

# Powderhorn Lake Population Survey



Located in the City of Chicago on Brainard Ave. ¼ mile east of Burnham Ave. With a maximum depth of 17.4 feet this 48-acre lake is connected to a large marsh to the north. This marsh has been designated a wildlife refuge and a Nature Preserve by the State of Illinois; **No fishing is permitted in this area.** Powderhorn Lake has a very good self-reproducing population of Northern Pike; additional species found here include Largemouth Bass, Bluegill, sunfish, crappie, and bullheads. A boat launch can be found at the main parking lot. For acceptable watercraft and general boating regulations see the District's Fishing Guide. Designated ice fishing lake.

## Fish Population Survey

Fish population surveys are periodically conducted on Forest Preserves lakes in order to assess the health of the lake and the fish population in it. Surveys last anywhere from a few hours to a few days depending on the size of the lake.

Water samples are collected and analyzed for each survey. The information collected over the years will show trends in the lake's health. If any unusual readings are found, further tests may be done, or the Illinois DNR and EPA may be asked to investigate.

Fish are collected during surveys to assess the health of the population. Several methods are used to collect fish, these include experimental gill nets, Fyke or trap nets and the use of an electro-fishing boat. All fish collected are measured, weighed and a scale sample is collected when applicable. These scale samples are used to age the fish. All fish are then returned to the lake when possible.

The information listed below was collected during the most recent survey. It is only a snapshot in time. Many factors such as temperature, wind, rain and even moonlight can affect the species and number of fish that are collected. The Forest Preserves' Fisheries Section looks at data from many years when assessing a lake's fish population and assumptions from just one year of data therefore should not be made.

The dates of the survey along with the type of equipment used and the length of time it was fished is listed below. The "Total Population" tables & charts show all species collected and includes not only game fish but also forage fish. A healthy balanced population of forage fish and predatory (game) fish is needed in order to support a healthy overall fish population. Ideally, 30 to 40% of a lake's total fish population should be made up of forage fish in order to support a healthy predatory fish population. The species of forage fish varies from lake to lake, Gizzard Shad may be the main forage fish in one lake, while Bluegill/sunfish may be the main forage fish in another

Individual species tables are included only for the game fish that were collected. Game fish are those fish most sought after by anglers.

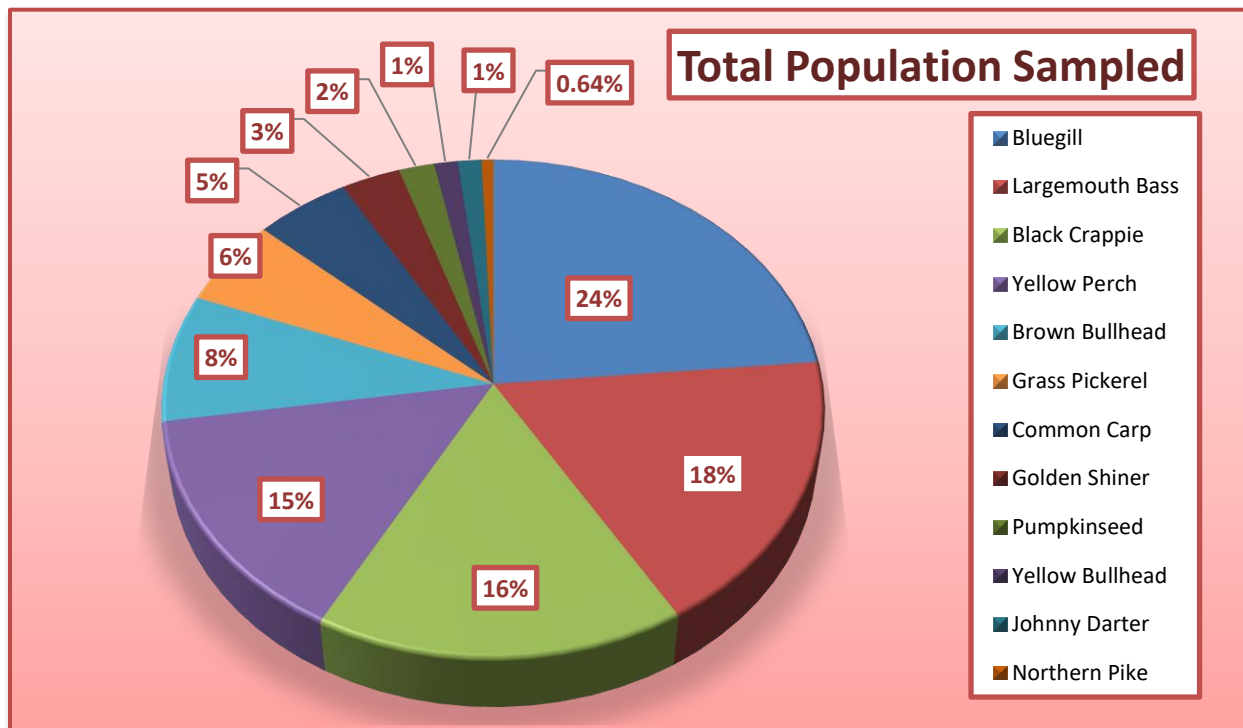
# Powderhorn Lake Population Survey



**Date of survey: August 22 - 23, 2023**  
**Electro-fishing time: 45 minutes**  
**3 Fyke nets fished: 24 hours**  
**0 feet of gill nets fished: 0 hours**

## Total Population

Species	Number	Percent
Bluegill	37	23.57%
Largemouth Bass	28	17.83%
Black Crappie	26	16.56%
Yellow Perch	23	14.65%
Brown Bullhead	13	8.28%
Grass Pickerel	9	5.73%
Common Carp	8	5.10%
Golden Shiner	5	3.18%
Pumpkinseed	3	1.91%
Yellow Bullhead	2	1.27%
Johnny Darter	2	1.27%
Northern Pike	1	0.64%
<b>Total</b>	<b>157</b>	<b>99.99%</b>



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## Bluegill

½-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
1.0	2	5.41%	0.002	0+
1.5	3	8.11%	0.002	0+
-	-	-	-	-
3.0	2	5.41%	0.03	1+
3.5	8	21.62%	0.03	1+
4.0	2	5.41%	0.04	2+
4.5	7	18.92%	0.06	2+
5.0	8	21.62%	0.09	2+
5.5	2	5.41%	0.12	2+
6.0	1	2.70%	0.14	3+
6.5	2	5.41%	0.18	3+
<b>Totals</b>	<b>37</b>	<b>100.02%</b>		

## Largemouth Bass

½-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
3.0	7	25.00%	0.02	0+
3.5	2	7.14%	0.02	0+
4.0	2	7.14%	0.04	0+
4.5	2	7.14%	0.05	0+
-	-	-	-	-
10.5	2	7.14%	0.54	2+
11.0	1	3.57%	0.54	2+
11.5	1	3.57%	0.79	2+
12.0	2	7.14%	1.08	3+
12.5	2	7.14%	1.02	3+
13.0	1	3.57%	1.29	4+
13.5	1	3.17%	1.17	4+
14.0	2	7.14%	1.35	4+
-	-	-	-	-
15.5	1	3.17%	2.01	5+
-	-	-	-	-
17.0	1	3.17%	2.39	5+
-	-	-	-	-
18.0	1	3.17%	3.79	6+
<b>Totals</b>	<b>28</b>	<b>99.99%</b>		

# Powderhorn Lake Population Survey



## Black Crappie

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
2.0	3	11.54%	0.002	0+
2.5	4	15.38%	0.002	0+
-	-	-	-	-
5.0	4	15.38%	0.06	1+
5.5	1	3.85%	0.08	1+
6.0	1	3.85%	0.12	2+
6.5	7	26.92%	0.14	2+
7.0	3	11.54%	0.18	3+
7.5	1	3.85%	0.20	3+
-	-	-	-	-
8.5	1	3.85%	0.33	4+
-	-	-	-	-
9.5	1	3.85%	0.54	4+
<b>Totals</b>	<b>26</b>	<b>100.01%</b>		

## Yellow Perch

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
2.0	1	4.34%	0.002	0+
2.5	5	21.73%	0.003	0+
-	-	-	-	-
4.0	5	21.73%	0.03	1+
4.5	4	17.39%	0.03	1+
5.0	7	30.43%	0.05	1 - 2+
-	-	-	-	-
6.5	1	4.34%	0.11	2+
<b>Totals</b>	<b>23</b>	<b>100.01%</b>		

## Brown Bullhead

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
9.5	1	7.69%	0.42	NA
10.0	4	30.77%	0.47	NA
10.5	4	30.77%	0.47	NA
11.0	3	23.08%	0.59	NA
11.5	1	7.69%	0.61	NA
<b>Totals</b>	<b>13</b>	<b>100.01%</b>		

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## Grass Pickerel

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
6.0	2	22.22%	0.04	0+
6.5	4	44.44%	0.07	0+
-	-	-	-	-
7.5	1	11.11%	0.09	1+
8.0	1	11.11%	0.10	1+
-	-	-	-	-
10.0	1	11.11%	0.20	2+
<b>Totals</b>	<b>9</b>	<b>99.99%</b>		

## Common Carp

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
18.0	1	12.50%	2.69	4+
-	-	-	-	-
21.0	1	12.50%	4.23	4+
-	-	-	-	-
22.0	2	25.00%	4.50	5+
22.5	1	12.50%	5.59	5+
23.0	2	25.00%	5.91	5 - 6+
-	-	-	-	-
25.0	1	12.50%	7.13	6+
<b>Totals</b>	<b>8</b>	<b>100.00%</b>		

## Pumpkinseed

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
3.5	1	33.33%	0.03	0+
-	-	-	-	-
4.5	2	66.66%	0.06	2+
<b>Totals</b>	<b>3</b>	<b>99.99%</b>		

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## Other Species collected

Species	Number	Length	Weight	Age
Yellow Bullhead	2	10.5 – 11.0	0.53 – 0.67	NA
Northern Pike	1	9.0	0.14	0+

## Fisheries Survey Overview

Powderhorn Lake has a good, self-reproducing Bass – Bluegill population. The Bluegill collected ranged in size from 1-inch young-of-year (YOY) fish up to 6.5-inch fish with 13 of the 37 fish collected being over 5.0-inches. Like the Bluegill, Largemouth Bass were collected over several age classes from YOY fish up to six year old 18.0-inch bass. While only five bass were collected that were over the 14-inch legal size limit there is a healthy population of younger fish that will be of legal size in the next few years.

The Black Crappie collected were a little on the small size, but half of the population sampled was over 6.0-inches. These fish should continue to increase in size over the next few years and larger crappie may be found in the deeper water. This population is larger than indicated by the 2023 survey since crappie are more readily caught with experimental gill nets which were not used in 2023.

Like the crappie population, the Yellow Perch population is larger than indicated by this survey. In the summer, perch tend to head for deeper, cooler water and are not easy to sample by electro-fishing or Fyke nets. Also like the crappie, the perch at Powderhorn Lake are smaller than we would like to see.

All but one of the bullhead collected in 2023 were over 10.0-inch and weighed around a half of a pound. These hard fighting fish would be fun for kids and adults alike to catch.

While the data collected in the 2023 survey does not show it, Powderhorn Lake is the best Northern Pike Lake in the Forest Preserves of Cook County. The Northern population is self-reproducing thanks to the large marsh to the north of the lake. Pike are very difficult to sample due to their ability to outrun the electro-fishing boat and avoiding our nets in the clear water of Powderhorn. Powderhorn also has a large Grass Pickerel population and this small member of the Esoc family is often mistaken as young Northern.

With the recent completion of the Wolf Lake – Powderhorn Lake reconnection project the dynamics of Powderhorn Lake may change over the next few years. As part of the project monitoring equipment has been put in place to track the passage of fish between these two lakes. The Forest Preserves Fisheries Section, working with the Illinois Natural History Survey, will continue to monitor the passage of fish through the connection and its impact on Powderhorn Lake.