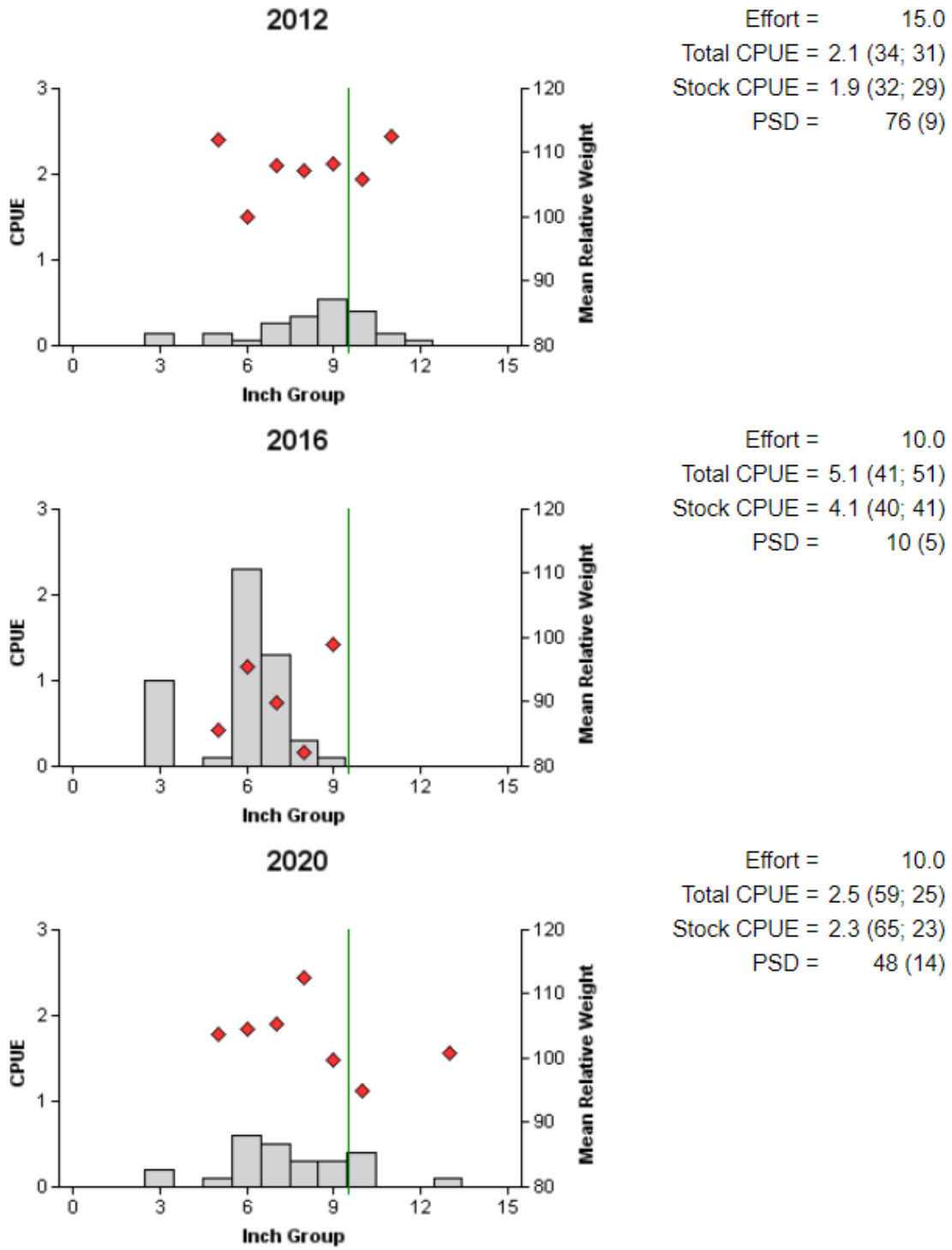


Figure 10. Number of Black Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Lake Wright Patman, Texas, 2012, 2016, and 2020. Vertical line indicates minimum length limit.

Proposed Sampling Schedule

Table 7. Proposed sampling schedule for Lake Wright Patman, 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.

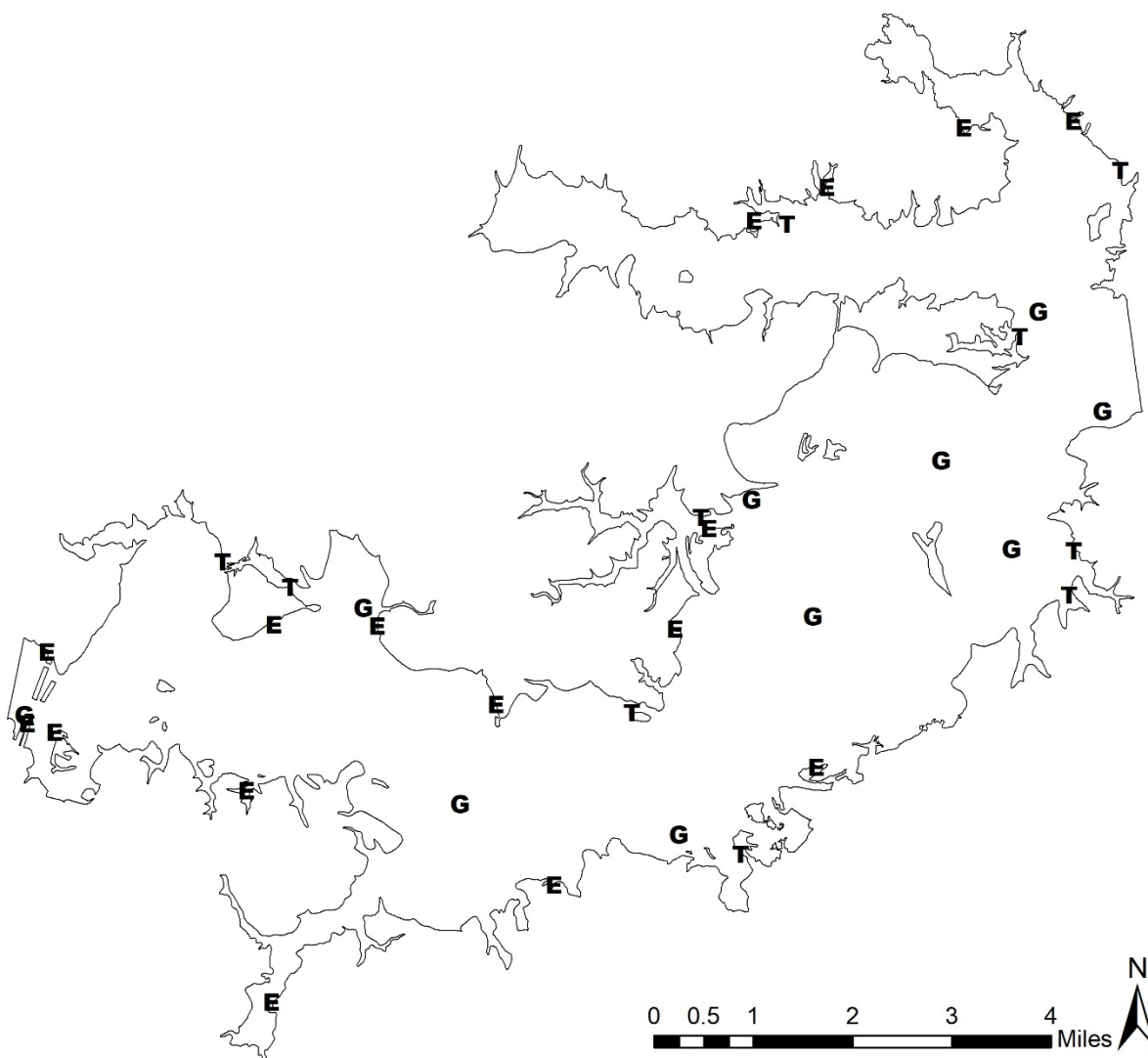
	Survey year			
	2021-2022	2022-2023	2023-2024	2024-2025
Angler Access				X
Vegetation	X	X	X	X
Daytime Electrofishing – Fall				X
Trap netting				X
Gill netting				X
Report				X

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 Lake Wright Patman, Texas, 2020-2021. Sampling effort was 10 net nights for gill netting, 10 net nights for trap netting, and 80 minutes for electrofishing.

Species	Gill Netting		Trap Netting		Electrofishing	
	N	CPUE	N	CPUE	N	CPUE
Gizzard Shad					844	633.0 (16)
Threadfin Shad					482	361.5 (56)
Blue Catfish	73	7.3 (21)				
Channel Catfish	92	9.2 (15)				
White Bass	19	1.9 (30)				
Bluegill					69	51.75 (29)
Longear Sunfish					12	9.0 (38)
Redear Sunfish					6	4.5 (41)
Largemouth Bass					119	89.25 (16)
White Crappie			161	16.1 (74)		
Black Crappie			25	2.5 (59)		

APPENDIX B – Map of sampling locations



Location of sampling sites, Lake Wright Patman, Texas, 2020-2021. Trap net, gill net, and electrofishing stations are indicated by T, G, and E, respectively. Water level was just above full pool at time of sampling.



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