

PERFORMANCE REPORT

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INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

2014 Fisheries Management Survey Report

Jacksboro Reservoir

Prepared by:

Tom Lang, District Management Supervisor
and
Robert Mauk, Assistant District Management Supervisor

Inland Fisheries Division
Wichita Falls District
Wichita Falls, Texas



Carter Smith
Executive Director

Craig Bonds
Director, Inland Fisheries

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SURVEY AND MANAGEMENT SUMMARY

Fish populations in Jacksboro Reservoir were surveyed in 2014 using electrofishing and trap netting and in 2015 using gill netting. Anglers were surveyed from June 2014 through May 2015 with a creel survey. Historical data are presented with the 2014-2015 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:** Jacksboro Reservoir is a 116-acre impoundment constructed in 1951. It is located in Jack County approximately 60 miles southeast of Wichita Falls and is controlled by the City of Jacksboro. The primary use is for municipal water supply. Maximum depth is 30 feet. Habitat consists of rocks and emergent vegetation. Boat access consists of a single, one-lane public boat ramp and an undeveloped gravel launching area. Bank fishing is available along most of the lower half of the lake and includes a city park. Jacksboro's spillway flows directly into 385-acre Lost Creek Reservoir. Despite their proximity, characteristics between the two reservoirs differ considerably.
- **Management History:** Historically important sport fish include Channel Catfish, White Bass, Largemouth Bass, and White Crappie. Stocking of fingerling size Channel Catfish occurred in 2011.
- **Fish Community**
 - **Prey species:** The Gizzard Shad catch rate and size structure improved since the 2011 survey. No Threadfin Shad were sampled in the 2014 survey, while they were sampled in 2011. The catch per unit effort (CPUE) for Bluegill was down from the previous survey but their abundance was still considered good. Green Sunfish, Longear Sunfish, and Warmouth were also sampled in good numbers. Inland Silversides and Logperch were abundant and available as forage for the reservoir's predator population.
 - **Catfishes:** Channel Catfish abundance decreased from the 2012 gill net survey. However, the abundance of legal length catfish was slightly higher this year. Blue Catfish were present in low abundance with two 25-pound individuals sampled during the 2015 survey. No Blue Catfish were sampled during the previous survey. Flathead Catfish have historically been present in the reservoir in very low abundance but were not sampled during the 2015 gill net survey.
 - **White Bass:** White Bass remained present in relatively low abundance with lengths ranging from seven- to 17 inches. The reproducing population puts an increased demand on the somewhat limited prey base.
 - **Largemouth Bass:** Largemouth Bass catch rate increased since the last survey completed in 2011. Body condition, as measured by relative weight was improved for legal length bass compared to 2011. Good numbers of legal length bass were sampled.
 - **White Crappie:** The catch rate of White Crappie was the highest recorded since 1997. Seven-eight-inch crappie were highly abundant. Average for legal-length crappie was between 12 to 13 inches.

Management Strategies: Conduct general fish population monitoring by using trap nets, gill nets, and electrofishing during 2018 and 2019. Stock fingerling Channel Catfish on alternate years at the rate of 10 per acre if available from state hatcheries.

INTRODUCTION

This document is a summary of fisheries data collected from Jacksboro Reservoir in 2014-2015. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. While information on other species of fishes was collected, this report deals primarily with major sport fishes and important prey species. Historical data are presented with the 2014-2015 data for comparison.

Reservoir Description

Jacksboro Reservoir is a 116-acre impoundment constructed in 1951. It is located in Jack County approximately 60 miles southeast of Wichita Falls and is controlled by the City of Jacksboro. Its primary use is water supply. Maximum depth is 30 feet. Habitat consists of rocks and emergent vegetation. Boat access consists of a single, one-lane public boat ramp and an undeveloped gravel launching area. Bank fishing is available around much of the lower half of the lake. Water clarity was five feet as measured by secchi disc. Other characteristics are found in Table 1. Jacksboro's spillway flows directly into 385-acre Lost Creek Reservoir. Many anglers don't realize they are two separate reservoirs, and bass tournaments allow participants to fish both reservoirs, even though you have to trailer a boat from one reservoir to the other. However, the characteristics between the two reservoirs are quite different. Jacksboro is eutrophic while Lost Creek is oligotrophic.

Angler Access

Jacksboro has two boat ramps available (Table 2), a paved single lane ramp and a two-lane gravel ramp. The reservoir shoreline is primarily undeveloped and a city park provides plentiful shoreline access.

Management History

Previous management strategies and actions: This is the first fisheries management report written for Jacksboro Reservoir.

Harvest regulation history: Sport fish species in Jacksboro have always been managed under statewide regulations (Table 3).

Stocking history: Jacksboro Reservoir was last stocked with fingerling Channel Catfish in 2011. A complete stocking history is described in Table 4.

Vegetation/habitat management history: Noxious aquatic vegetation has not been observed at the reservoir. Historically the reservoir is ringed by water willow with patches of pondweed.

Water Transfer: There are no inter-basin transfers involving Jacksboro Reservoir but an intra-basin transfer occurs during high water events when water will flow directly into Lost Creek Reservoir via the Jacksboro spillway.

METHODS

Fishes were collected by electrofishing (1 hour at 12, five-minute stations), gill netting (5 net nights at 5 stations), and trap netting (5 net nights at 5 stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing and, for gill and trap nets, as the number of fish per net night (fish/nn). All survey sites were randomly selected and all surveys were conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014) except the 2011 fall electrofishing survey which was completed during daylight hours. Prior to 2011, the reservoir had never had an electrofishing survey completed on it and it

was unknown as to what species were in the reservoir and at what abundance. Care should be taken when comparing the 2011 and 2014 electrofishing survey data.

A 9-month roving creel survey was conducted from June - November 2014 and March - May 2015. Angler interviews were conducted on 5 weekend days and 4 weekdays per quarter to assess angler use and fish catch/harvest statistics in accordance with the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014).

A structural habitat survey was conducted in 2014. Vegetation surveys were conducted in 2014 to monitor vegetation types and coverage. Habitat was assessed with the digital shapefile method (TPWD, Inland Fisheries Division, unpublished manual revised 2014).

Sampling statistics (CPUE for various length categories), structural indices [Proportional Size Distribution (PSD), terminology modified by Guy et al. (2007)], and condition indices [relative weights (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.

RESULTS AND DISCUSSION

Habitat: Jacksboro Reservoir consists of primarily a rocky shoreline with some emergent vegetation (water willow) present most of the year (Tables 5 and 6).

Creel: Total fishing effort for all species was over 6,600 hours and direct expenditures was over \$44,000 for the nine-month creel survey period (Table 7). Directed fishing effort by anglers was highest for Largemouth Bass (66.2%), followed by anglers fishing for catfish spp. and anything (Table 8). While these numbers are accurate, caution should be exercised when utilizing them over the long term. These estimates could be somewhat inflated because of the drought. Jacksboro was one of only a few area reservoirs that had good boat access and thus could have received higher-than-normal angler utilization. Over 40% of the surveyed anglers travelled 50 or more miles to fish the reservoir (Appendix C).

Prey species: Electrofishing catch rates of Gizzard Shad was 88.0/h; a great improvement over the 2011 daytime catch rate of 16.0/h (Fig. 1). Index of vulnerability (IOV) also greatly improved from 0.0/h in 2011 to 92.0/h in 2014. Threadfin Shad catch rate was 0.0h in 2014 compared to 2011 when it was 96.0/h. Bluegill catch rate was 281.0/h in the current survey compared to 484.0/h in 2011 (Fig. 2). Redear Sunfish were collected in 2011 at a catch rate of 10.0/h and increased to 47.0/h in 2014 (Fig. 3). Green Sunfish, Longear Sunfish, and Warmouth were also present in the survey (Appendix A). Logperch and Inland Silversides were present and supplement the available prey species.

Blue Catfish: Blue Catfish were present in low abundance as represented by two 25-pound individuals sampled during the 2015 survey (Fig. 4). Both exhibited excellent body condition. No Blue Catfish were sampled during the previous survey. Blue Catfish were never TPWD stocked into the reservoir but first appeared in the 2004 gill net survey. No directed Blue Catfish effort or catch/harvest were reported during the creel survey.

Channel Catfish: Channel Catfish gill net catch rate was down (1.2/nn) from the previous two surveys (2.8 and 2.0; Fig. 5). The species has never been abundant in the reservoir and body condition was poor to fair. Fingerling Channel Catfish were stocked in 2011 and it does not appear recruitment was very good. Catfish are popular at the reservoir being the second most sought-after species in the reservoir (Table 8) but only two were harvested during the creel survey (Fig 6). Anglers targeting Channel Catfish reported catching zero Channel Catfish (Table 9).

Flathead Catfish: Flathead Catfish have historically been present in the reservoir in very low abundance but were not sampled during the 2015 gill net survey nor were they observed during the creel survey.

White Bass: White Bass were first sampled in the 2004 gill net survey and have since become established. The catch rate was down from the previous two gill net surveys but there was evidence they are continuing to reproduce successfully as seven and eight-inch fish were sampled (Fig. 7). Fish 15-17 inches in length were also sampled. Body condition would be characterized as poor to fair. While those targeting White Bass during the creel survey didn't have success (Table 10), other anglers caught several.

Largemouth Bass: Electrofishing catch rate of Largemouth Bass was 92.0/h in 2011 increased to 132.0/h in 2014 (Fig. 9). CPUE-14 was 13.0/h, indicating there are a good number of legal-length bass (≥ 14 inches) in the population. Body condition was considered good, and was much improved over the 2011 survey, especially for the legal length bass. Largemouth Bass was the most popular fish species in the reservoir with nearly two-thirds of the anglers targeting this species (Table 8). Angler catch rates were 0.7 bass an hour which is considered good. There was some harvest of this species but no illegal harvest was observed (Table 11).

White Crappie: Trap net catch rate of White Crappie was 33.4/nn, up from the previous survey completed in 2011 when CPUE was 25.3/nn (Fig. 11). All crappie ranged from 3-13 inches in length. The majority were in the 7-8 inch range. Of the legal-length fish sampled, average length was 12.6 inches. Body condition as measured by *Wr* was around 90. Very few anglers targeted this species (Table 12), which was somewhat surprising considering the quality of the crappie population and the drought resulting in a lack of crappie fishing opportunities in the region.

Fisheries management plan for Jacksboro Reservoir, Texas

Prepared - July 2015

ISSUE 1: The improved boat ramp area is difficult to use at some reservoir elevations. At times the trailering vehicle must have its wheels in the water to float the boat. It's not a problem if more than one person is launching a boat but for the solo boater, they must wade to get their boat off the trailer. The City of Jacksboro has created a gravel ramp that is quite steep and typically requires a four-wheel drive vehicle to launch a boat.

MANAGEMENT STRATEGY

1. Visit with controlling authority officials to discuss options to improve the launch sites on the lake.

ISSUE 2: Channel Catfish abundance is considered low with the species last being stocked in 2011. Catfish Spp. are the second most sought after species and anglers targeting the species report poor results.

MANAGEMENT STRATEGY

1. Stock Channel Catfish in 2016 and 2018 with nine-inch or fingerling size Channel Catfish depending upon availability. Determine if stocking is helping by examining the population in 2019 with a gill net survey.

ISSUE 3: The White Crappie population is abundant with lots of big crappie available now and plenty of smaller individuals ready to recruit to legal length. White Crappie are a highly sought-after species locally. The drought has depressed other local crappie populations and Jacksboro could provide angling opportunity while other populations rebuild.

MANAGEMENT STRATEGY

1. Publicize this reservoir as a possible location to target and catch White Crappie. Add a link to the lake on TPWD website to make more angler's aware of this opportunity and publicize on the District Facebook page.

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 (*Dreissena polymorpha*) can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches and plugging engine cooling systems. Giant salvinia (*Salvinia molesta*) and other invasive vegetation species can form dense mats, interfering with recreational activities like fishing, boating, skiing and swimming. The financial costs of controlling and/or eradicating these types of invasive species are significant. Additionally, the potential for invasive species to spread to other river drainages and reservoirs via watercraft and other means is a serious threat to all public waters of the state.

MANAGEMENT STRATEGIES

1. Cooperate with the controlling authority to post appropriate signage at access points around the reservoir.
2. Educate the public about invasive species through the use of 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.

SAMPLING SCHEDULE JUSTIFICATION:

Conduct standardized electrofishing, gill and trap net surveys during the 2018-19 survey period.

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. Stimert. 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 32:348.

Table 1. Characteristics of Jacksboro Reservoir, Texas.

Characteristic	Description
Year constructed	1951
Controlling authority	City of Jacksboro
County	Jack
Reservoir type	Tributary
Shoreline development index (SDI)	3.51
Conductivity	280 μ S/cm
Secchi disc reading	150 cm

Table 2. Boat ramp characteristics for Jacksboro City Lake, Texas, August, 2014. Reservoir elevation at time of survey was unknown. No gauges are at the reservoir to measure elevations.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
Jacksboro City Lake-Developed	33.23170 -98.15076	Y	10	Unknown	At current elevation, ramp is difficult to launch from.
City Park- Undeveloped	33.23523 -98.14749	Y	50	Unknown	Steep, unpaved gravel ramp that has been newly created.

Table 3. Harvest regulations for Jacksboro Reservoir, Texas.

Species	Bag Limit	Length Limit (inches)
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (in any combination)	12 minimum
Catfish, Flathead	5	18 minimum
Bass, White	25	10 minimum
Bass, Largemouth	5	14 minimum
Crappie, White	25	10 minimum

Table 4. Stocking history of Jacksboro Reservoir, Texas. FRY = Fry; FGL = fingerling; AFGL = advanced fingerling; UNK = Unknown.

Species	Year	Number	Life Stage	Mean TL (in)
Channel Catfish	1969	6,000	AFGL	7.9
	1991	3,000	AFGL	5.9
	1992	3,007	AFGL	5.1
	1994	3,003	AFGL	7.2
	1997	4,375	AFGL	5.9
	1998	3,015	AFGL	7.4
	2011	<u>12,323</u>	FGL	3.1
	Total	34,723		
Coppernose Bluegill x Green Sunfish	1984	6,200		2.0
Florida Largemouth Bass	1988	12,000	FRY	1.0
	1990	12,336	FRY	0.7
	1991	<u>12,200</u>	FGL	1.2
	Total	36,536		
Northern Pike	1974	2,369		UNK

Table 5. Survey of structural habitat types, Jacksboro Reservoir, Texas, 2014. Shoreline habitat type units are in miles.

Habitat type	Estimate	% of total
Natural	1.3 miles	28.1
Rocky	3.4 miles	71.9

Table 6. Survey of aquatic vegetation, Jacksboro Reservoir, Texas, 2014. Surface area (acres) is listed with percent of total reservoir surface area in parentheses.

Vegetation	2014
Native emergent	2.0 (1.7)
Native submersed	0.1 (<0.1)

Table 7. Total fishing effort (h) for all species and total directed expenditures at Jacksboro Reservoir, Texas, 2014. Survey periods were from 1 June, 2014 through 30 November 2014, and 1 March through 31 May, 2015. Relative standard error is in parentheses.

Creel statistic	2014/2015
Total fishing effort	6,685.4 (23)
Total directed expenditures	\$44,299.7 (50)

Table 8. Percent directed angler effort by species for Jacksboro Reservoir, Texas, 2014. Survey periods were from 1 June, 2014 through 30 November 2014, and 1 March through 31 May, 2015.

Species	2014/2015
Channel Catfish	5.2
Catfish spp.	8.8
White Bass	4.7
Largemouth Bass	66.2
White Crappie	1.2
Anything	14.0

Gizzard Shad

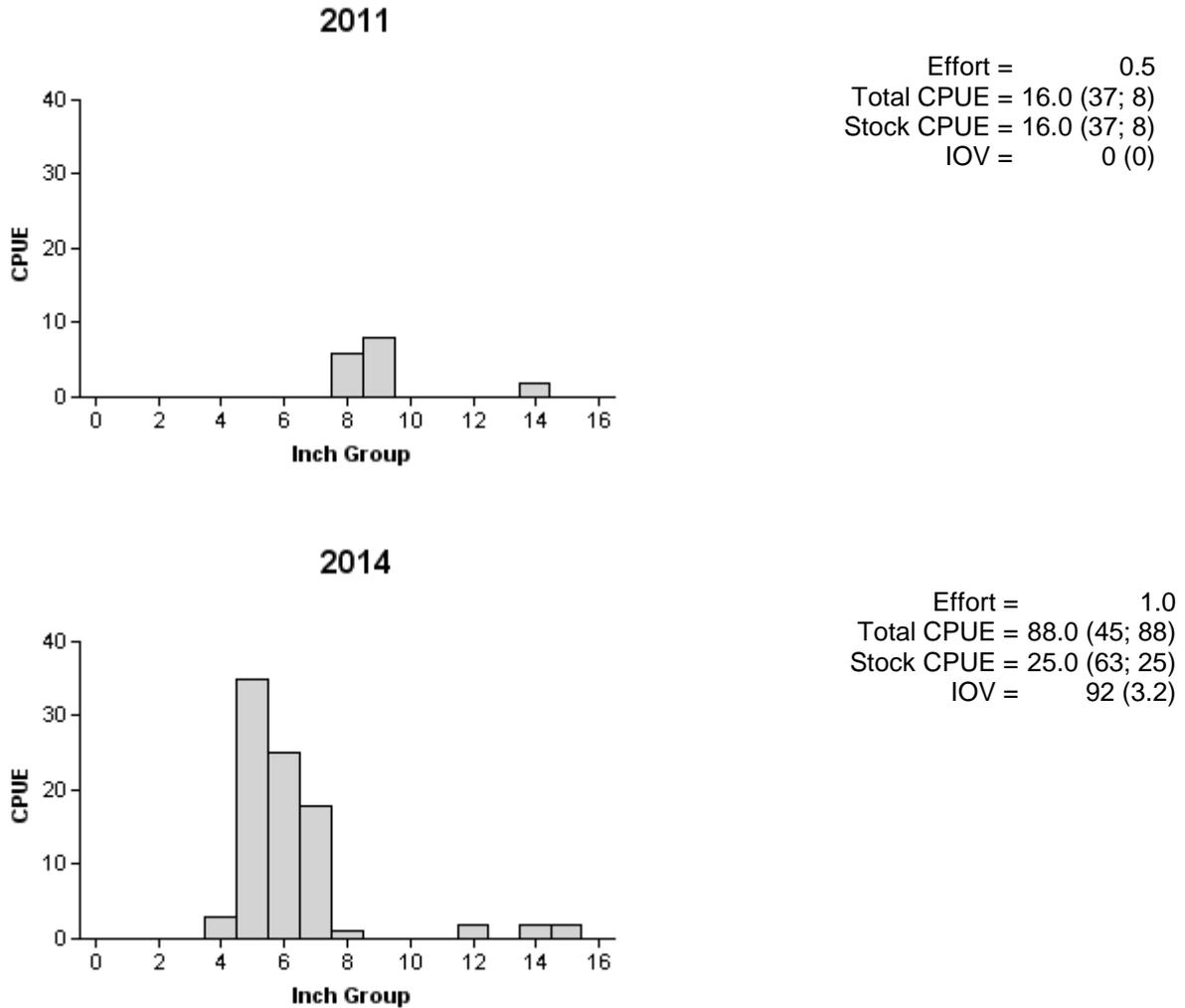


Figure 1. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Jacksboro Reservoir, Texas, 2011 and 2014. The 2011 survey was completed during daylight hours while the 2014 survey was completed at night.

Bluegill

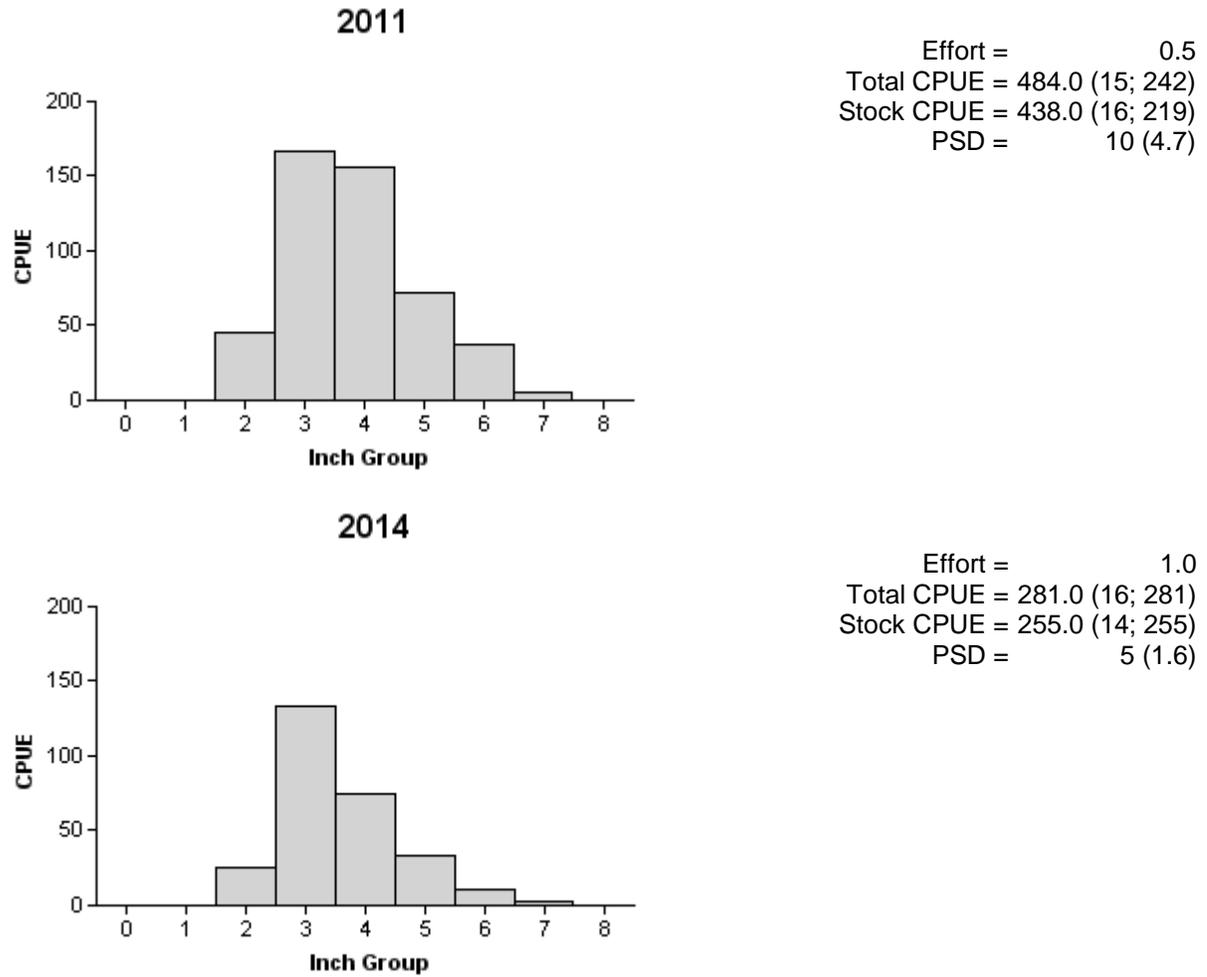


Figure 2. Number of Bluegill caught per hour (CPUE, bars) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for the fall electrofishing survey, Jacksboro Reservoir, Texas, 2011 and 2014. The 2011 survey was completed during daylight hours while the 2014 survey was completed at night.

Redear Sunfish

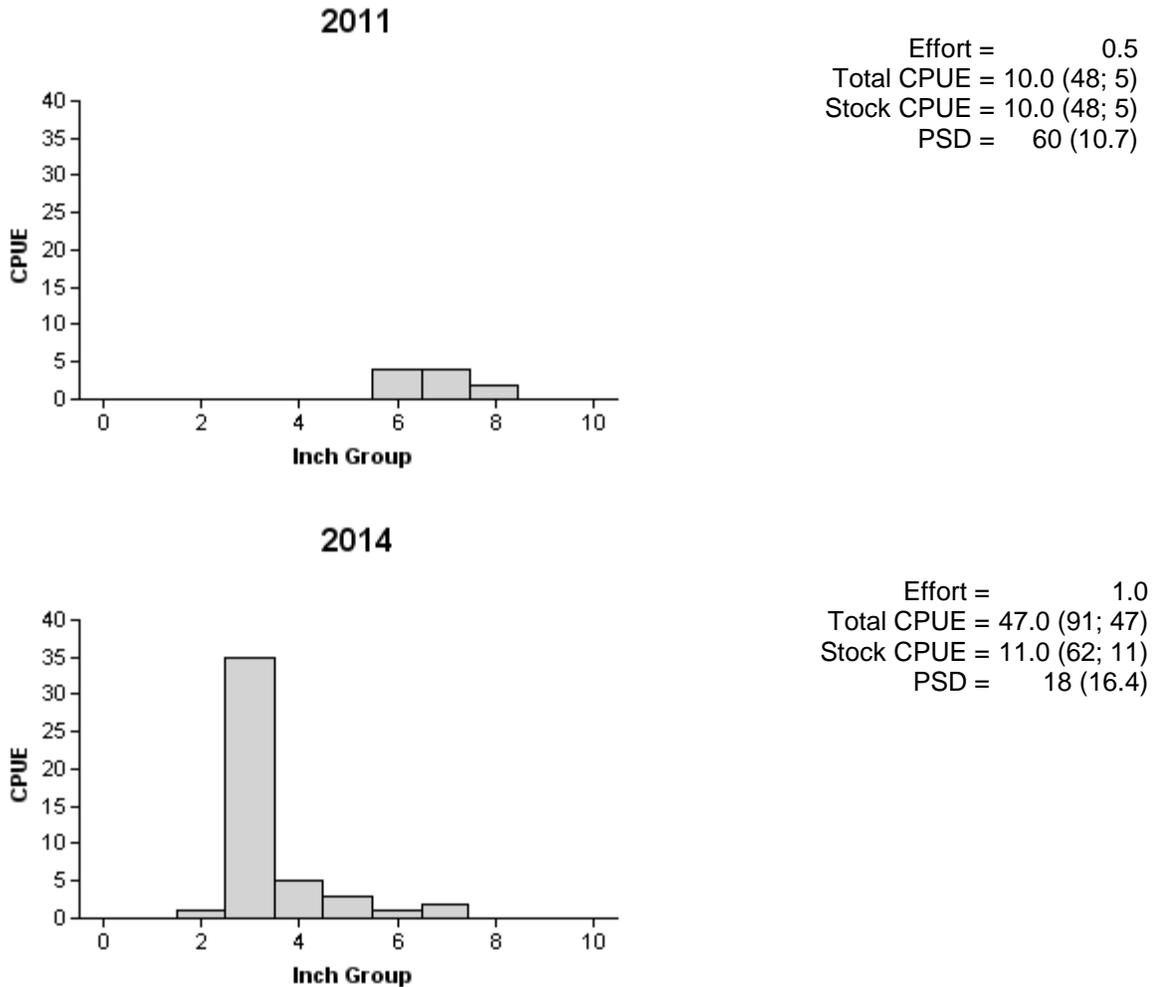


Figure 3. Number of Redear Sunfish caught per hour (CPUE, bars) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Jacksboro Reservoir, Texas, 2011 and 2014. The 2011 survey was completed during daylight hours while the 2014 survey was completed at night.

Blue Catfish

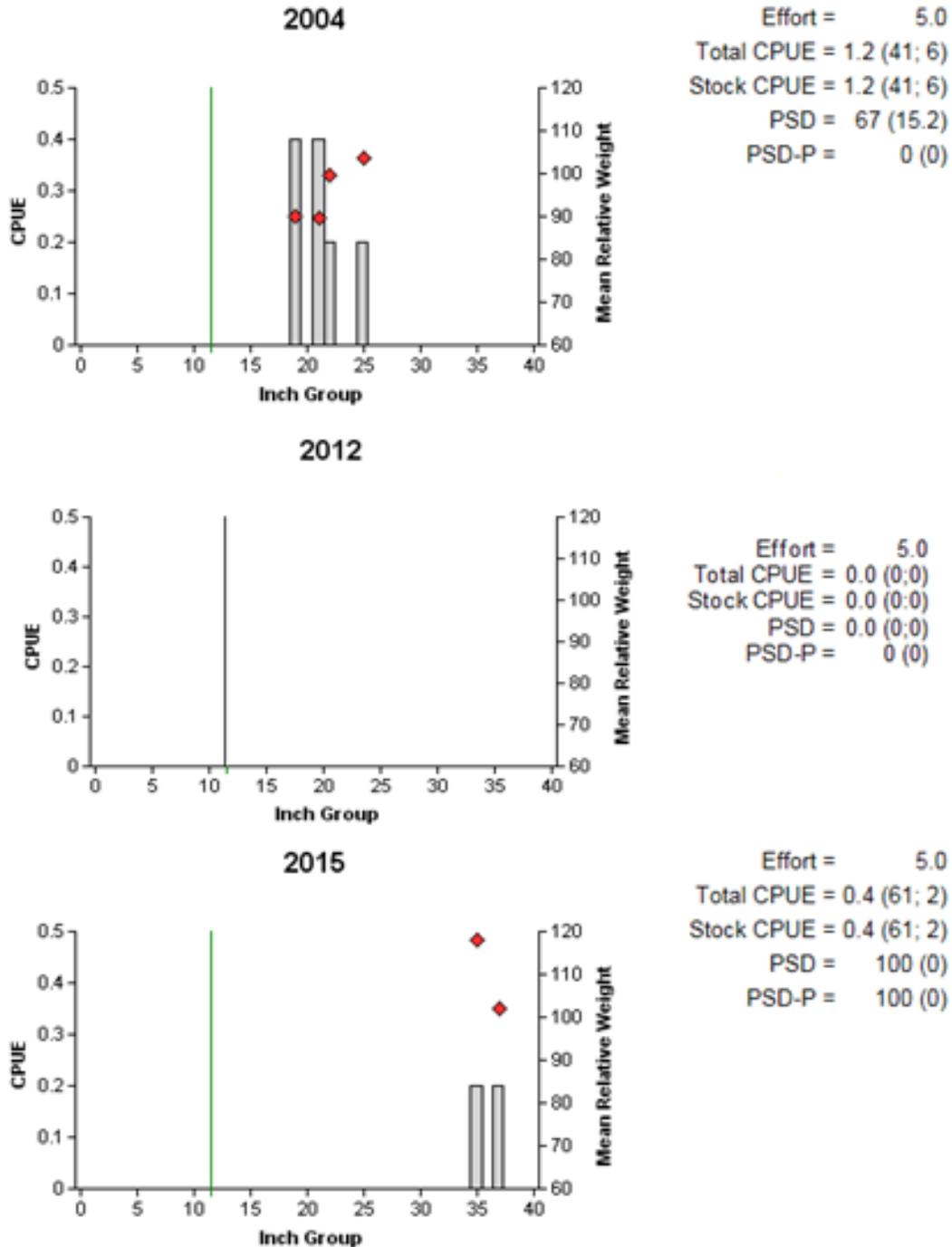


Figure 4. Number of Blue Catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill netting surveys, Jacksboro Reservoir, Texas, 2004 and 2015. No Blue Catfish were caught in the 2012 survey. Line indicates minimum length limit at time of sampling.

Channel Catfish

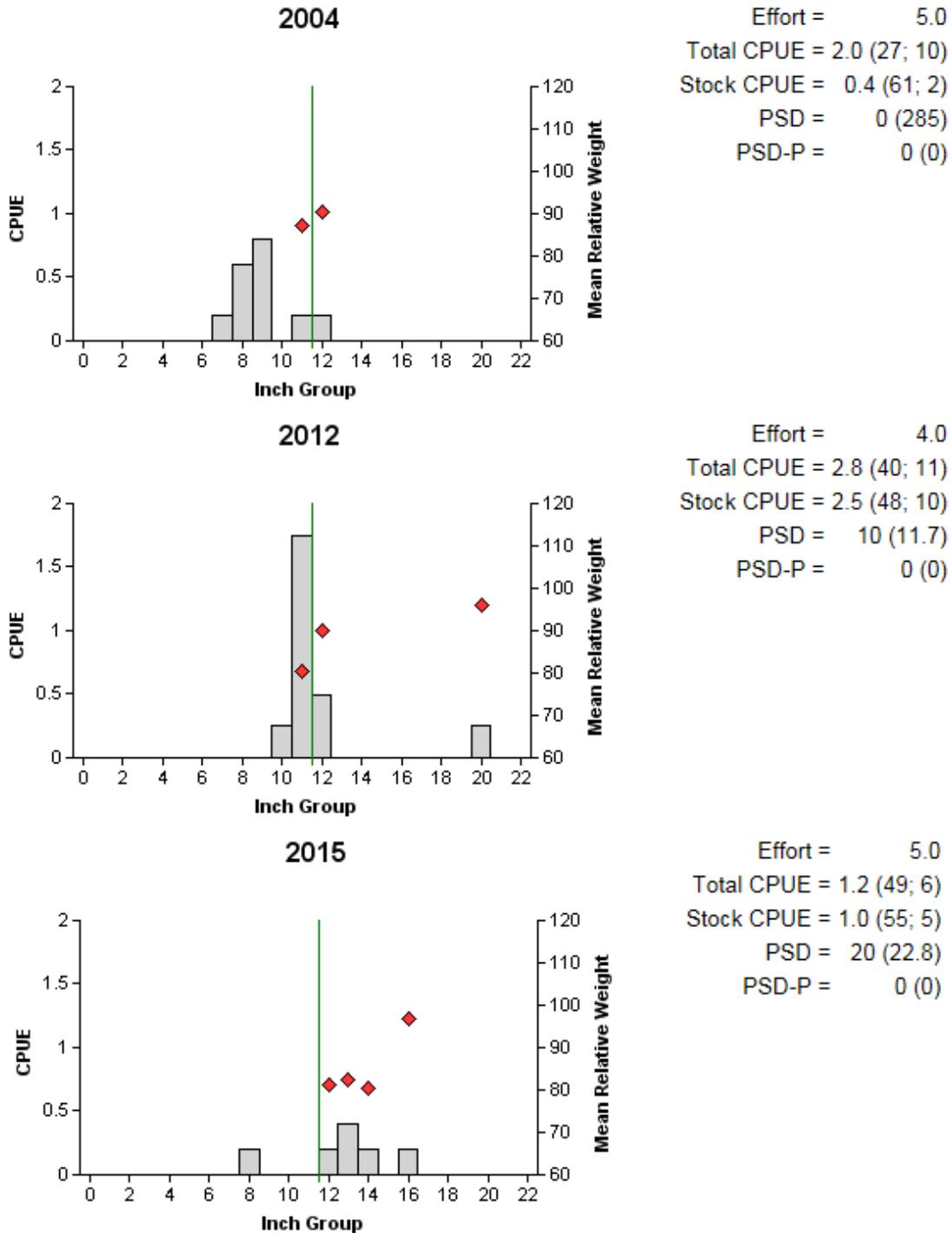


Figure 5. Number of Channel Catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill netting surveys, Jacksboro Reservoir, Texas, 2004, 2012 and 2015. Line indicates minimum length limit at time of sampling.

Channel Catfish

Table 9. Creel survey statistics for Channel Catfish at Jacksboro Reservoir, Texas, from June - November 2014 and March - May 2015. Total catch per hour is for anglers targeting Channel Catfish and total harvest is the estimated number of Channel Catfish harvested by all anglers. Relative standard errors (RSE) are in parentheses. Acreage during the 2014/2015 creel survey was 116.4.

Creel survey statistic	Year
	2014/2015
Directed effort (h)	345.2 (53.9)
Directed effort/acre	3.0 (53.9)
Total catch per hour	0.0 (-)
Total harvest	3.8 (1.3)
Harvest/acre	<0.1 (1.3)
Percent legal released	0.0

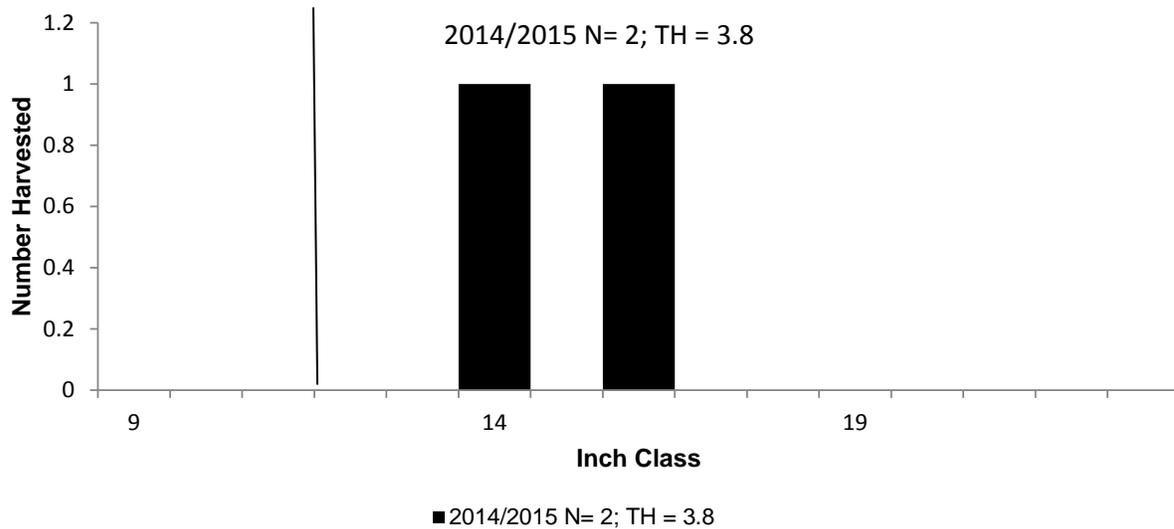


Figure 6. Length frequency of harvested Channel Catfish observed during creel surveys at Jacksboro Reservoir, Texas, June - November 2014 and March - May 2015, all anglers combined. N is the number of harvested Channel Catfish observed during creel surveys, and TH is the total estimated harvest for the creel period. Line indicates minimum length limit at time of sampling.

White Bass

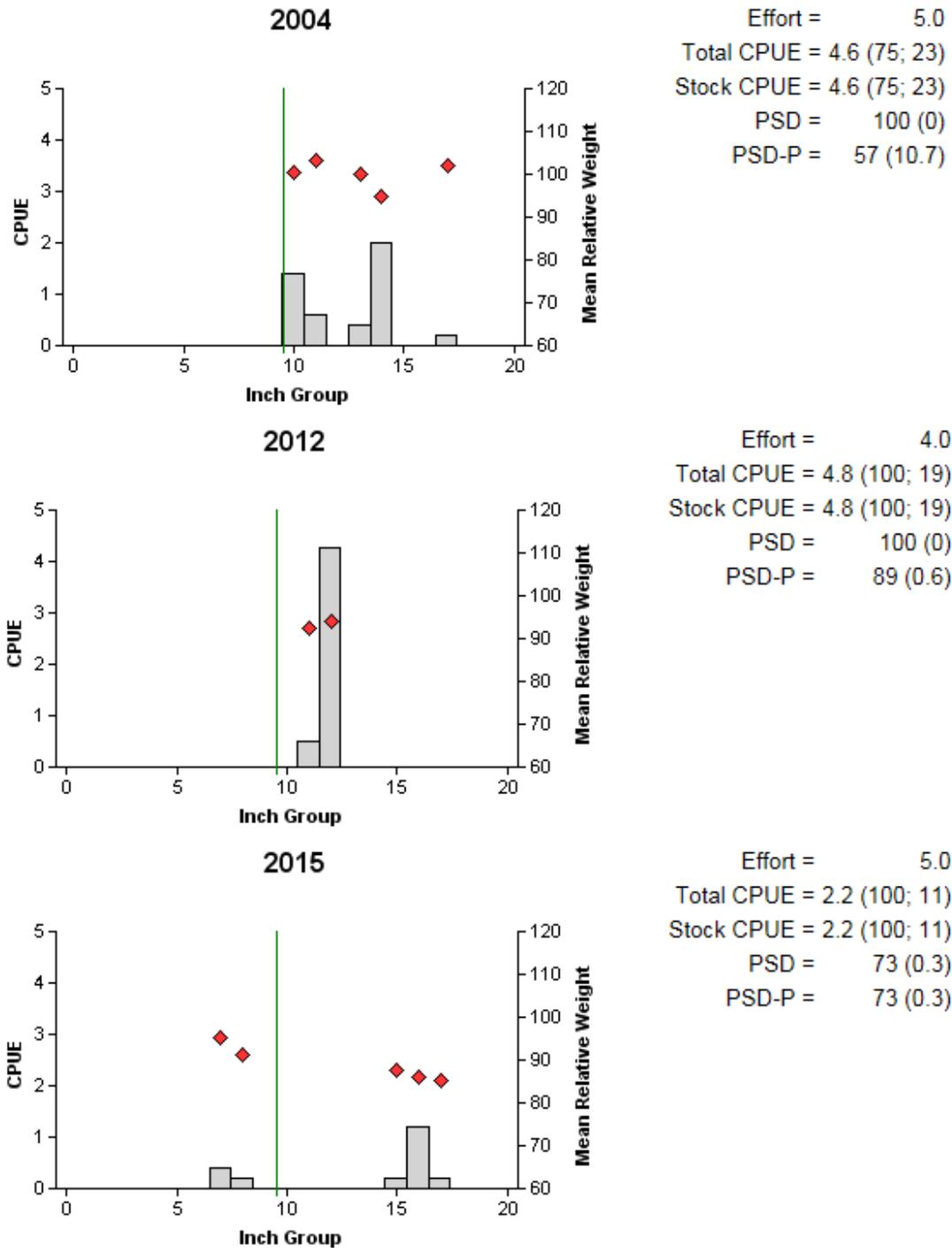


Figure 7. Number of White Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Jacksboro, Texas, 2004, 2012 and 2015. Line indicates minimum length limit at time of sampling.

White Bass

Table 10. Creel survey statistics for White Bass at Jacksboro Reservoir, Texas, from June - November 2014 and March - May 2015. Total catch per hour is for anglers targeting White Bass and total harvest is the estimated number of White Bass harvested by all anglers. Relative standard errors (RSE) are in parentheses. Acreage during the 2014/2015 creel survey was 116.4.

Creel survey statistic	Year
	2014/2015
Directed effort (h)	311.7 (90.0)
Directed effort/acre	2.7 (90.0)
Total catch per hour	0.0(-)
Total harvest	90.1 (32.0)
Harvest/acre	0.8 (32.0)
Percent legal released	52.9

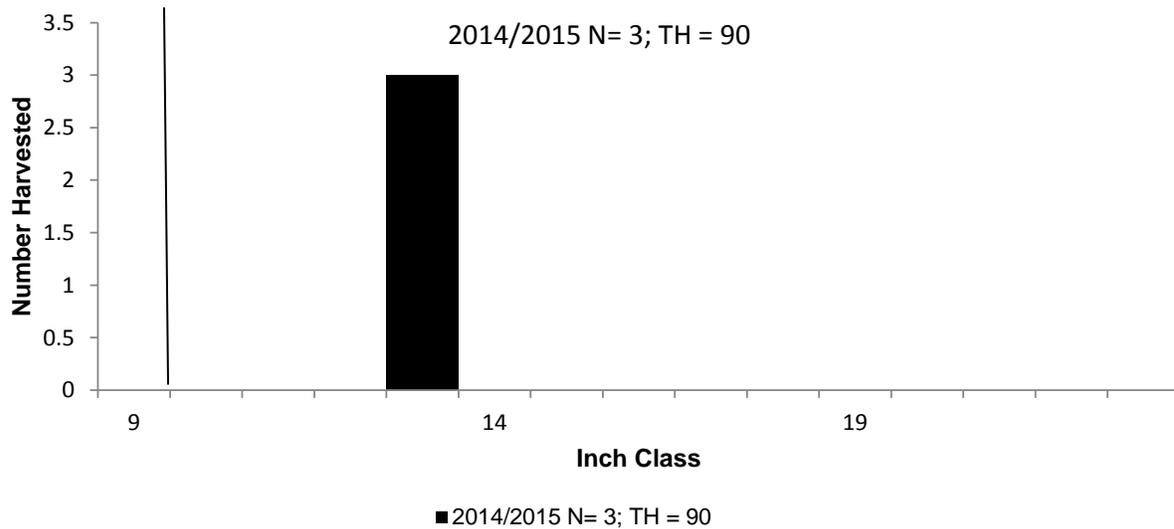


Figure 8. Length frequency of harvested White Bass observed during creel surveys at Jacksboro Reservoir, Texas, June - November 2014 and March - May 2015, all anglers combined. N is the number of harvested White Bass observed during creel surveys, and TH is the total estimated harvest for the creel period. Line indicates minimum length limit at time of sampling.

Largemouth Bass

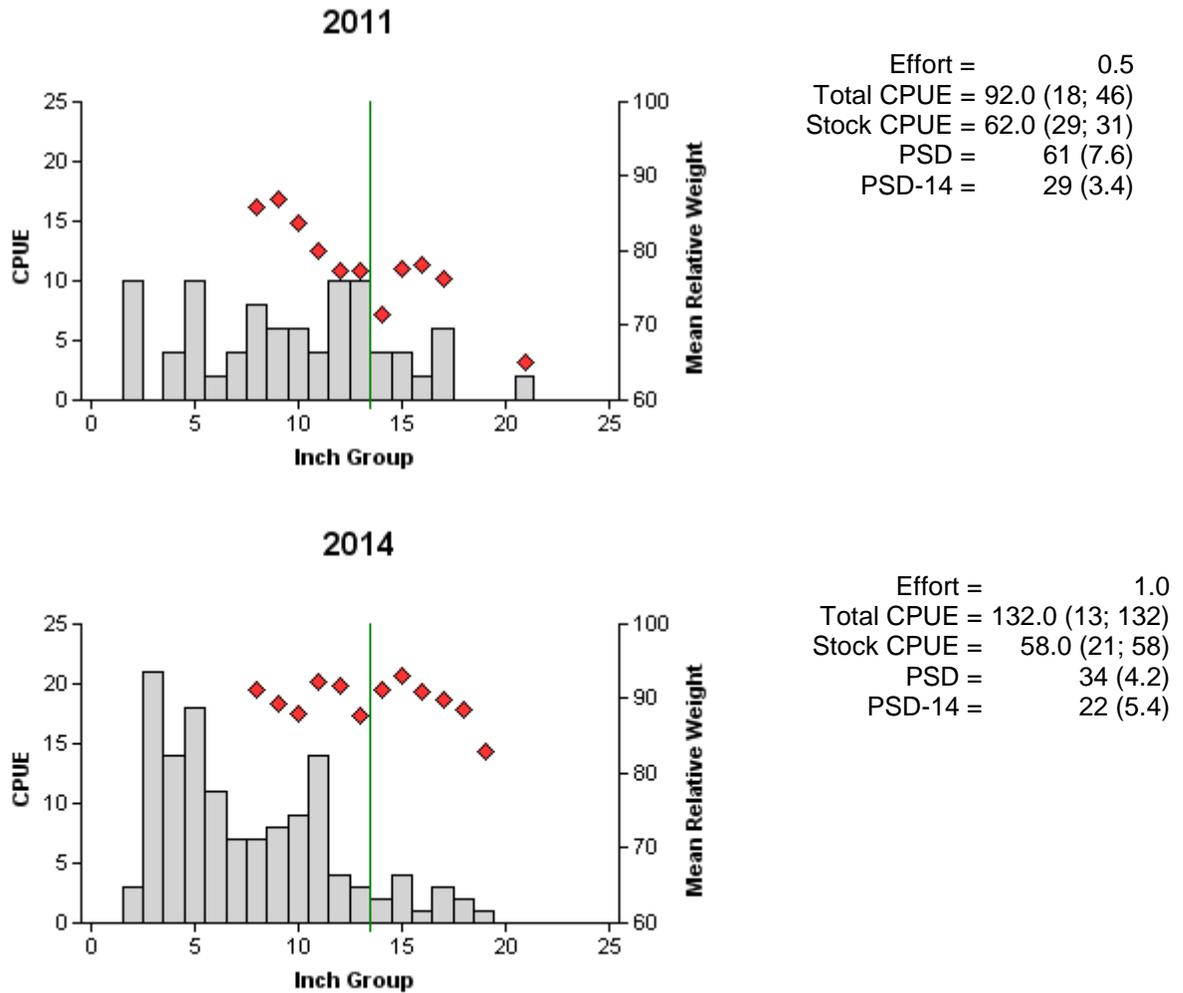


Figure 9. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Jacksboro, Texas, 2011 and 2014. The 2011 survey was completed during daylight hours while the 2014 survey was completed at night. Line indicates minimum length limit at time of sampling.

Largemouth Bass

Table 11. Creel survey statistics for Largemouth Bass at Jacksboro Reservoir, Texas, from June - November 2014 and March - May 2015. Total catch per hour is for anglers targeting Largemouth Bass and total harvest is the estimated number of Largemouth Bass harvested by all anglers. Relative standard errors (RSE) are in parentheses. Acreage during the 2014/2015 creel survey was 116.4.

Creel survey statistic	Year
	2014/2015
Directed effort (h)	4,429.0 (28.9)
Directed effort/acre	38.0 (28.9)
Total catch per hour	0.7 (56.2)
Total harvest	44.9 (15.9)
Harvest/acre	0.4 (15.9)
Percent legal released	93.5

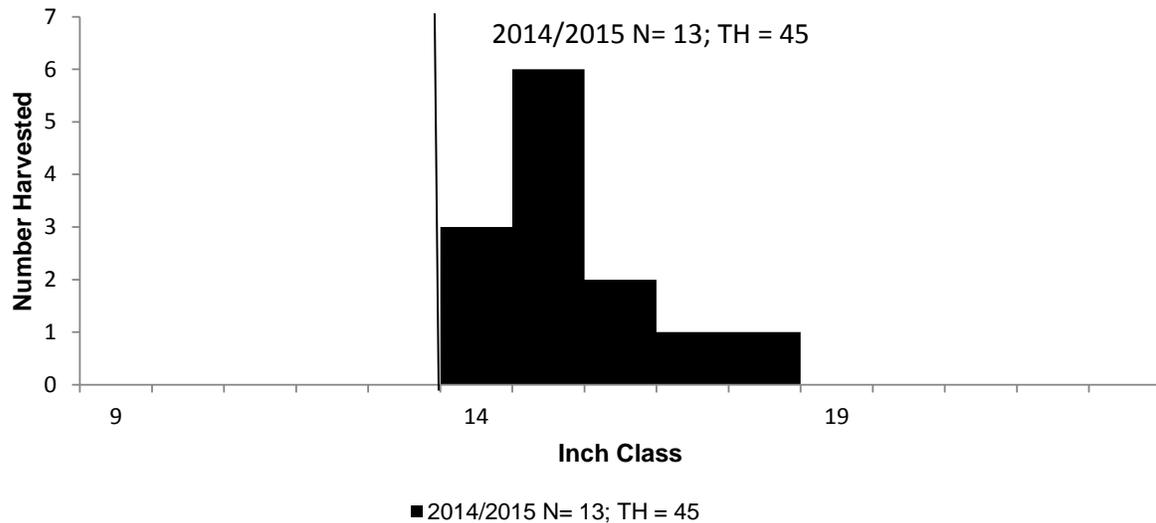


Figure 10. Length frequency of harvested Largemouth Bass observed during creel surveys at Jacksboro Reservoir, Texas, June - November 2014 and March - May 2015, all anglers combined. N is the number of harvested Largemouth Bass observed during creel surveys, and TH is the total estimated harvest for the creel period. Line indicates minimum length limit at time of sampling.

White Crappie

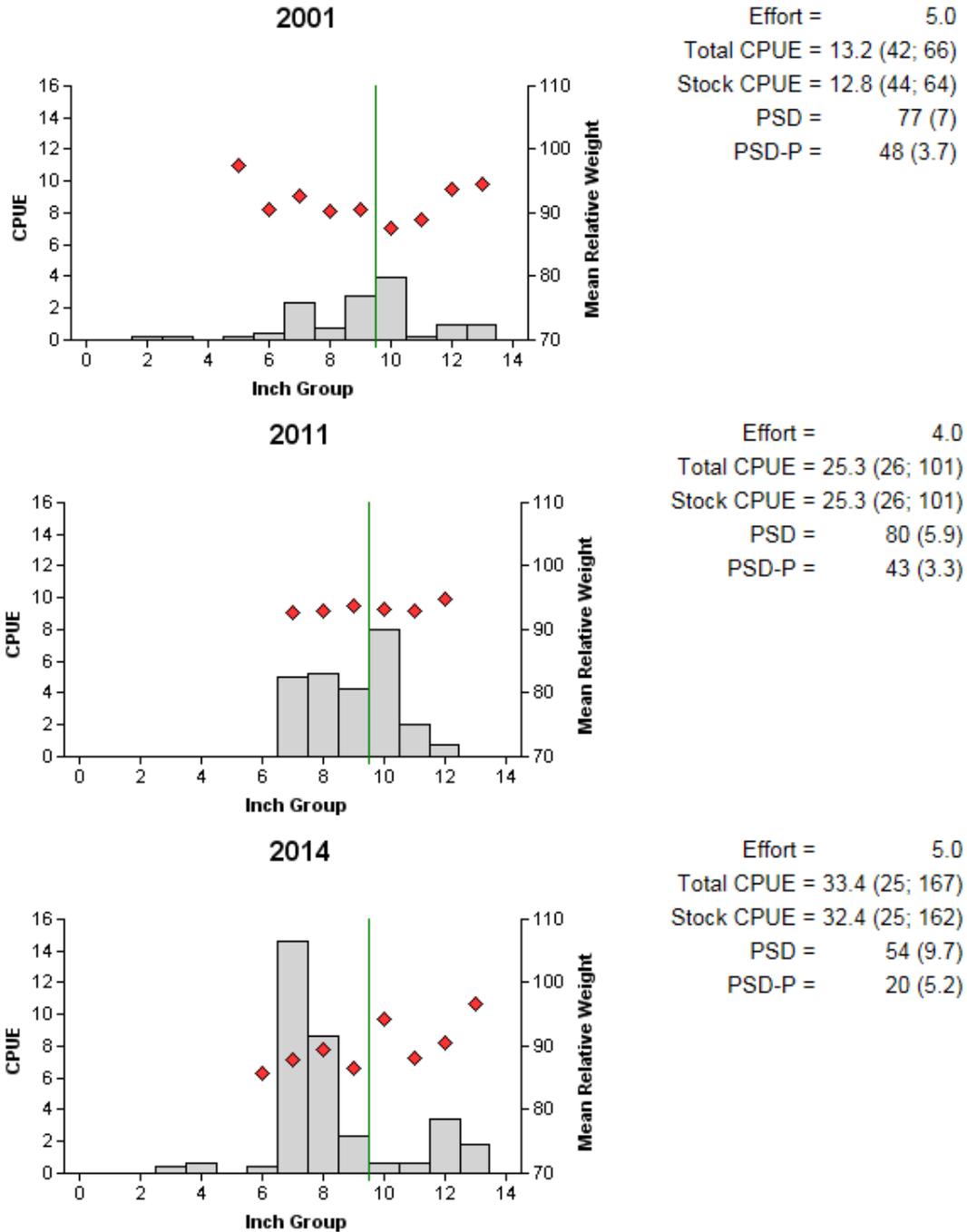


Figure 11. Number of White Crappie caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap net surveys, Jacksboro, Texas, 2001, 2011 and 2014. Line indicates minimum length limit at time of sampling.

White Crappie

Table 12. Creel survey statistics for White Crappie at Jacksboro Reservoir, Texas, from June - November 2014 and March - May 2015. Total catch per hour is for anglers targeting White Crappie and total harvest is the estimated number of White Crappie harvested by all anglers. Relative standard errors (RSE) are in parentheses. Acreage during the 2014/2015 creel survey was 116.4.

Creel survey statistic	Year
	2014/2015
Directed effort (h)	79.5 (128.2)
Directed effort/acre	0.7 (128.2)
Total catch per hour	0.0 (-)
Total harvest	112.3 (39.6)
Harvest/acre	1.0 (39.6)
Percent legal released	37.2

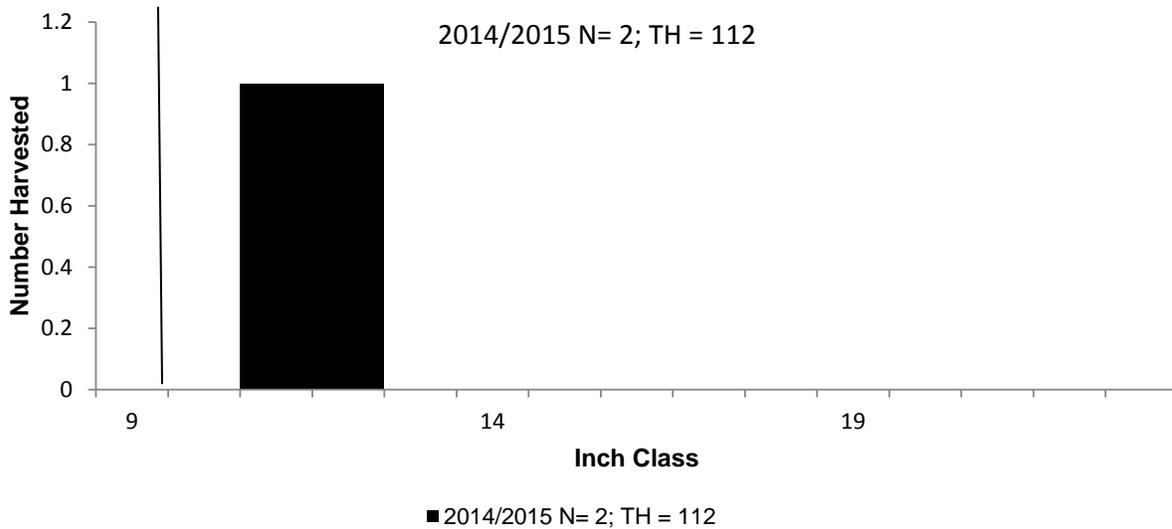


Figure 12. Length frequency of harvested White Crappie observed during creel surveys at Jacksboro Reservoir, Texas, June - November 2014 and March - May 2015, all anglers combined. N is the number of harvested White Crappie observed during creel surveys, and TH is the total estimated harvest for the creel period. Line indicates minimum length limit at time of sampling.

Table 13. Proposed sampling schedule for Jacksboro Reservoir, Texas. Survey period is June through May. Gill netting surveys are conducted in the spring, while electrofishing and trap netting surveys are conducted in the fall. Standard survey denoted by S.

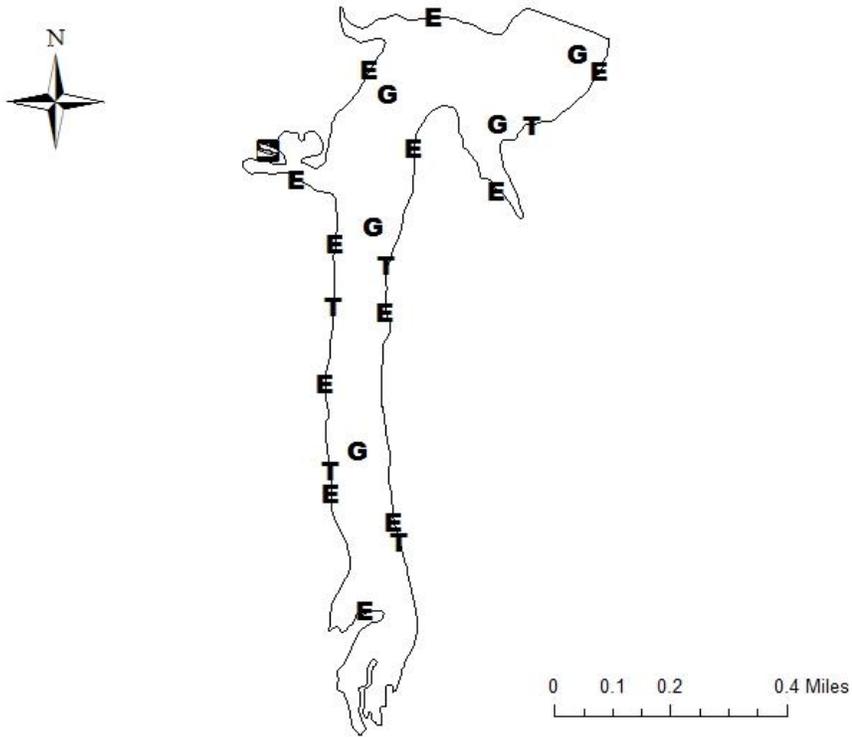
Survey year	Electrofishing Fall(Spring)	Trap net	Gill net	Habitat			Creel survey	Report
				Structural	Vegetation	Access		
2015-2016								
2016-2017								
2017-2018								
2018-2019	S	S	S		S	S		S

APPENDIX A

Number (N) and catch rate (CPUE) of all target species collected from all gear types from Jacksboro Reservoir, Texas 2014-2015. Sampling effort was 5 net nights for gill netting, 5 net nights for trap netting, and 1 hour for electrofishing.

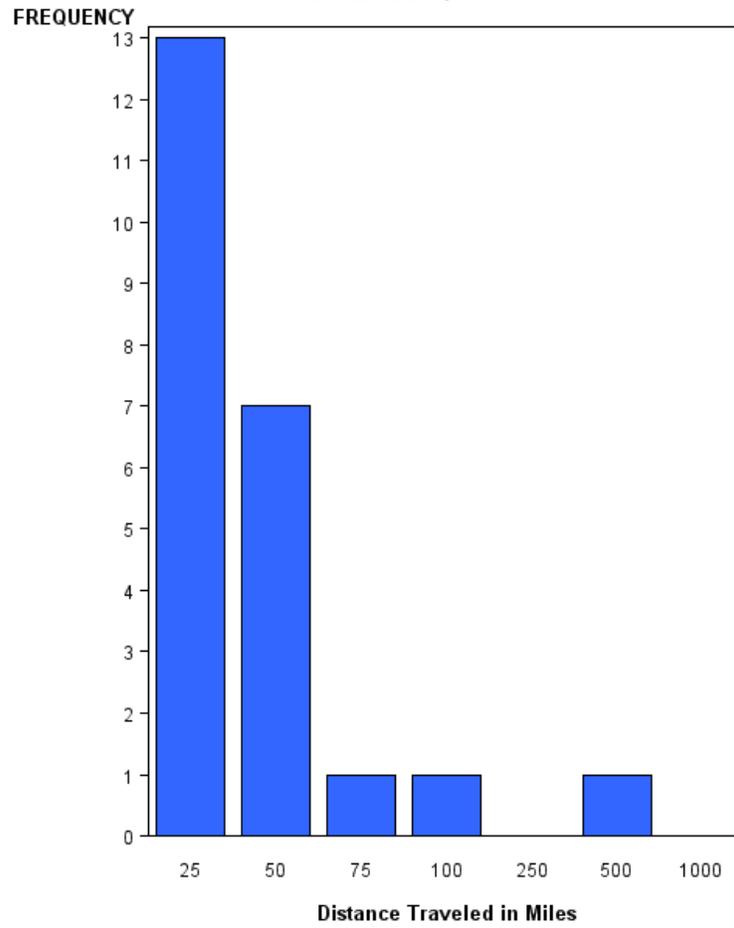
Species	Gill Nets		Trap Nets		Electrofishing	
	N	CPUE	N	CPUE	N	CPUE
Gizzard Shad	14	2.8			88	88.0
Common Carp	1	0.2				
Blue Catfish	2	0.4				
Channel Catfish	6	1.2				
White Bass	11	2.2	16	3.2		
Green Sunfish					50	50.0
Warmouth			3	0.6	6	6.0
Bluegill			83	16.6	281	281.0
Longear Sunfish			30	6.0	136	136.0
Redear Sunfish			1	0.2	47	47.0
Largemouth Bass			1	0.2	132	132.0
White Crappie			167	33.4		

APPENDIX B



Location of sampling sites, Jacksboro Reservoir, Texas, 2014-2015. Trap net, gill net, and electrofishing sites are indicated by T, G, and E, respectively. Water level was approximately three feet below normal pool at time of sampling.

APPENDIX C



Frequency of anglers that traveled various distances (miles) to Jacksboro Reservoir, Texas as determined from the June-November 2014 and March-May 2015 creel survey.