

CAGLE'S MILL RESERVOIR  
Owen and Putnam Counties  
2008 Supplemental Walleye Stocking Evaluation

Dates of Survey: October 6 and 8, 2008

Biologist: Jamie L. Smyth

Survey Objectives: Evaluate the stocking success of walleye at Cagle's Mill Reservoir.

Methods: Fish collection effort consisted of 3 h of DC night electrofishing. Due to time constraints, no gill nets were deployed for the evaluation. Walleye were measured to the nearest 0.1 in TL and weighed to the nearest 0.01 lb for fish up to 5.00 lbs, and to the nearest 0.25 lb for fish over 5.00 lbs. Scale samples were collected for age and growth determination.

Summary: A total of 38 walleye was collected that weighed 18.90 lbs. Walleye CPUE was 12.7/h. Walleye ranged in length from 7.9 to 25.4 in and averaged 9.8 in.

There were 35 YOY walleye collected that ranged in length from 7.9 to 9.9 in. The 2008 YOY walleye average length was 8.8 in. The average size for YOY walleye in Cagle's Mill from 1994 to 2008 varied from 7.3 to 9.1 in (Table 1). The DFW criteria for walleye stocking success is the collection of at least seven YOY walleye per h of electrofishing. The 2008 walleye stocking was a success with a CPUE of 11.7 YOY/h, but was well below the average electrofishing CPUE for YOY walleye in surveys from 1994 to 2006 (44.5/h) (Table 2). However, the previous fall evaluation conducted in 2006 yielded no YOY walleye, most likely due to the muddy water and high outflows during the time of the 2006 stocking (Smyth 2008).

Age-1 and older walleye have been hard to collect with electrofishing gear at Cagle's Mill. There were only 3 other walleye collected during the evaluation; a 16.0 in fish that weighed 1.24 lbs, a 21.9 in fish that weighed 3.39 lbs, and a 25.0 in fish that weighed 7.00 lbs. The 16.0 in walleye was age 1, while the other two fish were not aged.

As suggested in previous evaluations, catch rates and growth of YOY walleye have typically increased when the reservoir has remained high throughout much of the growing season. The 2008 walleye stocking succeeded as the reservoir remained high throughout much of the spring and summer, enabling the young walleye to utilize the improved habitat and array of forage. The 2008 YOY walleye average length was the second highest average since fry have been stocked strictly into the reservoir. Although a higher YOY catch rate was expected with the favorable conditions, it is much improved over 2006. The annual stocking rate at Cagle's Mill Reservoir should remain at 2,000 walleye fry/acre. Successful stockings can be achieved at this rate when reservoir conditions permit. The lower stocking rate should result in less competition and better walleye growth than the previous rate of 3,000 fry/acre.

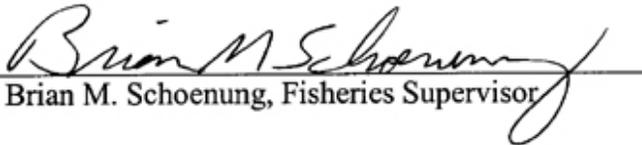
The next fall evaluation for walleye is scheduled for 2011. Gill nets should be used to help assess age-1 and older walleye. A fish community survey has tentatively been scheduled for 2010.

#### LITERATURE CITED

Smyth, J.L. 2008. Cagle's Mill Reservoir 2006 Supplemental Walleye Stocking Evaluation. Indiana Department of Natural Resources. Indianapolis, Indiana. 6pp.

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**NUMBER, PERCENTAGE, WEIGHT, AND AGE OF WALLEYE**

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	1	2.6	3.39	not aged
4.0					22.0				
4.5					22.5				
5.0					23.0				
5.5					23.5				
6.0					24.0				
6.5					24.5				
7.0					25.0	1	2.6	7.00	not aged
7.5	2	5.3	0.15	YOY	25.5				
8.0	8	21.1	0.17	YOY	26.0				
8.5	11	28.9	0.20	YOY	TOTAL	38			
9.0	11	28.9	0.24	YOY					
9.5	3	7.9	0.28	YOY					
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	1	2.6	1.24	1					
16.5									
17.0									
17.5									
18.0									
18.5									

ELECTROFISHING CATCH	12.7 / h	GILL NET CATCH	NA	TRAP NET CATCH	NA
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Table 1. Walleye stockings at Cagle's Mill Reservoir 1994 to 2008.

Year	Number	Size	Recommended stocking rate (per acre)	% of recommended stocking	YOY avg size (in)
1994	4,278,175	Fry	3,000	101.9	8.4
1995	4,222,950	Fry	3,000	100.5	7.3
1996	4,207,675	Fry	3,000	100.2	8.6
1997	4,220,600	Fry	3,000	100.5	No fall evaluation
1998	4,312,250	Fry	3,000	102.7	7.8
1999	4,208,850	Fry	3,000	100.2	8.6
2000	1,793,050	Fry	3,000	42.7	8.1
	70,184	Fingerling	100	50.1	
2001	2,817,650	Fry	2,000	100.6	No fall evaluation
2002	2,820,000	Fry	2,000	100.7	8.1
2003	4,285,225	Fry	2,000	153.0	9.1
2004	3,550,850	Fry	2,000	126.8	7.9
2005	2,801,200	Fry	2,000	100.0	No fall evaluation
2006	2,895,200	Fry	2,000	103.4	0.0
2007	3,092,600	Fry	2,000	110.5	No fall evaluation
2008	2,803,550	Fry	2,000	100.1	8.8

Table 2. DC electrofishing catch rates (fish per hour) of walleye by age collected during fall evaluations at Cagle's Mill Reservoir, 1994 to 2006.

<u>Year</u>	<u>YOY</u>	<u>Age</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4 and older</u>
1994	8.8	3.6	0.8	--	0.2
1995	57.2	0.4	--	--	--
1996	176.7	9.0	--	--	--
1997	***** No fall evaluation *****				
1998	51.0	3.0	1.3	--	--
1999	38.5	0.8	1.0	--	--
2000	52.0	1.5	1.0	--	0.3
2001	***** No fall evaluation *****				
2002	2.0	0.5	--	0.3	--
2003	45.0	--	0.7	0.3	--
2004	13.7	2.9	--	0.3	--
2005	***** No fall evaluation *****				
2006	--	--	--	0.3	--
Average	44.5	2.2	0.5	0.1	0.1