



# PRICE & LONG LAKES

## Kosciusko County

### FISH MANAGEMENT REPORT



Department of Natural Resources

Division of Fish and Wildlife

2000

#### BACKGROUND

Price and Long lakes are two small natural lakes located within the Tri-County Fish and Wildlife Area near North Webster. Together they cover 19 acres and are connected by a channel. The lakes lie within the Elkhart basin and have a small watershed. A gravel boat ramp is available on the south side of Price Lake.

Maximum depth of Price Lake is 42 feet. Maximum depth of Long Lake is 26 feet. The lakes are steep-sided and have little shallow habitat for warmwater fish species. Although water clarity is good (13-18 ft secchi readings), oxygen levels are usually low within the surface layer at Price Lake. Oxygen levels at Long Lake are low below 10 feet, but both lakes occasionally have enough oxygen to support fish at lower depths.

Both lakes support large stands of aquatic plants, primarily spatterdock, water lilies, coontail, elodea and Eurasian water milfoil. Because of excessive plant growth and an inability of wind action to substantially replenish oxygen levels, Price and Long lakes have undergone periodic winter kills of fish.

Both lakes have a lengthy fish management history. A 14-inch largemouth bass size limited was imposed in 1973. Brown trout were stocked into Price Lake in 1974 but stockings were discontinued due to greater angler interest and better habitat in nearby Wyland Lake. Channel catfish stockings were made in 1980-82 but were also discontinued due to low angler interest and poor survival. An 18-inch, two-fish daily limit on bass is currently in place. Five fish community surveys have been conducted since 1962. To obtain additional information on their status, the Division of Fish and Wildlife conducted another survey of both lakes on July 23-25, 2000. Total sampling effort consisted of ½ hour of DC electrofishing, four gill net lifts and two trap nets lifts. The results are presented in this report.

Table 1. *Oxygen levels (ppm) and water clarity (secchi depth) at Price Lake, 1970 - 2000.*

Depth (ft)	7/70	6/73	8/75	6/79	10/83	7/00
0	7.2	8.0	5.4	9.0	7.0	4.7
5	8.0	8.0	4.4	8.0	6.0	4.5
10	6.2	9.0	10.4	7.0	3.0	2.1
15	8.0	7.0	4.4	4.0	0.6	4.1
20	3.6	1.6	1.6	2.0	0.6	7.9
25	1.6	2.6	1.4	0.5	0.0	0.4
30	---	0.0	0.4	0.0	0.0	0.2
secchi depth (ft)	11.5	11.0	9.5	11.5	12.5	18.0

#### SURVEY RESULTS

During the survey 539 fish weighing 72 pounds were collected. Ten species were represented. Bluegills accounted for 84% of the catch by number and 25% of the weight. Largemouth bass made up 6% of the catch and 30% of the weight. The other species comprised less than 5% of the number, although channel catfish and bowfin made up 23% and 12% of the weight, respectively. About equal numbers of bluegills were caught at each lake but more largemouth bass and pumpkinseeds were caught in Long Lake. Altogether sport fish made up 97% of the number and 82% of the combined weight at both lakes.

Of the 455 bluegills caught in the survey, only nine were 7-inch or larger. The largest was 7½ inches. Most were less than 5 inches. Their growth rate was slow compared to other lakes in the area. Age-4 bluegills averaged slightly over 4 inches and age-6 bluegills were less than 5½ inches. Normally bluegills reach 6 inches long by age-4 in most lakes in the area.

Largemouth bass were 4-20½ inches long, although only four of the 34 sampled bass were larger than 14 inches. Most bass were 6½-9½ inches. Not enough bass over three years old were captured to determine their growth rate but age-2 and age-3 bass grew slowly.

Twenty-two pumpkinseeds were collected. They ranged in length from 2½-5½ inches. Eight channel catfish were also caught. They were 13-24½ inches long. Other sport fish included four warmouth, an 11½-inch brown bullhead and a yellow bullhead. Other fish included four grass pickerel and two bowfin.

## PREVIOUS SURVEY COMPARISONS

Major shifts within the fish community at Price and Long lakes have occurred in the past 30 years (Table 2), primarily due to fish kills in the late 1970s. Some differences in surveys however can be attributed to changes in sampling methods. Bluegills dominated the catch in 1970-73, then were absent in 1979-83 and are now abundant. Bullheads,

Table 2. *Number of fish collected in fish population surveys at Price and Long lakes, 1970-2000.*

Species	Number				
	1970	1973	1979	1983	2000
Black crappie	0	2	0	0	0
Bluegill	54	62	0	0	455
Bowfin	12	0	0	5	2
Brown bullhead	1	1	78	1	1
Central mudminnow	0	1	0	0	0
Channel catfish	0	0	0	0	8
Golden shiner	0	68	303	0	0
Grass pickerel	0	2	5	3	4
Green sunfish	4	0	0	0	0
Lake chubsucker	18	46	48	17	8
Largemouth bass	3	3	0	1	34
Pumpkinseed	18	18	40	11	22
Redear	1	6	0	0	0
Warmouth	18	7	0	2	4
White crappie	1	0	0	0	0
Yellow bullhead	14	4	51	46	1
<b>TOTAL</b>	<b>144</b>	<b>220</b>	<b>525</b>	<b>86</b>	<b>539</b>
Sampling effort					
electrofishing hours	1 AC	2AC	½AC	0	½DC
gill net lifts	2	3	4	2	4
trap net lifts	20*	8*	6	0	2

\*denotes wire traps

Price and Long lakes have also undergone changes within their bluegill and largemouth bass populations. More large bluegills may have been present years ago. Of the 54 bluegills sampled in 1970, 17 were 8-inch or larger. By 1973 only three 7-inch or larger bluegills (5%) were caught. Likewise, only nine 7-inch and larger bluegills (2%) were caught during the latest survey. In contrast, bass may now be more abundant. Only three were caught in 1970 and 1973 and only one was caught in 1983. Thirty-four bass were caught in the current survey, including three that were larger than 18 inches.

## MANAGEMENT IMPLICATIONS

For the past 30 years Price and Long lakes have provided poor quality fishing opportunities due to the lack of shallow-water habitat, excessive plant growth and winter kills. Not enough large bluegills, bass or other sport fish have been present to interest anglers. While the natural surroundings enhance the aesthetic appearance of the lakes, their appeal to anglers has been offset by poor fishing.

Little can be done to improve fishing at Price and Long lakes. Over the years management initiatives included supplemental bass stockings, more

pumpkinseeds and golden shiners were more prevalent in 1979-83. Largemouth bass have always been fairly scarce, although more were caught in the most recent survey. Channel catfish were not present prior to stocking but have apparently established a reproducing population.

restrictive bass regulations, aquatic weed control, water level manipulation, and trout and channel catfish stockings. These options met with limited success. Furthermore, attempts to improve fishing in the future may be negated by winter kills and habitat problems.

Given current availability of high-quality fishing opportunities at Tri-County and at other lakes in the area, risking additional public funds to improve fishing at Price and Long lakes cannot be justified. Therefore, it is recommended that no other management programs be implemented.

Submitted by: Jed Pearson, fisheries biologist  
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