

Avon Town Hall Lake
Hendricks County
2006 Supplemental Evaluation

Date of Survey: July 10, 2006

Biologist: Rhett Wisener

Survey Objectives: To determine the species present in Avon Town Hall Lake other than bluegill and largemouth bass, which were stocked by the Division of Fish and Wildlife (DFW) in the fall of 2005, and to determine if the fishery is manageable.

Methods: Survey effort consisted of 15 min of DC electrofishing (nearly one lap around the lake) during the day with two dippers. All fish collected were identified and measured to the nearest 0.1 in TL. Scales were collected from bluegill and largemouth bass for age determination. Weights of all fish were estimated using central Indiana averages.

Summary: A total of 172 fish weighing approximately 12 lbs was collected. Green sunfish was the most abundant species by number (34%). Fifty-nine green sunfish that ranged in length from 2.1 to 6.0 in were collected.

Bluegill (30%) and largemouth bass (19%) were the second and third most numerous species sampled. Bluegill ranged in length from 3.3 to 6.4 in and averaged 4.5 in while bass ranged from 4.6 to 11.2 in and averaged 6.9 in. Bluegill from 3.0 to 5.0 in and bass from 4.5 to 8.0 in were aged and all found to be age 1. Age-1 fish accounted for at least 88% of the collection of each species. Many of the age-1 bluegill and bass were likely fish stocked by DFW in 2005.

Gizzard shad was the fourth most abundant species sampled. Nineteen gizzard shad that ranged in length from 6.3 to 9.2 in were collected. Other species collected were white sucker, yellow bullhead, and hybrid sunfish.

Although Avon Town Hall Lake was nearly dry for an extended period of time, not being able to conduct a pre-impoundment eradication following repair and rehab

work to the lake and dam allowed several undesirable species to reestablish. While not ideal, the presence of green sunfish, suckers, and bullheads would generally be tolerable in a fishery such as Avon. A dense bass population could have been maintained by encouraging or requiring catch and release of bass at the lake. With a dense bass population, there would be sufficient predatory pressure on these less desirable species to prevent them from becoming overly abundant and severely impacting the sport fishery.

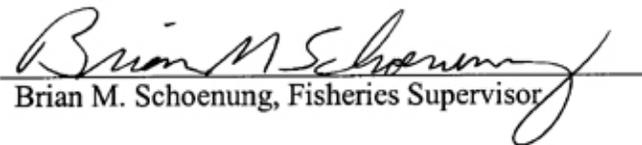
Unfortunately, the presence of gizzard shad will make those management goals very difficult to achieve. Shad are prolific spawners and, given time, often account for nearly half the fish in a lake like Avon. Due to competition with shad, largemouth bass recruitment will most likely suffer. As a result, bass abundance will probably be low. Growth of bass and bluegill is also often stunted because of competition with shad. Because of the excessive competition for food when they are young, bass often start off growing slower in lakes with shad than in lakes without shad. It sometimes takes 2 to 3 years before bass reach a size large enough to prey on shad. With fewer bass, bluegill abundance often increases. This, coupled with competition from shad for the same food resources, leads to slower growth and stunted bluegill populations.

With the current mix of fish species at Avon Town Hall Lake, little can be done to manage the fishery. A lake drawdown and eradication with a subsequent restocking of a balanced sport fishery is the only remaining management option. At such time as the town council is prepared to implement this strategy, they should contact the district 5 fisheries biologist so that the planning phase can begin.

Submitted by: J. Rhett Wisener, Fisheries Biologist

Date: December 22, 2008

Approved by:


Brian M. Schoenung, Fisheries Supervisor

Date: March 16, 2009

NUMBER, PERCENTAGE, WEIGHT, AND AGE OF GREEN 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	5	8.5	0.01	not aged	20.0				
2.5	8	13.6	0.01		20.5				
3.0	15	25.4	0.02		21.0				
3.5	15	25.4	0.03		21.5				
4.0	10	16.9	0.05		22.0				
4.5	3	5.1	0.06		22.5				
5.0	2	3.4	0.09		23.0				
5.5					23.5				
6.0	1	1.7	0.16		24.0				
6.5					24.5				
7.0					25.0				
7.5					25.5				
8.0					26.0				
8.5					TOTAL	59			
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	236.0 /hr	GILL NET CATCH	NA	TRAP NET CATCH	NA
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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					19.5				
2.0					20.0				
2.5					20.5				
3.0	1	2.0	0.02	1	21.0				
3.5	19	37.3	0.30	1	21.5				
4.0	6	11.8	0.04	1	22.0				
4.5	8	15.7	0.06	1	22.5				
5.0	11	21.6	0.08	1	23.0				
5.5	5	9.8	0.11	not aged	23.5				
6.0	1	2.0	0.15	not aged	24.0				
6.5					24.5				
7.0					25.0				
7.5					25.5				
8.0					26.0				
8.5					TOTAL	51			
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	204.0 /hr	GILL NET CATCH	NA	TRAP NET CATCH	NA
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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	2	6.1	0.04	1	22.5				
5.0	1	3.0	0.05	1	23.0				
5.5	8	24.2	0.07	1	23.5				
6.0	6	18.2	0.09	1	24.0				
6.5	1	3.0	0.12	1	24.5				
7.0	3	9.1	0.15	1	25.0				
7.5	3	9.1	0.19	1	25.5				
8.0	5	15.2	0.23	1	26.0				
8.5	2	6.1	0.28	not aged	TOTAL	33			
9.0									
9.5	1	3.0	0.40	not aged					
10.0									
10.5									
11.0	1	3.0	0.63	not aged					
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	132.0 /hr	GILL NET CATCH	NA	TRAP NET CATCH	NA
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NUMBER, PERCENTAGE, WEIGHT, AND AGE OF GIZZARD SHAD

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	1	5.3	0.07	not aged	24.0				
6.5	2	10.5	0.09		24.5				
7.0	8	42.1	0.11		25.0				
7.5	3	15.8	0.14		25.5				
8.0	3	15.8	0.17		26.0				
8.5	1	5.3	0.21		TOTAL	19			
9.0	1	5.3	0.24						
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	76.0 /hr	GILL NET CATCH	NA	TRAP NET CATCH	NA
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