

PERFORMANCE REPORT

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FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-30-R-30

STATEWIDE FRESHWATER FISHERIES MONITORING AND MANAGEMENT PROGRAM

2004 Survey Report

Pat Mayse Reservoir

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SUMMARY

The fish community in Pat Mayse Reservoir was surveyed from June 2004 to May 2005 using electrofishing, trap netting, gill netting, a littoral zone habitat and an aquatic vegetation survey. This report summarizes survey results and contains a management plan for the reservoir.

- **Reservoir description:** Pat Mayse Reservoir is located in Lamar County, Texas on Sanders Creek, a tributary of the Red River. It was constructed by the U. S. Army Corps of Engineers in 1967 for flood control, municipal and industrial water supply, and recreational use. The major habitat components observed were native emergent vegetation, native submerged macrophytes, and dead trees. Total coverage of hydrilla (*Hydrilla verticillata*) measured during a vegetation survey in summer 2004 (6.1 acres) was lower than in the last vegetation survey in summer 2000 (30.2 acres).
- **Prey species:** Electrofishing catch rate of gizzard shad during fall 2004 (126.7 fish/hour), was higher than 1997 (40.0 fish/hour), but lower than 2000 (252.0 fish/hour). The gizzard shad population size range, 3 to 13 inches, remained the same in 2000 and 2004. The population is dominated by large individuals (population mode 10 – 11 inches), and many of these fish are not available as prey for game fishes. There is also a population of threadfin shad. Bluegill catch rate in fall 2004 (202.0 fish/hour) was higher than in 1997 (139.3 fish/hour) or 2000 (153.3 fish/hour). The population mode remained at 4 inches. Redear sunfish catch rate in 2004 (56.7 fish/hour) was slightly higher than in 2000 (45.3 fish/hour), but lower than 1997 (107.3 fish/hour). Prey fish populations appear adequate for predators such as largemouth bass, hybrid striped bass and white bass as evidenced by relative weights of 90 or more for most size classes.
- **Catfishes:** Pat Mayse Reservoir supports a quality channel catfish population. Catch rate in spring 2005 (3.1 fish/net night) was lower than in 2001 (10.3 fish/net night) and 2003 (4.8 fish/net night). Although abundance in gill nets decreased in 2005, PSD increased compared to past years. Relative weights and size structure of this population are good. There is also evidence of natural recruitment into the fishery.
- **Temperate basses:** The catch rate of white bass in 2005 (10.5 fish/net night) was the second highest on record from 1992-2005 (Appendix 4 - range 1.3- 19.2 fish/net night). The population was dominated (77%) by fish larger than the 10 inch minimum size limit. In May 2005, 2 months after the gill net survey, the white bass population was subjected to a fish kill, involving an estimated 15,249 fish. The fish kill only affected white bass. Interestingly, a similar white bass-only fish kill occurred in May 2000 (Storey and Myers 2001) 2 months after the highest gill net catch was recorded for the period 1992 to 2005. No causative agent was identified for the fish kill in 2000. It is likely that these kills are density-dependant. The population will likely rebuild itself within about 3 years.

The catch rate of palmetto bass continues to decline because annual fingerling stockings were discontinued in 2000 as a result of low directed effort. In 2005 gill net catch rate (6.0 fish/net night) was the second lowest on record from 1992- 2005 (Appendix 4 - range 2.3 - 31.7 fish/net night). The special regulation that combined harvest of white bass and palmetto bass, a 10-inch minimum length limit, 25 fish daily bag limit with only 5 fish 18 inches or longer, reverted to the statewide limits in September 2004.

- **Black bass:** Electrofishing catch rate of largemouth bass during fall 2004 (33.0 fish/hour) was

similar to 2002 (38.0 fish/hour) but it was the lowest observed from 1992 to 2005 (Appendix 4 – range - 33.0-181.3 fish/hour). Though catch rate was low, size structure was good, and 26% of stock sized fish caught were above the minimum length limit. Florida largemouth bass fingerlings (FLMB) were stocked at 25/acre in 2003 and 2004. In fall 2004, a sample of age-0 largemouth bass contained 38.5% FLMB alleles. There were no pure FLMB in the sample. There is a low density population of spotted bass in Pat Mayse Reservoir but none were collected in electrofishing in 2004.

- **Crappie:** The crappie community at Pat Mayse Reservoir has historically been dominated by white crappie. The catch rate of this species in fall 2004 (1.5 fish/net night) was one of the lowest recorded in the past 13 years (range 0.3 – 15.2 fish/net night). Although catch rate of black crappie (1.2 fish/net night) was similar, it was the highest recorded for this species during the same time period. Since catches of crappie are low, it is difficult to make definitive statements on these populations.
- **Management strategies:** The Pat Mayse Reservoir largemouth bass population should continue to be managed under the current 14-inch minimum length limit. The genetics of the largemouth bass population will continue to be monitored to assess the impact of the stockings of FLMB that took place in 2003 and 2004. All other sport fish should be managed at the current statewide length limits and bag limits. The distribution and coverage of hydrilla will continue to be monitored through vegetation surveys.

INTRODUCTION

This document is a summary of fisheries data collected from Pat Mayse Reservoir from June 2004 to May 2005. The purpose of this document is to provide 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. Management strategies are included to address existing problems or opportunities. Historical data is presented with the 2004 – 2005 data for comparison.

Harvest regulations for Pat Mayse Reservoir.

Species	Bag Limit	Minimum-Maximum length
Bass, Largemouth	5 (<i>in any combination with spotted bass</i>)	14 – No Limit
Bass, Spotted	5 (<i>in any combination with largemouth bass</i>)	No Limit – No Limit
Bass, White	25	10 - No Limit
Bass, Palmetto	5	18 - No Limit
Catfish, Channel	25	12 - No Limit
Catfish, Flathead	5	18 - No Limit
Crappie, Black and White	25 (in any combination)	10 - No Limit

METHODS

- Fishes were collected by electrofishing in fall 2004 (1.5 hours at 18 stations), by trap netting in fall 2004 (10 net-nights at 10 stations) and by gill netting in spring 2003 (10 net-nights at 10 stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour of actual electrofishing, and for gill netting and trap netting as the number of fish caught in one net set overnight. Angler access and largemouth bass electrophoresis samples were collected according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2004).
- Sampling statistics (CPUE for various length categories), structural indices (Proportional Stock Density [PSD], Relative Stock Density [RSD]), and relative weights (W_r) were calculated for target fishes according to Anderson and Neumann (1996).
- A littoral zone/physical habitat survey, vegetation survey, and angler access facility survey was conducted in accordance with Texas Parks and Wildlife Department Inland Fisheries Assessment in accordance with Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2004).

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, Second edition. American Fisheries Society, Bethesda, Maryland.
- Prentice, J. A. 1987. Length-weight relationships and average growth rates of fishes in Texas. Inland Fisheries Data Series, No. 6. Texas Parks and Wildlife Department, Fisheries Division. Austin, Texas.
- Storey, K. W. and R. A. Myers. 2001. Statewide freshwater fisheries monitoring and management program, Pat Mayse Reservoir 2000. Federal Aid in Sport Fish Restoration, Performance Report, Project F-30-R-26, Job A, 30 pages.

Habitat survey of littoral zone and physical habitat types, Pat Mayse Reservoir, Texas, September 2004. Linear shoreline distance was estimated for each habitat type and divided by total shoreline distance (75.7 miles) to obtain percent of shoreline occupied by habitat type. Habitat components may overlap so their sum does not estimate total shoreline distance. Lake elevation (449.64 ft msl) was 1.36 feet below conservation pool elevation at time of survey.

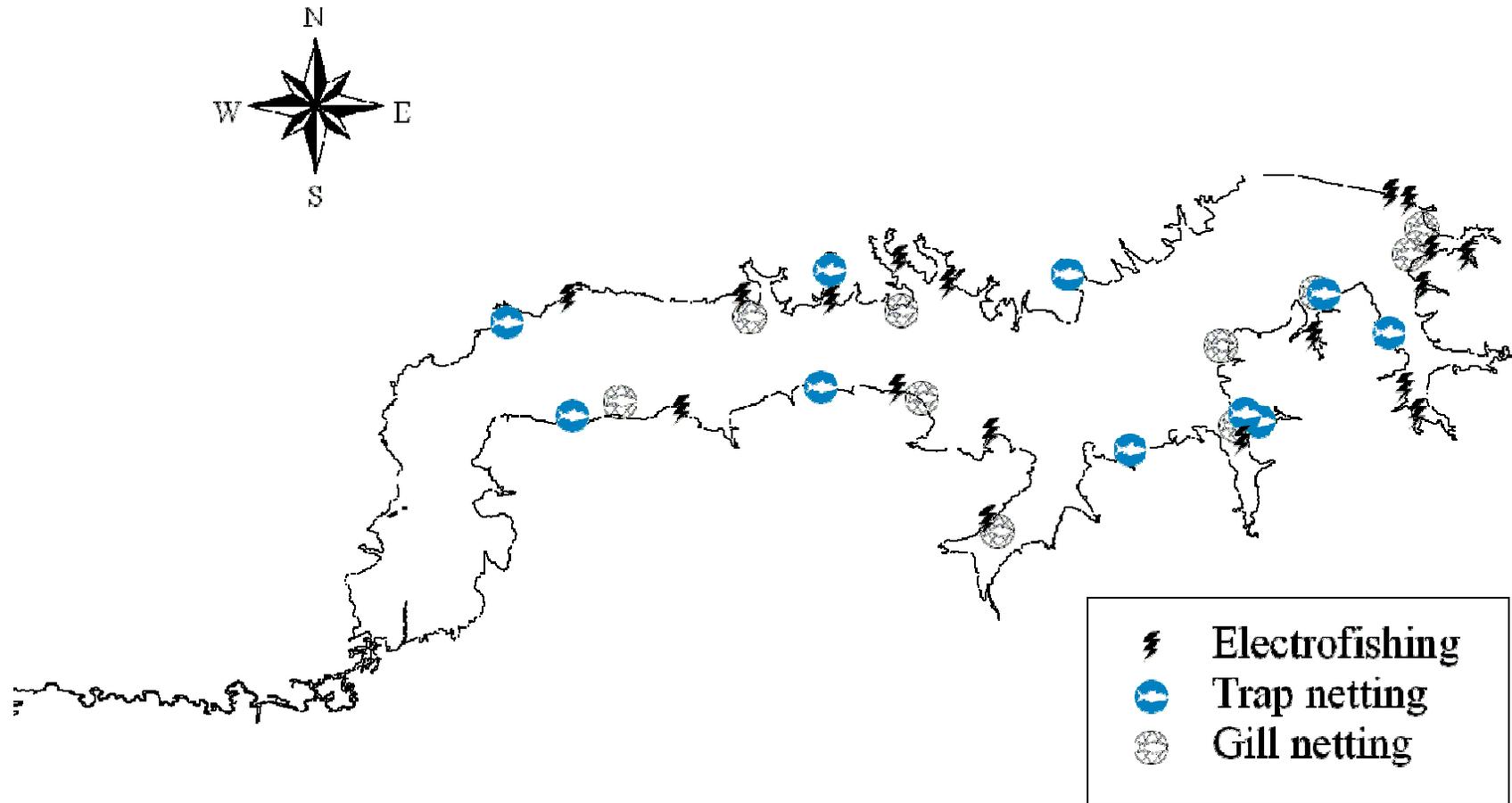
Shoreline habitat component	Shoreline distance (miles)	Percentage of lake perimeter
American lotus	14.41	19.0
Dead trees	31.15	41.2
Featureless	17.67	23.4
Hydrilla	1.54	2.0
Native emergent	54.85	72.5
Native submerged	34.30	45.3
Rip rap	1.14	1.5

Results of aquatic vegetation survey conducted at Pat Mayse Reservoir, Texas, in September 2004. Surface area coverage (acres) was estimated by vegetation type and divided by total reservoir area (5865 acres) to obtain percent of reservoir area occupied by vegetation type.

Vegetation type	Acres	Percent lake surface area
Non-native submersed (<i>Hydrilla</i>)	6.05	0.1
Native emergent (<i>American lotus</i> , <i>cattail</i> , <i>sawgrass</i>)	198.7	3.4
Native submerged (<i>chara</i> , <i>coontail</i>)	228.0	3.9
Total	432.75	7.4

Stocking history for Pat Mayse Reservoir, Texas. Size categories are ADL for adults and FGL for fingerling.

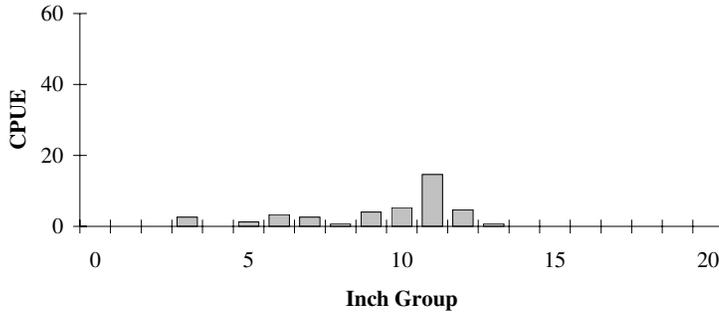
Species	Year	Number	Size
Threadfin shad	1986	1,000	ADL
	Species Total	1,000	
Channel catfish	1967	162,400	FGL
	Species Total	162,400	
Palmetto bass	1973	46,303	FGL
	1974	60,000	FGL
	1975	59,773	FGL
	1976	60,000	FGL
	1979	30,000	FGL
	1982	63,000	FGL
	1986	89,495	FGL
	1991	95,000	FGL
	1992	58,000	FGL
	1993	49,284	FGL
	1994	89,758	FGL
	1995	121,525	FGL
	1996	42,801	FGL
	1997	42,175	FGL
	1998	42,200	FGL
1999	21,084	FGL	
2000	42,027	FGL	
	Species Total	1,012,425	
Largemouth bass	1967	505,000	FGL
	1968	901,000	FGL
	Species Total	1,406,000	
Florida largemouth bass	1981	7,980	FGL
	1983	289,375	FGL
	1991	289,390	FGL
	1994	301,790	FGL
	2003	298,658	FGL
	2004	147,910	FGL
	Species Total	1,335,103	



Location of fish population sampling sites, Pat Mayse Reservoir, Texas, 2004 – 2005.

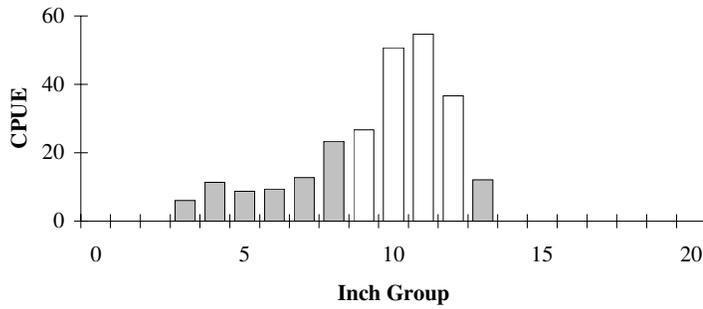
Gizzard Shad

1997



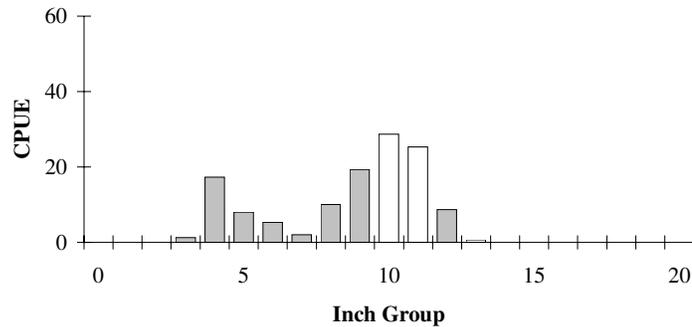
Effort = 1.5 hours
 Total CPUE = 40.0
 Stock CPUE = 32.7
 PSD = 51

2000



Effort = 1.5 hours
 Total CPUE = 252.0
 Stock CPUE = 216.7
 PSD = 48

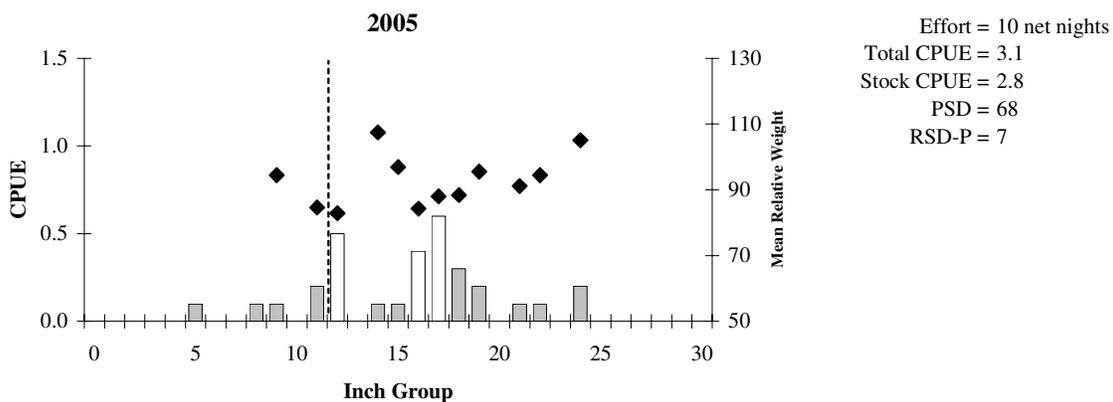
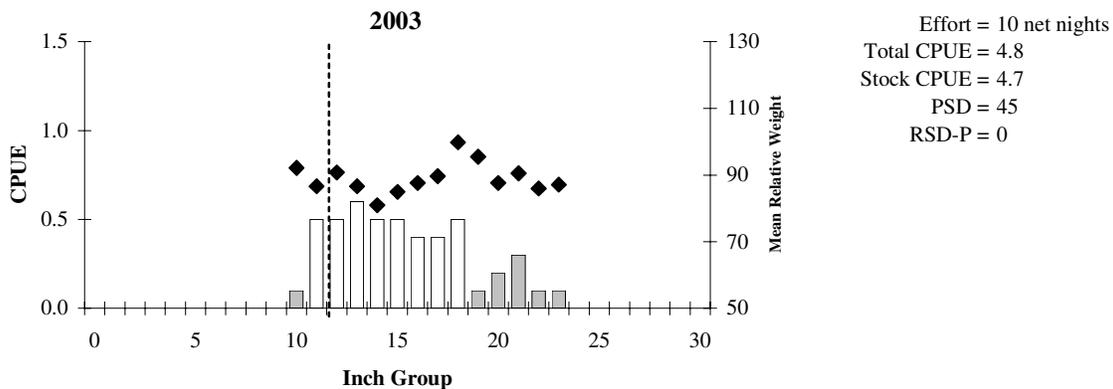
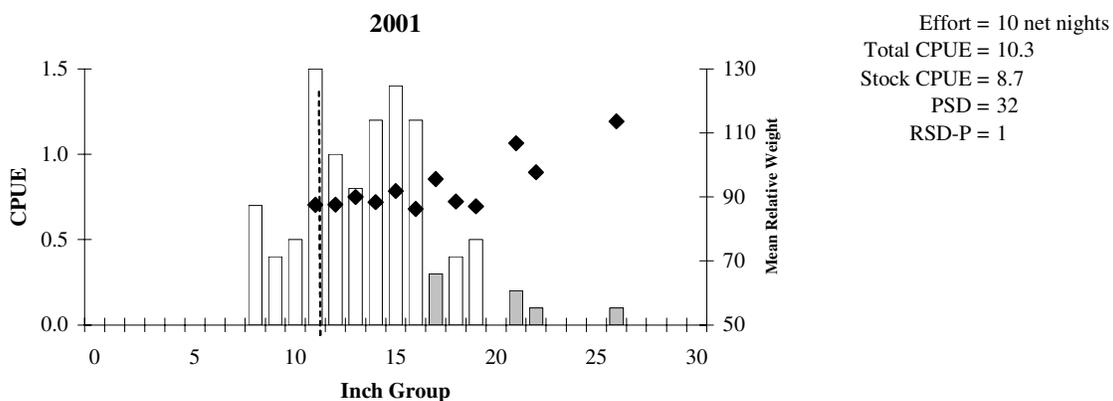
2004



Effort = 1.5 hours
 Total CPUE = 126.7
 Stock CPUE = 94.7
 PSD = 37

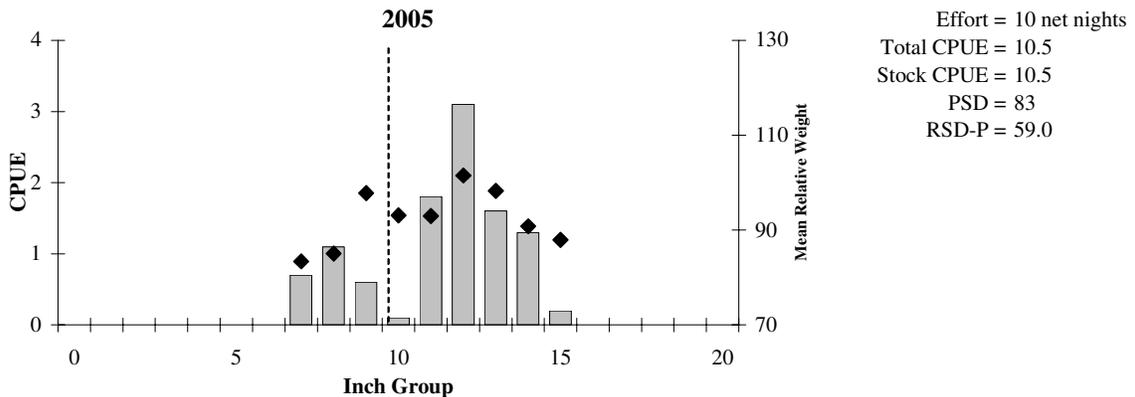
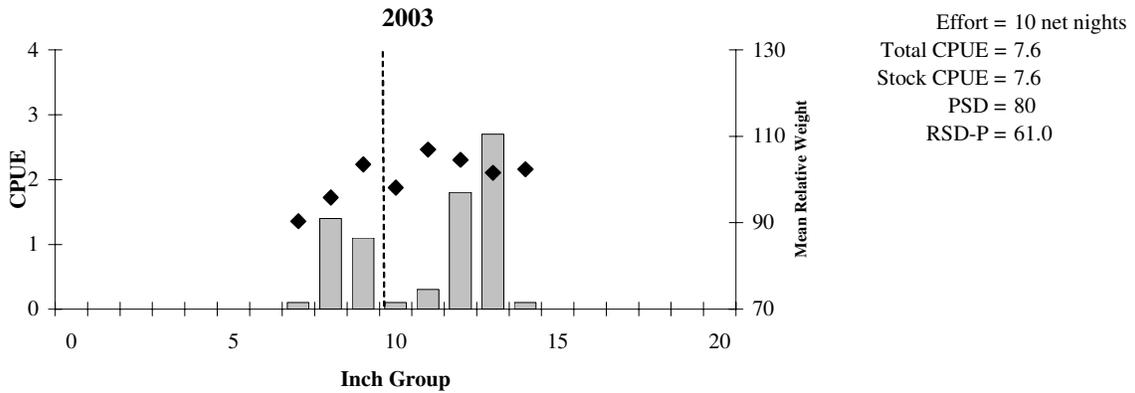
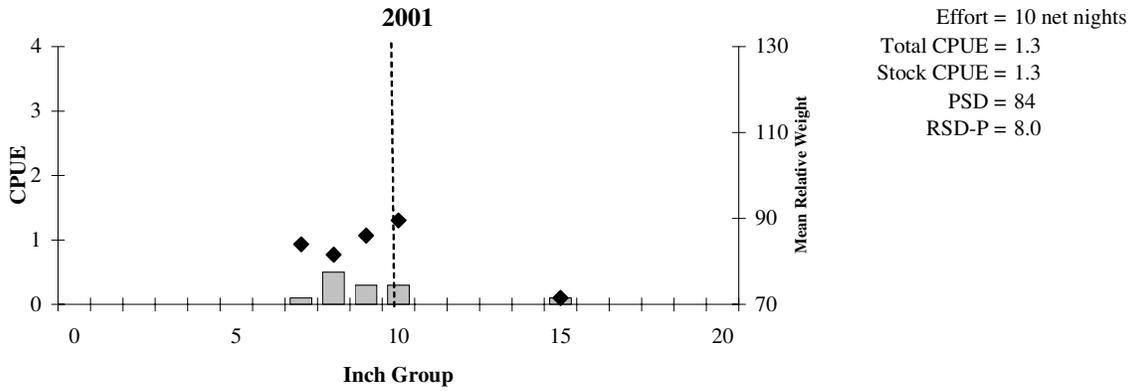
The number of gizzard shad caught per hour (bars), and population indices from fall electrofishing sampling at Pat Mayse Reservoir, Texas.

Channel Catfish



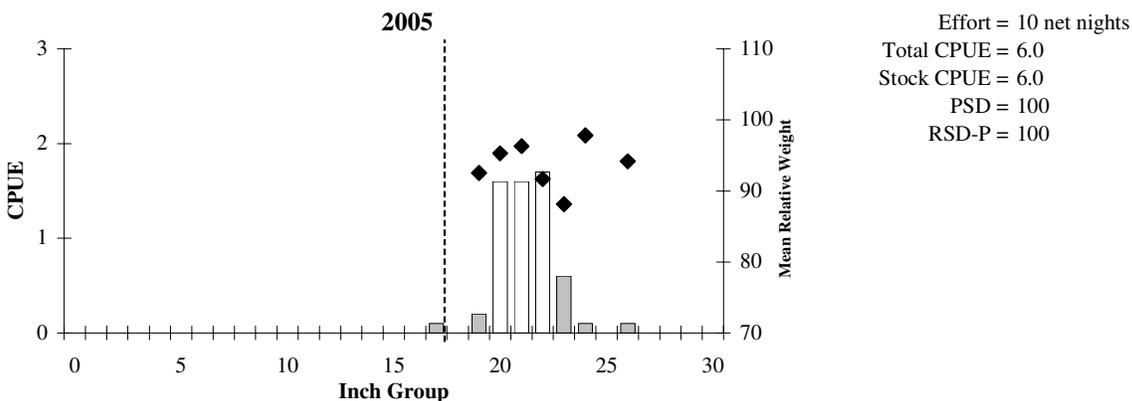
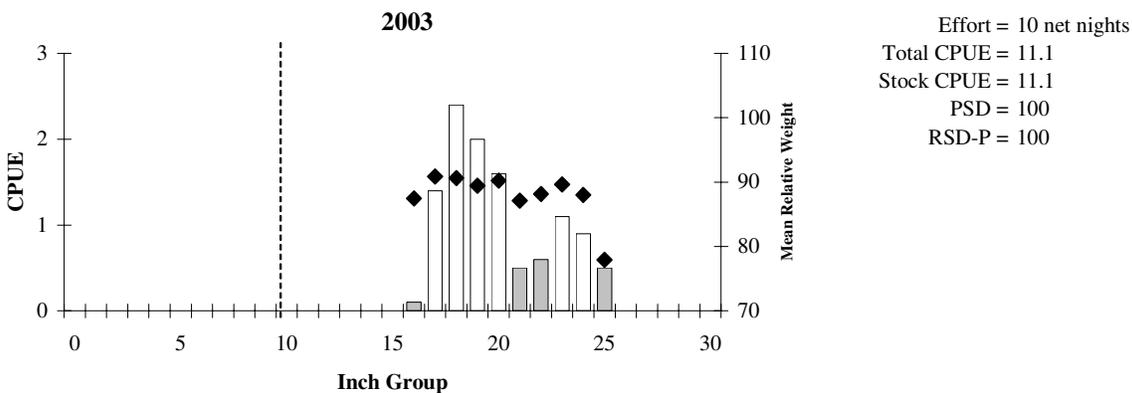
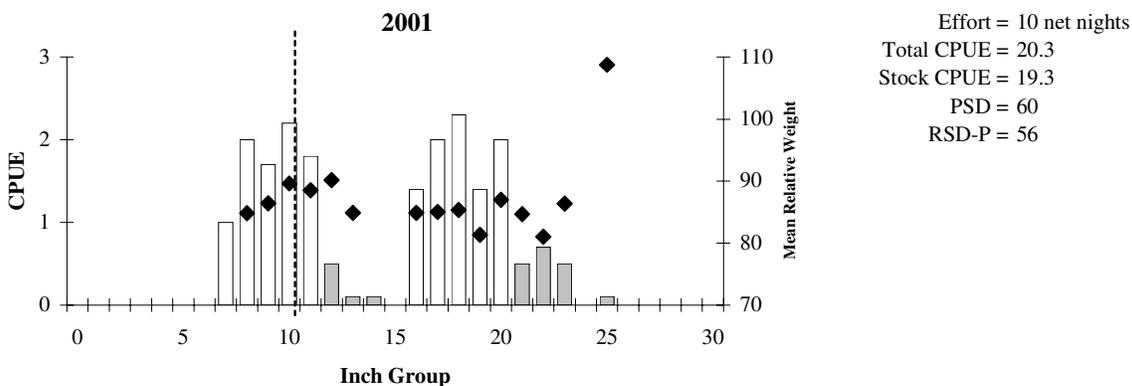
The number of channel catfish caught per net night (bars), mean relative weight (diamonds), and population indices from spring gill net sampling at Pat Mayse Reservoir, Texas. Dashed lines indicate minimum length limit at time of survey.

White bass



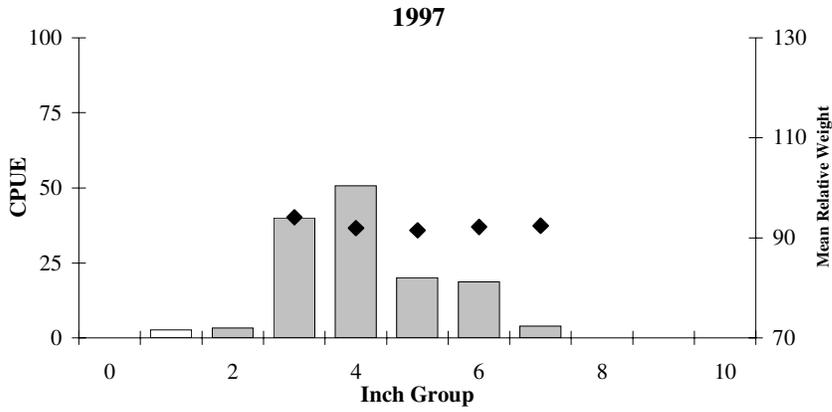
The number of white bass caught per net night (bars), mean relative weight (diamonds), and population indices from spring gill net sampling at Pat Mayse Reservoir, Texas. Dashed lines indicate minimum length limit at time of survey.

Palmetto bass

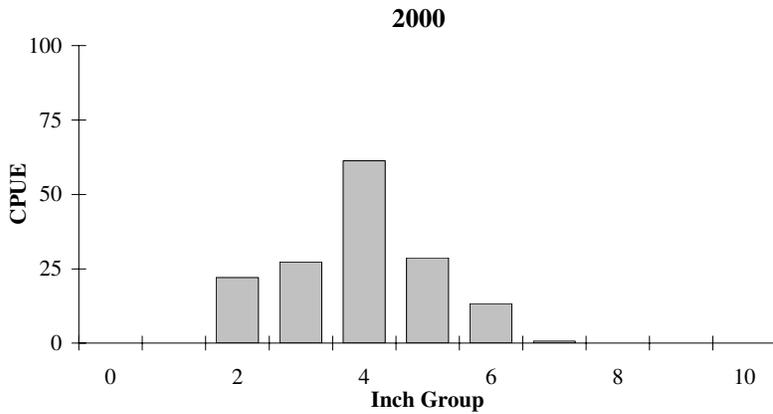


The number of palmetto bass caught per net night (bars), mean relative weight (diamonds), and population indices from spring gill net sampling at Pat Mayse Reservoir, Texas. Dashed lines indicate minimum length limit at time of survey.

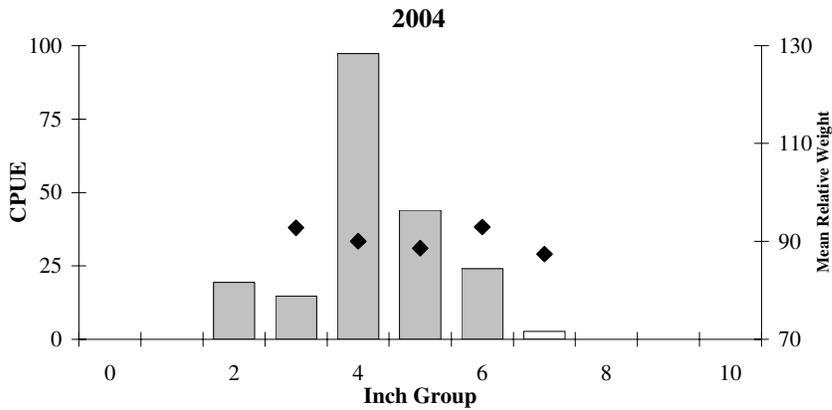
Bluegill



Effort = 1.5 hours
 Total CPUE = 139.3
 Stock CPUE = 133.3
 PSD = 17
 RSD-P = 0



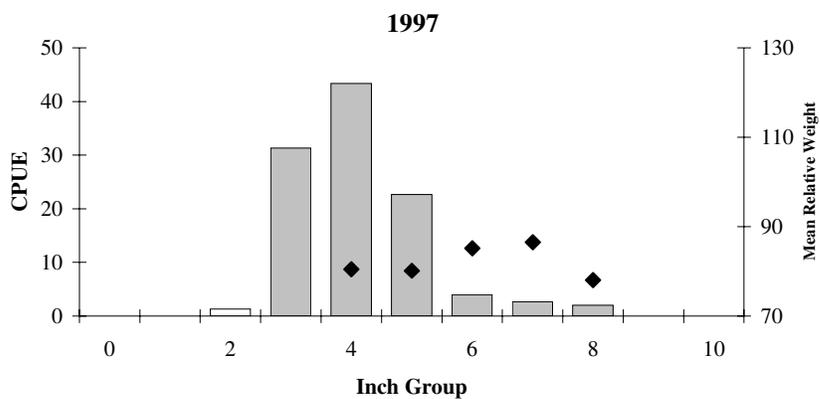
Effort = 1.5 hours
 Total CPUE = 153.3
 Stock CPUE = 131.3
 PSD = 11
 RSD-P = 0



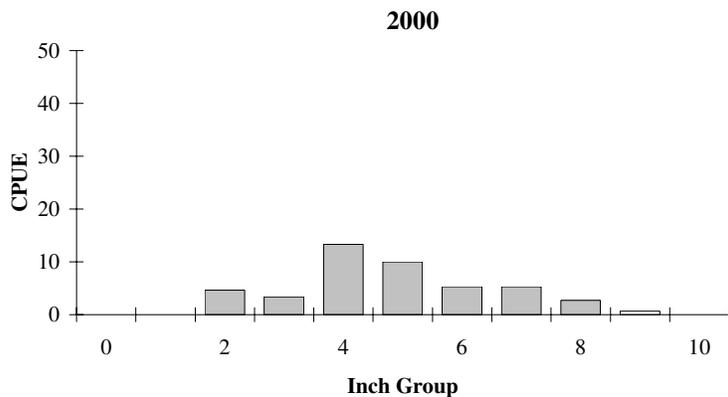
Effort = 1.5 hours
 Total CPUE = 202.0
 Stock CPUE = 182.7
 PSD = 15
 RSD-P = 0

The number of bluegill caught per hour (bars), mean relative weight (diamonds), and population indices from fall electrofishing sampling at Pat Mayse Reservoir, Texas. No weight data were collected in 2000.

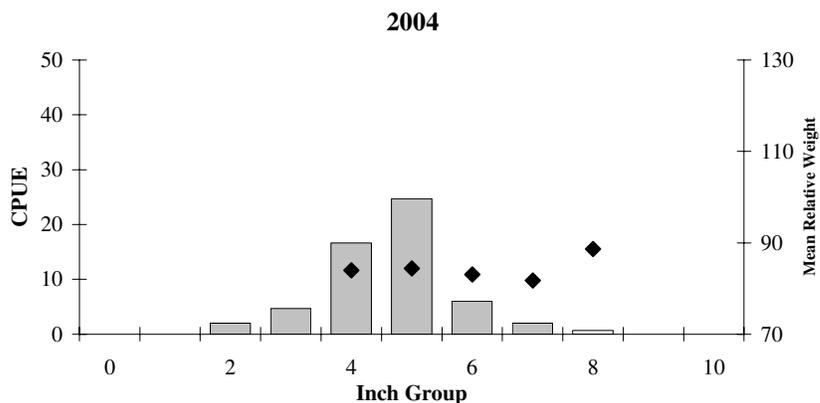
Redear Sunfish



Effort = 1.5 hours
 Total CPUE = 107.3
 Stock CPUE = 74.7
 PSD = 6
 RSD-P = 0



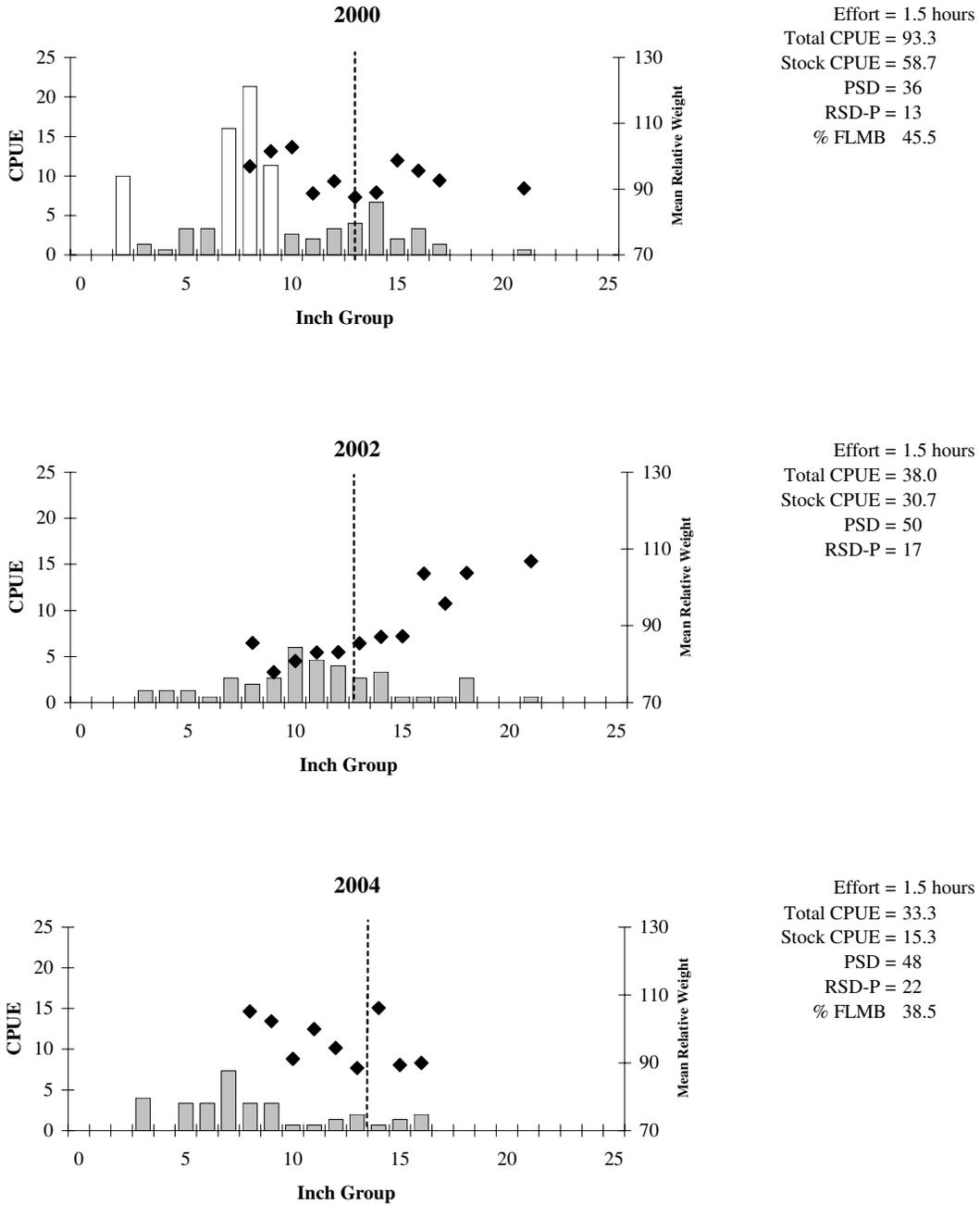
Effort = 1.5 hours
 Total CPUE = 45.3
 Stock CPUE = 37.3
 PSD = 23
 RSD-P = 2



Effort = 1.5 hours
 Total CPUE = 56.7
 Stock CPUE = 50.0
 PSD = 5
 RSD-P = 0

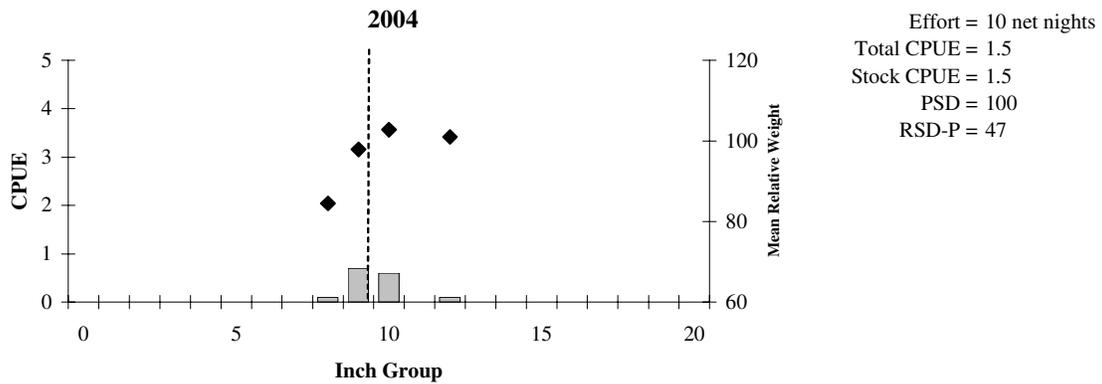
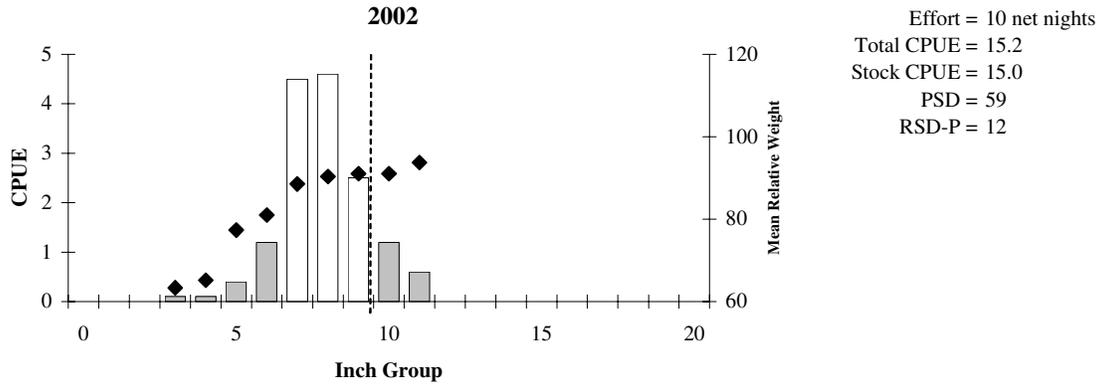
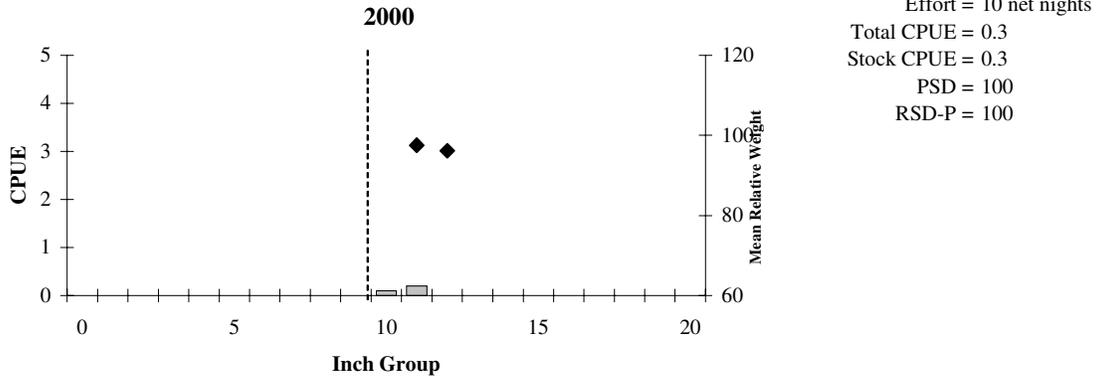
The number of redear sunfish caught per hour (bars), mean relative weight (diamonds), and population indices from fall electrofishing sampling at Pat Mayse Reservoir, Texas. No weight data were collected in 2000.

Largemouth Bass



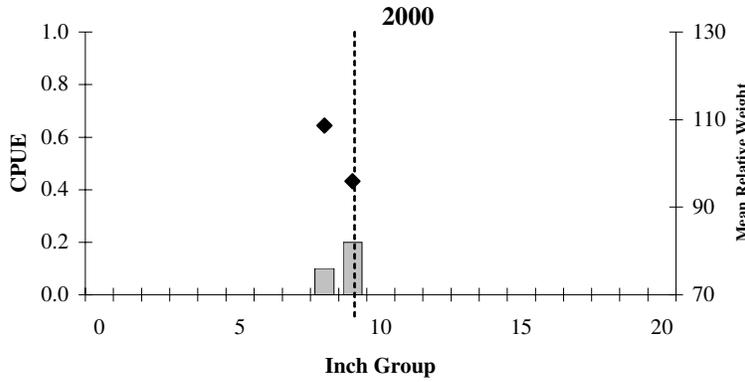
The number of largemouth bass caught per hour (bars), mean relative weight (diamonds), and population indices from fall electrofishing sampling at Pat Mayse Reservoir, Texas. Dashed lines indicate minimum length limit at time of survey. % FLMB = percent of Florida largemouth bass alleles present in sub-sample of Age-0 fish.

White Crappie

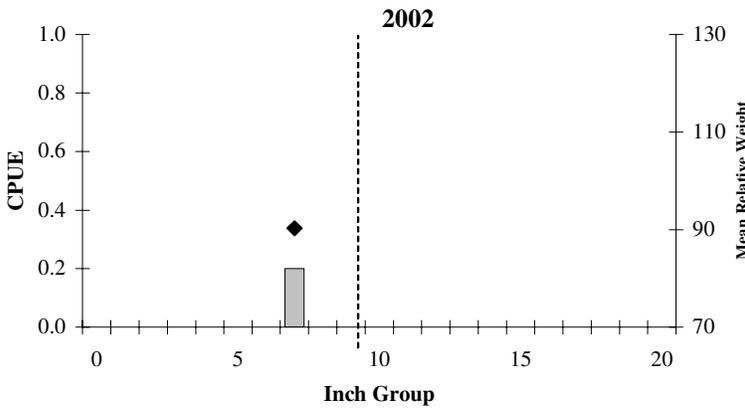


The number of white crappie caught per net night (bars), mean relative weight (diamonds), and population indices from fall trap netting sampling at Pat Mayse Reservoir, Texas. Dashed lines indicate minimum length limit at time of survey.

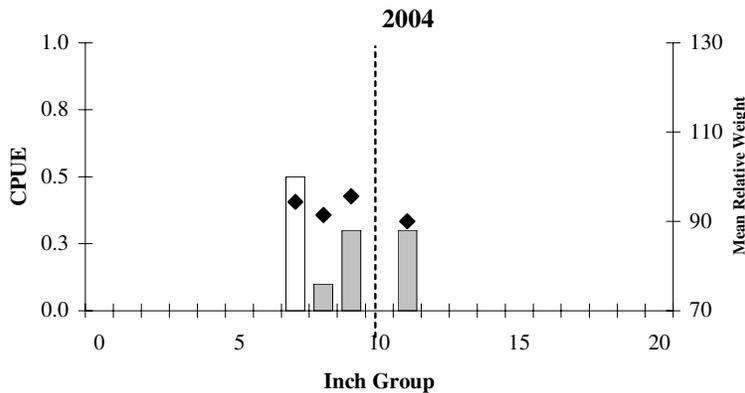
Black Crappie



Effort = 10 net nights
 Total CPUE = 0.3
 Stock CPUE = 0.3
 PSD = 100
 RSD-P = 0



Effort = 10 net nights
 Total CPUE = 0.2
 Stock CPUE = 0.2
 PSD = 0
 RSD-P = 0



Effort = 10 net nights
 Total CPUE = 1.2
 Stock CPUE = 1.2
 PSD = 58
 RSD-P = 25

The number of black crappie caught per net night (bars), mean relative weight (diamonds), and population indices from fall trap netting sampling at Pat Mayse Reservoir, Texas. Dashed lines indicate minimum length limit at time of survey.

Fisheries Management Plan Pat Mayse Reservoir, Texas

Prepared – July 2005

ISSUE 1 Enhancement of the largemouth bass fishery. Pat Mayse Reservoir has shown the potential to produce trophy largemouth bass as evidenced by the size of the current lake record, 14.1 pounds (3/1994). This fish was one of two fish from Pat Mayse Reservoir that were donated to the ShareLunker program. The second fish was caught in March 1995 and weighed 13.4 pounds.

MANAGEMENT STRATEGIES

1. Continue to monitor the largemouth bass population by conducting fall electrofishing surveys every 2 years. The next scheduled survey would be conducted in 2006.
2. Monitor the influence of FLMB stockings (spring 2003 and 2004) by conducting electrophoresis of age-0 largemouth bass in fall 2006.
3. Continue to manage the largemouth bass fishery under the current statewide 14-inch minimum length limit, 5-fish daily bag limit.

ISSUE 2 Increase awareness of Pat Mayse Reservoir fisheries resources. There is a need to inform anglers of the fisheries potential that exists in Pat Mayse Reservoir. Dissemination of information describing the sport fish harvest regulations in effect on Pat Mayse Reservoir is also needed.

MANAGEMENT STRATEGIES

1. Prepare regulation posters detailing fisheries regulations in effect at Pat Mayse Reservoir and post this information at boat ramps and local businesses.
2. Produce news releases promoting the fisheries resources of Pat Mayse Reservoir for distribution to local media outlets.

ISSUE 3 Problematic aquatic vegetation . *Hydrilla verticillata* was observed during vegetation surveys in September 2000 and 2004, although there has been a reduction in plant abundance since 2000 from 30.2 acres to 6.1. This aquatic plant has the potential to create access problems at Pat Mayse Reservoir.

MANAGEMENT STRATEGIES

1. Continue monitoring of hydrilla infestation at Pat Mayse Reservoir.

2. In the event that this plant becomes problematic, work with US Army Corps of Engineers to develop an integrated aquatic plant management plan, as required by HB No. 3079 and explore all treatment options.

ISSUE 4 **Angler access.** Maintenance and improvement of angler access facilities are important in promoting angling and maximizing utilization of the fisheries resources at Pat Mayse Reservoir by all types of anglers.

MANAGEMENT STRATEGIES

1. When opportunities are identified, encourage controlling authorities to improve existing angler access facilities to accommodate not only boat anglers, but also bank and physically challenged anglers.

APPENDIX 1

Catch rates (CPUE) of target species collected from all gear types from Pat Mayse Reservoir, Texas, 2004 - 2005.

Species	Fall electrofishing (1.5 hours)	Fall trap netting (10 net nights)	Spring gill netting (10 net nights)
Gizzard shad	126.67		
Threadfin shad	32.00		
Channel catfish			3.10
Flathead catfish			0.30
White bass			10.50
Palmetto bass			6.00
Warmouth	10.00		
Bluegill	202.00		
Longear sunfish	24.67		
Redear sunfish	56.67		
Largemouth bass	33.33		
White crappie		1.50	
Black crappie		1.20	

APPENDIX 2

Results of electrophoretic analysis of young-of-the-year largemouth bass collected by electrofishing from Pat Mayse Reservoir, Texas, fall 1991, 1992, 1993, 1994, 1997, 2000 and 2004.

Year	Sample size	Genotype				% FLMB alleles	% pure FLMB
		Florida	F1	Fx	Northern		
1991	30	3	6	13	8	34.7	10.0
1992	35	0	9	11	15	25.0	0.0
1993	35	0	3	16	16	17.1	0.0
1994	35	4	11	3	16	24.6	11.4
1997	35	1	11	16	10	33.6	2.6
2000	23	1	6	13	3	45.5	4.6
2004	40	0	7	27	4	38.5	0.0

APPENDIX 3

Water body records, all tackle category, for Pat Mayse Reservoir as of 5/5/2005.

Species	Weight (lbs)	Length (inches)	Date certified	Gear
Bass, White x striped hybrid	13.69	28.00	4/25/1993	Rod & Reel
Bass, Largemouth	14.10	27.00	3/12/1994	Rod & Reel
Buffalo, Smallmouth	62.00	45.00	10/16/2000	Trotline
Catfish, Blue	46.25	42.00	3/9/2003	Trotline
Catfish, Channel	15.50	31.50	5/8/1993	Trotline
Catfish, Flathead	68.00	50.00	3/16/2004	Trotline
Crappie, Black	1.75	14.63	10/16/1995	Rod & Reel
Crappie, White	2.06	15.75	10/18/2000	Rod & Reel
Pickerel, Chain	4.75	23.75	2/18/1996	Rod & Reel

APPENDIX 4

Catch rates (CPUE) of selected target species caught per net night during spring **gill netting**, Pat Mayse Reservoir, Texas, March 1992, 1994, 1997, 1999, 2000, and April 1998, 2001, 2003, and 2005.

Species	1992	1994	1997	1998	1999	2000	2001	2003	2005
Channel catfish	5.1	5.6	3.0	9.0	4.0	8.1	10.0	4.8	3.1
Flathead catfish	0.1	0.5	0.2						0.3
White bass	9.5	8.0	4.6	3.0	7.0	19.2	1.3	7.6	10.5
Palmetto bass	2.3	13.2	8.7	17.1	23.6	31.7	20.3	11.1	6.0

Catch rates (CPUE) of selected target species caught per hour during fall **electrofishing**, Pat Mayse Reservoir, Texas, October 1992, 1993, 1994, 1995, 1997, 2000, 2002 (largemouth bass only) and 2004.

Species	1992	1993	1994	1995	1997	2000	2002	2004
Gizzard shad	312.7	212.0	104.7	45.0	40.0	252.0		126.7
Threadfin shad	4.0	4.7	4.7	3.0		85.3		32.0
Bluegill	994.0	534.0	342.7	284.0	139.3	153.3		202.0
Redear sunfish	265.3	130.0	56.0	90.0	107.3	45.3		56.7
Spotted bass				1.0	0.7	2.0		
Largemouth bass	181.3	156.7	109.3	88.0	110.7	93.3	38.0	33.3

Catch rates (CPUE) of selected target species caught per net night during fall **trap netting**, Pat Mayse Reservoir, Texas, November 1992, 1993, 1994, 1997, 2000, 2002 and 2004.

Species	1992	1993	1994	1997	2000	2002	2004
White crappie	4.1	2.5	5.2	3.6	0.3	15.2	1.5
Black crappie	0.5	0.1	0.1	0.1	0.3	0.2	1.2

APPENDIX 5

Historic information on mean length-at-age of capture (inches) of game fishes (sexes combined) from Pat Mayse Reservoir, Texas, compared with averages for the Canadian / Red River system (Prentice 1987). Sample sizes are shown in parentheses.

Channel catfish collected in spring gill netting surveys, Pat Mayse Reservoir, Texas, March 1992, 1994, and 1997.

Year	Age class									
	0	1	2	3	4	5	6	7	8	9
1997		11.6 (4)	13.4 (8)	16.8 (4)	17.7 (5)	16.1 (1)			20.4 (1)	
1994		9.9 (1)	12.1 (8)	14.4 (12)	16.5 (7)	19.0 (7)	19.2 (6)	20.9 (3)	19.4 (1)	21.4 (2)
1992		9.8 (10)	11.9 (2)	13.6 (1)	16.7 (10)	17.8 (8)	19.9 (4)	17.7 (3)		
Average for Canadian/ Red River System for March 15	4.7	6.8	8.9	11.0	13.0	15.0	17.0	18.9	20.7	22.6

White bass collected in spring gill netting surveys, Texas, March 1994, 1997, 1999, 2000, 2003, and April 1998 and 2001.

Year	Age class						
	0	1	2	3	4	5	6
2003		9.0 (12)	12.2 (5)	13.1 (9)			
2001	9.0 (12)	15.1 (1)					
2000	9.8 (8)	9.3 (2)	12.7 (6)	12.7 (13)	14.1 (1)		14.8 (1)
1999		10.8 (4)	11.4 (4)	10.3 (5)	12.2 (6)	9.8 (1)	
1998	9.7 (10)	12.2 (6)	14.2 (1)	14.2 (6)	15.6 (2)		

1997		8.5 (14)	11.6 (9)	13.0 (6)	13.8 (3)	14.7 (1)	
1994		10.0 (19)	13.0 (7)	13.6 (3)	14.5 (2)	14.3 (1)	
Average for Canadian / Red River System for March 15	5.2	7.8	9.9	11.6	12.9	13.9	14.7

Palmetto bass collected in spring gill netting surveys, March 1994, 1997, 1999, 2000, and April 1998 and 2001.

Year	Age class							
	0	1	2	3	4	5	6	7
2001	10.0 (30)	16.9 (6)	18.6 (5)	18.9 (12)	21.9 (12)	23.1 (1)	24.0 (3)	
2000	11.9 (11)	16.7 (6)	18.1 (14)	21.5 (12)	22.3 (3)	22.9 (7)		
1999		13.3 (15)	18.0 (25)	18.9 (3)	22.4 (9)	24.4 (4)	24.1 (6)	
1998	10.6 (12)	16.6 (12)	17.0 (10)	20.7 (15)	23.4 (9)	24.4 (3)		
1997	11.7 (12)	15.8 (7)	18.7 (15)	21.5 (5)	22.2 (15)	25.1 (1)		
1994		15.4 (19)	21.5 (17)		25.7 (3)			
Average for Canadian / Red River System for March 15	6.2	14.0	17.8	19.7	20.6	21.0	21.2	21.3

Largemouth bass (sexes combined) collected in fall electrofishing surveys, Texas, October 1991, 1992, 1993, 1994, 1997 and 2000.

Year	Age class						
	0	1	2	3	4	5	6
2000	8.1 (22)	12.0 (14)	14.9 (11)	16.2 (2)	17.4 (1)		

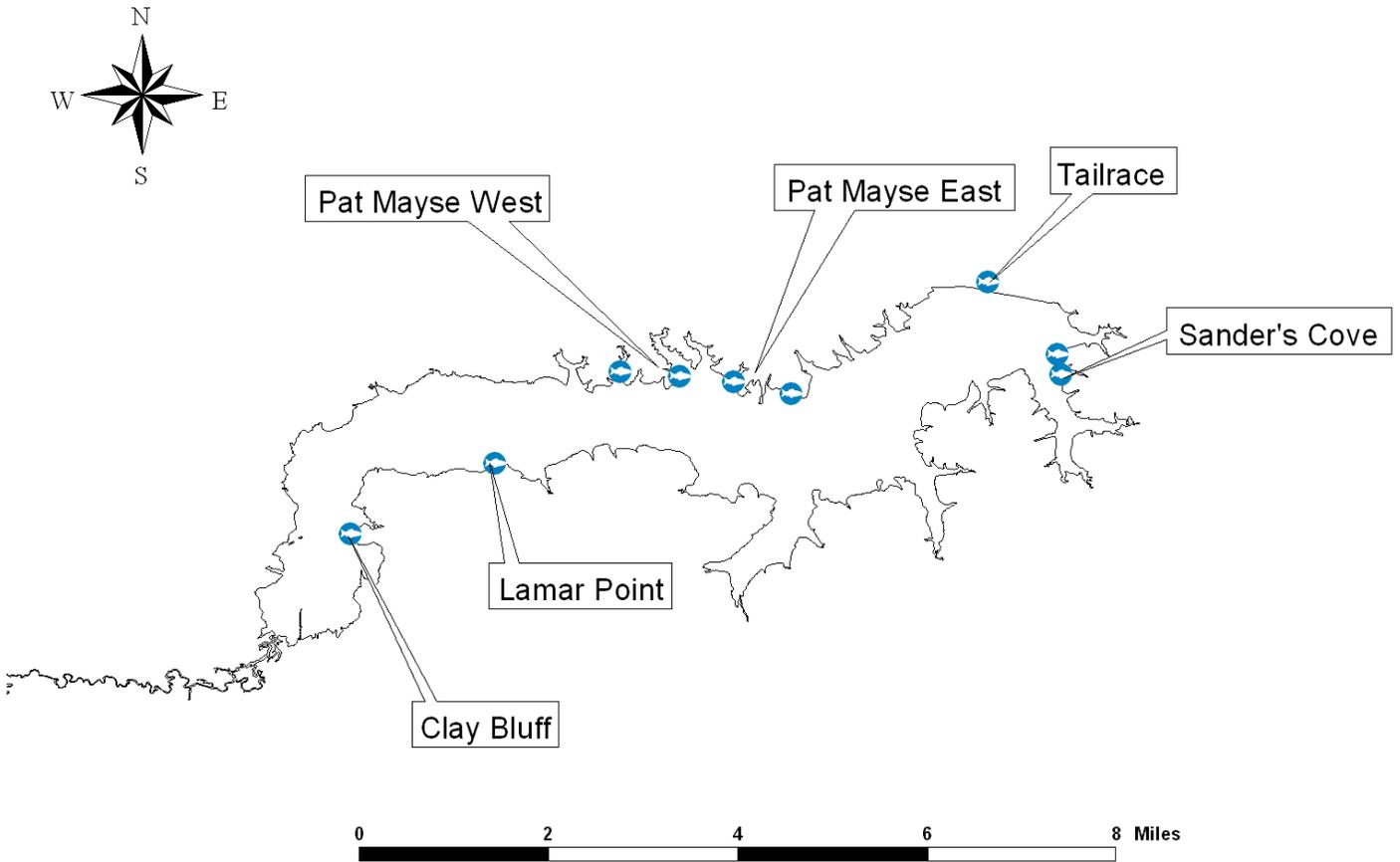
1997	9.0 (20)	12.7 (14)	15.4 (7)	16.2 (4)	18.6 (1)	17.1 (2)	
1994	6.1 (17)	10.1 (19)	13.5 (12)	15.2 (7)			
1993	6.6 (6)	10.3 (16)	13.9 (18)	16.2 (5)	16.5 (2)		
1992	6.5 (16)	10.9 (27)	15.3 (3)	15.9 (3)	18.7 (1)		
1991	6.9 (35)	11.5 (26)	13.9 (2)	17.9 (1)	19.9 (1)		
Average for Canadian / Red River System for October 15	6.0	8.4	10.5	12.3	13.9	15.2	16.3

White crappie (sexes combined) collected in fall trap netting surveys, November 1992, 1993, 1994, 1997, and 2002 compared with averages for the Canadian / Red River system for November 15.

Year	Age class					
	0	1	2	3	4	5
2002	4.0 (2)	7.8 (25)	11.1 (9)			
1997	8.7 (1)	9.2 (6)	10.9 (10)	12.0 (3)		
1994		8.5 (16)	10.9 (8)	12.5 (2)	13.1 (1)	
1993			8.9 (19)	11.7 (5)	12.6 (1)	
1992		9.9 (17)	11.2 (14)	10.8 (1)		
Average for Canadian / Red River System for November 15	4.1	5.9	7.3	8.6	9.7	10.6

APPENDIX 6

Public angler access facilities, Pat Mayse Reservoir



Facility type	Location name	GPS Coordinates	Fee charged	No. of lanes	Challenged access	Bank Fishing	Comments
Boat ramp	Sander's Cove	N 33° 50.565' W 95° 32.522'	Y	3	N	Y	2 ramps
Boat ramp	Lamar Point	N 33° 49.766' W 95° 37.717'	N	1	N	Y	
Boat ramp	Clay Bluff	N 33° 49.111' W 95° 39.048'	N	1	N	Y	
Boat ramp	Pat Mayse East	N 33° 50.600' W 95° 36.570'	N	2	N	Y	2 ramps
Boat ramp	Pat Mayse West	N 33° 50.508' W 95° 35.535'	Y	2	N	Y	2 ramps
Tailrace	Tailrace area	N 33° 51.323' W 95° 33.196'	N	-	N	Y	