Lost Creek Reservoir

2022 Fisheries Management Survey Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-221-M-4

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

Prepared by:

Wes Dutter, Assistant District Management Supervisor
and
Robert Mauk, District Management Supervisor

Inland Fisheries Division
Wichita Falls District, Wichita Falls, Texas

David Yoskowitz, Ph. D.
Executive Director

Timothy Birdsong
Director, Inland Fisheries

July 31, 2023

Contents

Survey and Management Summary

Fish populations in Lost Creek Reservoir were surveyed in 2022 using electrofishing. Historical data are presented with the 2022 data for comparison. This report summarizes the results of the survey and contains a management plan for the reservoir based on those findings.

Reservoir Description: Lost Creek Reservoir is a 385-acre impoundment located on Lost Creek, a tributary of the West Fork of the Trinity River approximately 58 miles southeast of Wichita Falls. The primary use is for municipal water supply and recreation. It has a primarily rocky shoreline with flooded timber. Hydrilla is present in the reservoir. Lost Creek Reservoir has an average depth of 30 feet and water clarity as measured by secchi disc is often over seven feet in depth. Fort Richardson State Park offers a satellite park on the reservoir with a swimming area and kayak rental and launch. Boat access is available at a two-lane public boat ramp with a loading dock. Shoreline access is available in the State Park and around the boat ramp.

Management History: Historically, Largemouth Bass have been the most important sport fish with Channel Catfish, White Bass, and White Crappie also being present. The Largemouth Bass minimum length limit was reduced from 16-inches to the statewide 14-inch regulation on September 1, 2003. Stocking of advanced size Channel Catfish last occurred in 2008. Threadfin Shad were stocked in the reservoir in 2008 and 2009 to boost the amount of available prey.

Fish Community

- **Prey species:** No Threadfin Shad were sampled during the electrofishing survey. Gizzard Shad electrofishing catch rate was very low, and few Gizzard Shad were available as prey to most sport fish. Electrofishing catch rate of Bluegill was very high, with some Bluegill reaching 8-inches in length.
- **Redear Sunfish:** The relative abundance was high with a good number of fish 7-inches in length or larger.
- **Largemouth Bass:** Largemouth Bass electrofishing catch rate matched the historical average. The catch rate of legal-length and larger fish improved from previous surveys. Largemouth Bass were sampled up to 19-inches in length. The body condition was poor for most length groups.

Management Strategies: Continue monitoring the hydrilla growth around the reservoir for access problems annually. Promote the Redear and Bluegill Sunfish fisheries via social media and in conversations with anglers. Request a stocking of Lone Star Bass. Monitor the Largemouth Bass, Bluegill and Redear Sunfish populations with electrofishing in 2026.

Introduction

This document is a summary of fisheries data collected from Lost Creek Reservoir from 2019-2022. The purpose of this 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 2019-2022 data for comparison.

Reservoir Description

Lost Creek Reservoir is a 385-acre impoundment constructed in 1990 on Lost Creek, a tributary of the West Fork of the Trinity River. It is located in Jack County approximately 58 miles southeast of Wichita Falls and is controlled by the City of Jacksboro. Primary uses include municipal water supply and recreation. Mean depth was 30 feet, shoreline development index was 2.3, and conductivity was 382 µS/cm (Table1). Water clarity is usually quite high as measured by secchi disc often exceeding seven feet in depth. Habitat consisted of aquatic vegetation, rocks, and standing timber. Hydrilla is present in the reservoir, but not detrimental to boat access or swimming. The water level was close to four feet below conservation pool during the electrofishing survey (Figure 1). Jacksboro Reservoir's spillway empties into Lost Creek reservoir when it overflows.

Angler Access

Boat access consisted of one two-lane public boat ramp. Shoreline fishing access was available at the public access points including the boat ramp and throughout Fort Richardson State Park. There was a fishing pier managed by Fort Richardson State Park being constructed and should be finished in 2023. Fort Richardson State Park has added a kayak rental kiosk and kayak launch for the public to use. Additional boat ramp characteristics are in Table 2.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Lang and Mauk 2018) included:

1. Hydrilla seems to have become established but in low density. While not detrimental to the reservoir, it could be transported to other waterbodies where it could become a nuisance.

   Action: Maintained signage about invasive species at the reservoir. Made anglers aware that hydrilla exists in the reservoir and to Clean, Drain and Dry their boats during conversations. Conducted vegetation surveys every year since 2013 to monitor spread and determine if treatment was needed. Hydrilla has spread around the reservoir but does not propose a problem for boat access or swimming.

2. The fishing pier at the state park was in disrepair and was closed to the public. Angler shoreline access at this reservoir is limited so it would be beneficial to repair the pier and reopen it to the public.

   Action: Discussed repairs with the state park and were told a new pier was being purchased and installed in 2023. As of this report the old pier has been removed, but the new pier has not been installed. The state park has opened a kayak rental kiosk with a kayak launch for the public to use. The State Park has done some clearing of brush for new camp sites along the water and provides better access for shore anglers.

3. The potential spread of zebra mussels and other invasive species exists. Informing the public and reservoir authorities of what to do to prevent the spread and what to do if they suddenly appear in the reservoir, are prudent actions.

Action: Signage was maintained at the boat ramp to make boaters aware of invasive species. Invasive species are a talking point while communicating with the public and discussed/published in various media outlets.

Harvest regulation history: Sport fish species in Lost Creek Reservoir are currently managed under statewide regulations. Largemouth Bass minimum length-limit was reduced from 16 inches to 14 inches on September 1, 2003. Blue and Channel Catfish statewide regulation changed to no minimum length-limit but only 10 fish can be over 20 inches in length as part of the combined 25 fish bag limit on September 1, 2021 (Table 3).

Stocking history: Advanced fingerling Channel Catfish were last stocked in 2008. Threadfin Shad were last stocked in 2009 to increase prey numbers. The complete stocking history is presented in Table 4.

Vegetation/habitat management history: During the 2013 summer, a small stand of hydrilla was discovered near the gate tower near the dam. It was treated twice with chemicals in 2013 and had not been documented again until 2016 when a small patch < 0.1 acres was identified near the Jacksboro Reservoir overflow. Hydrilla has been surveyed annually since 2013.

Water transfer: Lost Creek Reservoir is primarily used for municipal water supply and recreation. There is one permanent pumping station on the reservoir which transfers water to the City of Jacksboro. No inter-basin transfers are known to exist.

Methods

Surveys were conducted to achieve survey and sampling objectives in accordance with the objective-based sampling (OBS) plan for Lost Creek Reservoir (Lang and Mauk 2018). 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).

Electrofishing – Largemouth Bass, sunfishes and Gizzard Shad were collected by electrofishing (1 hour at 12, 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. An APEX Smith Root electrofishing system was used with a 7000-kW generator. Previously a Smith Root 7.5 GPP unit was used.

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 and creel statistics.

Habitat – A structural habitat survey was conducted in 2022. A vegetation survey was conducted in 2022 to monitor aquatic vegetation. Hydrilla has been monitored and surveyed annually since 2013. Habitat was assessed with the digital shapefile method (TPWD, Inland Fisheries Division, unpublished manual revised 2022).

Water level – – Source for water level data was the United States Geological Survey (USGS 2023).

Results and Discussion

Habitat: A structural habitat survey was conducted in 2022 noting no changes from the 2018 survey (Table 6). Native vegetation covered 0.7% of the reservoir's surface area compared to 13.4% coverage by non-native vegetation (Table 7). Native vegetation includes American Pondweed and native water willow. Hydrilla has been steadily expanding in coverage from 0.5 acres in 2018 to 51.5 acres in 2022 (Table 7). Hydrilla can be found around the whole reservoir growing in depths between 6 to 22 feet. Hydrilla was not problematic around the boat ramp or at the Fort Richardson State Park swimming area and was being maintained under a Tier II status.

Prey species: Electrofishing catch rates of Gizzard Shad were below catch rates from 2018 (17.0/h) and 2014 (27.0/h) at 3.0/h. One of the three Gizzard Shad was available as prey (Figure 2). Bluegill catch rates were over two times the historical average (118.9/h, Appendix C) with a CPUE of 264.0/h. This catch rate more than doubles the 2016 rate of 123.0/h. The survey in 2016 had ample habitat that consisted of flooded terrestrial vegetation from refilling after the historic drought that broke in 2015. In 2018 the CPUE for Bluegill dropped to 71.0/h as the terrestrial vegetation degraded. Since hydrilla coverage has expanded, a correlation between habitat abundance and Bluegill relative abundance could be made. The Bluegill ranged in size from 2 to 8 inches in length with a PSD of 32, meaning a third of stock-length fish are quality length (≥ 6-inches, Figure 3). Redear sunfish were very plentiful with a catch rate of 60.0/h. This catch rate was five times the rate of 12.0/h in 2018 and 11.0/h in 2016. Redear size structure as shown by PSD was 56 showing that quality length fish (≥ 7-inches) are more prevalent in the population. The sizes ranged from 3 to 8- inches in length (Figure 4). No Threadfin Shad were sampled.

Largemouth Bass: The Largemouth Bass electrofishing catch rate of 89.0/h was similar to the historical average of 90.7/h (Appendix C). The 2022 catch rate was below the 106.0/h in 2016 and slightly above the 2018 catch rate of 84.0/h. The catch rate of legal-length fish (CPUE-14) was higher than the previous two surveys with a catch rate of 18.0/h compared to 6.0/h in 2018 and 7.0/h in 2016 (Figure 5). Body condition would be considered poor with majority of the length categories at or below 80 W_r (Figure 5). The decline in Gizzard Shad numbers can explain the low W_r numbers, but the Bluegill catch rates are at

record highs and should provide an adequate prey base for Largemouth Bass. Size structure was considered balanced as shown with a PSD of 60 (Figure 5).

Fisheries Management Plan for Lost Creek Reservoir, Texas

Prepared – July 2023

ISSUE 1: Hydrilla has become established around the reservoir. It is a big benefit to the fish populations but could cause access issues in the future.

MANAGEMENT STRATEGY

1. Continue annual monitoring of hydrilla in the reservoir. Currently there are no access issues at the boat ramp or swimming area. If hydrilla starts to affect access at these two areas, a vegetation management plan will be developed to improve the access but also maintain abundance of hydrilla in other areas of the reservoir which benefits the fish populations.

ISSUE 2: Lost Creek has the potential of producing trophy sized Largemouth Bass as evidence with a waterbody record of 8.66 lbs. The reservoir has abundant aquatic vegetation (Table 7). Genetics play an important role in determining trophy potential.

MANAGEMENT STRATEGIES

1. Request a stocking of Lone Star Bass which are 2nd generation offspring of pure Florida strain ShareLunker Largemouth Bass that have proven to be able to grow to ≥ 13 pounds at a rate of 100/acre in 2024 and 2025.
2. Examine the Largemouth Bass genetics during the 2026 electrofishing survey.
3. Conduct a Category 3 age and growth sample during the 2026 electrofishing survey.

ISSUE 3: There is a lack of quality sunfish fisheries in the area. The Bluegill and Redear Sunfish populations have improved with quality fish available to anglers.

MANAGEMENT STRATEGY

1. Promote the Bluegill and Redear Sunfish populations on social media or when talking about the reservoir to anglers.

ISSUE 4: Many invasive species threaten aquatic habitats and organisms in Texas and can adversely affect the state ecologically, environmentally, and economically. For example, zebra mussels can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches, and plugging engine cooling systems. 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.

MANAGEMENT STRATEGIES

1. Cooperate with the controlling authority to maintain appropriate signage at access points around the reservoir.

2. Educate the public about invasive species using media and the internet.
3. Make a speaking point about invasive species when presenting to constituent and user groups.
4. 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 (2023–2027)

Sport fish, forage fish, and other important fishes

Sport fishes in Lost Creek Reservoir include Channel Catfish, White Crappie, White Bass, and Largemouth Bass. Known important forage species include Bluegill, Redear Sunfish and Gizzard Shad.

Low-density fisheries

Channel Catfish: Channel Catfish are present in Lost Creek Reservoir, but population relative abundance was extremely low because water clarity was high and predation by Largemouth Bass on juvenile catfish was likely high. Gill net surveys from 1998-2011 resulted in CPUE of Channel Catfish from 0.3 to 1.4 fish/nn. In 2012, three tandem baited hoop nets were each set for two nights, and no Channel Catfish were sampled. Creel surveys in 2002, 2008, and 2014 indicated low directed effort (0.6 to 1.7h/acre) and catch (0 to 0.3/h) of Channel Catfish occurred. Advanced fingerling Channel Catfish were stocked in 2006 and 2008 providing no positive influence in relative abundance of the population. Sampling the population is unnecessary in the next four years.

White Bass: White Bass are present in Lost Creek Reservoir, but population relative abundance was low. Gill net surveys from 1996-2011 resulted in CPUE of White Bass from 0.4 to 2.0 fish/nn. Creel surveys in 2002, 2008, and 2014 indicated low directed effort (0.2 to 0.9h/acre) with a catch rate of 0.8 to 13.5 fish/h for White Bass. Sampling the population is unnecessary in the next four years.

White Crappie: White Crappie are present in Lost Creek Reservoir, but population relative abundance was low. Trap net surveys from 1996-2011 resulted in CPUEs of White Crappie ranging from 0.5 to 3.4 fish/nn. Creel surveys in 2002, 2008, and 2014 indicated low directed effort (0.0 to 1.7h/acre) and low catch (0.0/h to 0.1/h) of White Crappie occurred. Sampling the population is unnecessary in the next four years.

Survey objectives, fisheries metrics, and sampling objectives

Gizzard and Threadfin Shad: Gizzard Shad are present in Lost Creek Reservoir, but population relative abundance was low. From 1998-2022, CPUE of Gizzard Shad ranged from 2.0 to 27.0 fish/h, with a historical average of 8.5/h. Threadfin Shad have been stocked in 1996, 2008, and 2009 but have never become established. Threadfin Shad are present in Jacksboro Reservoir and could transfer into Lost Creek during high water events at Jacksboro Reservoir. Gizzard and Threadfin Shad will be sampled in 2026 by electrofishing at 12 randomly selected 5-minute stations with an exploratory objective to check on presence/absence due to the historically low catch rates.

Bluegill and Redear Sunfish: Bluegill are the primary forage species. Trend data on CPUE and size structure has been collected during every electrofishing survey since 1998. General monitoring will allow for monitoring of large-scale changes in Bluegill relative abundance and size structure. The Redear Sunfish population exploded in 2022 with a good number of quality length fish. General monitoring will be able to show large-scale changes to the Redear Sunfish relative abundance and size structure. A sample precision of RSE<25 for CPUE and a sample of 50 or more stock-length fish will be the target of the electrofishing survey at 12 randomly selected 5-minute stations for both Bluegill and Redear Sunfish in the fall of 2026. No additional effort will be expended to achieve an RSE <25 for CPUE or a sample of 50 or more stock-length fish for both Bluegill and Redear Sunfish.

Largemouth Bass: Largemouth Bass are the most popular sport fish in Lost Creek Reservoir. Trend data on CPUE, size structure, and body condition have been collected about every two years since 1998 with fall electrofishing. The population in the past was characterized as abundant with few legal length bass, poor body condition, and slow growth. Creel surveys indicated anglers are aware of the problems but like

the idea of catching lots of bass. General monitoring will be the objective to monitor large-scale changes in the Largemouth Bass population in the fall of 2026. Monitoring will be done with fall electrofishing at 12 randomly selected 5-minute stations to reach a precision of RSE<25 for CPUE-stock for relative abundance and a sample of 50 or more stock-length fish for size structure and body condition analysis. During the 2022 survey a significant increase in CPUE-14 was noted, maybe suggesting a change in growth due to an increase of hydrilla and Bluegill relative abundance. A category 3 age and growth survey will be conducted in 2026 to estimate mean length at age. Otoliths will be collected from 200 random fish > 150 mm, subsampled at 5 fish per 10 mm strata for age estimation. In conjunction with general monitoring, a sample of 30 fish will be used for genetic analysis to ensure that the percent of Florida Largemouth Bass allele estimate will be within 5% of the true value 80% of the time and within 10% of the true value 95% of the time (Dumont, TPWD unpublished data 2017).

Sampling schedule is in table 8.

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.

Lang, T., and R. Mauk. 2019. Lost Creek Reservoir, 2018 fisheries management survey report. Texas Parks and Wildlife Department, Federal Aid Report F-221-M-3, Austin.

United States Geological Society (USGS). 2023. National water information system: Web interface. Available: http://waterdata.usgs.gov/tx/nwis (July 2023).

Tables and Figures

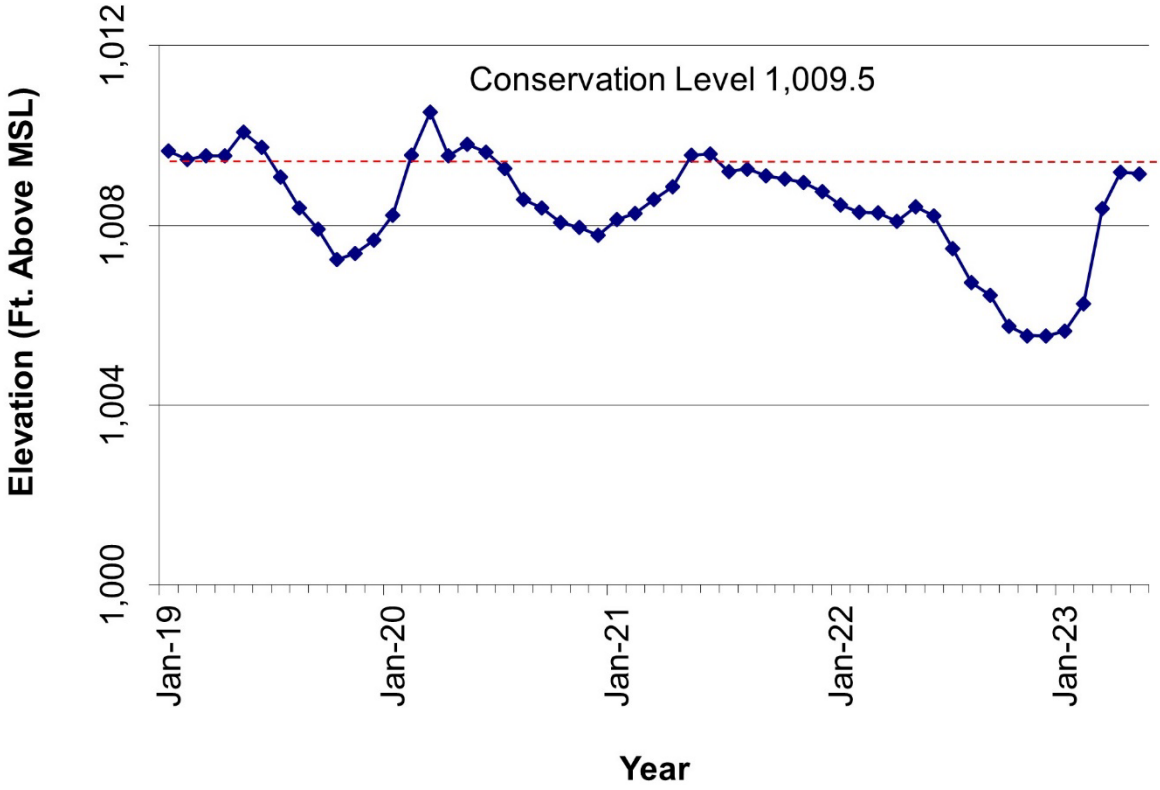


Figure 1. Monthly water level elevations in feet above mean sea level (MSL) recorded for Lost Creek Reservoir, Texas

Table 1. Characteristics of Lost Creek Reservoir, Texas.

Characteristic	Description
Year constructed	1990
Controlling authority	City of Jacksboro
County	Jack
Reservoir type	Tributary
Shoreline Development Index	2.3
Conductivity	382 µS/cm

Table 2. Boat ramp characteristics for Lost Creek Reservoir, Texas, August 2022. Reservoir elevation at time of survey was 1006.9 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
Lost Creek	32.23343 -98.13352	Y	30	993	Good

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

Species	Bag limit	Length limit
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (only 10 ≥ 20 inches)	None
Catfish, Flathead	5	18-inch minimum
Bass, White	25	10-inch minimum
Bass, Largemouth	5	14-inch minimum
Crappie: White and Black crappie, their hybrids and subspecies	25 (in any combination)	10-inch minimum

Table 4. Stocking history of Lost Creek Reservoir, Texas. FGL = fingerling; AFGL = advanced fingerling; ADL = adults.

Species	Year	Number	Life Stage
Bluegill	1991	121,939	FGL
	Total	121,939	
Channel catfish	1991	24,450	FGL
	1993	6,120	AFGL
	1993	50,601	FGL
	2006	4,000	AFGL
	2008	3,703	AFGL
	Total	88,874	
Coppernose bluegill	1991	28,902	FGL
	Total	28,902	
Florida largemouth bass	1990	50,141	FRY
	1994	50,000	FGL
	Total	100,141	
Smallmouth bass	1991	25,088	FGL
	Total	25,088	
Threadfin shad	1996	359	ADL
	2008	100	ADL
	2009	300	AFGL
	Total	759	
White crappie	1990	25,364	FRY
	Total	25,364	

Table 4. Objective-based sampling plan components for Lost Creek Reservoir, Texas 2022.

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
Bluegill [a]	Abundance	CPUE–Total	RSE ≤ 25
	Size structure	PSD, length frequency	N ≥ 50

[a] No additional effort will be expended to achieve an RSE ≤ 25 for CPUE of Bluegill 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.

Table 5. Survey of structural habitat types, Lost Creek Reservoir, Texas, 2022. Shoreline habitat type units are in miles and standing timber is acres.

Habitat type	Estimate	% of total
Natural	2.4 miles	43.8
Rocky	3.1 miles	56.2
Standing timber	146.5 acres	53.6

Table 6. Survey of aquatic vegetation, Lost Creek Reservoir, Texas, 2018–2022. Only hydrilla was sampled in 2019, 2020, and 2021. Surface area (acres) is listed with percent of total reservoir surface area in parentheses.

Vegetation	2018	2019	2020	2021	2022
Native submersed	6.8 (1.8)				1.9 (0.5)
Native floating-leaved	8.9 (2.3)				0
Native emergent	8.1 (2.1)				0.8 (0.2)
Non-native					
Hydrilla (Tier II) *	0.5 (0.1)	18.7 (4.9)	34.7 (9.0)	38.9 (10.1)	51.5 (13.4)

*Tier II calls for maintenance

Gizzard Shad

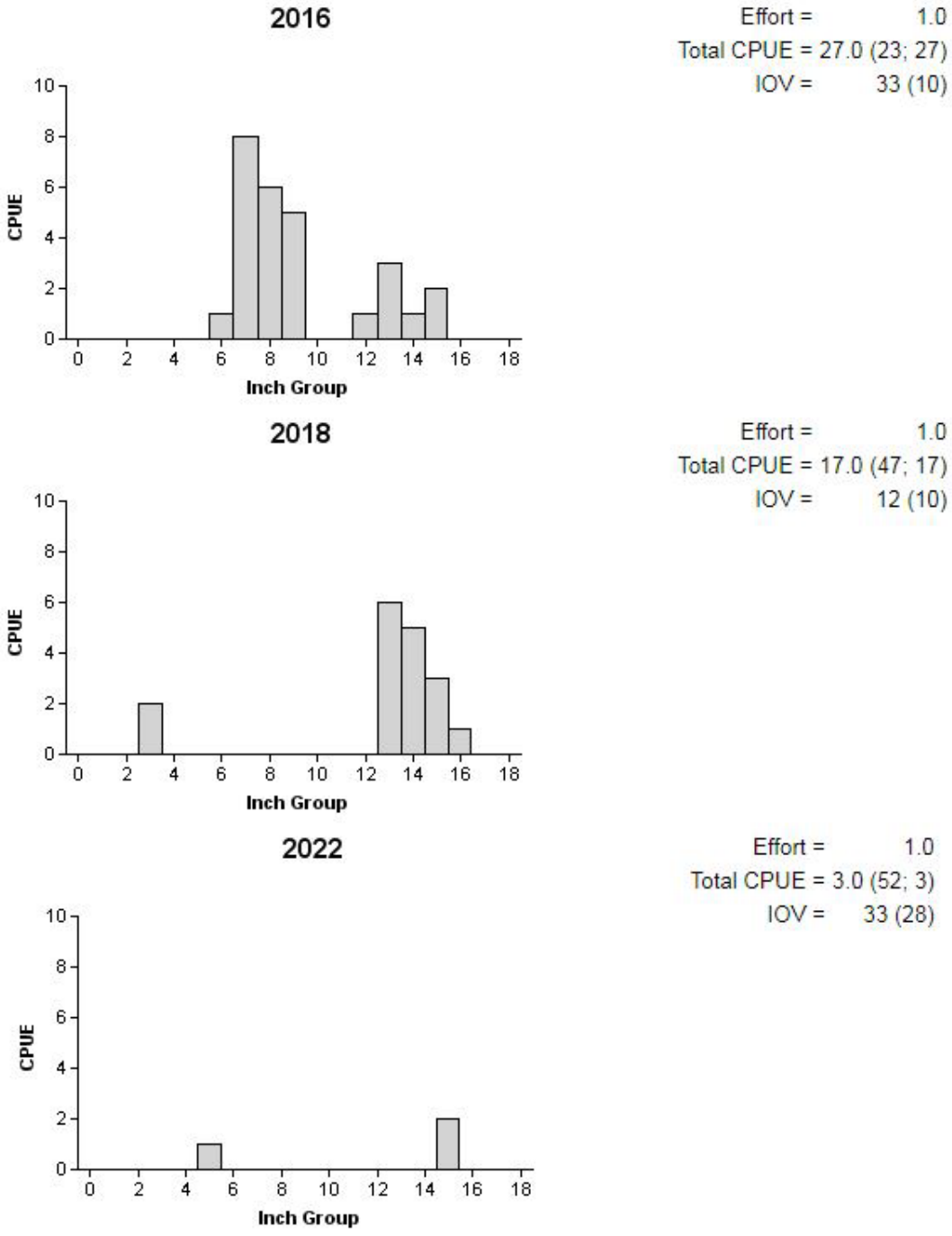


Figure 2. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Lost Creek Reservoir, Texas, 2016, 2018, and 2022.

Bluegill

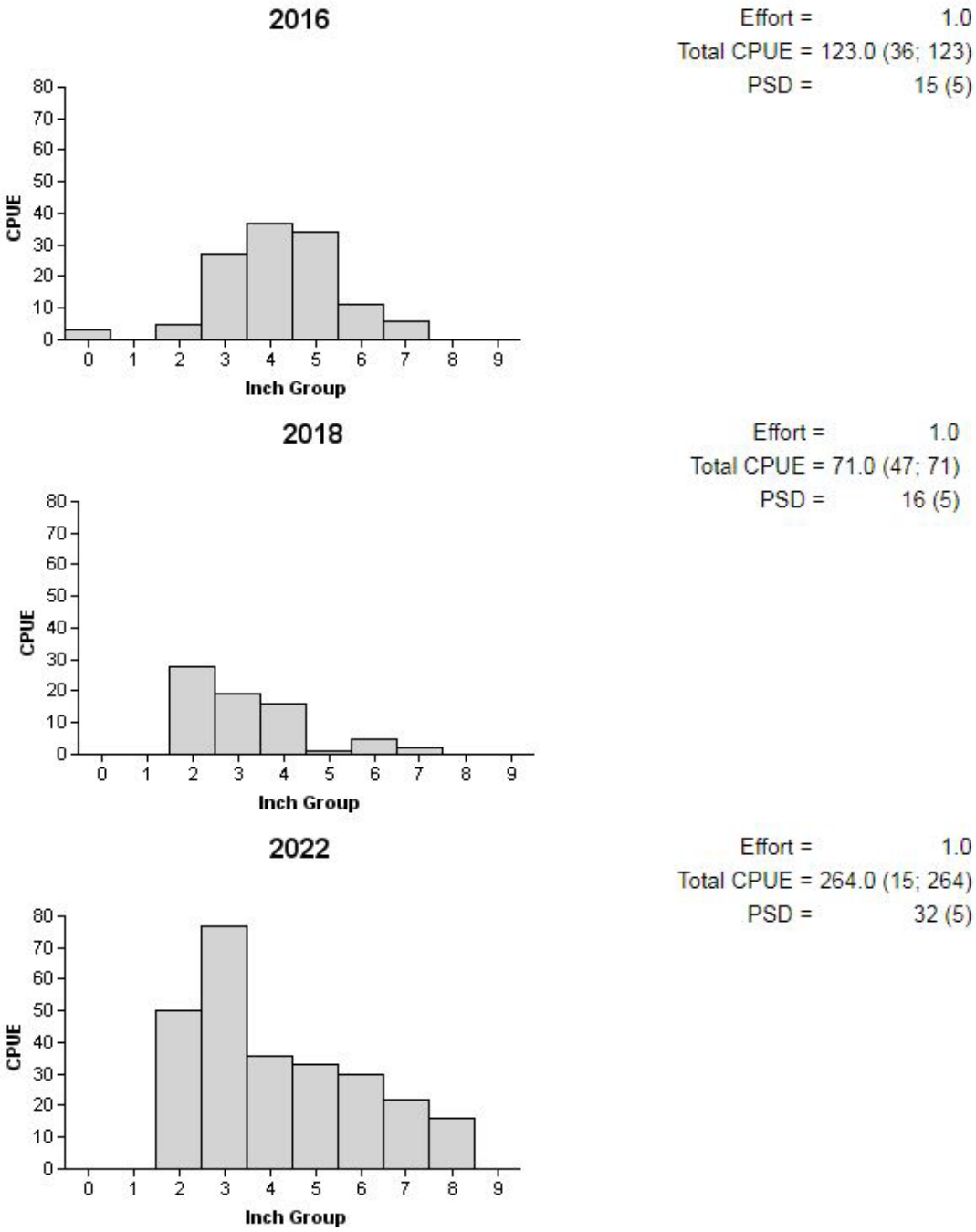


Figure 3. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lost Creek Reservoir, Texas, 2016, 2018, and 2022.

Redear Sunfish

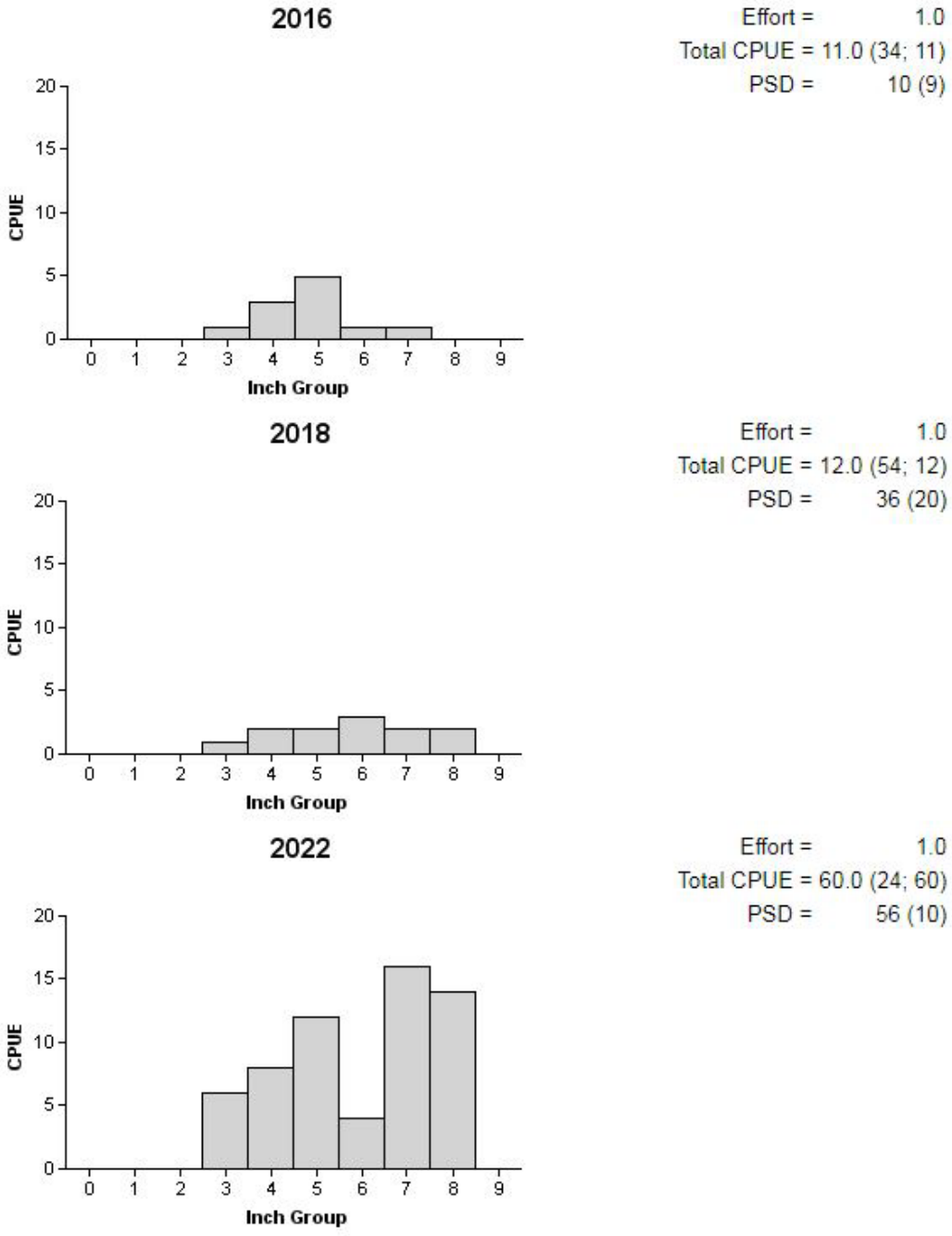


Figure 4. Number of Redear Sunfish caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lost Creek Reservoir, Texas, 2016, 2018, and 2022.

Largemouth Bass

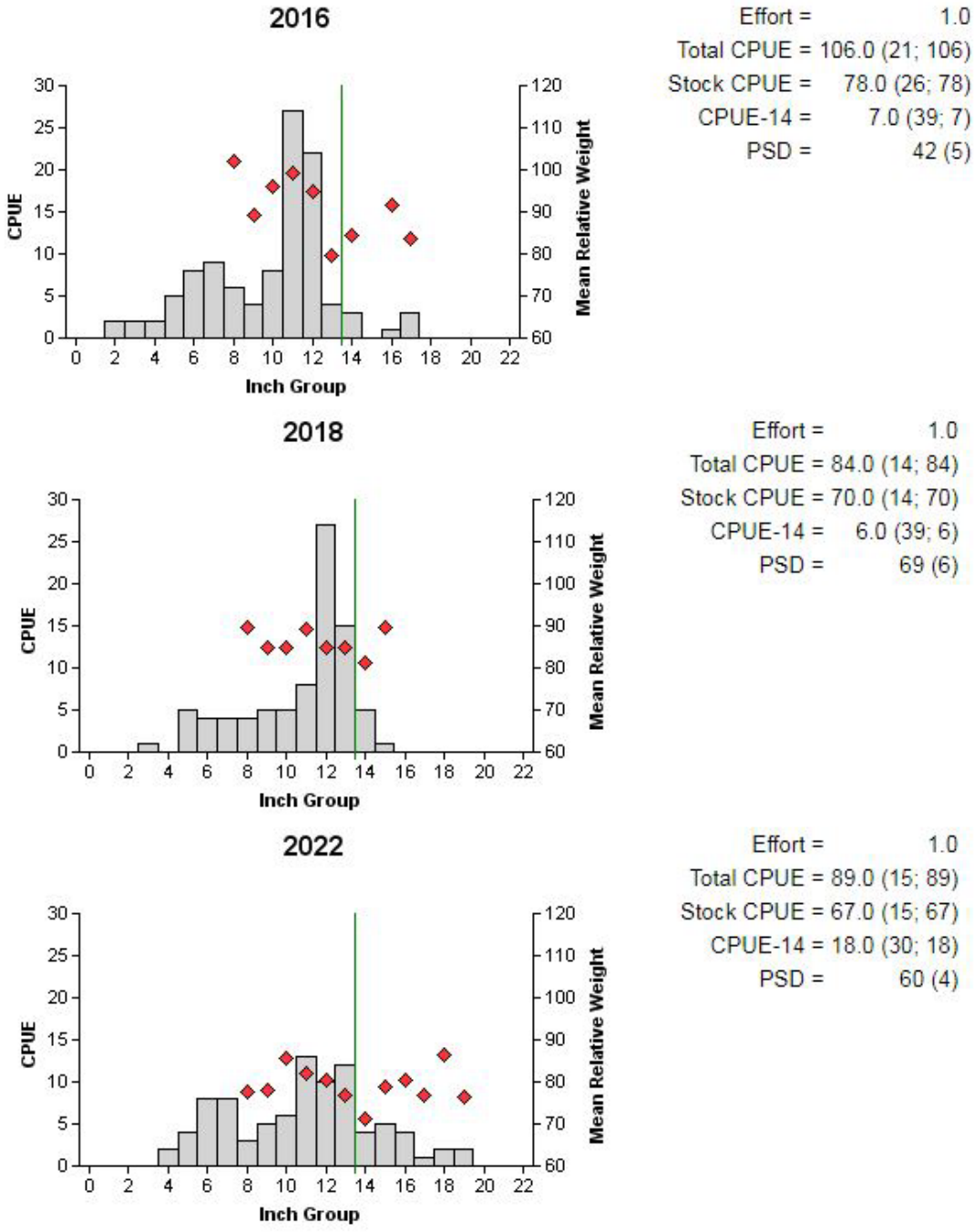


Figure 4. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lost Creek Reservoir, Texas, 2016, 2018, and 2022. Vertical line represents the minimum length limit.

Proposed Sampling Schedule

Table 7. Proposed sampling schedule for Lost Creek Reservoir, Texas. Survey period is June through May. Electrofishing surveys are conducted in the fall.

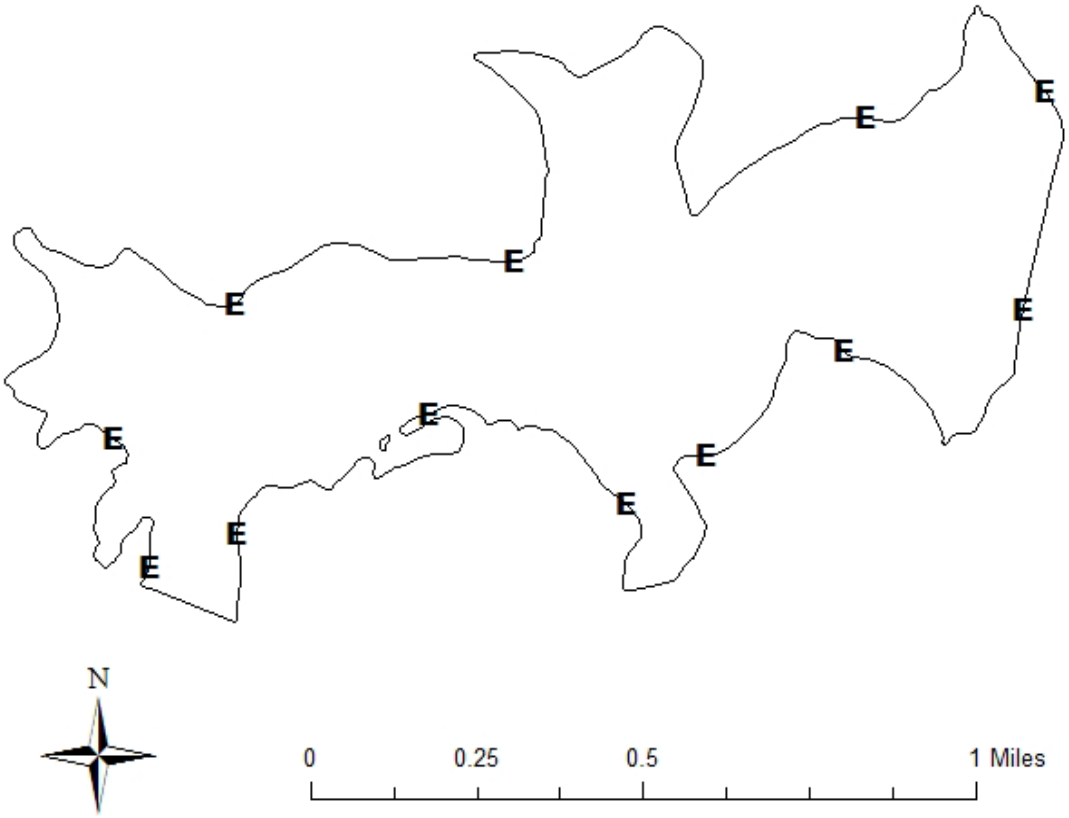
	Survey year			
	2023-2024	2024-2025	2025-2026	2026-2025
Angler Access				X
Structural Habitat				X
Vegetation	X	X	X	X
Electrofishing – Fall				X
Report				X

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 Lost Creek Reservoir, Texas, 2022. Sampling effort was 1 hour for electrofishing.

Species	Electrofishing	
	N	CPUE
Gizzard Shad	3	3.0 (52)
Green Sunfish	15	15.0 (37)
Warmouth	8	8.0 (65)
Bluegill	264	264.0 (15)
Longear Sunfish	23	23.0 (40)
Redear Sunfish	60	60.0 (24)
Largemouth Bass	89	89.0 (15)

APPENDIX B – Map of sampling locations



Location of sampling sites, Lost Creek Reservoir, Texas, 2022. Electrofishing stations are indicated by E. Water level was close to four feet below conservation level (1,009.5 MSL) at time of sampling.

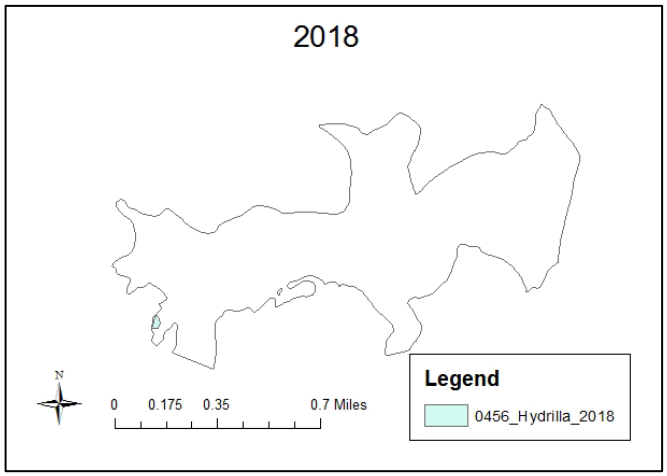
APPENDIX C – Historical catch rates of targeted species by gear type for Lost Creek Reservoir, Texas.

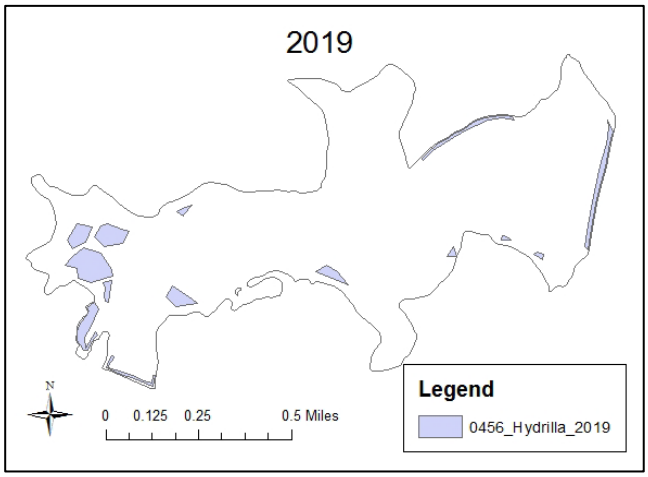
		Year							
Gear	Species	1998	2000	2001	2002	2003	2006	2007	2010
Gill Netting (fish/net night)	Blue Catfish							0.1	
	Channel Catfish	1.4				0.3		1.1	
	Flathead Catfish	0.0				0.0		0.2	
	White Bass	0.4				2.0		1.9	
Electrofishing (fish/hour)	Gizzard Shad	19.0	4.0	3.0	2.0		6.0		2.0
	Threadfin Shad	292.0	62.0	0.0	66.0		0.0		1.0
	Green Sunfish	30.0	149.0	21.0	72.0		97.0		56.0
	Bluegill	135.0	79.0	129.0	85.7		111.0		187.0
	Longear Sunfish	40.0	87.0	19.0	20.0		58.0		58.0
	Redear Sunfish	0.0	6.0	0.0	0.0		5.0		9.0
	Largemouth Bass	53.0	107.0	45.0	120.7		133.0		144.0
Trap Netting (fish/net night)	White Crappie	1.6			0.5		2.1		3.4

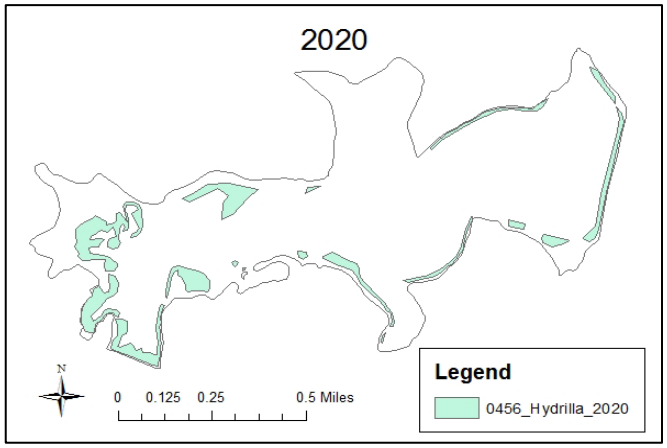
APPENDIX C – (continued)

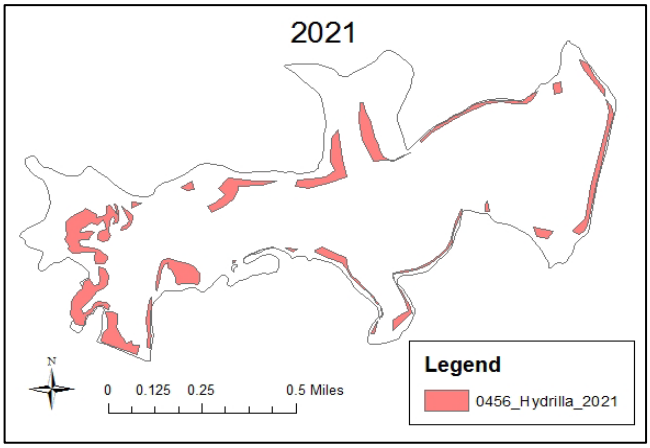
		Year					
Gear	Species	2011	2014	2016	2018	2022	Average
Gill Netting (fish/net night)	Blue Catfish	0.0					0.1
	Channel Catfish	0.6					0.9
	Flathead Catfish	0.2					0.1
	White Bass	1.8					1.5
Electrofishing (fish/hour)	Gizzard Shad		2.0	27.0	17.0	3.0	8.5
	Threadfin Shad		10.0	1.0	0.0	0.0	43.2
	Green Sunfish		16.7	34.0	10.0	15.0	50.1
	Bluegill		4.7	123.0	71.0	264.0	118.9
	Longear Sunfish		12.7	48.0	13.0	23.0	37.9
	Redear Sunfish		6.0	11.0	12.0	60.0	10.9
	Largemouth Bass		25.3	106.0	84.0	89.0	90.7
Trap Netting (fish/net night)	White Crappie						1.9

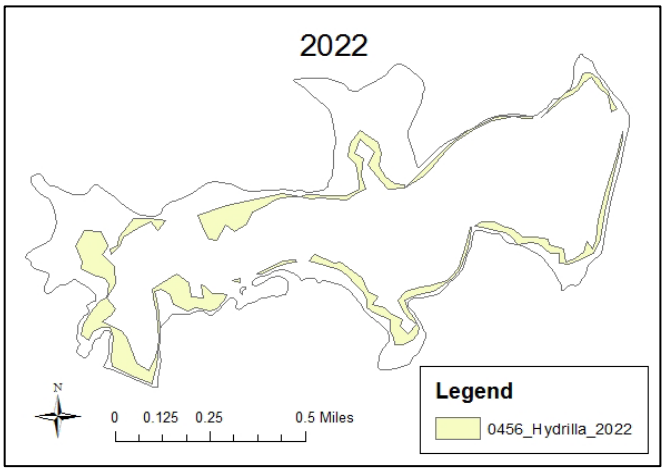
APPENDIX D – Hydrilla coverage for 2018-2022 at Lost Creek Reservoir, Texas











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.