

Busse Reservoir – Main Pool Population Survey

Located in Elk Grove Village south of Higgins Rd. between RT 53/I-290 and Arlington Heights Rd. Busse Reservoir is comprised of three pools making up a total of 457-acres of water. The Main Pool is the largest at 325-acres and has a depth of 10.2 feet. Walleye, Northern Pike, Musky, Largemouth Bass, and Channel Catfish are the top predators at Busse. Bluegill, sunfish, bullheads, Yellow Bass, Yellow Perch, and crappie can be found in all three pools. In 2007 the District started stocking pure Musky in the Main Pool in order to help control Gizzard Shad. Boat ramps are located on the Main and South Pools. For acceptable watercraft and general boating regulations see the District's Fishing Guide. A boat rental with concessions and bait is located on the Main Pool. Barrier free fishing walls are located on all three pools. The Main pool is a designated ice fishing lake.

Fish Population Survey

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

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.

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.

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.

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Date of survey: September 11-15, 2023

Electro-fishing time: 70 minutes

4 Fyke nets fished: 48 hours & 1 Fyke net fished 24 hours*

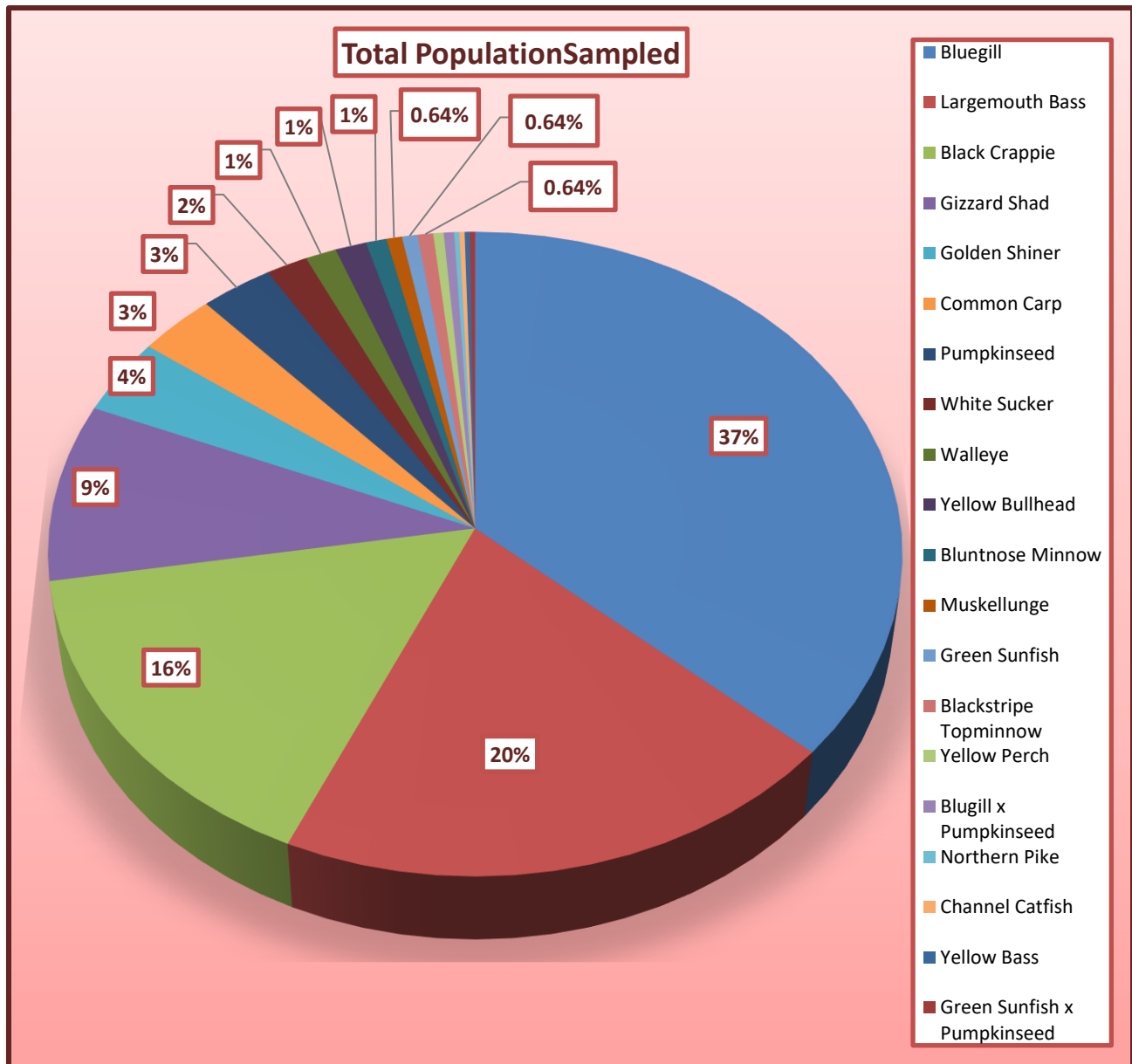
0 feet of gill nets fished: 0 hours

Total Population Sampled

Species	Number	Percent
Bluegill	172	36.52%
Largemouth Bass	95	20.17%
Black Crappie	74	15.71%
Gizzard Shad	42	8.92%
Golden Shiner	18	3.82%
Common Carp	15	3.18%
Pumpkinseed	14	2.97%
White Sucker	8	1.70%
Walleye	6	1.27%
Yellow Bullhead	6	1.27%
Bluntnose Minnow	4	0.85%
Muskellunge	3	0.64%
Green Sunfish	3	0.64%
Blackstripe Topminnow	3	0.64%
Yellow Perch	2	0.42%
Bluegill x Pumpkinseed Hybrid	2	0.42%
Northern Pike	1	0.21%
Channel Catfish	1	0.21%
Yellow Bass	1	0.21%
Green Sunfish x Pumpkinseed Hybrid	1	0.21%
Total	471	99.96

* One gill net was damaged beyond repair and had to be pulled after 24 hours.

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Bluegill

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
1.0	5	2.91%	0.002	0+
1.5	15	8.72%	0.004	0+
2.0	9	5.23%	0.002	0+
2.5	5	2.91%	0.02	0+
3.0	37	21.51%	0.02	0+
3.5	8	4.65%	0.04	1+
4.0	9	5.23%	0.05	1+
4.5	20	11.63%	0.07	2+
5.0	35	20.35%	0.09	2 - 3+
5.5	19	11.05%	0.13	2 - 3+
6.0	9	5.23%	0.16	3+
6.5	1	0.58%	0.21	3+
Totals	172	100.00%		

Largemouth Bass

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
2.5	4	4.21%	0.009	0+
3.0	7	7.37%	0.02	0+
-	-	-	-	-
7.5	1	1.05%	0.22	1+
8.0	1	1.05%	0.30	1+
8.5	2	2.11%	0.31	1+
9.0	1	1.05%	0.44	2+
9.5	1	1.05%	0.47	2+
10.0	2	2.11%	0.54	2+
10.5	3	3.16%	0.59	2+
11.0	9	9.47%	0.67	2 - 3+
11.5	5	5.26%	0.80	3+
12.0	7	7.37%	1.03	3+
12.5	5	5.26%	1.20	3 - 4+
13.0	8	8.42%	1.26	3 - 4+
13.5	6	6.3%	1.38	4+
14.0	10	10.53%	1.54	4 - 5+
14.5	3	3.16%	1.75	5+
15.0	3	3.16%	1.81	5+
15.5	3	3.16%	2.13	5+
16.0	7	7.37%	2.36	5 - 6+
16.5	2	2.11%	2.72	6+
17.0	3	3.16%	2.69	6+
-	-	-	-	-
18.0	1	1.05%	3.37	7+
18.5	1	1.05%	4.18	7+
Totals	95	100.01		

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Black Crappie

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
5.0	12	16.22%	0.08	1+
5.5	11	14.86%	0.07	1+
-	-	-	-	-
6.5	21	28.38%	0.16	1 - 2+
7.0	18	24.32%	0.22	2 - 3+
7.5	4	5.41%	0.24	3+
8.0	2	2.70%	0.28	3+
8.5	4	5.41%	0.33	3+
9.0	2	2.70%	0.39	4+
Totals	74	100.00%		

Common Carp

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
18.0	2	13.33%	2.85	4+
18.5	1	6.67%	3.48	4+
19.0	1	6.67%	2.78	5+
19.5	2	13.33%	3.76	5+
-	-	-	-	-
21.0	4	26.66%	4.35	6+
21.0	2	13.33%	4.76	6+
22.0	1	6.67%	4.75	6+
-	-	-	-	-
23.5	1	6.67%	6.15	7+
-	-	-	-	-
25.0	1	6.67%	7.09	7+
Totals	15	100.00%		

Pumpkinseed

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
1.5	1	7.14%	0.009	0+
2.0	1	7.14%	0.01	0+
-	-	-	-	-
3.0	6	42.86%	0.03	1+
3.5	3	21.43%	0.04	1+
4.0	1	7.14%	0.05	1+
-	-	-	-	-
5.0	2	7.14%	0.09	2+
Totals	14	100.00%		

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Walleye

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
11.5	2	33.33%	0.43	2+
-	-	-	-	-
12.5	1	16.67%	0.0.70	2+
-	-	-	-	-
14.0	1	16.67%	0.92	3+
-	-	-	-	-
18.0	1	16.67%	1.77	4+
-	-	-	-	-
20.5	1	16.67%	2.80	5+
Totals	6	100.01%		

Yellow Bullhead

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
8.0	1	16.67%	0.23	NA
-	-	-	-	-
9.0	3	50.00%	0.42	NA
-	-	-	-	-
10.0	1	16.67%	0.61	NA
-	-	-	-	-
11.0	1	16.67%	0.78	NA
Totals	6	100.01%		

Muskellunge

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
19.5	1	33.33%	1.40	2+
20.0	1	33.33%	193	2+
20.5	1	33.33%	1.79	2+
Totals	3	99.99%		

Green Sunfish

1/2-Inch Group	Number Collected	% of Population	Average Weight lbs.	Age
3.0	1	33.33%	0.03	1+
-	-	-	-	-
5.0	2	66.66%	0.11	2+
Totals	3	99.99%		

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Other Species collected

Species	Number	Length	Weight	Age
Yellow Perch	2	8.0 – 12.0	0.21 – 0.68	3 - 5+
Bluegill x Pumpkinseed Hybrid	2	5.0 – 5.5	0.10 – 0.13	2+
Northern Pike	1	22.0	1.67	2+
Channel Catfish	1	20.0	2.78	NA
Yellow Bass	1	8.5	0.25	3+
Green Sunfish x Pumpkinseed Hybrid	1	5.5	0.15	2+

Stocking

The Forest Preserves of Cook County works closely with the Illinois Department of Natural Resources to stock fishes within the Forest Preserves lakes. The decision to stock fish and the number of fish stocked is based on many factors including but not limited to type of species, size of fish stocked, size of the lake and type of stocking. The Forest Preserves of Cook County must follow State of Illinois regulation regarding the introduction and stocking of fish. All requests to stock a new species into a District lake must go through the State's Management Recommendation Committee.

Most stocking fall under one of three categories, introduction, supplemental and put-and-take. Introduction stockings are the introduction of a new species within an existing lake or the stocking of a new body of water. Supplemental stockings are the stocking of species already in a lake and are used to supplement a species that may not successively reproduce on its own or has been overfished. Fish stocked in a put-and-take stocking are catchable size fish.

Size of Fish Stocked

Most of the fish stocked in the lakes of the Forest Preserves of Cook County are young-of-the-year and are provided by the IDNR Hatcheries. Fish from the hatcheries are stocked upon availability and are funded by your fishing licenses.

Channel Catfish are stocked at around 6-inches in most lakes.

The IDNR suspended the production, rearing and stocking of Northern Pike in 2017, Northern stocking resumed in 2020 and were stocked in the 7 to 9-inch range. Muskellunge range from 10 to 14-inches and are stocked in the Main Pool of Busse Reservoir intermittently.

Walleye fingerlings from the IDNR are 2 to 3-inches and the Walleye from the Tampier Walleye Propagation Program are stocked as fingerlings and/or fry.

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Species	2019	2020	2021	2022	2023
Channel Catfish	8,758	6,299	-	6,250	6,250
Muskellunge	403	-	453	405	409
Walleye	10,500	19,143	11,782	10,544	9,503

Fisheries Survey Overview

The Main Pool of Busse Reservoir consistently ranks as one of the top three lake within the Forest Preserves of Cook County. With an abundant sunfish population with fish reaching 5 to 6-inches and Largemouth Bass up to five pounds, Busse Main offers fishing opportunities for the entire family. While only 33 of the 95 bass sampled were over the legal limit of 14-inches, the success of the IHSA High School Bass Tournament held each year since 2009 shows that the Main pool has one of the best bass fishery in the Forest Preserves.

While we only sampled six Walleye during the 2023 survey, this is not indicative of the overall population. In both the spring and fall walleye are collected during other projects, with all year classes being represented. Some of these fish are even approaching the 9 to 10-pound range. We have noticed over the past few years that the walleye have been displaced from their usual haunts by the relatively new Musky population. While this makes them more difficult to find, Walleye anglers who put the time in to find them do quite well.

Musky were first stocked in the Main Pool of Busse Reservoir in 2007. This new population has done quite well with Musky anglers reporting fish approaching 50-inches. The largest Musky that has been documented in one of our surveys or bi-annual salvages below the main dam is 46-inches. This large predator primarily feeds on the large Gizzard Shad and White Sucker population.

Open water species and bottom feeders are not accurately represented in the total population sampled since these species are hard to collect with Fyke nets and electro-fishing. These species are better caught with experimental gill nets. We try to use gill net only when needed and weather conditions are favorable since they are hard on the fish that get caught in them. Gizzard Shad are much more abundant than the 42 fish caught would indicate. This open water species is the main forage fish found in Busse Reservoir. Other open water species such as Yellow Perch, Yellow Bass and crappie are likewise misrepresented in the 2023 survey.

The populations of bottom feeders such as catfish, bullhead, and Common Carp are also not represented in the numbers that are present since these species like those found in open water are best caught with gill nets.

Overall, the fishery of the Main Pool of Busse Reservoir is very healthy and should continue to provide great fishing for the anglers of Cook County.