



Allen Lake Kosciusko County FISH MANAGEMENT REPORT 2002



Department of Natural Resources

Division of Fish and Wildlife

Secchi (ft) 10.5 10.0

BACKGROUND

Allen Lake is a 5-acre natural lake located on the Tri-County Fish and Wildlife Area at North Webster, Indiana. It lies within a large wetland complex in one branch of the headwaters of Lake Wawasee (Elkhart River watershed). A boat launching area and parking lot are provided, but boaters must maneuver through the wetland fringe to get to the lake. Outboard motor operation is prohibited.

The lake is 44 feet deep. The bottom is mostly muck. Water clarity is very good (10 ft secchi) but oxygen levels are variable (Table 1). Large daily changes can occur in the surface layer due to plant photosynthesis and respiration, but oxygen amounts below 20 feet are consistently low. Coontail is dense to a depth of 12 feet and spatterdock lines much of the shoreline area.

Fish management at Allen Lake has focused mainly on largemouth bass. A 14-inch size limit was imposed in 1973. It was increased to 18 inches and the daily limit was reduced to two in 1997 when lakes on the Tri-County Area were included in a study designed to improve bass fishing. No specific sampling for the study was done at Allen Lake, but a population survey was conducted on July 1-3, 2002. Sampling effort consisted of ¼ hour of electrofishing, two gill nets lifts and four trap net lifts.

SURVEY RESULTS

During the survey, 108 fish weighing an estimated 70½ pounds were collected, compared to 608 fish that weighed 104 pounds in 1985 (Table 2). Eleven species were noted. Bluegill dominated the catch by number (42%) but ranked fourth by weight (12%). Largemouth bass were second in number (25%) and accounted for 34% of the weight. Altogether, sportfish made up 87% of the number and 64% of the weight.

Table 1. *Oxygen levels (ppm) and water clarity (secchi depth) at Allen Lake in 1985 and 2002.*

Depth (ft)	6/24/1985	7/2/2002
0	8.0	4.3
5	7.0	2.9
10	8.0	10.0
15	2.5	9.9
20	1.5	2.4
25	0.0	0.5
30	0.0	0.4
40	0.0	0.3

Table 2. *Numbers and weight of fish collected at Allen Lake in 1985 and 2002.*

Species	Number		Pounds	
	1985	2002	1985	2002*
Bluegill	430	45	59.3	8.1
Bowfin	0	5	0.0	12.6
Golden shiner	39	4	6.8	0.5
Pumpkinseed	31	0	6.1	0.0
Largemouth bass	31	27	4.9	23.7
Lake chubsucker	30	1	1.9	--
Redear	15	5	5.3	1.7
Black crappie	12	4	4.8	1.8
Spotted gar	0	4	--	12.3
Warmouth	5	6	1.1	1.3
Northern pike	4	0	7.4	0.0
Yellow bullhead	4	2	3.9	2.2
Central mudminnow	3	0	--	0.0
Brown bullhead	2	5	2.2	6.3
Hybrid sunfish	2	0	0.6	0.0
TOTAL	608	108	104.1	70.5

*weights estimated from regression equations.

Bluegills measured 4-8 inches long and largemouth bass were 7½-18½ inches. Most bluegills (64%) were 6-7½ inches. The number captured by electrofishing (19/15 min) was very low compared to other lakes in the area and only 11 were caught in traps. Sixteen bass (59%) were 11-13½ inches long and four were 15-17½ inches. The number captured by electrofishing (27/15 min) was normal. Other sport fish included warmouth up to 7 inches long, redear up to 10 inches and black crappies up to 12 inches. Five brown bullheads and two yellow bullheads were also caught.

MANAGEMENT IMPLICATIONS

Although Allen Lake contains a satisfactory species composition and large sport fish are present, habitat conditions are poor. Daily and seasonal fluctuations in oxygen levels at times may suffocate fish, reduce their recruitment, or force them into nearby lakes. Similar bog-like conditions are found at several small natural lake basins in the area. However, the cost to improve habitat by large-scale plant control, aeration or other means would not likely provide sufficient benefits. As a result, no immediate management is recommended.

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December 4, 2002

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December 11, 2002