

PERFORMANCE REPORT

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FEDERAL AID IN SPORT FISH RESTORATION ACT

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FEDERAL AID PROJECT F-30-R-35

STATEWIDE FRESHWATER FISHERIES MONITORING AND MANAGEMENT PROGRAM

2009 Survey Report

Lake Bob Sandlin

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1
TABLE OF CONTENTS

Survey and management summary	2
Introduction	3
Reservoir description.....	3
Management history.....	3
Methods	4
Results and discussion	4
Fisheries management plan	6
Literature cited.....	8
Figures and tables.....	9-20
Water level (Figure 1).....	9
Reservoir characteristics (Table 1)	9
Harvest regulations (Table 2)	10
Stocking history (Table 3)	10
Aquatic vegetation/habitat survey (Table 4)	11
Gizzard shad (Figure 2)	12
Bluegill (Figure 3)	13
Redear sunfish (Figure 4)	14
Blue catfish (Figure 5)	15
Channel catfish (Figure 6).....	16
White bass (Figure 7)	17
Spotted bass (Figure 8).....	18
Largemouth bass (Figure 9)	19
Proposed sampling schedule (Table 5)	20
Appendix A	
Catch rates for all species from all gear types.....	21
Appendix B	
Map of 2004-2005 sampling locations	22

SURVEY AND MANAGEMENT SUMMARY

Fish populations in Lake Bob Sandlin were surveyed in 2007 and 2009 with electrofishing, 2009 with trap netting, and 2010 using gill netting. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

- **Reservoir Description:** Lake Bob Sandlin is a 9,116-acre impoundment located on Big Cypress Creek in the Cypress River Basin. The lake is located in Titus, Camp, and Franklin Counties. Habitat features consisted of standing timber, bulkhead, piers and docks, rock and gravel, native aquatic plants, hydrilla, alligatorweed, and Eurasian watermilfoil.
- **Management History:** Important sport fish include channel catfish, white bass, largemouth bass, and crappie. All sport fish at Lake Bob Sandlin have historically been managed with statewide harvest regulations. Florida largemouth bass and blue catfish have been stocked to improve angling opportunities. Percent coverage of aquatic vegetation has fluctuated (7%, 1993 to 23%, 2005). Native submersed vegetation dominates the plant community (910 acres, 2009). Hydrilla, alligatorweed, and Eurasian watermilfoil were also present. Hydrilla abundance has declined in recent years (1,898 acres, 2005; 1,021 acres, 2008; 512 acres, 2009). Alligatorweed was found throughout the reservoir and has ranged from 60-100 acres in recent years. Eurasian watermilfoil, mostly located at the lower end of the reservoir, has ranged from 26-57 acres in recent years.
- **Fish Community**
 - **Prey species:** Threadfin shad were present in the reservoir. Gizzard shad abundance was moderate with the majority of the fish not available as prey to most sport fish. Bluegill and other sunfish were also available as prey and were abundant.
 - **Catfishes:** The blue catfish stocking in 2008 was successful. Some fish have already grown past the minimum length limit. The channel catfish population had many fish above legal length and provides excellent angling opportunities. Flathead catfish were present in the reservoir and provide anglers with an additional sport fish.
 - **White bass:** White bass were present in the reservoir in moderate numbers. Many legal-size fish from 10-16 inches were available for harvest.
 - **Largemouth bass:** The largemouth bass population was excellent with high relative abundance and good size structure. Condition of largemouth was good for most inch groups. Growth of largemouth bass was good with fish reaching legal length in 1.8 years. Many legal-size fish from 14-21 inches were available to catch.
 - **Crappie:** Crappie were not collected in trap nets in 2009; however, moderate numbers of both black and white crappie were caught in recent surveys (2001 and 2005). Angler creel surveys (2004-2005) also indicate these fish are present in the reservoir.

Management Strategies: Conduct fall electrofishing and spring gill netting surveys every other year beginning 2011 and 2012, respectively. Conduct fall trap netting in 2013 and summer electrofishing (low-pulse) in 2014. Conduct a roving creel survey June 2013 through May 2014. Aquatic vegetation surveys will be conducted annually beginning in 2010. All sport fish will continue to be managed under statewide harvest regulations.

3
INTRODUCTION

This document is a summary of fisheries data collected from Lake Bob Sandlin from June 2009 through May 2010. 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 2009-2010 data for comparison.

Reservoir Description

Lake Bob Sandlin is a 9,116-acre impoundment constructed in 1977 on Big Cypress Creek in the Cypress River Basin. It is located in Camp, Titus, and Franklin Counties centrally located approximately 10 miles between the cities of Pittsburg and Mt. Pleasant. The controlling authority is Titus County Fresh Water District No. 1. Primary water uses are municipal and industrial water supply and public recreation. The reservoir has a drainage area of approximately 128 square miles and a shoreline length of 75 miles. Average annual water fluctuation is 1-3 feet; however water levels in 2005 and 2006 dropped 5.8 and 10.6 feet below conservation pool (337.5 msl), respectively. Habitat features consisted of standing timber, bulkhead, piers and docks, rock and gravel, native aquatic plants, hydrilla, alligatorweed, and Eurasian watermilfoil. Boat access consisted of seven ramps. Bank fishing access is limited. There is one fishing pier located at Lake Bob Sandlin State Park and one at Titus County Park. Other descriptive characteristics for Lake Bob Sandlin are recorded in Table 1.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Brice and Bister 2006) included:

1. Conduct annual aquatic vegetation surveys to monitor trends and estimate coverage of hydrilla, Eurasian watermilfoil, and native plants.
Action: Aquatic vegetation surveys were conducted in 2008 (exotic species) and 2009 (all species).
2. Allow treatments of nuisance aquatic vegetation to allow property owners access to the lake.
Action: Worked along with Titus County Freshwater District No. 1 to allow some control of nuisance aquatic vegetation (alligatorweed and American lotus) by homeowners.
3. Stock Florida largemouth bass at 50/acre in 2006 and 2007.
Action: Florida largemouth bass fingerlings were stocked in 2006 and 2007 at the recommended rate. Due to change in TPWD stocking protocol, an additional 50 fish/acre were stocked in 2009 and 2010.
4. Conduct an electrofishing survey in fall 2009 to assess Florida largemouth bass genetic influence.
Action: Because Florida largemouth bass were stocked in 2009, no genetic sampling was conducted for largemouth bass in that same year.
5. Conduct standard electrofishing surveys in fall 2007 and 2009 to monitor the largemouth bass and prey species populations.
Action: Fall electrofishing was conducted in 2007 and 2009.
6. Provide information to anglers and stakeholders about fisheries management activities, fishing opportunities, and other issues at Lake Bob Sandlin.
Action: District personnel attended a Titus County Freshwater Supply District No. 1 public meeting (Mt. Pleasant) and presented information about fish and aquatic plant management at Lake Bob Sandlin.

Harvest regulation history: All sport fishes in Lake Bob Sandlin are currently managed with statewide regulations (Table 2). Largemouth bass have been managed under a 14-inch minimum length limit and 5-fish daily bag (in combination with spotted bass) since 1986. Other black basses were included under this regulation in 1988. In 2000, the 12-inch minimum length limit for spotted bass was dropped to no minimum length limit. The 12-inch minimum length limit and 25 fish daily bag for channel and blue catfish (in any combination) has been in effect since 1995. The minimum length limit for flathead catfish was reduced from 24 inches to 18 inches in 1994. There is a 5-fish daily bag on flathead catfish. Crappie (white and black) have been managed under a 10-inch minimum length limit and 25 fish daily bag (combination of both species) since 1990.

Stocking history: Lake Bob Sandlin was stocked with blue catfish in 2008 and 2009. Channel catfish were stocked in 1976, 1978, and 2000. The 812 channel catfish stocked in 2000 were inadvertently stocked into Lake Bob Sandlin and not Lake Bob Sandlin State Park Pond. Florida largemouth bass were introduced into Bob Sandlin in 1977 and again stocked in 1998, 2006, 2007, 2009, and 2010. The complete stocking history is recorded in Table 3.

Vegetation/habitat history: In 2009, about 18% of the lake contained aquatic vegetation. Aquatic vegetation abundance has fluctuated from a low of 7% in 1993 to a high of 23% in 2005. Dominant species in 2009 were native submersed plants (910 acres) and hydrilla (512 acres). The last three surveys have shown a continued decline in hydrilla abundance (1,898 acres, 2005; 1,021 acres, 2008). Alligatorweed can be found throughout the reservoir and has ranged from 60-100 acres in recent years. Eurasian watermilfoil, mostly located at the lower end of the reservoir, has ranged from 26-57 acres in recent years.

METHODS

Fishes were collected by electrofishing (1.5 hours at 18, 5-min stations), gill netting (10 net nights at 10 stations), and trap netting (10 net nights at 10 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 according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2009). Source for water level data was the United States Geological Survey (USGS) website

Sampling statistics (CPUE for various length categories), structural indices [Proportional Size Density (PSD), as defined by Guy et al. (2007)], and condition indices [relative weights (W_i)] were calculated for target fishes according to Anderson and Neumann (1996). Index of vulnerability (IOV) was calculated for gizzard shad (DiCenzo et al. 1996). Relative standard error (RSE = 100 X SE of the estimate/estimate) was calculated for all CPUE statistics and for creel statistics and SE was calculated for structural indices and IOV. Average age at length was determined using otoliths for largemouth bass from 13 fish (13.6 to 14.9 inches). Source for water level data was the United States Geological Survey (USGS) website.

RESULTS AND DISCUSSION

Habitat: Structural habitat consisted of standing timber, bulkhead, piers and docks, and rocks. Shoreline habitat was mostly natural shoreline (63%) and bulkhead with piers and docks (25%). Total bulkhead for the lake was 31%. Native submersed vegetation was most abundant (910.5 acres) followed by hydrilla (512.1 acres). Also present were native emergent plants (96.2 acres) as well as native floating-leaved plants (90.8 acres). Invasive exotic plants found in the reservoir included alligatorweed (66.7 acres) and Eurasian watermilfoil (26.5 acres). Table 4 summarizes the 2009 habitat and vegetation surveys.

Prey species: Gizzard shad, threadfin shad, and several sunfish species were present indicating good prey fish diversity. Electrofishing catch rates of gizzard shad in 2007 and 2009 were 120.7/h and 73.3/h, respectively, both an increase from 2005 (38.7/h) (Figure 2). Index of vulnerability (IOV) for gizzard shad in 2009 was low, indicating that only 20% of gizzard shad were available to most predator fish. This was

similar to 2005 (10%) but lower than in 2007 (68%) (Figure 2). Bluegill was the dominate sunfish species collected in 2007 (407.3/h) and 2009 (192.7/h). Catch rates for bluegill were similar to that of 2005 and 2007, however there was a 52% decrease from 2007 to 2009 (Figure 3). Low water levels from 2005 to 2007 (Figure 1) may have contributed to the decline in sunfish catch rates. Catch rate for combined sunfish species (warmouth, orangespotted sunfish, bluegill, longear sunfish, redear sunfish, and spotted sunfish) was 503.3/h in 2007 and 275.3/h in 2009. Abundant small sunfish were available as prey.

Catfishes: Blue catfish, channel catfish, and flathead catfish were all present in Lake Bob Sandlin. The gill net catch rate for blue catfish in 2010 was 1.3/nn (Figure 5). This indicates the 2008 stocking of blue catfish was successful. The gill net catch rate of channel catfish in 2010 was 8.1/nn, which was a slight increase from that of 2006 (6.6/nn) but lower than it was in 2002 (11.2/nn) (Figure 6). Body condition for channel catfish collected in 2010 was good with mean W_r for most inch groups exceeding 90 (Figure 6). Flathead catfish were collected at a rate of 0.3/nn in 2010 (Appendix A).

White bass: The gill net catch rate of white bass in 2010 was 10.6/nn which exceeded collections in 2002 (8.3/nn) and 2006 (3.3/nn). In 2010, the increase was evident in both stock- and quality-size fish (Figure 7). Mean W_r for most inch groups ranged from 80-100 (Figure 7).

Black basses: The electrofishing catch rate of spotted bass in 2010 was 10.7/h, which was a decrease from 2007 (26.7) and 2005 (34.0) (Figure 8). This decrease in relative abundance can be attributed to fewer stock-size (≥ 7 inches) fish being collected. Fish up to 15 inches were collected and mean W_r for most inch groups exceeded 90 (Figure 8). The electrofishing catch rate of largemouth bass in 2007 and 2010 was 176.0/h and 167.3/h, respectively (Figure 9). These catch rates were very similar to the catch rate in 2005 (185.3/h) (Figure 9). The largemouth bass population exhibited good size distribution in 2007 and 2009. Recruitment of largemouth bass has been consistent in recent years with moderate numbers of stock-size (≥ 8 inches) fish being collected (2007, 99.3/h; 2010, 96.0/h) (Figure 9). Abundant aquatic vegetation should contribute to successful recruitment in the future. Largemouth bass from 2 to 21 inches were collected and many legal-size (≥ 14 inches) fish were available for catch (Figure 9). Growth of largemouth bass in Bob Sandlin was fast. Average age at 14 inches (13.0 to 14.5 inches) was 1.8 years ($N = 13$; range = 1 – 3 years). Condition of largemouth bass was good with mean W_r for most inch groups exceeding 90 (Figure 9).

Crappie: No crappie were collected from trap nets in 2009. However, both white and black crappie were caught in previous years [(2001, 2.6 fish/nn (Ryan and Brice 2002); 2005, 2.9 fish/nn (Brice and Bister 2006)] using standard trap netting procedures. Additionally, anglers interviewed during creel surveys (2004-2005) caught 2.4/hour and harvested 2.2/hour up to 15 inches (white and black crappie combined) in length (Brice and Bister 2006).

Fisheries management plan for Lake Bob Sandlin, Texas

Prepared – July 2010

ISSUE 1: Hydrilla, alligatorweed, and Eurasian watermilfoil are all present in the reservoir. While coverage of these aquatic plants is not problematic at this time, certain areas may require management to maintain access.

MANAGEMENT STRATEGIES

1. Provide technical guidance to property owners and controlling authority on treating nuisance aquatic vegetation in the lake. Procedural requirements as outlined in *Aquatic Vegetation Management in Texas: A Guidance Document* will be followed.
2. Conduct annual aquatic vegetation surveys to monitor trends and estimate coverage of hydrilla, Eurasian watermilfoil, and alligatorweed.

ISSUE 2: Blue catfish were introduced into Lake Bob Sandlin in 2008 in an effort to increase sportfish angling opportunities. Fingerlings were stocked in 2008, 2009, and 2010 at 50/acre. Blue catfish (12-15 inches) were collected during the 2010 gillnetting survey at 1.8/nm, indicating stocking success. Blue catfish population dynamics as well as angler utilization of these fish should be monitored.

MANAGEMENT STRATEGIES

1. Conduct spring gill netting in 2012 and 2014 to assess blue catfish population relative abundance and recruitment.
2. Conduct summer electrofishing (low pulse) in 2014 to assess blue catfish population relative abundance and recruitment.
3. Conduct a roving creel survey from June 2013 through May 2014 to assess angler effort, catch rate, and harvest rate of blue catfish.

ISSUE 3: Lake Bob Sandlin supports a quality largemouth bass fishery. The population can be characterized as one of consistent recruitment, fast growth rate, moderate relative abundance, and good size distribution with many year classes. A diverse, moderately abundant aquatic plant community also contributes to the success of the bass fishery. In an effort to maintain a quality fishery, Florida largemouth bass have been stocked at 50/acre in 1998, 2006, 2007, 2009, and 2010. Brice and Bister (2008) also indicate largemouth bass are highly sought sport fish at Lake Bob Sandlin. Largemouth bass population dynamics as well as angler utilization of these fish should be monitored.

MANAGEMENT STRATEGIES

1. Conduct standard electrofishing surveys in fall 2011 and 2013 to monitor the largemouth bass and prey species populations.
2. Conduct a roving creel survey from June 2013 through May 2014 to assess angler effort, catch rate, and harvest rate of largemouth bass.
3. Stock Florida largemouth bass annually at 50/acre.

ISSUE 4: Anglers and stakeholders might benefit from information about fisheries management activities, fishing opportunities, and other issues at Lake Bob Sandlin.

MANAGEMENT STRATEGIES

1. Continue to provide news releases to the print and broadcast media.
2. Continue to provide fisheries presentations to the public regarding issues/opportunities at Lake Bob Sandlin

SAMPLING SCHEDULE JUSTIFICATION:

The proposed sampling schedule includes aquatic vegetation surveys (2011-2014), supplemental fall electrofishing survey in 2011, a supplemental summer electrofishing (low-pulse) survey in 2014, a supplemental spring gillnetting survey in 2012, and required electrofishing, trap netting, and gill netting surveys in 2013/2014 (Table 5). A roving creel survey (June 2013 through May 2014) will be conducted to monitor angler utilization of sport fishes. Annual aquatic vegetation surveys are necessary to monitor hydrilla, Eurasian watermilfoil, and alligatorweed. Supplemental fall electrofishing will be conducted in 2011 to monitor the largemouth bass and prey fish populations. Supplemental gillnetting in 2012 and supplemental summer electrofishing (low-pulse) in 2014 will be conducted to monitor the blue catfish population. Structural habitat and angler access and facilities surveys will be conducted once every 4 years.

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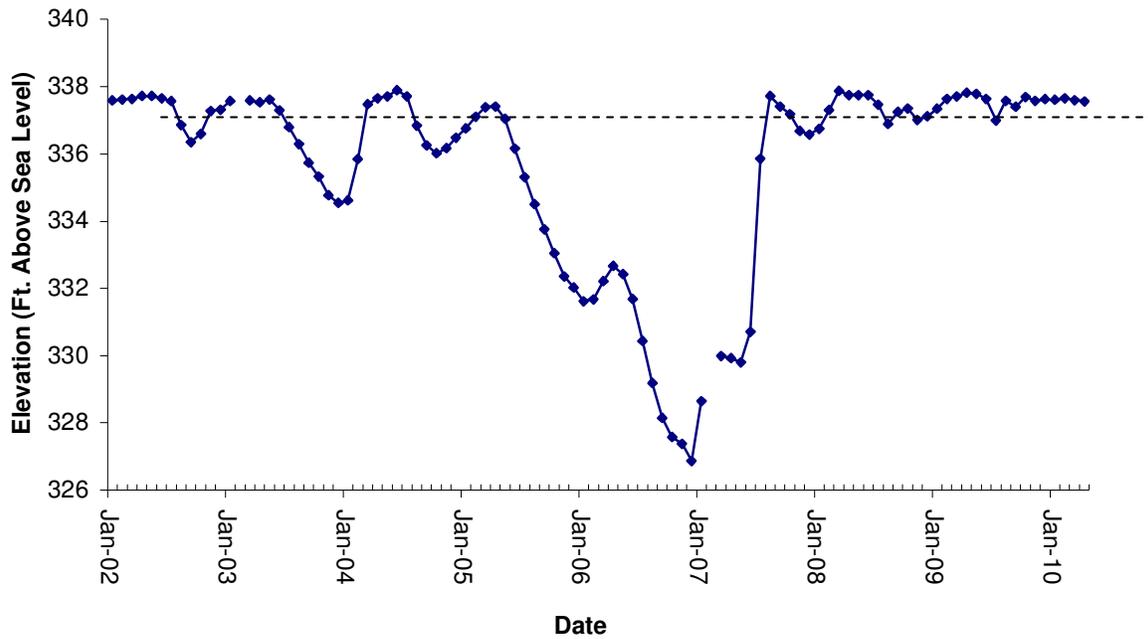


Figure 1. Monthly mean water level elevations in feet above mean sea level (MSL) recorded for Lake Bob Sandlin, Texas. Horizontal line marks denote conservation pool level (337.50 msl).

Table 1. Characteristics of Lake Bob Sandlin, Texas.

Characteristic	Description
Year Constructed	1977
Controlling authority	Titus County Freshwater District No.1
Counties	Camp, Titus, Franklin
Reservoir type	Mainstream
Shoreline Development Index (SDI)	5.5
Conductivity	349 umhos/cm

Table 2. Harvest regulations for Lake Bob Sandlin, Texas.

Species	Bag Limit	Minimum-Maximum Length (inches)
Catfish: channel and blue catfish, their hybrids and subspecies	25 (in any combination)	12 - No Limit
Catfish, flathead	5	18 - No Limit
Bass, white	25	10 - No Limit
Bass: largemouth	5 ^a	14 - No Limit
Bass: spotted	5 ^a	No Limit - No Limit
Crappie: white and black crappie, their hybrids and subspecies	25 (in any combination)	10 - No Limit

^a Daily bag for largemouth bass and spotted bass = 5 in any combination.

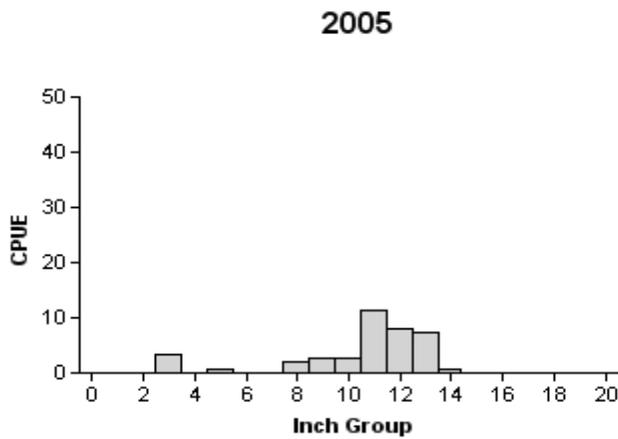
Table 3. Stocking history of Bob Sandlin, Texas. Life stages are fingerlings (FGL), advanced fingerlings (AFGL), and adults (ADL). Life stages for each species are defined as having a mean length that falls within the given length range. For each year and life stage the species mean total length (Mean TL, in) is given. For years where there were multiple stocking events for a particular species and life stage the mean TL is an average for all stocking events combined.

Species	Year	Number	Life Stage	Mean TL (in)
Blue catfish	2008	456,126	FGL	2.2
	2009	470,431	FGL	2.2
	2010	502,086	FGL	2.2
		<u>1,428,643</u>		
	Total	926,557		
Channel catfish	1976	42,498	AFGL	7.9
	1978	149,315	AFGL	7.9
	2000	812	AFGL	8.5
	Total	<u>192,625</u>		
Florida largemouth bass	1977	450,000	FRY	1.0
	1998	238,477	FGL	1.7
	2006	385,675	FGL	1.6
	2007	455,600	FGL	1.7
	2009	456,468	FGL	1.6
	2010	480,554	FGL	1.5
	Total	<u>2,466,774</u>		

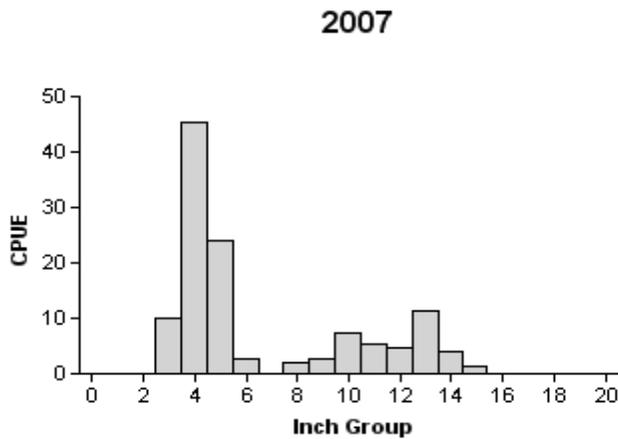
Table 4. Survey of littoral zone and physical habitat types, Lake Bob Sandlin, Texas 2009. A linear shoreline distance (miles) was recorded for each habitat type found. Surface area (acres) and percent of reservoir surface area was determined for each type of aquatic vegetation found.

Shoreline habitat type	Shoreline distance		Surface area	
	Miles	Percent of total	Acres	Percent of reservoir surface area
Natural shoreline	53.02	62.7		
Bulkhead with piers and boat docks	21.11	25.0		
Bulkhead	5.15	6.1		
Natural shoreline with piers and boat docks	3.38	4.0		
Rocky shoreline	1.56	1.8		
Rocky shoreline with piers and boat docks	0.27	0.3		
Gravel shoreline	0.05	0.1		
Standing timber			1,677.8	18.4
Native submersed			910.5	10.0
Native emergent			96.2	1.1
Native floating-leaved			90.8	1.0
Hydrilla			512.1	5.6
Alligatorweed			66.7	0.7
Eurasian watermilfoil			26.5	0.1

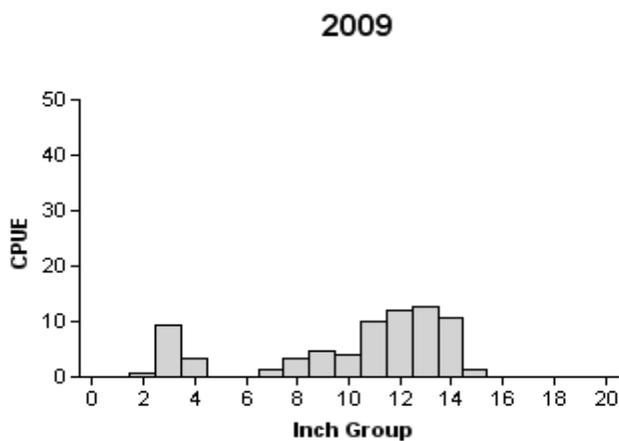
Gizzard shad



Effort = 1.5
 Total CPUE = 38.7 (27; 58)
 Stock CPUE = 34.7 (30; 52)
 PSD = 79.0 (0.05)
 IOV = 10.3 (0.07)



Effort = 1.5
 Total CPUE = 120.7 (14; 181)
 Stock CPUE = 38.7 (20; 58)
 PSD = 69 (5.7)
 IOV = 68.0 (5.5)



Effort = 1.5
 Total CPUE = 73.3 (20; 110)
 Stock CPUE = 60.0 (26; 90)
 PSD = 78 (8.4)
 IOV = 20.0 (8.5)

Figure 2. Number of gizzard shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV and size structure are in parentheses) for fall electrofishing surveys, Lake Bob Sandlin, Texas, 2005, 2007, and 2009.

Bluegill

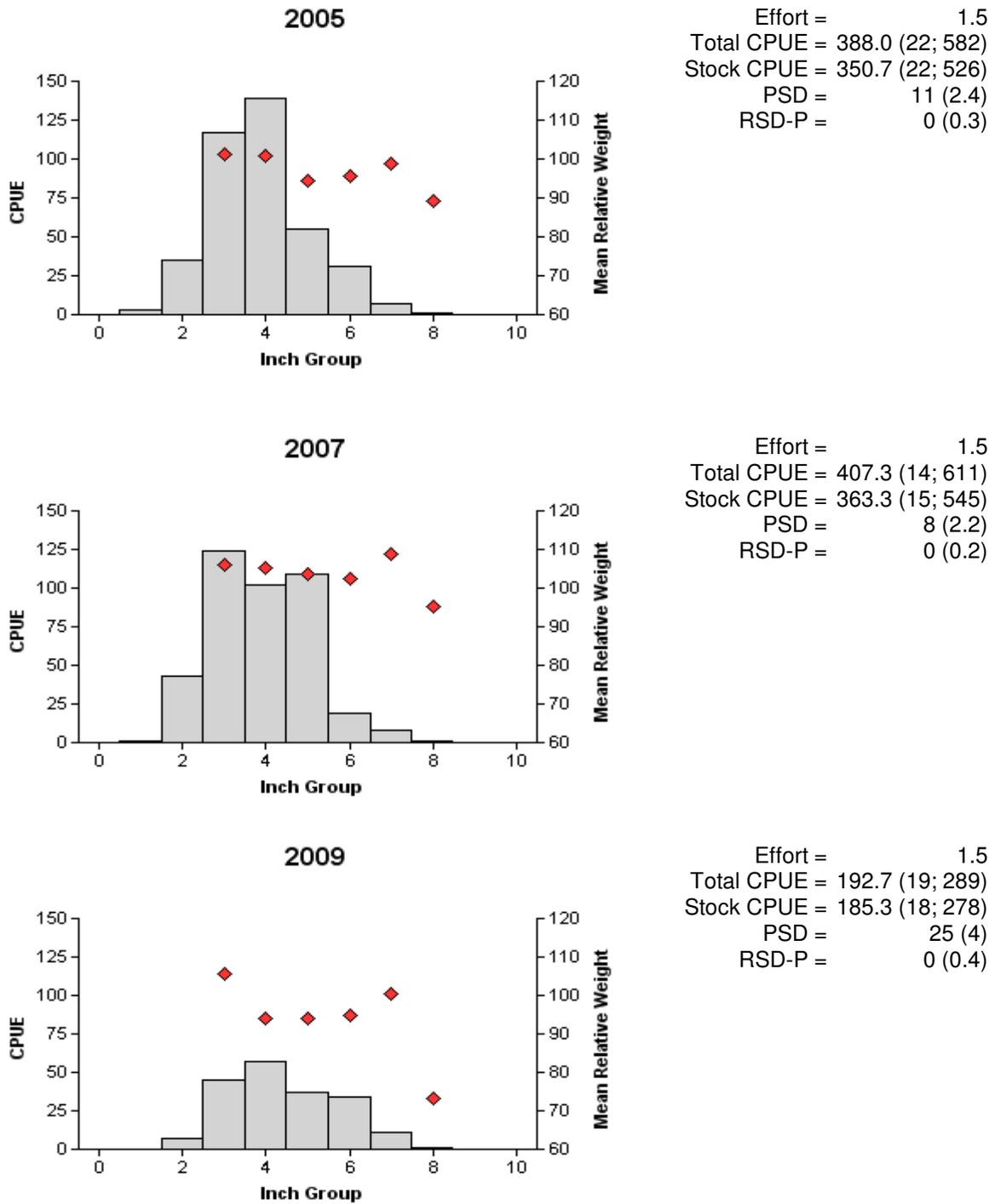


Figure 3. Number of bluegill caught per hour (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lake Bob Sandlin, Texas, 2005, 2007, and 2009

Redear sunfish

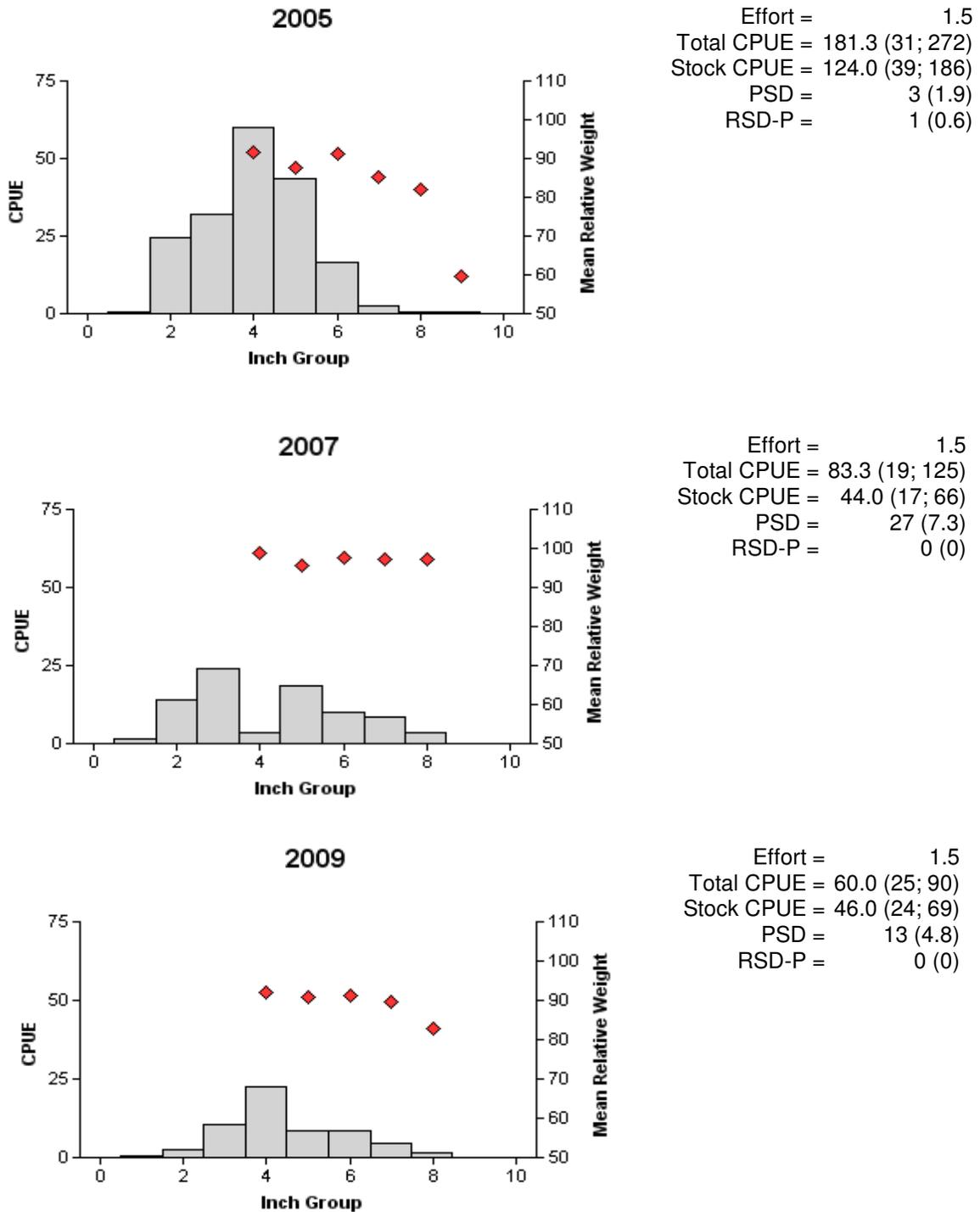


Figure 4. Number of redear sunfish caught per hour (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lake Bob Sandlin, Texas, 2005, 2007, and 2009.

Blue catfish

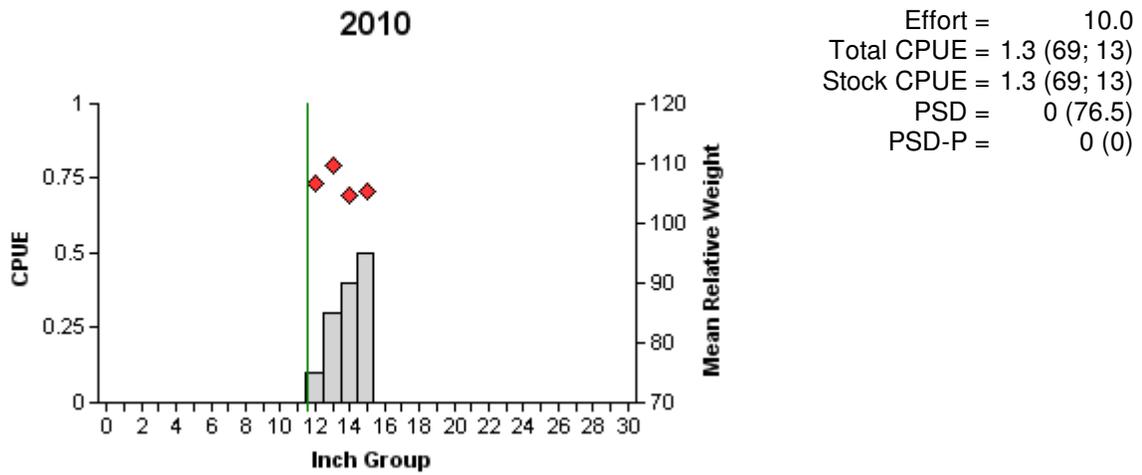


Figure 5. Number of blue catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lake Bob Sandlin, Texas 2010. Vertical line indicates minimum length limit.

Channel catfish

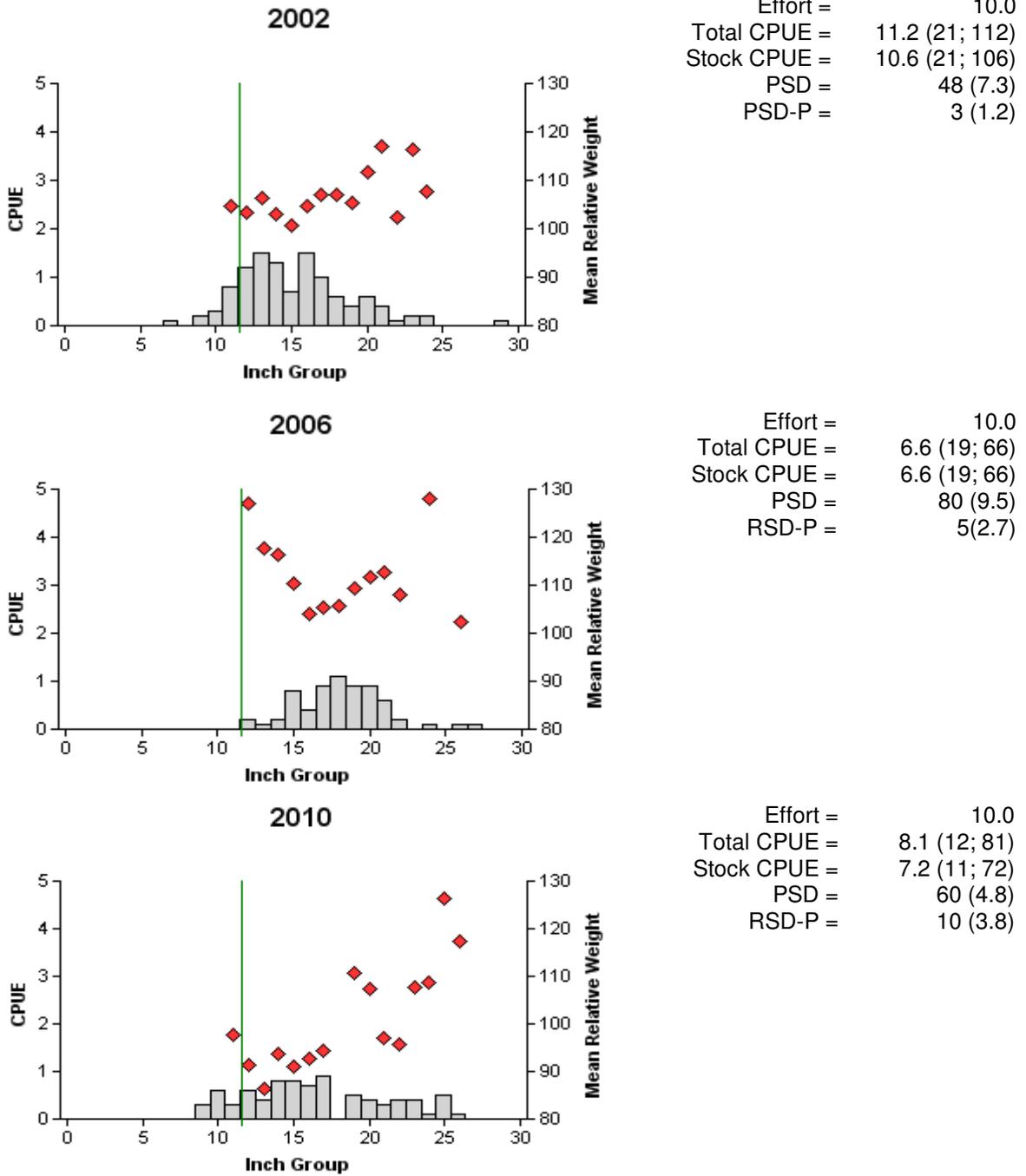


Figure 6. Number of channel catfish caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lake Bob Sandlin, Texas, 2002, 2006, and 2010. Vertical lines indicate minimum length limit.

White bass

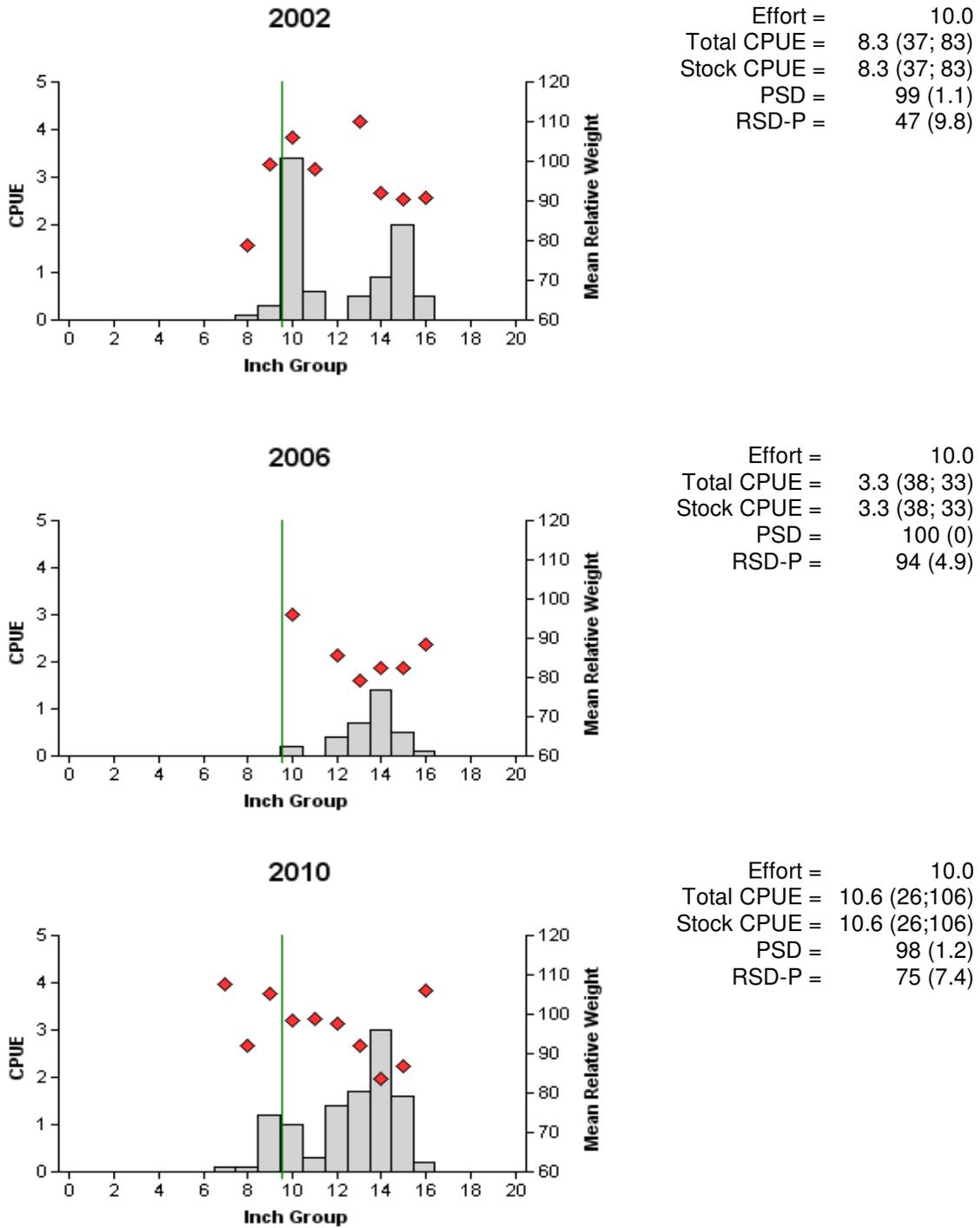


Figure 7. Number of white bass caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lake Bob Sandlin, Texas, 2002, 2006, and 2010. Vertical lines indicate minimum length limit.

Spotted bass

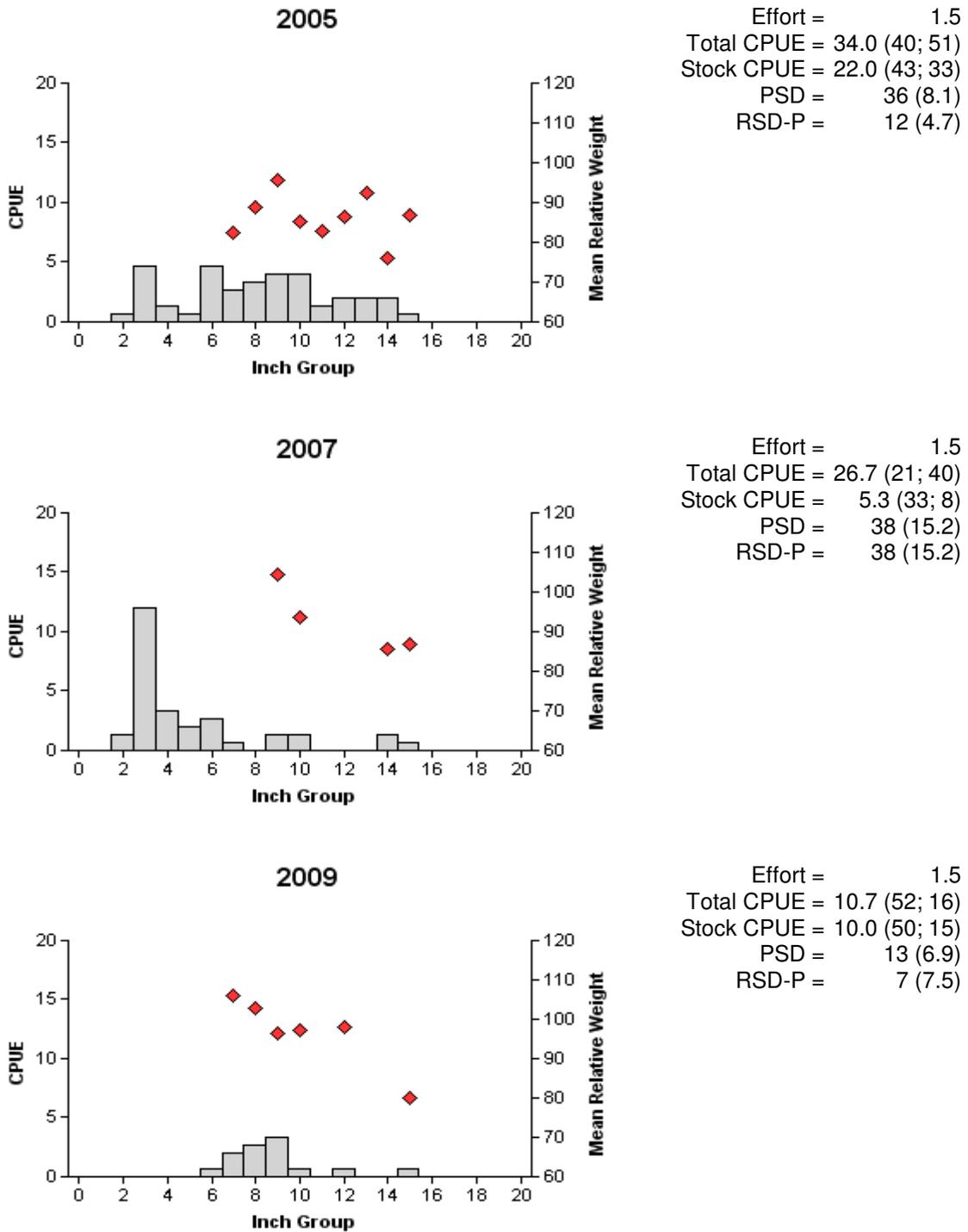


Figure 8. Number of spotted bass caught per net night (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lake Bob Sandlin, Texas, 2005, 2007, and 2009.

Largemouth bass

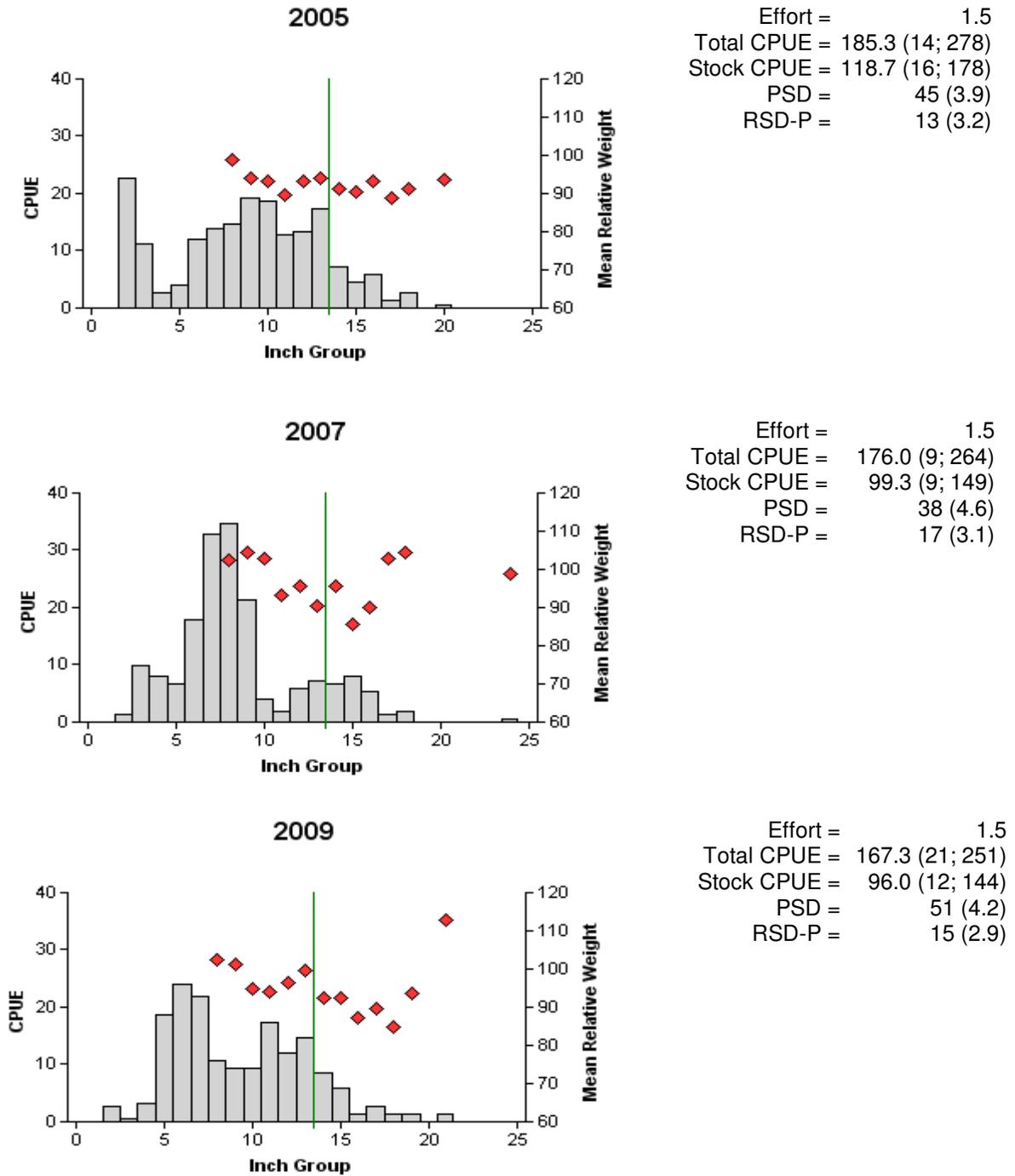


Figure 9. Number of largemouth bass caught per hour (CPUE), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lake Bob Sandlin, Texas, 2005, 2007, and 2009. Vertical lines indicate minimum length limit

Table 5. Proposed sampling schedule for Lake Bob Sandlin, Texas. Gill netting surveys are conducted in the spring, vegetation surveys are conducted in the summer, electrofishing in the fall and spring, and trap netting surveys are conducted in the fall. Standard survey denoted by S and additional survey denoted by A.

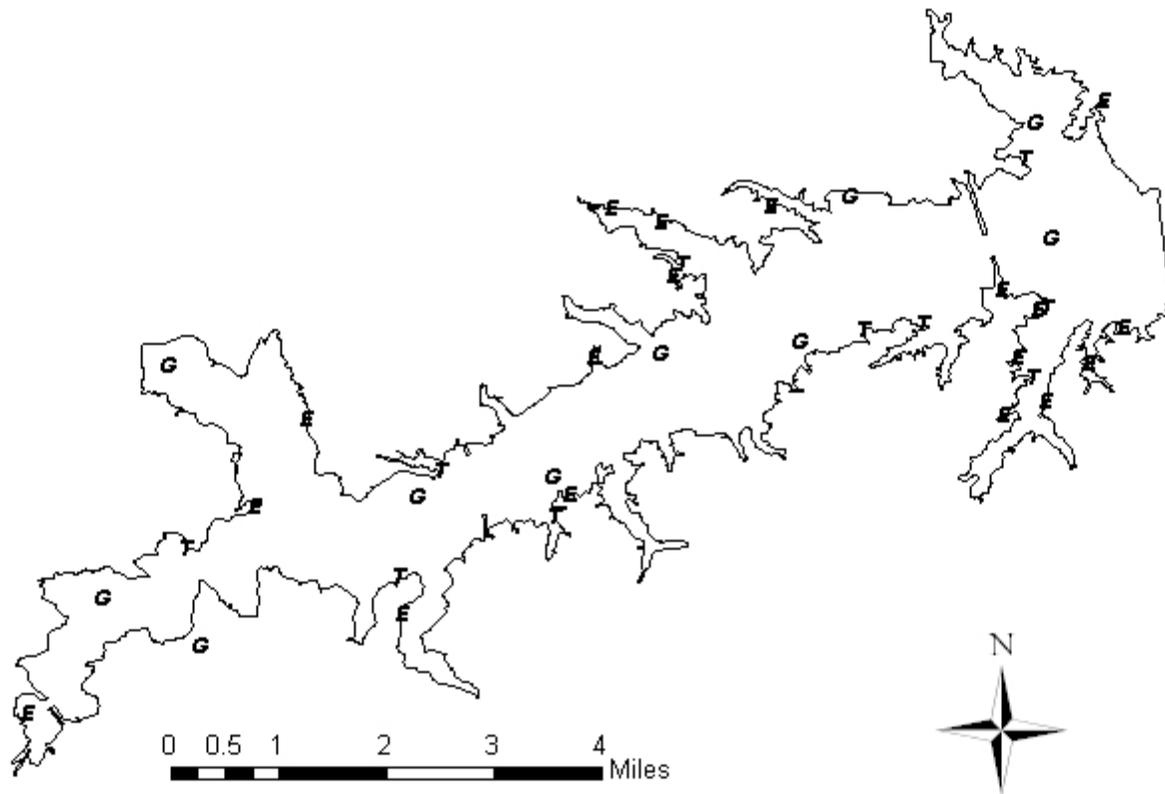
Survey Year	Vegetation	Fall electrofishing	Summer electrofishing (low pulse)	Trap netting	Gill netting	Creel survey	Report
June 2010 - May 2011	A						
June 2011 - May 2012	A	A			A		
June 2012 - May 2013	A						
June 2013 - May 2014	S	S	A	A	S	A	S

APPENDIX A

Number (N) and catch rate (CPUE) of all target species collected from all gear types from Lake Bob Sandlin, Texas, 2009-2010.

Species	Gill Netting		Trap Netting		Electrofishing	
	N	CPUE	N	CPUE	N	CPUE
Gizzard shad					110	73.33
Threadfin shad					34	22.67
Blue catfish	13	1.30				
Channel catfish	81	8.10				
Flathead catfish	3	0.30				
White bass	106	10.60				
Warmouth					13	8.67
Orangespotted sunfish					6	4.00
Bluegill					289	192.67
Longear sunfish					11	7.33
Redear sunfish					90	60.00
Spotted sunfish					4	2.67
Spotted bass					16	10.67
Largemouth bass					251	163.33
White crappie			0	0.0		
Black crappie			0	0.0		

APPENDIX B



Location of sampling sites, Lake Bob Sandlin, Texas, 2009-2010. Trap netting, gill netting, and electrofishing stations are indicated by T, G, and E, respectively.