

Chambers Lake

Chester County

2021 Largemouth Bass Survey / 2021 Trap Net Survey / 2024 Trap Net Survey



View of Chambers Lake from the south shoreline. Image courtesy of Chester County Parks and Preservation

Chambers Lake is an 89-acre impoundment located in Hibernia County Park, Chester County. The Pennsylvania Fish and Boat Commission (PFBC), in cooperation with Chester County Parks, manages Chambers Lake as a multi-use fishery. Chambers Lake is managed under [Panfish Enhancement Regulations](#) for Bluegill, crappies, and Yellow Perch. Largemouth Bass are managed with [Big Bass Program Regulations](#). All other species are managed under [Commonwealth Inland Regulations](#). Biologists from the Area 6 Fisheries Management Office have recently monitored fish populations in the lake with a nighttime electrofishing survey in

2021, primarily targeting Largemouth Bass, and trap net surveys in fall 2021 and 2024. Results from these surveys are presented below.

Summer 2021 Nighttime Boat Electrofishing Survey – Largemouth Bass

A nighttime boat electrofishing survey was completed June 28th, 2021. Six randomly selected, ten-minute (one hour of total effort) shoreline transects sites, were sampled. A total of 70 Largemouth Bass were collected, ranging in length from 5 to 15 inches (Figure 1). These results are comparable with those from 2016, which found a similar size structure with few fish exceeding 15 inches. The timing of the survey (late June) was not ideal for sampling Largemouth Bass, particularly since water temperature were very warm for that time of year (85°F). Therefore, it is possible that this could have influenced the results of this survey, but likely not to an appreciable extent, as our results were similar to those observed in the 2016 survey. A high density of Largemouth Bass ≥ 12 inches creates a scenario that could provide anglers with high catch rates of quality-length fish and benefits panfish populations through predation on small fish.

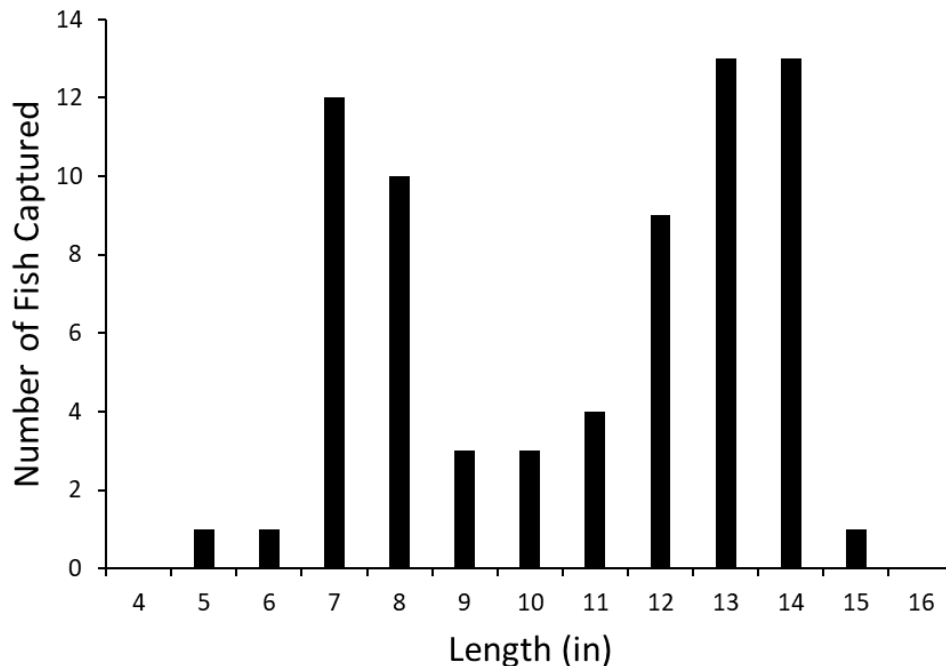


Figure 1. Length frequency distribution of Largemouth Bass collected at Chambers Lake on June 28, 2021.

Fall 2021 Trap Net Survey - Panfish

Panfish populations were sampled at Chambers Lake via a trap net survey conducted during October 4-7, 2021. Eleven nets were set throughout the lake (nine at historical sites and two at new sites) to ensure that all habitat types were sampled. Nets were set from 2.5 to 16.5 ft and allowed to fish for approximately 24 hrs. The survey results indicate Chambers lake supports a large abundance of Bluegill (n=617) and Black Crappie (n=542; Tables 1 and 2). Further the size structure of Bluegill comprised of large individuals. Of the 617 Bluegill captured, 454 (74%) were ≥ 7 in, which is the harvestable size under Panfish Enhancement Regulations. Although many Black Crappie were captured, only 23 (4%) were of legal size. Other species captured include Pumpkinseed, Brown Bullhead, White Crappie, Yellow Perch, Chain Pickerel, Golden Shiner, Largemouth Bass, White Sucker, and Hybrid Sunfish.

Table 1. Species, number (n), and length range of fish captured during 2021 trap net survey at Chambers Lake, Chester Co.

Species	n	Length Range (in)
Golden Shiner	31	-
White Sucker	3	15-18
Brown Bullhead	53	7-16
Chain Pickerel	1	22
hybrid sunfish	4	6-8
Pumpkinseed	93	5-8
Bluegill	617	3-9
Largemouth Bass	6	4-17
White Crappie	13	9-13
Black Crappie	542	6-15
Yellow Perch	13	6-12

Table 2. Length-frequecy distribution of species captured during 2021 trap net survey at Chambers Lake, Chester Co.

Length (in)	Species								
	Brown Bullhead	Chain Pickerel	hybrid sunfish	Pumpkinseed	Bluegill	Largemouth Bass	White Crappie	Black Crappie	Yellow Perch
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	2	0	0	0	0
4	0	0	0	0	2	2	0	0	0
5	0	0	0	3	45	0	0	0	0
6	0	0	2	45	114	0	0	45	1
7	1	0	1	42	359	0	0	333	1
8	0	0	1	3	93	0	0	141	0
9	0	0	0	0	2	0	1	9	5
10	1	0	0	0	0	0	8	8	3
11	7	0	0	0	0	0	2	5	1
12	4	0	0	0	0	0	0	0	2
13	6	0	0	0	0	1	2	0	0
14	8	0	0	0	0	0	0	0	0
15	20	0	0	0	0	2	0	0	0
16	6	0	0	0	0	0	0	0	0
17	0	0	0	0	0	1	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	1	0	0	0	0	0	0	0
Total	53	1	4	93	617	6	13	542	13

Fall 2024 Trap Net Survey - Panfish

In October 2024, Area 6 biologists returned to Chambers Lake to continue monitoring the panfish populations. During October 28-30, 2024, six trap nets were set and allowed to fish for approximately 24 hours. Conditions during this survey differed compared to those experienced during the 2021 survey, namely that lake levels were low and an algal bloom was occurring due a lack of precipitation in southeast Pennsylvania. Despite the differences in environmental conditions and number of trap nets used during the survey, the results were similar to those

from the 2021 survey (Tables 3 and 4), particularly when compared using catch per unit effort (fish/hour (fish/h), a metric biologists use to estimate relative abundance).

Table 3. Species, number (n), and length range of fish captured during 2024 trap net survey at Chambers Lake, Chester Co.

Species	n	Length Range (in)
Golden Shiner	29	-
White Sucker	5	-
Yellow Bullhead	5	10-11
Brown Bullhead	13	11-16
Pumpkinseed	18	4-8
Bluegill	617	2-9
Largemouth Bass	4	8-14
White Crappie	4	14-16
Black Crappie	191	2-9
Yellow Perch	51	7-11

The same number of Bluegill were captured in 2021 and 2024. However, the catch rates of Bluegills differed between surveys (2.43 fish/h in 2021 and 4.48 fish/h in 2024) since 5 fewer nets were set during this year's survey. Size structure of Bluegill was comparable between surveys, with large fish being well represented in the sample. In 2024, 78% of Bluegills were ≥ 7 inches; similar to the 74% of Bluegill that were ≥ 7 inches during 2021. Fewer Black Crappies were captured in 2024 (n=191, 1.39 fish/h) compared to 2021 (n=542, 2.13 fish/h). However, the number and catch rate of fish ≥ 9 inches was higher in 2024 (n=46, 0.33 fish/h) than 2021 (n=23, 0.09 fish/h). Despite a slight increase in catch rate, the number of fish ≥ 9 inches remains at levels lower than that preferred for anglers. It is possible that poor year-class production, overharvest, or some other factor is limiting the number of larger Black Crappies in the lake. Staff plan to conduct age-and-growth analyses in the near future to potentially identify what is

limiting Black Crappie size structure in the lake. Although present at a low density, White Crappies reach large sizes in Chambers Lake (photo below), with all the fish in the sample being ≥ 14 in. Other species captured during the survey include Brown Bullhead, Golden Shiner, Largemouth Bass, Pumpkinseed, White Sucker, Yellow Bullhead, and Yellow Perch.

Table 4. Length-frequecy distribution of species captured during 2021 trap net survey at Chambers Lake, Chester Co.

Length (in)	Species							
	Yellow Bullhead	Brown Bullhead	Pumpkinseed	Bluegill	Largemouth Bass	White Crappie	Black Crappie	Yellow Perch
1	0	0	0	0	0	0	0	0
2	0	0	0	11	0	0	74	0
3	0	0	0	9	0	0	33	0
4	0	0	5	15	0	0	1	0
5	0	0	3	19	0	0	1	0
6	0	0	3	78	0	0	2	0
7	0	0	6	457	0	0	3	2
8	0	0	1	27	2	0	31	8
9	0	0	0	1	0	0	46	18
10	2	0	0	0	1	0	0	18
11	3	3	0	0	0	0	0	5
12	0	0	0	0	0	0	0	0
13	0	1	0	0	0	0	0	0
14	0	3	0	0	1	1	0	0
15	0	3	0	0	0	2	0	0
16	0	3	0	0	0	1	0	0
Total	5	13	18	617	4	4	191	51

The results of the Largemouth Bass and panfish surveys at Chambers Lake indicate that anglers have the opportunity for high catch rates of Largemouth Bass up to 15 in, Bluegills ≥ 7 in, and the potential for trophy White Crappies. Shoreline fishing access is available on both sides of the lake, while boat fishing is limited to electric motors or unpowered watercraft (except sailboats). Boats can access the lake from a single boat ramp located on the southeast side of the lake. Anglers and boaters should be aware that if accessing the lake between April 1st and

June 15th, the northern end the lake is closed to boating and shoreline access due to its designation as a wildlife sanctuary.



White Crappie collected from Chambers Lake in 2024

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