

LAKE SALINDA
Washington County
2008 Fish Management Report

Michelle L. Cain
Assistant Fisheries Biologist

Clinton R. Kowalik
Assistant Fisheries Biologist



Fisheries Section
Indiana Department of Natural Resources
Division of Fish and Wildlife
I.G.C.-South, Room W273
402 W. Washington Street
Indianapolis, IN 46204

EXECUTIVE SUMMARY

- Lake Salinda is a 66-acre impoundment located approximately 1.5 miles south of Salem on State Road 135 in Washington County. The lake was constructed in 1948 as a drinking water supply to the City of Salem.
- A general survey was conducted on May 28 to 30, 2008. Submersed aquatic vegetation was sampled on August 20, 2008.
- Submersed vegetation was found to a maximum depth of 8.5 ft. Coontail was the most frequently occurring, followed by a naiad sp., American pondweed, sago pondweed, and brittle naiad.
- A total of 537 fish, representing 11 species and one hybrid, was collected that weighed an estimated 130 lbs. Bluegill ranked first by number, followed by largemouth bass, white crappie, and black crappie.. Largemouth bass ranked first by weight, followed by bluegill, and common carp.
- A total of 311 bluegill was sampled that weighed 38 lbs. Bluegill growth was fast averaging 6.9 in at age 3 and 7.7 in at age 4. A total of 66 largemouth bass was sampled that weighed 46 lbs. Largemouth bass growth was average with age-3 bass averaging 10.8 in and age-4 bass averaging 12.8 in.
- Lake Salinda provides excellent fishing for bluegill and good fishing for largemouth bass and crappie. Twenty-two percent of the bluegill were 7.0 in or longer and 18% of the black crappie were 8.0 in or longer.
- The largemouth bass population is producing fish up to 16.0 in and 5% of the population is 14.0 in or longer. The lake is still a decent bass fishery, even though the PSD has decreased from the 2000 survey.
- One channel catfish was collected that was 23.8 in. The lack of catfish collected in the survey indicates that these fish are being utilized and stocking should continue. Also the amount of shoreline area available for fishing is much greater than other lakes in the area making it ideal for catfish anglers.

INTRODUCTION

Lake Salinda is a 66-acre impoundment located approximately 1.5 miles south of Salem on State Road 135 in Washington County. The lake was constructed in 1948 as a drinking water supply to the City of Salem. The shoreline is mostly wooded. Boat access is provided by a two-lane asphalt ramp and a fishing pier is available for shoreline fishing. A \$5.00 daily or \$20.00 annual boat launch permit is required. The annual boat launch permit is \$15.00 for residents of Washington County. The permits gives access to both Lake Salinda and Lake John Hay and can be purchased at City Hall in Salem.

The 2000 survey revealed an excellent bluegill fishery and good catch and release fishing for largemouth bass. It was recommended that channel catfish stocking be continued every two years.

METHODS

A general survey was conducted on May 28 to 30, 2008. Some physical and chemical characteristics of the water were measured (Shipman 2001). Submersed aquatic vegetation was sampled on August 20, 2008, using guidelines written by the Indiana Department of Natural Resources (2006).

Fish collection effort consisted of pulsed DC night electrofishing with two dippers for 0.5 h for all species and an additional 0.25 h for largemouth bass only, two trap net lifts, and four experimental-mesh gill net lifts. All fish collected were measured to the nearest 0.1 in TL. Average weights for fish by half-inch groups for Fish Management District 8 were used to estimate the weight of bluegill, largemouth bass, redear sunfish, black crappie, and hybrid sunfish within the sample. Other fishes were weighed in the field to the nearest 0.01 lb. Scale samples were taken from sport fish for age and growth analysis. Proportional stock density (PSD) and relative stock density (RSD) were calculated for bluegill and largemouth bass (Anderson and Neumann 1996). The Bluegill Fishing Potential (BGFP) index was used to assess bluegill fishing quality (Ball and Tousignant 1996).

RESULTS

Lake Salinda was at normal pool. The Secchi disk reading was 7.5 ft and the conductivity was 300 μ s. Dissolved oxygen concentrations were not adequate for fish survival below 10.0 ft.

Submersed vegetation was found to a maximum depth of 8.5 ft. Coontail was the most frequently occurring, followed by a naiad sp., American pondweed, sago pondweed, and brittle naiad. Other plants observed were curlyleaf pondweed, duckweed, and broadleaf cattail.

A total of 537 fish, representing 11 species and one hybrid, was collected that weighed an estimated 130 lbs. Bluegill ranked first by number (58%), followed by largemouth bass (12%), white crappie (7%), black crappie (4%), and redear sunfish (2%). Largemouth bass ranked first by weight (35%), followed by bluegill (29%), common carp (16%), golden shiner (5%), and channel catfish (4%). Other species collected were longear sunfish, green sunfish, hybrid sunfish, and blackstripe topminnow. Species collected in past surveys include black bullhead, golden redhorse, sauger, white catfish, white sucker, yellow bullhead, and yellow perch.

A total of 311 bluegill was sampled that weighed 38 lbs. They ranged in length from 1.5 to 8.6 in. The catch rates were 600.0/electrofishing h, 3.0/trap net lift, and 1.3/gill net lift. The 2000 electrofishing catch rate was 510.0/h. Bluegill growth was fast averaging 6.9 in at age 3 and 7.7 in at age 4. Bluegill were reaching 7.7 in by their fourth year of growth. Growth was similar in 2000.

The bluegill PSD increased from 25 (2000) to 33. The suggested PSD range indicating a balanced bluegill fishery is 20 to 60 (Anderson and Neumann 1996). The RSD-7 was 23 and the RSD-8 was 5 compared to 8 and 1 in 2000. The BGFP index slightly improved from 31 to 36, classifying the lake as having "excellent" bluegill fishing.

A total of 66 largemouth bass was sampled that weighed 46 lbs. They ranged in length from 6.8 to 16.0 in. The catch rates were 82.7/electrofishing h, 0.0/trap net lift, and 0.8/gill net lift. The 2000 electrofishing catch rate was 324.0/h. Largemouth bass growth was average with age 3 bass averaging 10.8 in and age 4 bass averaging 12.8 in. Largemouth were reaching 14.0 in by their fifth year of growth. Growth was similar in 2000.

The largemouth bass PSD decreased from 36 (2000) to 21. The suggested PSD range indicating a balanced largemouth fishery is 40 to 70 (Anderson and Neumann 1996). The RSD-14 and RSD-15 were both 3 compared to 7 and 3 in 2000.

A total of 38 white crappie was sampled that weighed 4 lbs. They ranged in length from 4.9 to 6.8 in. The catch rates were 6.0/electrofishing h, 3.0/trap net lift, and 7.3/gill net lift. All fish collected were age 1 or age 2.

Two other panfish species were collected; black crappie, and redear sunfish. Twenty-two black crappie were sampled that weighed 4 lbs. They ranged in length from 5.4 to 9.7 in. The catch rates were 18.0/electrofishing h, 0.5/trap net lift, and 3.0/gill net lift. Twelve redear sunfish were sampled that weighed 4 lbs and ranged in length from 4.5 to 9.8 in.

DISCUSSION

Lake Salinda provides excellent fishing for bluegill and good fishing for largemouth bass and crappie. Twenty-two percent of the bluegill were 7.0 in or longer and 18% of the black crappie were 8.0 in or longer. White and black crappie combined for over 11% of the relative abundance which was good considering the time of year the sample was taken.

The largemouth bass population is producing fish up to 16.0 in and 5% of the population is 14.0 in or longer. The lake is still a decent bass fishery, even though the PSD has decreased from the 2000 survey.

One channel catfish was collected that was 23.8 in. The lack of catfish collected in the survey indicates that these fish are being utilized and stocking should continue. Also, the amount of shoreline area available for fishing is much greater than other lakes in the area making it ideal for catfish anglers.

RECOMMENDATIONS

- The biennial stocking of 1,056 channel catfish should be continued.

LITERATURE CITED

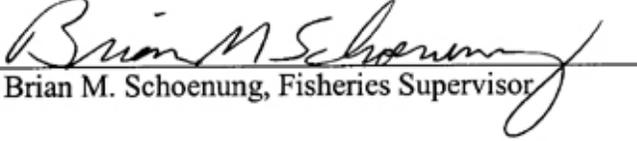
- Anderson, R. O. and R. M. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-481 in B. R. Murphy and D. W. Willis, editors. Fisheries techniques, 2nd edition. American Fisheries Society, Bethesda, Maryland.
- Ball, R. L. and J. N. Tousignant. 1996. The development of an objective rating system to assess bluegill fishing in lakes and ponds. Research report. Indiana Department of Natural Resources. Indianapolis, Indiana. 18 pp.

Indiana Department of Natural Resources. 2006. Tier II aquatic vegetation survey protocol. 9 pp.

Shipman, S. T. 2001. Manual of fisheries survey methods. Fisheries Section. Indiana Division of Fish and Wildlife. Indianapolis, Indiana. 58 pp.

Submitted by: Michelle L. Cain, Assistant Fisheries Biologist
Date: September 10, 2009

Approved by: Daniel P. Carnahan, Fisheries Biologist

Approved by: 
Brian M. Schoenung, Fisheries Supervisor

Date: December 18, 2009

Appendix

Fish survey data

LAKE SURVEY REPORT

Type of Survey	<input type="checkbox"/> Initial Survey	<input checked="" type="checkbox"/> Re-Survey
----------------	---	---

Lake Name Lake Salinda	County Washington	Date of survey (Month, day, year) May 28 to 30, 2008
Biologist's name Michelle Cain, Clint Kowalik, Larry L. Lehman		Date of Approval (Month, day, year) December 18, 2009

LOCATION		
Quadrangle Name Salem, Ind. 1963	Range 4E	Sections 28, 29, 32, 33
Township 2N	Nearest Town Salem	

ACCESSIBILITY					
State owned public access site None		Privately owned public access site None		Other access site Access controlled by Salem	
Surface acres 66.0	Maximum depth (ft) 26.0	Average depth (ft) 13.0*	Volume (acre feet) 858.0	Water level (feet MSL) 722.5	Extreme fluctuations 720.5 - 723.5
Location of benchmark Approximately 0.7 mile north of the dam near State Road 135					

INLETS		
Name Hoggatt Branch	Location Northeast corner of lake	Origin Watershed runoff
3 Unnamed intermittent inlets	North, east, south sides of lake	Watershed runoff

OUTLETS																
Name Hoggatt Branch	Location At principal spillway															
Water level control																
POOL	ELEVATION (Feet MSL)	ACRES														
TOP OF DAM																
TOP OF FLOOD CONTROL POOL																
NORMAL POOL	722.5	65.8														
TOP OF MINIMUM POOL																
STREAMBED																
<table border="0"> <tr> <td>Bottom type</td> <td> </td> </tr> <tr> <td><input type="checkbox"/> Boulder</td> <td> </td> </tr> <tr> <td><input type="checkbox"/> Gravel</td> <td> </td> </tr> <tr> <td><input type="checkbox"/> Sand</td> <td> </td> </tr> <tr> <td><input type="checkbox"/> Muck</td> <td> </td> </tr> <tr> <td><input checked="" type="checkbox"/> Clay</td> <td> </td> </tr> <tr> <td><input type="checkbox"/> Marl</td> <td> </td> </tr> </table>			Bottom type		<input type="checkbox"/> Boulder		<input type="checkbox"/> Gravel		<input type="checkbox"/> Sand		<input type="checkbox"/> Muck		<input checked="" type="checkbox"/> Clay		<input type="checkbox"/> Marl	
Bottom type																
<input type="checkbox"/> Boulder																
<input type="checkbox"/> Gravel																
<input type="checkbox"/> Sand																
<input type="checkbox"/> Muck																
<input checked="" type="checkbox"/> Clay																
<input type="checkbox"/> Marl																

Watershed use: The watershed, which covers 3,413 acres (5.33 square miles), is predominately agricultural with cropland comprising 44% and pasture 32%. The remainder is residential and forest.

Development of shoreline
Two-lane asphalt boat ramp, parking, handicap fishing pier, restrooms.

Previous surveys and investigations
Sedimentation study 1964. General fishery surveys 1964, 1971, 1974, 1979, and 2000. Lake Enhancement Program feasibility study 1988 (Donan Engineering Co., Inc. Jasper, IN). Largemouth bass population study 1991.

*Assumed to be 1/2 of maximum depth.

SAMPLING EFFORT					
ELECTROFISHING	Day hours		Night hours		Total hours
	0		0.5 for all species, 0.25 for lmb		0.75
TRAP NETS	Number of traps		Number of Lifts		Total effort
	1		2		2 Lifts
GILL NETS	Number of nets		Number of Lifts		Total effort
	2		2		4 Lifts
ROTENONE	Gallons	ppm	Acre Feet Treated	SHORELINE SEINING	Number of 100 Foot Seine Hauls
	0				none

PHYSICAL AND CHEMICAL CHARACTERISTICS			
Color		Turbidity	
Light grayish green		7 Feet 6 Inches (SECCHI DISK)	
Alkalinity (ppm)*		pH	
Surface: 154-171 Bottom: 171-188		Surface: 7.8 Bottom: 7.5	
Conductivity:		Air temperature:	
300 micromhos/cm		77 °F	
Water chemistry GPS coordinates:			
N 38.57211032		W -86.09595107	

TEMPERATURE AND DISSOLVED OXYGEN (D.O.)								
DEPTH (FEET)	Degrees (°F)	D.O. (ppm)	DEPTH (FEET)	DEGREES (°F)	D.O. (ppm)	DEPTH (FEET)	DEGREES (°F)	D.O. (ppm)
SURFACE	72.0	8.24	36			72		
2	72.0	8.21	38			74		
4	71.4	8.32	40			76		
6	70.7	8.02	42			78		
8	70.2	7.88	44			80		
10	64.8	5.22	46			82		
12	58.3	2.31	48			84		
14	57.2	1.99	50			86		
16	55.9	1.46	52			88		
18	54.9	1.88	54			90		
20	52.5	0.66	56			92		
22	50.4	0.55	58			94		
24	50.2	0.54	60			96		
26	49.5	0.53	62			98		
28			64			100		
30			66					
32			68					
34			70					

COMMENTS
Lake Salinda is one of two water-supply reservoirs for the City of Salem.

*ppm-parts per million

Occurrence and Abundance of Submersed Aquatic Plants - Overall

Lake: Lake Salinda	Secchi (ft): 4.0	SE Mean Species / Site: 0.17
Date: 8/20/2008	Littoral Sites w/Plants: 9	Mean Natives / Site: 0.48
Littoral Depth (ft): 8.5	Number of Species: 5	SE Mean Natives / Site: 0.17
Littoral Sites: 28	Max. Species / Site: 4	Species Diversity: 0.78
Total Sites: 40	Mean Species / Site: 0.48	Native Diversity: 0.78

Species	Frequency of Occurrence	Score Frequency				Dominance
		0	1	3	5	
Coontail	15.0	85.0	5.0	2.5	7.5	10.0
Naiad sp.	10.0	90.0	2.5	2.5	5.0	7.0
American pondweed	10.0	90.0	2.5	7.5	0.0	5.0
Sago pondweed	7.5	92.5	5.0	0.0	2.5	3.5
Brittle naiad	5.0	95.0	2.5	0.0	2.5	3.0
Filamentous algae	15.0					

Other species noted: Curlyleaf pondweed, Duckweed, Cattail sp.

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF BLUEGILL

TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					19.0				
1.5	4	1.3	<0.01	1	19.5				
2.0	13	4.2	<0.01	1	20.0				
2.5	4	1.3	<0.01	1	20.5				
3.0	34	10.9	0.02	1	21.0				
3.5	50	16.1	0.03	1, 2	21.5				
4.0	59	19.0	0.05	1, 2	22.0				
4.5	23	7.4	0.07	2	22.5				
5.0	10	3.2	0.09	2	23.0				
5.5	18	5.8	0.13	2	23.5				
6.0	16	5.1	0.16	2, 3	24.0				
6.5	13	4.2	0.23	2, 3, 4	24.5				
7.0	25	8.0	0.27	3, 4	25.0				
7.5	27	8.7	0.33	4	25.5				
8.0	14	4.5	0.40	4	26.0				
8.5	1	0.3	0.47	5	TOTAL	311			
9.0									
9.5									
10.0									
10.5									
11.0									
11.5									
12.0									
12.5									
13.0									
13.5									
14.0									
14.5									
15.0									
15.5									
16.0									
16.5									
17.0									
17.5									
18.0									
18.5									

ELECTROFISHING CATCH	600.0/h	GILL NET CATCH	1.3/lift	TRAP NET CATCH	3.0/lift
----------------------	---------	----------------	----------	----------------	----------

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF LARGEMOUTH BASS

TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					19.0				
1.5					19.5				
2.0					20.0				
2.5					20.5				
3.0					21.0				
3.5					21.5				
4.0					22.0				
4.5					22.5				
5.0					23.0				
5.5					23.5				
6.0					24.0				
6.5	1	1.5	0.16	2	24.5				
7.0	1	1.5	0.16	2	25.0				
7.5	2	3.0	0.22	2	25.5				
8.0	2	3.0	0.24	2	26.0				
8.5	1	1.5	0.34	2	TOTAL	66			
9.0	1	1.5	0.34	2					
9.5	7	10.6	0.44	2, 3					
10.0	10	15.2	0.53	3					
10.5	8	12.1	0.60	3					
11.0	10	15.2	0.68	3, 4					
11.5	8	12.1	0.77	3					
12.0	2	3.0	0.91	4					
12.5	5	7.6	1.02	4					
13.0	3	4.5	1.14	4					
13.5	1	1.5	1.24	4					
14.0									
14.5	1	1.5	1.72	5					
15.0	1	1.5	1.93	4					
15.5									
16.0	1	1.5	2.06	5					
16.5									
17.0									
17.5									
18.0									
18.5									

ELECTROFISHING CATCH	82.7/h	GILL NET CATCH	0.8/lift	TRAP NET CATCH	0.0/lift
----------------------	--------	----------------	----------	----------------	----------

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF WHITE CRAPPIE									
TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					19.0				
1.5					19.5				
2.0					20.0				
2.5					20.5				
3.0					21.0				
3.5					21.5				
4.0					22.0				
4.5	1	2.6	0.04	1	22.5				
5.0	9	23.7	0.07	1	23.0				
5.5	12	31.6	0.09	1	23.5				
6.0	12	31.6	0.10	1, 2	24.0				
6.5	4	10.5	0.15	1, 2	24.5				
7.0					25.0				
7.5					25.5				
8.0					26.0				
8.5					TOTAL	38			
9.0									
9.5									
10.0									
10.5									
11.0									
11.5									
12.0									
12.5									
13.0									
13.5									
14.0									
14.5									
15.0									
15.5									
16.0									
16.5									
17.0									
17.5									
18.0									
18.5									
ELECTROFISHING CATCH	6.0/h		GILL NET CATCH	7.3/lift		TRAP NET CATCH		3.0/lift	

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF BLACK CRAPPIE

TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					19.0				
1.5					19.5				
2.0					20.0				
2.5					20.5				
3.0					21.0				
3.5					21.5				
4.0					22.0				
4.5					22.5				
5.0	1	4.5	0.08	1	23.0				
5.5	9	40.9	0.08	1	23.5				
6.0	6	27.3	0.11	1, 2	24.0				
6.5					24.5				
7.0	1	4.5	0.20	2	25.0				
7.5	1	4.5	0.24	2	25.5				
8.0	2	9.1	0.27	2	26.0				
8.5					TOTAL	22			
9.0									
9.5	2	9.1	0.46	2, 3					
10.0									
10.5									
11.0									
11.5									
12.0									
12.5									
13.0									
13.5									
14.0									
14.5									
15.0									
15.5									
16.0									
16.5									
17.0									
17.5									
18.0									
18.5									

ELECTROFISHING CATCH	18.0/h	GILL NET CATCH	3.0/lift	TRAP NET CATCH	0.5/lift
----------------------	--------	----------------	----------	----------------	----------

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF REDEAR SUNFISH

TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH	TOTAL LENGTH (inches)	NUMBER COLLECTED	PERCENT OF FISH COLLECTED	AVERAGE WEIGHT (pounds)	AGE OF FISH
1.0					19.0				
1.5					19.5				
2.0					20.0				
2.5					20.5				
3.0					21.0				
3.5					21.5				
4.0					22.0				
4.5	2	16.7	0.06	2	22.5				
5.0	2	16.7	0.09	2	23.0				
5.5					23.5				
6.0					24.0				
6.5					24.5				
7.0					25.0				
7.5	3	25.0	0.34	3	25.5				
8.0	3	25.0	0.41	4	26.0				
8.5					TOTAL	12			
9.0									
9.5	2	16.7	0.71	not aged					
10.0									
10.5									
11.0									
11.5									
12.0									
12.5									
13.0									
13.5									
14.0									
14.5									
15.0									
15.5									
16.0									
16.5									
17.0									
17.5									
18.0									
18.5									

ELECTROFISHING CATCH	24.0/h	GILL NET CATCH	0.0/lift	TRAP NET CATCH	0.0/lift
----------------------	--------	----------------	----------	----------------	----------

BLUEGILL AGE-LENGTH KEY

Length group (in)	Total number	Sub-sample	AGE					
			1	2	3	4	5	
1.5	4	4	4					
2.0	13	5	13					
2.5	4	1	4					
3.0	34	5	34					
3.5	50	5	40	10				
4.0	59	5	47	12				
4.5	23	4		23				
5.0	10	4		10				
5.5	18	5		18				
6.0	16	5		13	3			
6.5	13	5		3	5	5		
7.0	25	5			10	15		
7.5	27	5				27		
8.0	14	7				14		
8.5	1	1						1
Totals	311	66	142	88	18	61		1

AGE-LENGTH KEY SUMMARY						
Age	Number	Mean			Lower 95%CI	Upper 95%CI
		TL	Var	SE		
1	142	3.6	0.46	0.06	3.5	3.7
2	88	5.1	0.70	0.09	4.9	5.3
3	18	6.9	0.15	0.09	6.8	7.1
4	61	7.7	0.20	0.06	7.5	7.8
5	1	8.8				

LARGEMOUTH BASS AGE-LENGTH KEY

Length group (in)	Total number	Sub-sample	AGE					
			1	2	3	4	5	
6.5	1	1		1				
7.0	1	1		1				
7.5	2	2		2				
8.0	3	3		3				
8.5	1	1		1				
9.0	1	1		1				
9.5	7	5		1	4			
10.0	10	4			10			
10.5	8	5			8			
11.0	10	6			8	2		
11.5	8	6			8			
12.0	2	2				2		
12.5	5	5				5		
13.0	3	2				3		
13.5	1	1				1		
14.0								
14.5	1	1						1
15.0	1	1				1		
15.5								
16.0	1	1						1
Totals	66	48	0	10	39	14		2

AGE-LENGTH KEY SUMMARY						
Age	Number	Mean			Lower 95%CI	Upper 95%CI
		TL	Var	SE		
1	0					
2	10	8.3	0.87	0.29	7.7	8.8
3	39	10.8	0.44	0.11	10.6	11.0
4	14	12.9	0.95	0.26	12.3	13.4
5	2	15.5	1.13	0.75	14.0	17.0

WHITE CRAPPIE AGE-LENGTH KEY

Length group (in)	Total number	Sub-sample	AGE	
			1	2
4.5	1	1	1	
5.0	9	7	9	
5.5	12	4	12	
6.0	12	5	10	2
6.5	4	4	3	1
Totals	38	21	35	3

AGE-LENGTH KEY SUMMARY						
Age	Number	Mean			Lower 95%CI	Upper 95%CI
		TL	Var	SE		
1	35	5.8	0.25	0.09	5.6	6.0
2	3	6.4	0.07	0.15	6.1	6.7

GPS LOCATION OF SAMPLING EQUIPMENT

GILL NETS			TRAP NETS			ELECTROFISHING		
1	N 38.57336	W -86.09101	1	N 38.57343	W -86.09479	1	N 38.57255	W -86.09564
	N 38.57304	W -86.09172	2	N 38.57237	W -86.08908		N 38.57085	W -86.09388
2	N 38.57518	W -86.08288	3	N	W	2	N 38.57381	W -86.08468
	N 38.57487	W -86.08367	4	N	W		N 38.57274	W -86.08772
3	N 38.57107	W -86.09632	5	N	W	3	N	W
	N 38.57171	W -86.09628	6	N	W		N	W
4	N 38.57166	W -86.09106	7	N	W	4	N	W
	N 38.57145	W -86.09184	8	N	W		N	W
5	N	W	9	N	W	5	N	W
	N	W	10	N	W		N	W
6	N	W	11	N	W	6	N	W
	N	W	12	N	W		N	W
7	N	W	13	N	W	7	N	W
	N	W	14	N	W		N	W
8	N	W	15	N	W	8	N	W
	N	W	16	N	W		N	W
9	N	W	17	N	W	9	N	W
	N	W	18	N	W		N	W
10	N	W	19	N	W	10	N	W
	N	W	20	N	W		N	W
11	N	W				11	N	W
	N	W					N	W
12	N	W				12	N	W
	N	W					N	W
13	N	W				13	N	W
	N	W					N	W
14	N	W				14	N	W
	N	W					N	W
15	N	W				15	N	W
	N	W					N	W
16	N	W				16	N	W
	N	W					N	W
17	N	W				17	N	W
	N	W					N	W
18	N	W				18	N	W
	N	W					N	W
19	N	W				19	N	W
	N	W					N	W
20	N	W				20	N	W
	N	W					N	W