

**Lake Iola**  
Scott County  
Supplemental Survey

Date of Survey: October 30, 2006

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**Survey Objectives:** To monitor fishery following supplemental stocking of largemouth bass fry, shorts, and fingerlings into Lake Iola in 2005 and culled broodstock in May 2006 (Table 1).

**Methods:** Fish collection effort equaled 0.31 h pulsed DC daytime electrofishing on October 30, 2006 with one dipper along the shoreline of the west basin of Lake Iola (9 acres). Total length was measured to the nearest 0.1 in. Scales were collected from largemouth bass and bluegill for age and growth determination.

**Summary:** A total of 145 bluegill (2.0 to 6.4 in.) was collected at a rate of 467.7/h (Table 2). The bluegill Proportional Stock Density (PSD) of 10 is an improvement from a PSD of 0 observed in 2004 (Lehman 2005). Too many small bluegill are present in Lake Iola for the PSD to fall within the range of 20 to 60, which is a balanced bluegill fishery as defined by Anderson and Neumann (1996).

Ten percent of the bluegill were quality-size fish which is an improvement since 2004 when no 6.0-in bluegill were collected. Growth of age-3 and age-4 bluegill remains below average for southeastern Indiana (Figure 1).

A total of 18 largemouth bass (4.3 to 17.6 in.) was collected (Table 2). Catch rate equaled 58.1 bass/h. Use of only one fish dipper and poor visibility (1.9 ft Secchi disk) probably explains, for the most part, the low catch rate observed in this survey compared to the catch of 100.0 bass/h in 2004 (Lehman 2005). Not enough bass were collected to calculate a reliable PSD in 2004 or 2006.

Four bass were longer than the 14.0-in size limit. Two of these bass were marked with a left ventral finclip indicating they had been stocked in May 2006 (Table 1). Bass growth is satisfactory for southeastern Indiana (Figure 2).

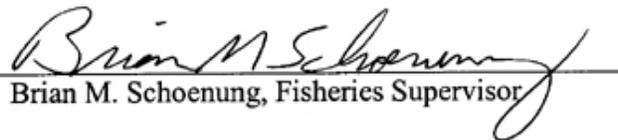
No age-0 bluegill or age-0 bass were collected. It is assumed that their absence is due to predation from the overwhelming numbers of small bluegill present. It is discouraging that only two age-1 bass were collected in spite of all the bass stocked in 2005. It is recommended, however, that the supplemental stocking of largemouth bass be continued by the Division of Fish and Wildlife (DFW) in an attempt to rebuild the bass population in Lake Iola. Enforcement of the 14-in size limit is necessary for this strategy to have a chance to work. The bass stockings will continue to be monitored. Sampling will be switched to night electrofishing in the spring to more effectively sample the target species.

**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, 2<sup>nd</sup> edition. American Fisheries Society, Bethesda, Maryland.

Lehman, L.L. 2005. Lake Iola Spot-check Survey Report, 2004. Fisheries Section, Indiana Department of Natural Resources, Indianapolis, Indiana. 6 pp.

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Date: 3/27/08

Approved by:   
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Date: August 7, 2008

Table 1. Recent largemouth bass stocking record by DFW at Lake Iola prior to the October 2006 2006 survey. \*Broodstock were marked with left ventral fin clip.

<u>SPECIES</u>	<u>NUMBER</u>	<u>LENGTH RANGE (in)</u>	<u>STOCKING DATE</u>
Largemouth bass	1,811	2.7 - 4.3	November 3, 2003
Largemouth bass	12	8.5 -14.1	April 14, 2004
Largemouth bass	28,800	0.75 (fry)	May 27, 2005
Largemouth bass	3,090	2.0 - 2.4	June 24, 2005
Largemouth bass	4,540	1.5 - 2.1	June 24, 2005
Largemouth bass	31	8	November 3, 2005
Largemouth bass	1,807	3.3 - 4.3	November 3, 2005
Largemouth bass	40	≥14 (broodstock)*	May 25, 2006

Table 2. Number, relative abundance, and length range of fishes collected by DFW at Lake Iola October 30, 2006.

<u>SPECIES</u>	<u>NUMBER</u>	<u>PERCENTAGE</u>	<u>LENGTH RANGE (in)</u>
Bluegill	145	86.8	2.0 - 6.4
Largemouth bass	18	10.8	4.3 - 17.6
Black crappie	2	1.2	7.3 - 7.7
Green sunfish	1	0.6	4.9
Hybrid sunfish	1	0.6	4.6
Total	167		

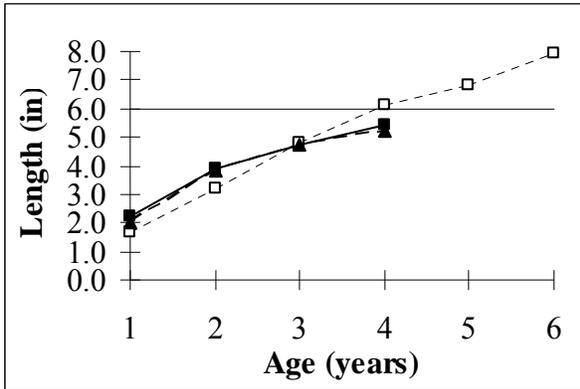


Figure 1. Lake Iola bluegill growth from 2006 survey (solid line) compared to 2004 survey (dashed line) and to average bluegill growth observed in Fish Management District 8 impoundments (dotted line).

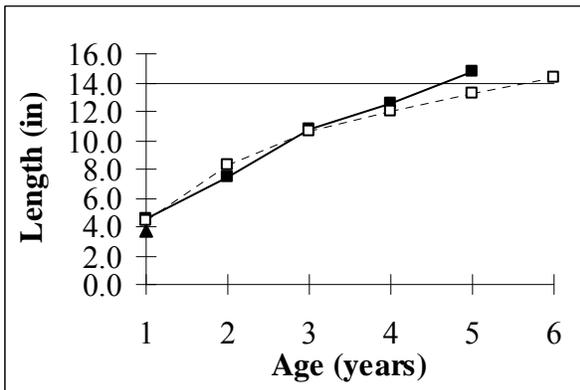


Figure 2. Lake Iola largemouth bass from 2006 survey (solid line) compared to 2004 survey (dashed line) and to average largemouth bass growth observed in Fish Management District 8 impoundments (dotted line).

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF: Bluegill Lake lola 10/30/06									
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	1	0.7	<0.01	1	20.0				
2.5	2	1.4	0.01	1	20.5				
3.0					21.0				
3.5					21.5				
4.0	2	1.4	0.04	2	22.0				
4.5	30	20.7	0.06	1, 2, 3	22.5				
5.0	49	33.8	0.08	2, 3	23.0				
5.5	36	24.8	0.11	3, 4	23.5				
6.0	22	15.2	0.15	3, 4	24.0				
6.5	3	2.1	0.19	4, 5	24.5				
7.0					25.0				
7.5					25.5				
8.0					26.0				
8.5					TOTAL	145			
9.0									
9.5									PSD = 14/142(100) = 9.9
10.0									
10.5									Bluegill Fishing Potential Index = 11
11.0									
11.5									% ≥ 6.0 inches = 14/145(100) = 9.7
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	467.7/h	GILL NET CATCH	N/A	TRAP NET CATCH	N/A
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NUMBER, PERCENTAGE, WEIGHT, AND AGE OF: Largemouth bass Lake lola 10/30/06									
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	5.6	0.04	1	22.5				
5.0					23.0				
5.5					23.5				
6.0					24.0				
6.5					24.5				
7.0	1	5.6	0.16	1	25.0				
7.5					25.5				
8.0					26.0				
8.5					TOTAL	18			
9.0	1	5.6	0.34	2					
9.5							PSD = 11/16(100) = 68.8*		
10.0	1	5.6	0.48	2			*PSD unreliable due to small sample size		
10.5									
11.0	2	11.1	0.64	3, 4			% <sub>≥</sub> 14.0 inches = 4/18(100) = 22.2		
11.5									
12.0	2	11.1	0.84	4			**these brood bass from Driftwood SFH were		
12.5	2	11.1	0.97	3, 4			marked with LV fin clip		
13.0	2	11.1	1.09	4, 5					
13.5	2	11.1	1.24	3					
14.0									
14.5**	1	5.6	1.59	5					
15.0									
15.5**	1	5.6	1.93	5					
16.0									
16.5	1	5.6	2.29	5					
17.0									
17.5	1	5.6	2.90	5					
18.0									
18.5									

ELECTROFISHING CATCH	58.1/h	GILL NET CATCH	N/A	TRAP NET CATCH	N/A
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Species Bluegill	YEAR CLASS	Number of fish aged	SIZE RANGE	BACK CALCULATED LENGTH (inches) AT EACH AGE							
				1	2	3	4	5	6	7	8
Intercept= 0.8"	2005	4	2.0-4.4	2.0							
	2004	6	4.1-5.2	2.5	4.1						
	2003	8	4.5-5.9	2.3	3.9	4.8					
	2002	10	5.4-6.4	2.0	3.5	4.7	5.4				
	2001	1*	6.4	1.9	3.6	4.9	5.3	6.3			
			AVERAGE LENGTH	2.2	3.9	4.7	5.4				
			NUMBER AGED	28	24	18	10				

Species Largemouth bass	YEAR CLASS	Number of fish aged	SIZE RANGE	BACK CALCULATED LENGTH (inches) AT EACH AGE							
				1	2	3	4	5	6	7	8
Intercept= 0.8"	2005	2*	4.3-7.1	3.3							
	2004	2*	9.0-10.1	3.2	4.9						
	2003	4	11.0-13.4	3.5	7.3	10.4					
	2002	5	11.2-13.2	3.9	5.4	9.9	11.5				
	2001	5	13.1-17.6	6.2	9.6	11.7	13.5	14.8			
			AVERAGE LENGTH	4.5	7.5	10.7	12.5	14.8			
			NUMBER AGED	14	14	14	10	5			

Species Black crappie	YEAR CLASS	Number of fish aged	SIZE RANGE	BACK CALCULATED LENGTH (inches) AT EACH AGE							
				1	2	3	4	5	6	7	8
Intercept= 1.4"											
	2004	2*	7.3-7.7	3.9	5.7						
			AVERAGE LENGTH								
			NUMBER AGED								

\*Not included in average length calculations.