

PERFORMANCE REPORT

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FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-30-R-29

STATEWIDE FRESHWATER FISHERIES MONITORING AND MANAGEMENT PROGRAM

2004 Survey Report

Lake Findley
(formerly Alice City Lake)

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EXECUTIVE SUMMARY

Lake Findley (formerly Alice City Lake) was surveyed in fall 2004 using trap nets and electrofishing and spring 2005 using gill nets. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

- Reservoir Description:** Lake Findley is a 288-acre reservoir located on Chiltipin Creek, in the San Fernando Creek Basin, one mile north of Alice. It receives water from Chiltipin Creek and from Lake Corpus Christi via pipeline, and is used for water supply and recreation. Shoreline access is adequate, while handicap and boat access are inadequate. The lake is shallow and turbid. Substrate is composed primarily of small rock, clay, sand, and silt. Littoral habitat consists of periodically flooded terrestrial vegetation, timber, and deadfalls. In 1998, the City of Alice began introducing native aquatic vegetation as mitigation for a 1996 fish kill. Survival rates of the native aquatic vegetation have been highly variable due to water level fluctuations. In 2002, water stargrass and American pondweed were abundant throughout the low end of the reservoir. However, by 2004 these species were non-existent. Emergent species, bulltongue and pickerel weed have established and spread beyond the planting sites. Floating-leaved species, white water lily and spatterdock have established and spread throughout the reservoir. The reservoir can fluctuate as much as 3 feet as a result of inflows and usage by the City of Alice. After a fish kill in May 1998, the City of Alice agreed to try to maintain the water level at approximately 192.0 ft MSL. Since May 1998 there have been four additional fish kills in the reservoir. These fish kills occur from late spring through the summer, shortly after the City of Alice begins pumping water via pipelines from Lake Corpus Christi. Approximately 26 acre-feet of water (~3.5% of the volume of Lake Findley) can remain in the two, 30-mile pipelines for extended periods of time, becoming anoxic. When the pipelines are opened, the fish respond to the flow by swimming up the canal into the anoxic water, resulting in a fish kill.
- Prey species:** The 2004 electrofishing catch rate for gizzard shad and threadfin shad was 25.0/h and 48.0/h, respectively. Gizzard shad catch rates were lower than the catch rates, 107.0/h (2000) and 147.0/h (2002), observed during the two previous sampling surveys. Threadfin shad catch rates were between 6.0/h (2000) and 78.0/h (2002). The Index of Vulnerability (IOV) for gizzard shad was 100, indicating that all of the gizzard shad collected were less than 8 inches and vulnerable to predation. The 2004 electrofishing catch rate for bluegill was 135.0/h, between 54.0/h (2000) and 282.0/h (2002) catch rates. Size range of bluegill indicated good availability to existing predators. Bluegill do not provide a fishery in this reservoir as few fish reach quality size.
- Blue Catfish:** Although not stocked by TPWD, blue catfish were first collected from the reservoir in fall 2004. These fish were collected during the electrofishing survey (N=3) and the trap net survey (N=1). No blue catfish were collected during the spring 2005 gill net survey.
- Channel Catfish:** The 2005 gill net catch rate for channel catfish was 0.6/net night (NN), similar to previous years. These low gill net catch rates may be a result other fish species, such as smallmouth buffalo, tangling the net. Channel catfish counts from fish kills suggest the population is larger than indicated by gill net surveys.
- Palmetto bass:** No palmetto bass were collected in gill nets in 2005, indicating the prior population is small or no longer exists.
- Largemouth bass:** The 2004 electrofishing catch rate for largemouth bass was 12.0/h, similar to previous years. Low catch rates of largemouth bass in Lake Findley may be due to the frequent water level fluctuations, resulting in the loss of spawning and juvenile habitat. Condition of stock size or greater fish was excellent; mean relative weights averaged above 100. Largemouth bass appear to have ample forage to rapidly grow to the 14-inch minimum length limit and maintain good body condition.
- White Crappie:** The 2004 trap net catch rate for white crappie was 23.8/NN, similar to previous years. Growth rate of white crappie was very good, as mean age at the 10-inch minimum length limit was 1.9. Condition of stock size or greater fish was good; mean relative weights averaged near 100. White crappie appear to have
- Black Crappie:** Trap net catch rates for black crappie were 2.2/NN, similar to previous years. Condition of stock size fish was good; mean relative weights averaged near 100. Black crappie

appear to have ample forage to reach legal size rapidly and maintain a good body condition.

- **Management Strategies**

- Based on current information, the reservoir should continue to be managed with existing regulations.
- Fish kills have plagued Lake Findley in recent years. Currently, the City of Alice is conducting a project to mitigate these kills, which may alleviate the problem. District staff will assist the City with both the design of a fish barrier to prevent fish from entering the canal and the design of weir dams to eliminate water quality problems. District staff will coordinate water quality monitoring during future pipeline releases. Change the four-year sampling rotation for the reservoir from electrofishing and trap netting every other year to once every four years, in order to increase sampling effort on other district lakes.
- There has been substantial personnel turnover within the management of the City of Alice. The new management has expressed interest in constructing a boat ramp and also improving the reservoir and its surrounding park. District staff will work with staff from the City of Alice on both the TPWD boat ramp grant program and maintaining a more stable water level.
- Despite low electrofishing catch rates, threadfin and gizzard shad are abundant in the reservoir as evidenced through trap net surveys and fish kills. Palmetto bass stocked in 1997 and 1998, recruited to legal size by age three and provided anglers with an additional sportfish species. Resume stocking palmetto bass at a rate of 10 per acre once the mitigation project is completed.

INTRODUCTION

This document is a summary of fisheries data collected from Lake Findley in 2004-2005. Its purpose is to provide fisheries information and provide management recommendations to maintain and improve the sport fisheries. This report deals primarily with major sport fishes and important prey species. Management recommendations address existing problems or opportunities. Historical data is presented with the 2004-2005 data for comparison.

STATUS OF MANAGEMENT ACTIONS FROM 2000 (Findeisen and Elder, 2001) SURVEY REPORT

ISSUE 1 Low annual recruitment of largemouth bass results in few quality-size fish. Recruitment may be influenced by high turbidity associated with shallow mean depth and lack of quality littoral habitat. Little aquatic vegetation exists.

Action: Final plantings of native aquatic vegetation were conducted in 2001 to fulfill the requirements of the mitigation project. District staff monitored all native vegetation planting sites annually for survival and colonization. Water stargrass and American pondweed had spread throughout the reservoir by fall 2002, however by fall 2004 these new colonies were no longer present, probably due to low water levels. District staff conducted electrofishing surveys every other year to assess largemouth bass recruitment.

ISSUE 2 Although channel catfish fry were stocked in 1995, and fingerlings in 1997, 1998, 1999, and 2000, gill net catch rate of channel catfish continues to be low. Low catch rate may indicate poor survival, excessive predation, sampling gear bias, and/or illegal harvest.

Action: Channel catfish fingerlings were stocked again in 2001. While the gill net surveys failed to produce adequate evidence of channel catfish recruitment, the numerous fish kills revealed that recruitment was not a problem.

ISSUE 3 In 1997 and 1998, palmetto bass were stocked to take advantage of abundant large gizzard shad and provide an additional sportfish. Both the palmetto bass growth rates and the accompanying decrease in large gizzard shad support the continued stocking of palmetto bass. Recently, Game Wardens have been issuing citations for the illegal harvest of palmetto bass, indicating some non-compliance with the current regulation.

Action: District staff requested palmetto bass for Lake Findley for 2001 but the request was not filled. District staff wrote and distributed press releases to inform the public of palmetto bass regulations. Signs concerning palmetto bass regulations were placed at Lake Findley but were removed by anglers.

ISSUE 4 Lake Findley has no paved boat ramp and shoreline access is limited to less than 25% of the shoreline. The best fishing habitat is inaccessible to most anglers.

Action: A TPWD boat ramp application form was sent to the City of Alice. New management within the City of Alice have begun to enhance the park surrounding the lake and have discussed building a boat ramp.

ISSUE 5 The water level at Lake Findley has continued to fluctuate, sometimes dropping water level below the native aquatic vegetation planting sites.

Action: District staff met with staff from the City of Alice concerning more stable water levels. New management within the City of Alice have expressed interest in maintaining a more stable water level.

Harvest regulations for Lake Findley 2004-2005.

Species	Bag Limit	Minimum-Maximum Length
Catfish, Channel and Blue	25 aggregate	12 inches - No Limit
Catfish, Flathead	5	18 inches - No Limit
Bass, Palmetto	5	18 inches - No Limit
Bass, Largemouth	5	14 inches - No Limit
Crappie, White and Black	25	10 inches - No Limit

METHODS

- Fishes were collected using electrofishing (1.0 hour at 12, 5-min stations), trap nets (5 net nights), and gill nets (5 net nights). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour of actual electrofishing (#/h), and for gill and frame nets as the number of fish caught in one net set overnight (#/NN).
- Sampling statistics (CPUE for various length categories), structural indices [Proportional Stock Density (PSD), Relative Stock Density Preferred (RSD-P), and Relative Weight (Wr)] indices were calculated for target fishes according to Anderson and Neumann (1996). The Index of Vulnerability (IOV) was calculated for gizzard shad according to DiCenzo et. al (1996).
- A littoral zone/physical habitat survey was conducted in 1998 (Findeisen, 1999) according to the Fisheries Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2004). There were no significant man-made changes to warrant a new littoral zone/physical habitat survey in 2004.
- An access survey was conducted according to the Fisheries Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2004).
- Ages were determined for selected fish using the following structures: otoliths for largemouth bass, white and black crappie, and palmetto bass; and pectoral spines for channel catfish. White crappie were the only species aged in 2004-2005.

LITERATURE CITED

- Anderson, R. O., and R. M. Neumann. 1996. Length, weight, and associated indices. Pages 447-482 in B. R. Murphy and D. W. Willis, editors. Fisheries techniques, second edition. American Fisheries Society, Bethesda, Maryland.
- DiCenzo, V.J., M.J. Maceina, and M.R. Stimpert. 1996. Relationships between reservoir trophic state and gizzard shad population characteristics in Alabama reservoirs. *North American Journal of Fisheries Management* 16:888-895.
- Findeisen, J.A. 1999. Statewide freshwater fisheries monitoring and management program survey report for: Alice City Lake, 1998. Texas Parks and Wildlife Department, Federal Aid In Sport Fish Restoration, Grant F-30-R, Performance Report, Austin, Texas.
- Findeisen, J.A and H.S. Elder. 2000. Statewide freshwater fisheries monitoring and management program survey report for: Alice City Lake, 1999. Texas Parks and Wildlife Department, Federal Aid In Sport Fish Restoration, Grant F-30-R, Performance Report, Austin, Texas.

Physical and historical data for Lake Findley, Texas, 2004-2005.

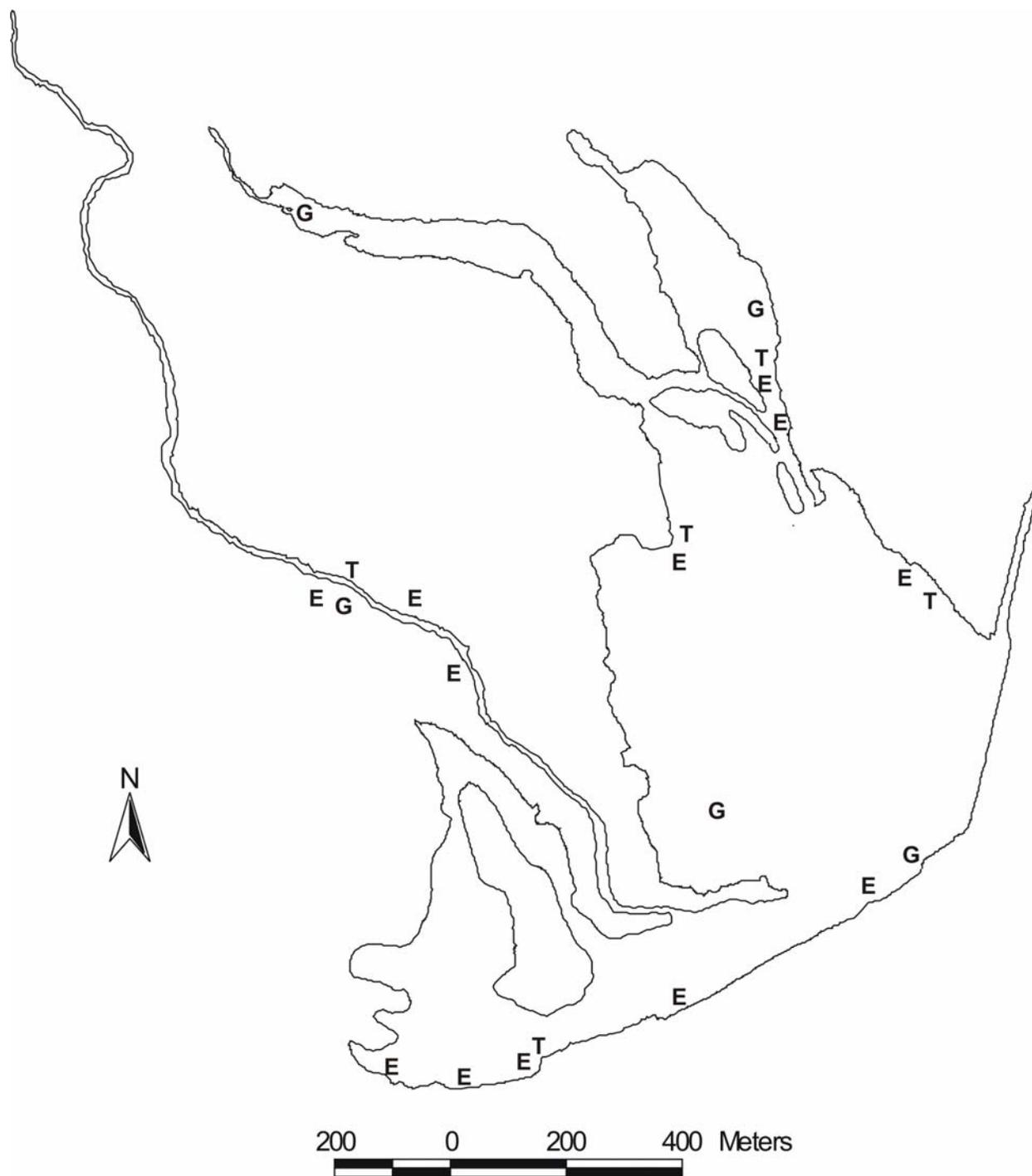
Inland Fisheries water body code: 0010	IF District: IE - Mathis
Controlling authority: City of Alice	Acres: 288 (maintenance pool)
Water Uses: Water supply, recreation	Elevation: 192.0 ft MSL
Counties: Jim Wells	Location: 3 miles N of Alice
Latitude: 27° 47' 25"	Longitude: 98° 03' 39"
Nearest major metropolitan area and distance: Corpus Christi - 45 miles	
Reservoir description: Reservoir/City Park:	River system: Chiltipin Creek in the San Fernando Creek Basin
Mean depth (ft): 1.5	Maximum depth (ft): 12.0
Shoreline development ratio: 1.7	Watershed (mi ²): 150
Secchi disc (ft): 0.5	Conductivity (umhos/cm): 850
Constructed: 1965	
Access:	Boat: Inadequate - no paved ramp
	Bank: Adequate
	Handicap: Inadequate - 1 short pier

Littoral zone physical habitat types, Lake Findley, Texas, September 1998 (there have been no man-made changes to the shoreline since the previous habitat survey). A linear shoreline distance (miles) was recorded for each habitat type found and areal measurements (acres) were recorded for vegetation.

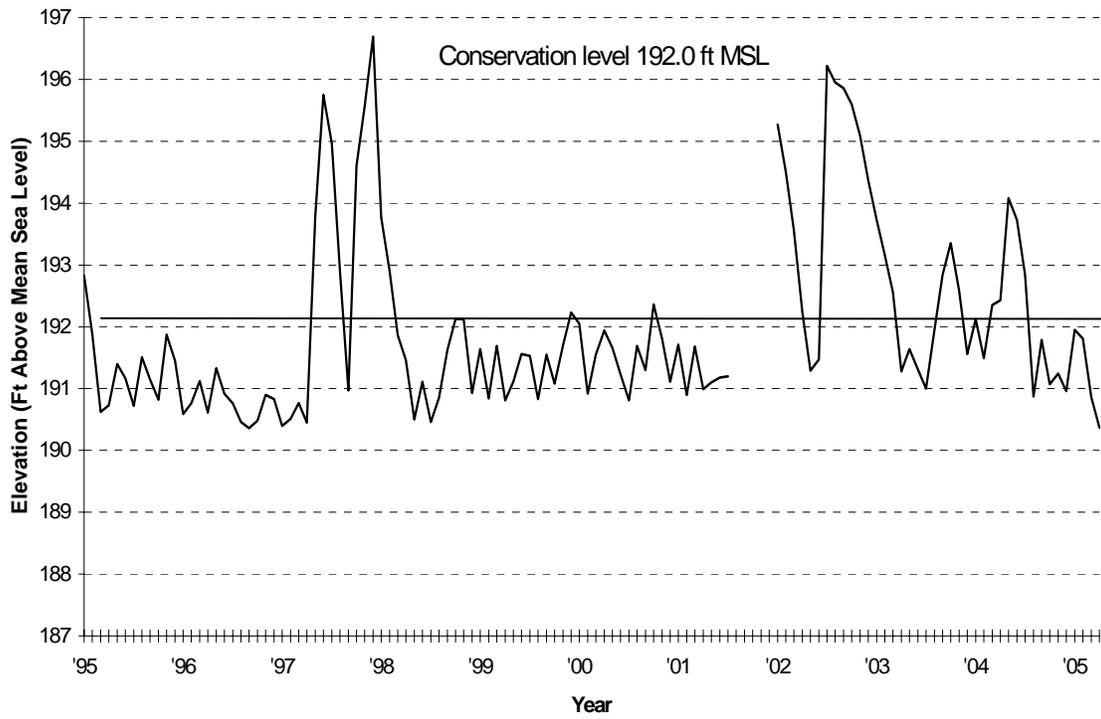
Habitat	Type	Shoreline Distance		Vegetation
		Miles	Percent	Acres
Waters edge	Concrete	0.04	<0.01	
	Eroded bank	0.30	0.02	
	Flooded terrestrial (live)	7.03	47.99	
	Overhanging brush	7.01	47.85	
	Riprap	0.27	0.02	
Vegetation	Native submerged	<0.01	<0.01	
	Native emergent	0.11	0.01	0.29
	Native floating	<0.01	<0.01	
Near shore	Dead terrestrial	0.0	0.0	

Stocking history of Lake Findley, Texas. Size categories are FGL for fingerling and FRY for fry.

<u>Year</u>	<u>Number</u>	<u>Size</u>
<u>Channel catfish</u>		
1968	1,500	FGL
1971	2,000	FGL
1991	7,005	FGL
1995	64,312	FRY
1997	7,744	FGL
1998	7,195	FGL
1999	7,235	FGL
2000	7,200	FGL
2001	7,217	FGL
Species total	111,462	
<u>Palmetto bass</u>		
1997	4,647	FGL
1998	4,536	FGL
Species total	9,183	
<u>Largemouth bass</u>		
1966	24,650	FGL
1968	6,000	FGL
Species total	30,650	
<u>Florida largemouth bass</u>		
1996	70,079	FGL
Species total	70,079	
<u>Black crappie</u>		
1966	4,000	FGL
Species total	4,000	

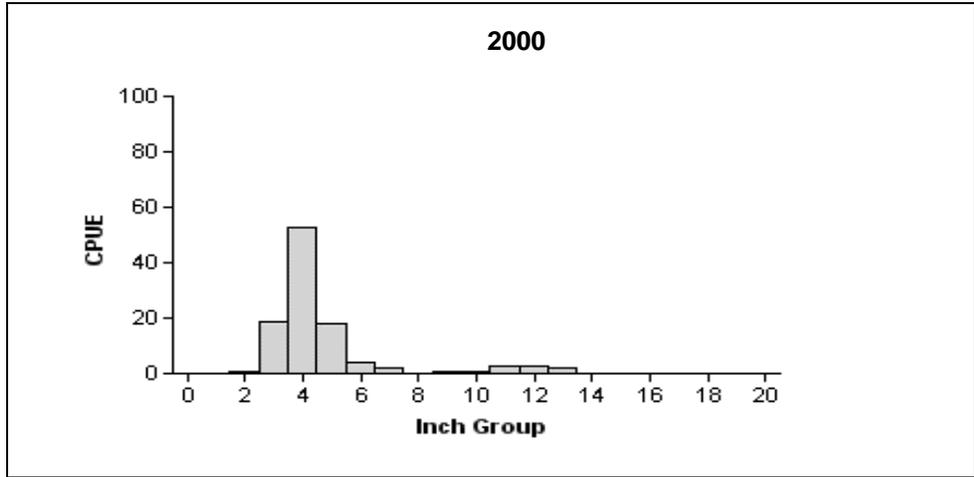


Location of sampling sites, Lake Findley, Texas, 2004-2005. Trap net, gill net, and electrofishing stations are indicated by T, G, and E, respectively.

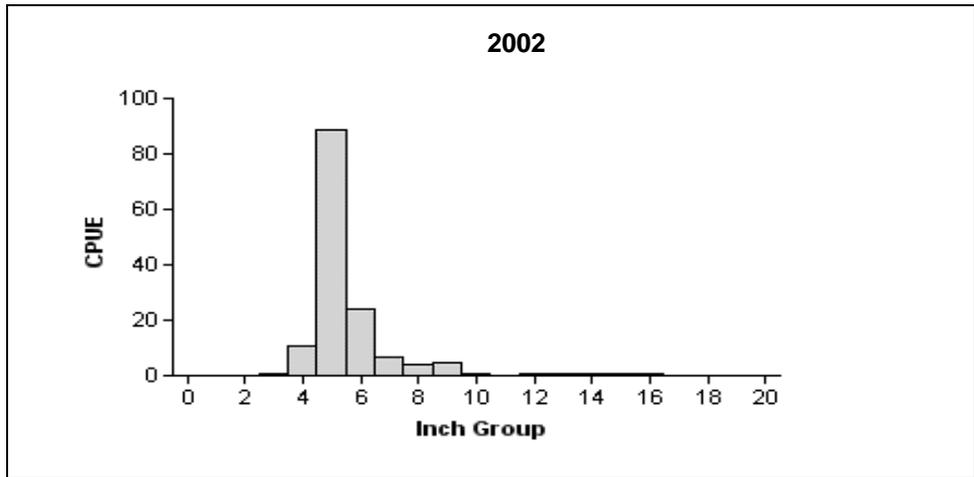


Mean monthly water level elevations, recorded in feet above mean sea level (MSL), for Lake Findley, Texas, January 1995 through April 2005. Note water level elevation data from August 2004 through December 2004 not available.

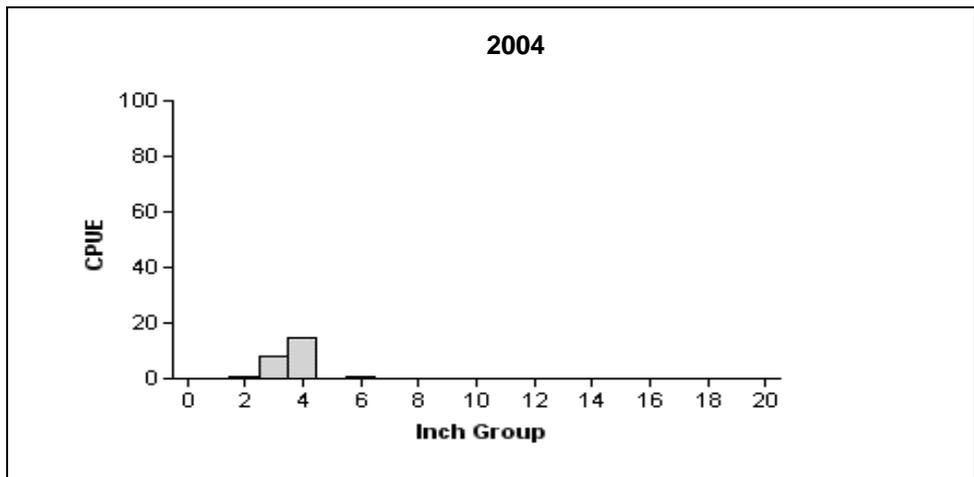
Gizzard shad



Effort = 1
 Total CPUE = 107.0
 Stock CPUE = 12.0
 PSD = 67
 IOV = 87



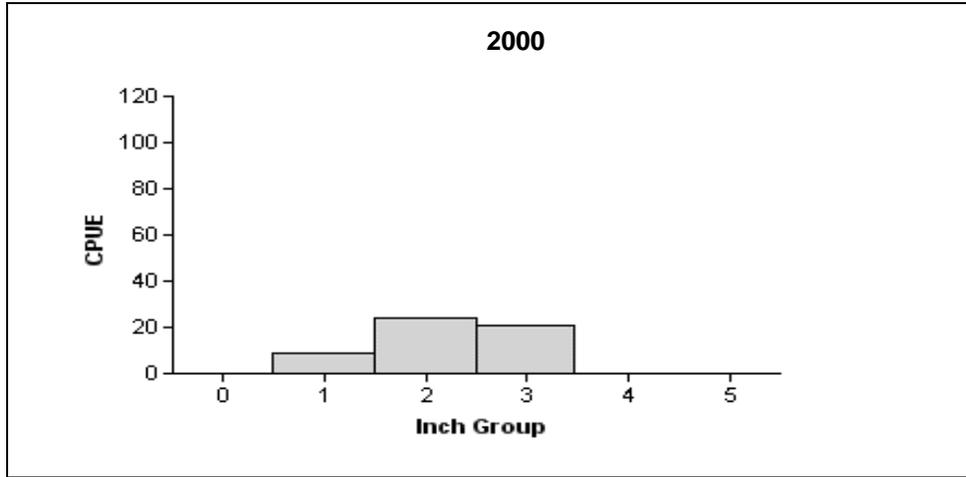
Effort = 1
 Total CPUE = 147.0
 Stock CPUE = 22.0
 PSD = 23
 IOV = 90



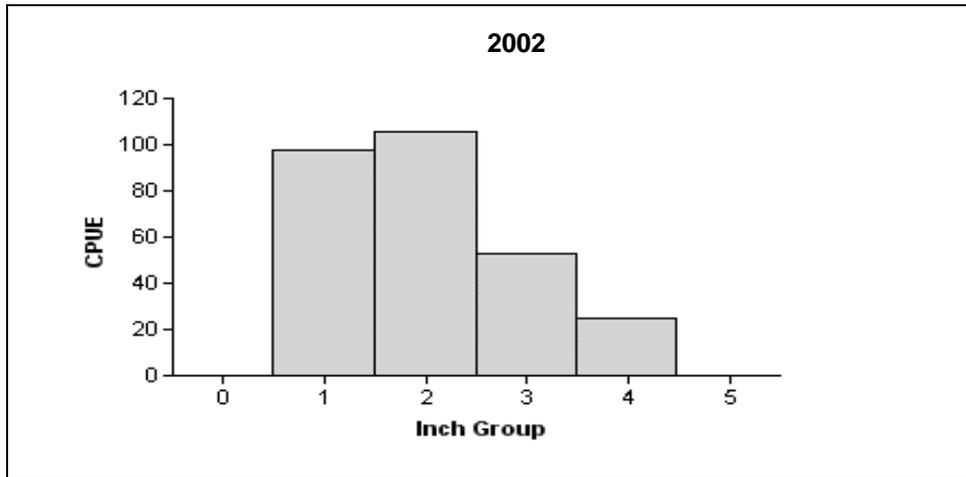
Effort = 1
 Total CPUE = 25.0
 Stock CPUE = 0.0
 PSD = 0
 IOV = 100

Comparison of the number of gizzard shad caught per hour (CPUE, bars) and population indices for fall electrofishing surveys, Lake Findley, Texas.

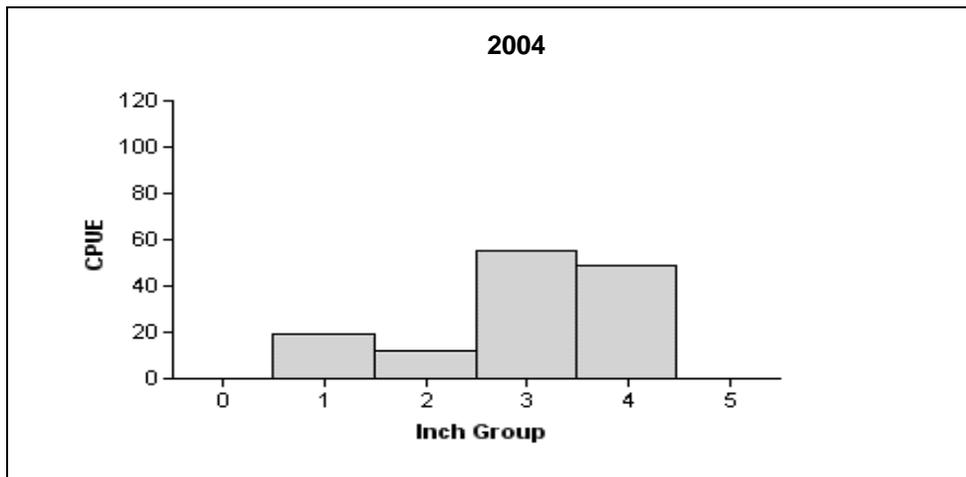
Bluegill



Effort = 1
 Total CPUE = 54.0
 Stock CPUE = 21.0
 PSD = 0
 RSD-P = 0



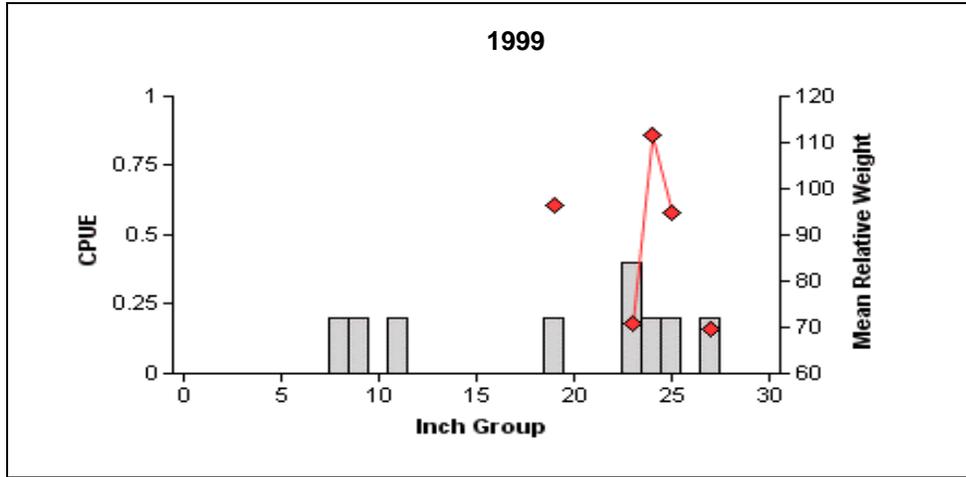
Effort = 1
 Total CPUE = 282.0
 Stock CPUE = 78.0
 PSD = 0
 RSD-P = 0



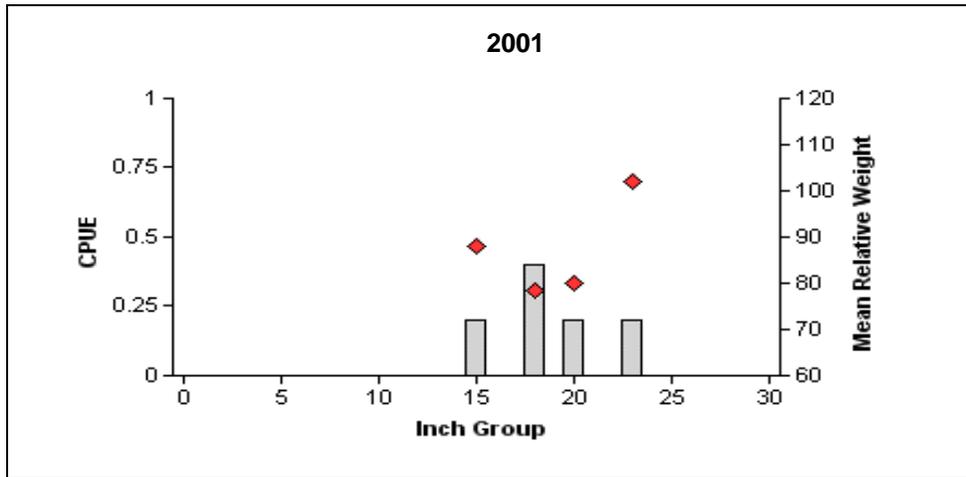
Effort = 1
 Total CPUE = 135.0
 Stock CPUE = 104.0
 PSD = 0
 RSD-P = 0

Comparison of the number of bluegill caught per hour (CPUE, bars) and population indices for fall electrofishing surveys, Lake Findley, Texas.

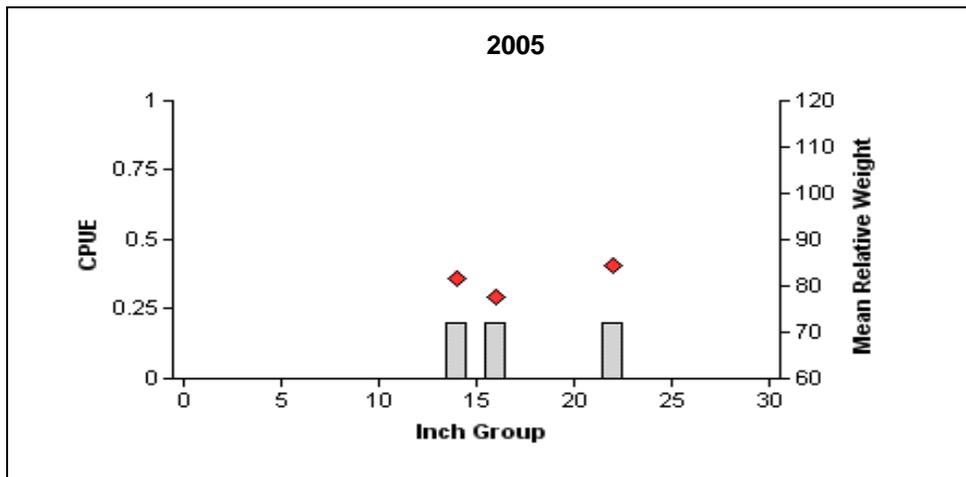
Channel catfish



Effort = 5
 Total CPUE = 1.8
 Stock CPUE = 1.4
 PSD = 86
 RSD-P = 43



Effort = 5
 Total CPUE = 1.0
 Stock CPUE = 1.0
 PSD = 80
 RSD-P = 0



Effort = 5
 Total CPUE = 0.6
 Stock CPUE = 0.6
 PSD = 67
 RSD-P = 0

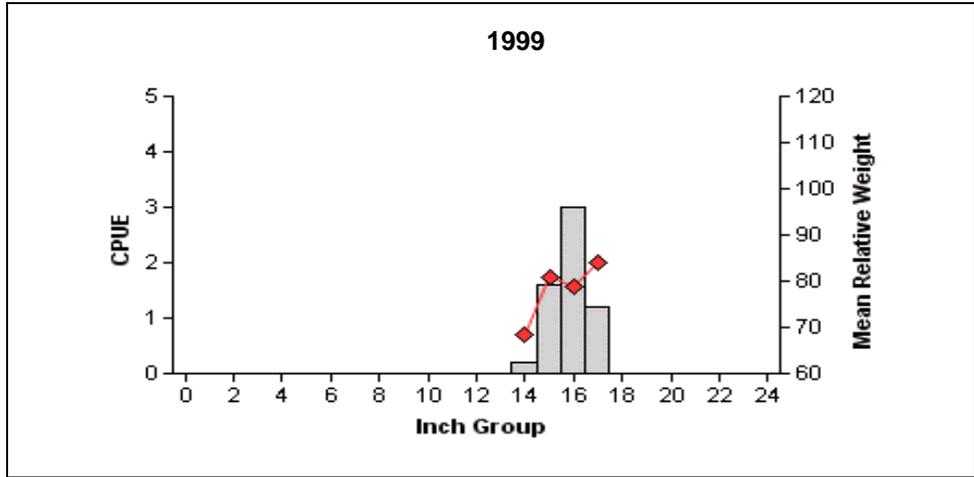
Comparison of the number of channel catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and populations indices for spring gill net surveys, Lake Findley, Texas.

Channel catfish

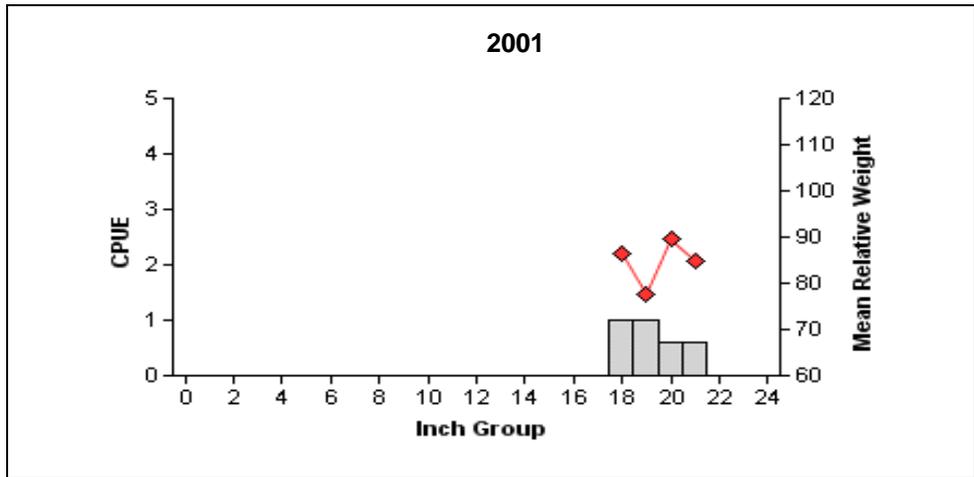
Age and mean length at capture for channel catfish (sexes combined) caught during spring gill net surveys, Lake Findley, Texas, 1999 and 2001. Channel catfish were not aged in 2005. Pectoral spines were used for aging purposes. Sample size is denoted in parentheses.

Year	<u>Length (inches) at age</u>					
	1	2	3	4	5	6
1999	---	9.8 (3)	---	19.3 (1)	---	24.8 (5)
2001	---	10.8 (3)	17.3 (2)	20.3 (8)	23.3 (2)	---

Palmetto bass



Effort = 5
 Total CPUE = 6.0
 Stock CPUE = 6.0
 PSD = 100
 RSD-P = 97



Effort = 5
 Total CPUE = 3.2
 Stock CPUE = 3.2
 PSD = 100
 RSD-P = 100

No palmetto bass were collected in 2005.

Effort = 5
 Total CPUE = 0.0
 Stock CPUE = 0.0
 PSD = 0
 RSD-P = 0

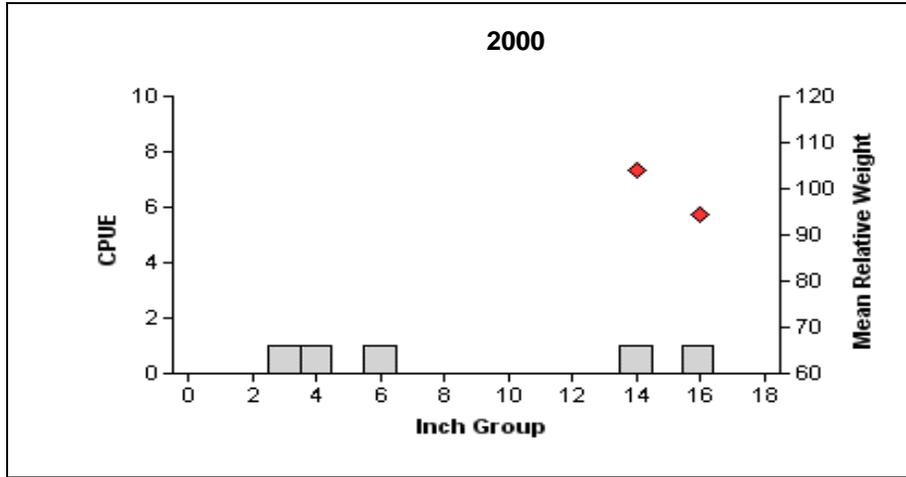
Comparison of the number of palmetto bass caught per net night (CPUE, bars), mean relative weight (diamonds), and populations indices for spring gill net surveys, Lake Findley, Texas.

Palmetto bass

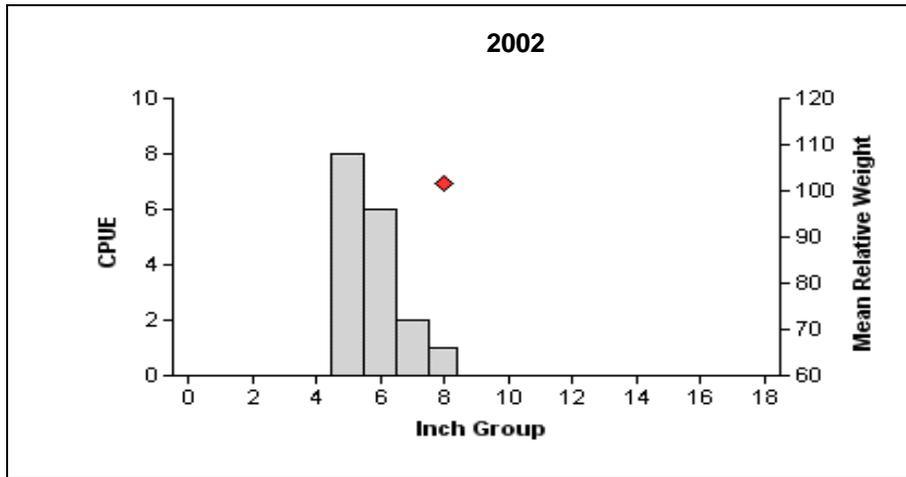
Age and mean length at capture for palmetto bass (sexes combined) caught during spring gill net surveys, Lake Findley, Texas, 1999 and 2001. No palmetto bass were collected in 2005. Sample size is denoted in parentheses.

Year	<u>Length (inches) at age</u>					
	1	2	3	4	5	6
1999	---	16.0 (17)	---	---	---	---
2001	---	---	19.7 (18)	20.7 (1)	---	---

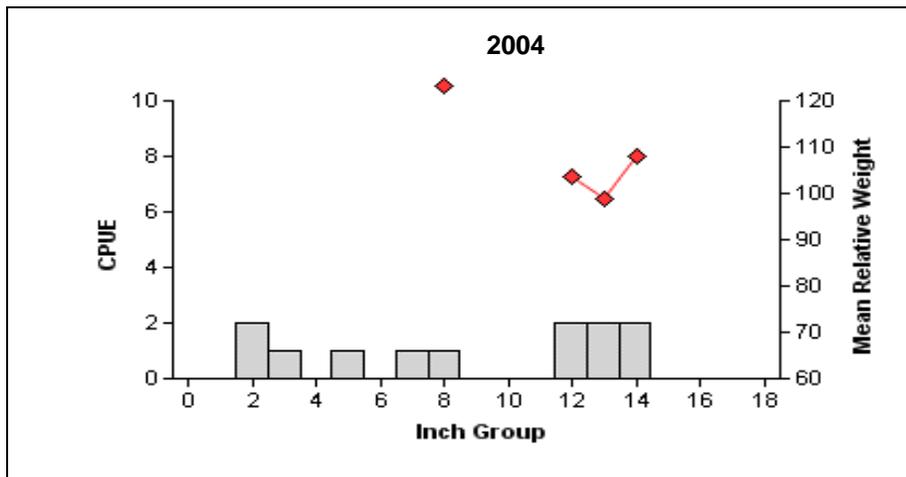
Largemouth bass



Effort = 1
 Total CPUE = 5.0
 Stock CPUE = 2.0
 PSD = 100
 RSD-P = 50
 % FLMB Alleles = Unk
 % FLMB Genotype = Unk



Effort = 1
 Total CPUE = 17.0
 Stock CPUE = 1.0
 PSD = 0
 RSD-P = 0
 % FLMB Alleles = 40
 % FLMB Genotype = 0



Effort = 1
 Total CPUE = 12.0
 Stock CPUE = 7.0
 PSD = 86
 RSD-P = 0
 % FLMB Alleles = Unk
 % FLMB Genotype = Unk

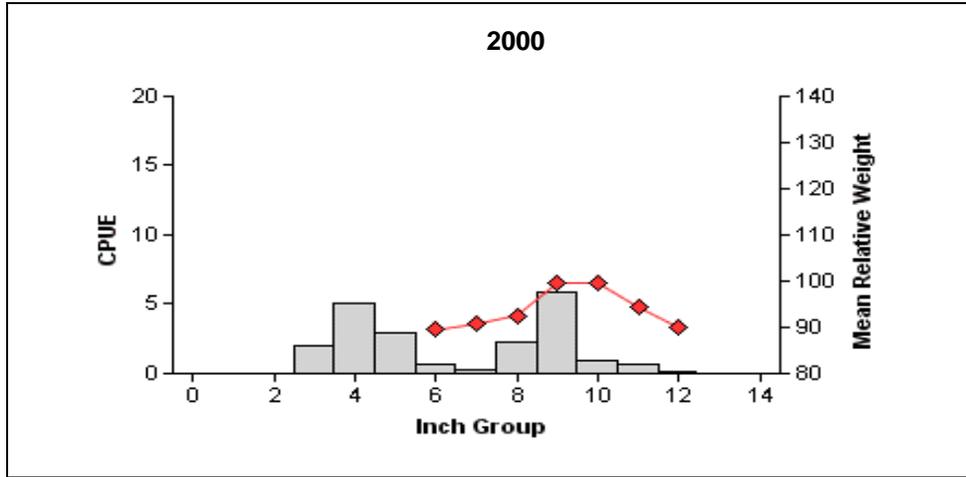
Comparison of the number of largemouth bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices for fall electrofishing surveys, Lake Findley, Texas.

Largemouth bass

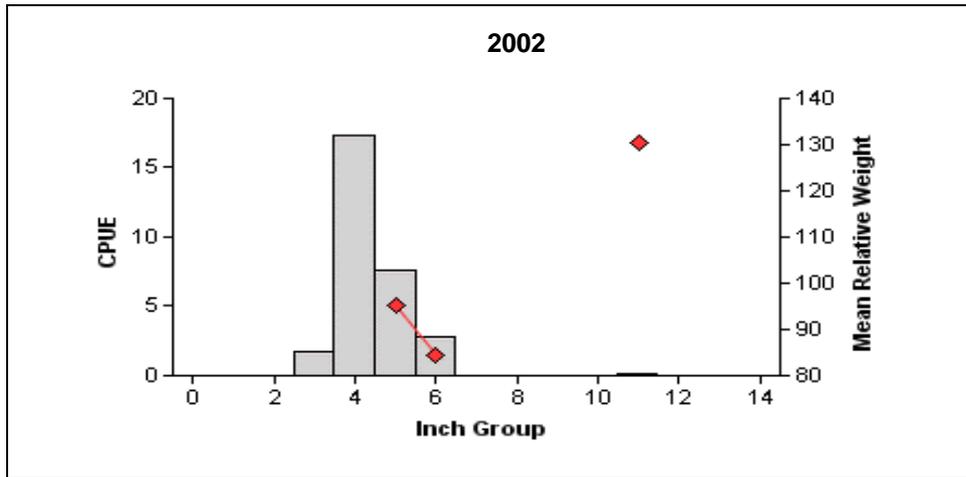
Age and mean length at capture for largemouth bass (sexes combined) caught during fall electrofishing surveys, Lake Findley, Texas, 2000, 2002, and 2003. Additional largemouth bass were collected for age and growth purposes in 2000. Sample size is denoted in parentheses.

Year	Length (inches) at age				
	0	1	2	3	4
2000	5.9 (15)	12.4 (4)	15.3 (2)	16.5 (6)	18.2 (1)
2002	6.1 (12)	---	---	---	---

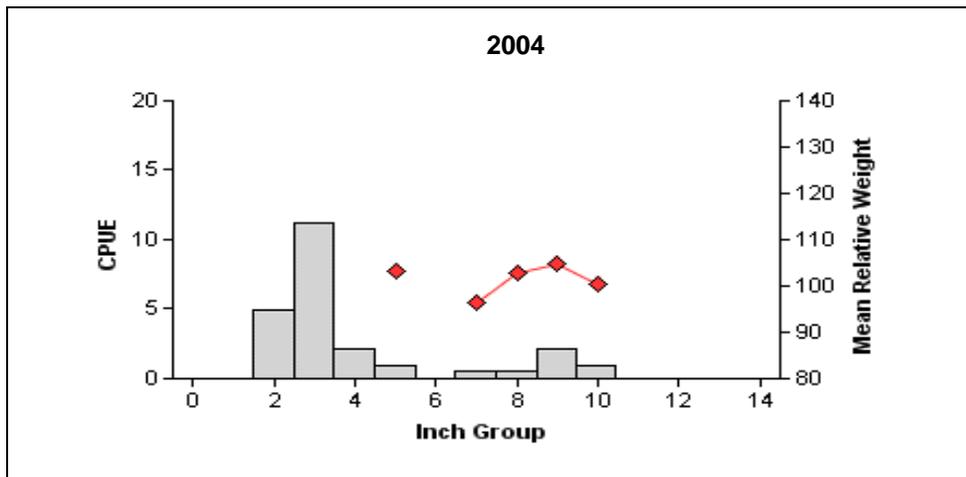
White crappie



Effort = 8
 Total CPUE = 20.8
 Stock CPUE = 13.6
 PSD = 72
 RSD-P = 13



Effort = 5
 Total CPUE = 29.8
 Stock CPUE = 10.6
 PSD = 2
 RSD-P = 2



Effort = 8
 Total CPUE = 23.8
 Stock CPUE = 5.4
 PSD = 70
 RSD-P = 19

 Mean age (years) at minimum length limit = 1.9

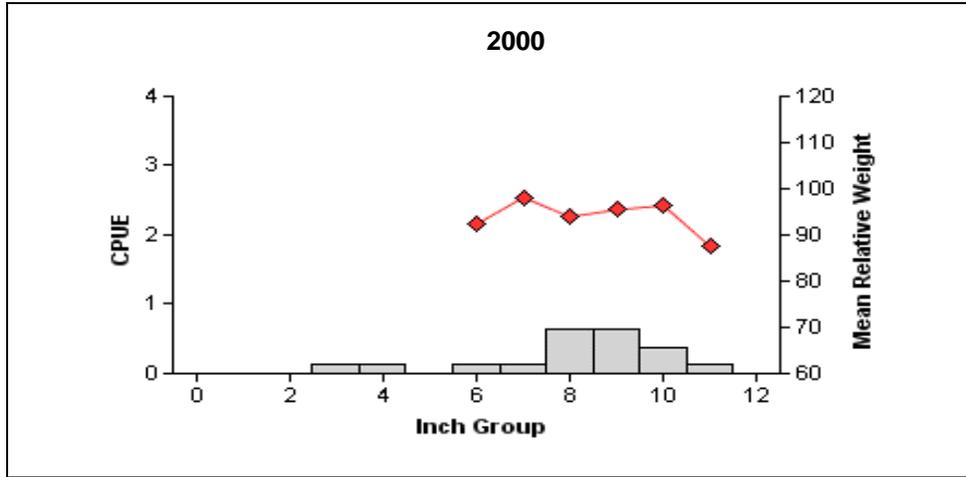
Comparison of the number of white crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for fall trap net surveys, Lake Findley, Texas.

White crappie

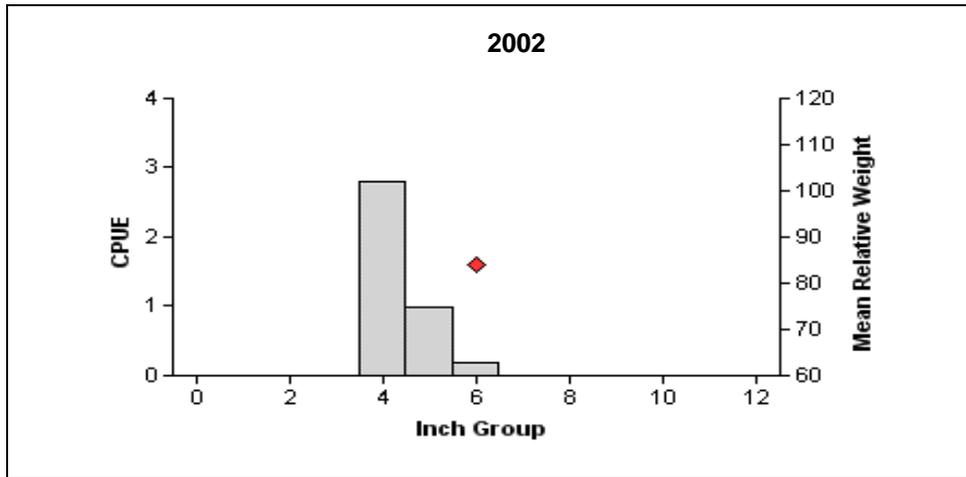
Age and mean length at capture for white crappie (sexes combined) caught during fall trap net surveys, Lake Findley, Texas, 2000 and 2002. Sample size is denoted in parentheses. Due to changes in the age and growth procedures, the 2004 age data for white crappie is presented under the population indices on the previous page.

Year	<u>Length (inches) at age</u>		
	0	1	2
2000	5.0 (20)	9.2 (20)	11.7 (4)
2002	5.1 (20)	11.2 (1)	---

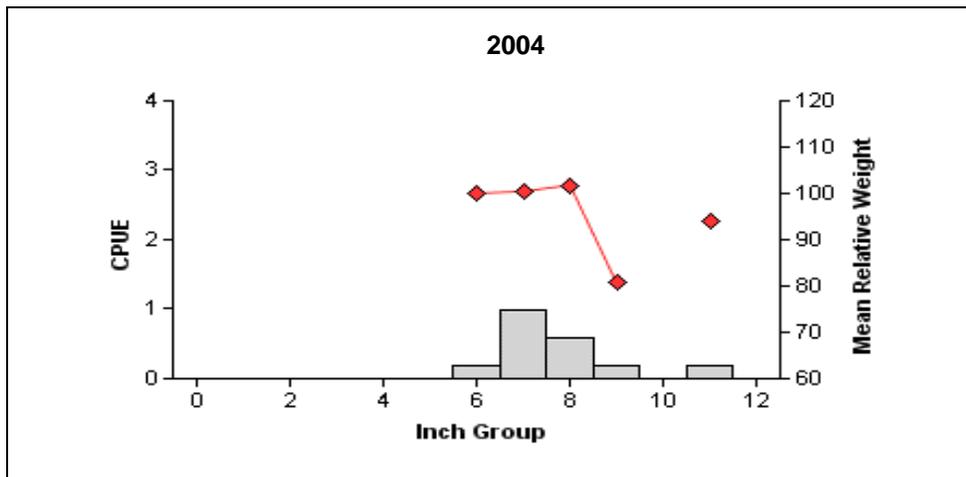
Black crappie



Effort = 8
 Total CPUE = 2.3
 Stock CPUE = 2.0
 PSD = 88
 RSD-P = 25



Effort = 5
 Total CPUE = 4.0
 Stock CPUE = 1.2
 PSD = 0
 RSD-P = 0



Effort = 5
 Total CPUE = 2.2
 Stock CPUE = 2.2
 PSD = 45
 RSD-P = 9

Comparison of the number of black crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for fall trap net surveys, Lake Findley, Texas.

**Fisheries Management Plan
Lake Findley, Texas**

Prepared - June 2005.

ISSUE 1 Fish kills have become a problem at Lake Findley due to anoxic water being trapped in two, 30-mile pipelines from Lake Corpus Christi. These fish kills have resulted in the loss of thousands of fish, mainly shad and catfish. The City of Alice has agreed to conduct a mitigation project to alleviate this problem. This project will include the construction of a fish barrier at the mouth of the canal and the construction of weir dams in the canal.

MANAGEMENT STRATEGIES

1. Provide the City of Alice advice on planning and constructing the fish barrier to prevent fish from entering the canal and weir dams to alleviate water quality problems.
2. Coordinate with the City of Alice on monitoring water quality during future pipeline releases.
3. Change the current four-year sampling rotation of electrofishing and trap netting every other year to once every four years, in order to increase sampling effort other district lakes.

ISSUE 2 There has been a substantial personnel turnover within the management of the City of Alice. The new management has expressed interest in both constructing a boat ramp and improving the reservoir and its surrounding park.

MANAGEMENT STRATEGIES

1. Continue to encourage City of Alice to apply for a TPWD boat ramp grant.
2. Meet with City of Alice staff to discuss and encourage maintaining a more stable water level.

ISSUE 3 Despite low electrofishing catch rates, threadfin and gizzard shad are abundant in the reservoir as evidenced through trap net surveys and fish kills. Palmetto bass stocked in 1997 and 1998, recruited to legal size by age three and provided anglers with an additional sportfish species.

MANAGEMENT STRATEGIES

1. Resume stocking palmetto bass at a rate of 10 per acre once the mitigation project is completed.
2. Conduct additional gill net sampling if palmetto bass are stocked.

APPENDIX A

Table 1. Total number (N) and catch rate (CPUE) of all species collected with all gear types from Lake Findley, Texas, 2004-2005.

Species	Electrofishing		Trap Net		Gill net	
	N	CPUE	N	CPUE	N	CPUE
Spotted gar	8	8.0				
Longnose gar					21	4.2
Alligator gar					2	0.4
Gizzard shad	25	25.0	23	4.6	36	7.2
Threadfin shad	48	48.0	440	88.0		
Common carp	6	6.0				
Inland silverside	1	1.0				
Smallmouth buffalo	51	51.0	14	2.8	108	21.6
Blue catfish	3	3.0	1	0.2		
Channel catfish	4	4.0	5	1.0	3	0.6
Flathead catfish			1	0.2		
Warmouth	48	48.0				
Bluegill	135	135.0	84	16.8	1	0.2
Redear sunfish	3	3.0				
Largemouth bass	12	12.0	1	0.2	1	0.2
White crappie	10	10.0	119	23.8		
Black crappie	1	1.0	11	2.2	1	0.2
Freshwater drum	1	1.0	4	0.8	21	4.2
Rio Grande cichlid	18	18.0	1	0.2		

APPENDIX B

Table 2. Proposed survey schedule for Lake Findley, Texas. Trap net and electrofishing surveys are conducted in the fall and the gill net survey is conducted in the spring. "S" denotes standard sampling is conducted and the Federal Aid Report is submitted, "A" denotes additional standard sampling, and "R" denotes sampling removed.

Sampling Year	Electrofishing	Trap Net	Gill Net	Annual Report
Fall 2005-Spring 2006				
Fall 2006-Spring 2007	R	R	A*	
Fall 2007-Spring 2008				
Fall 2008-Spring 2009	S	S	S	S

* This additional sampling will only be conducted if palmetto bass are stocked into the reservoir.

APPENDIX C

Table 3. Estimated numbers of dead fish as a result of fish kills at Lake Findley from May 18, 1998 through April 5, 2005.

Species	Estimated dead from May 18, 1998 fish kill	Estimated dead from July 19, 2001 fish kill	Estimated dead from June 27, 2003 fish kill	Estimated dead from July 29, 2003 fish kill	Estimated dead from April 5, 2005 fish kill
Longnose gar					4
Spotted gar	3				
Gizzard shad	13	17,575	165	32	240
Threadfin shad	32		265	4,161	638
Common carp	1				
Bullhead minnow		258		39	34
Inland silverside				16	4
Smallmouth buffalo	2			24	
Channel catfish	141	911	44	455	1284
Mexican tetra			8		8
Gambusia sp.				39	4
Sailfin molly					4
Palmetto bass	125				
Green sunfish			23	47	64
Warmouth		51	20	16	206
Bluegill		775	389	1,139	1197
Redear sunfish					8
Largemouth bass	2	177	12	24	23
White crappie		Combined	8	24	34
Black crappie	1	117			34
Freshwater drum	52	87			
Rio Grande cichlid		24	20	63	38
Total dead	378	19,975	954	6,079	3,824

APPENDIX D

Table 4. Surface acres and storage capacity, at one foot increments of elevation (msl), for Lake Findley, Texas. Conservation pool is 192.00 ft msl.

Elevation (msl)	Surface area (acres)	Storage capacity (acre-feet)
187.00	11.7	26.2
188.00	20.0	42.0
189.00	60.0	82.0
190.00	165.5	194.8
191.00	290.0	422.6
192.00	372.1	753.6
193.00	442.0	1,160.6
194.00	508.0	1,635.6
195.00	574.0	2,176.0
196.00	634.8	2,781.0