

# Tuscarora Lake

## Schuylkill County

### Boat electrofishing and trap net surveys

Tuscarora Lake is a 96-acre impoundment nestled within the mountains of Schuylkill County in Tuscarora State Park. The park is managed by the Pennsylvania Department of Conservation and Natural Resources (DCNR) and is located about three miles east of Tamaqua, Pennsylvania. The Pennsylvania Fish and Boat Commission's (PFBC) manages Tuscarora Lake for warmwater, coolwater, and coldwater fish populations. This reports details findings from a night electrofishing survey conducted in May 2022 and a trap net surveys conducted in April 2023 and May 2024.



PFBC Area 5 Fisheries Biologist Aide Brian Feuz holding a Largemouth Bass collected on May 17, 2022.

**2022 Night Boat Electrofishing Survey**

Biologists from the PFBC’s Area 6 fisheries management office conducted a nighttime electrofishing survey of the Tuscarora Lake Black Bass population on May 17, 2022. Nine sites of approximately 300 – 400 m in length were randomly selected and 10 minutes of electrofishing time was conducted at each site, totaling 1.5 hours of sampling effort. All black bass captured were weighed, measured, and released alive. A total of 111 Largemouth Bass were collected, this equates to a total catch rate of 74 fish/h. Largemouth Bass ranged 6 to 21 in (Figure 1) and weighed up to 6.5 lbs. A total of 12 Smallmouth Bass were collected, equating to a total catch rate of 8 fish/h. Smallmouth Bass in the sample ranged 7 to 15 in. (Figure 1) and weighed up to 2.4 lbs.

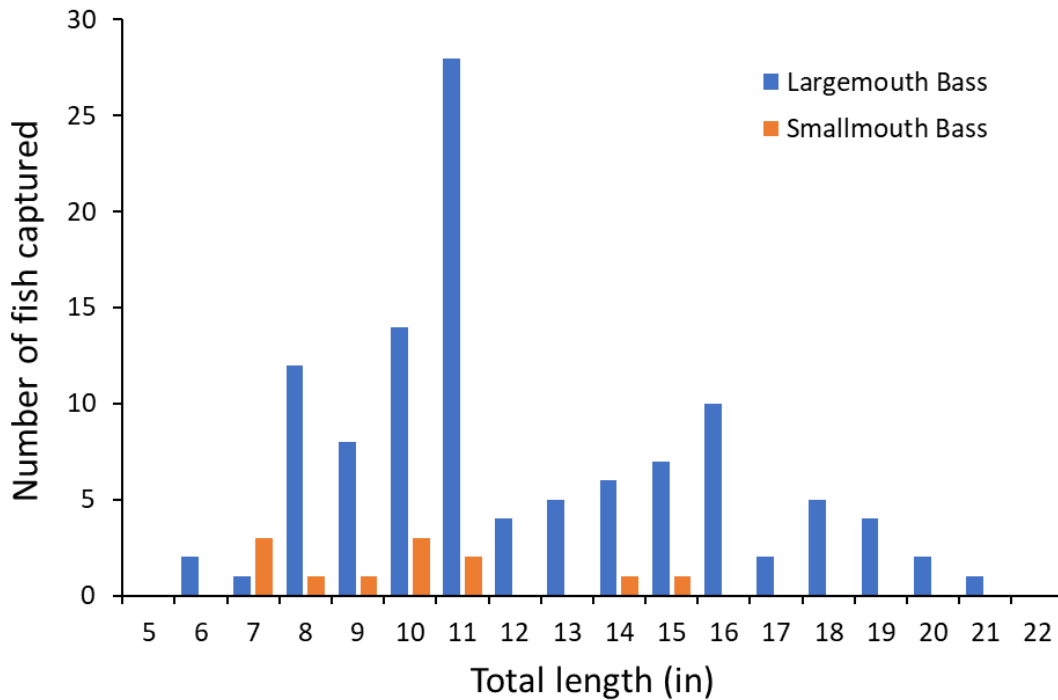


Figure 1. Length frequency distribution of Largemouth Bass and Smallmouth Bass collected at Tuscarora Lake on May 17, 2022.

A substantial percentage of the Largemouth Bass sample was comprised of large fish. Largemouth Bass  $\geq 12$  in and  $\geq 15$  in accounted for 41% and 28% of the total sample, respectively. This suggests Tuscarora Lake is an excellent choice for anglers interested in pursuing large Largemouth Bass. Although

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the overall catch of Smallmouth Bass was low, the higher abundance of large fish with trophy potential of the Largemouth Bass population, the black bass fishing opportunities are very attractive at Tuscarora Lake.

In addition to Largemouth Bass and Smallmouth Bass, Chain Pickerel, Muskellunge, and Walleye were netted when observed at each site. Furthermore, all fish species were collected at two of the nine sites. Other fish species encountered during the survey included Black Crappie, Bluegill, Chain Pickerel, Green Sunfish, Muskellunge, Pumpkinseed, Walleye, and Yellow Perch (Table 1). The Chain Pickerel captured during this survey were in poor condition (appeared very skinny). A future trap net survey will aim to describe the forage fish populations, as well as sportfish populations, in Tuscarora Lake.

Table 1. Summary of fish species, number, and length range captured from Tuscarora Lake on May 17, 2022 during the night boat electrofishing survey.

Species	Number	Length Range (in)
Muskellunge	3	23 - 35
Chain Pickerel	28	14 - 25
Green Sunfish	10	2 - 6
Pumpkinseed	1	5
Bluegill	33	5 - 7
Smallmouth Bass	12	7 - 15
Largemouth Bass	111	6 - 21
Black Crappie	6	8 - 10
Yellow Perch	33	6 - 11
Walleye	4	14 - 25

### 2023 Trap Net Survey

Biologists from the PFBC Area 6 office sampled Tuscarora Lake on April 25 and 26, 2023 using Pennsylvania-style trap nets. Six trap nets were set across the two days of sampling, which resulted in an average of 22.94 hours of effort per net. This survey was conducted to monitor some of the reservoir's sportfish populations, including Bluegill, crappies (Black and White), Muskellunge, Walleye,

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and Yellow Perch. Other species, including Brown Bullhead, Chain Pickerel, Pumpkinseed, and Rainbow Trout (hatchery) were also captured (Table 2). All sportfish were measured, counted, and released. Muskellunge were also weighed and tagged, and pelvic fin rays were removed for aging purposes.

Table 2. Summary of fish species, number, and length range (in.) captured from Tuscarora Lake from April 25-26, 2023 during the trap net survey.

Species	Number	Length Range (in.)
Golden Shiner	89	NA
White Sucker	3	18 - 19
Brown Bullhead	9	14 - 16
Rainbow Trout - Hatchery	5	NA
Muskellunge	10	32 - 48
Chain Pickerel	3	19 - 23
Pumpkinseed	6	6 - 7
Bluegill	455	5 - 8
White Crappie	2	10 - 15
Black Crappie	103	6 - 12
Yellow Perch	40	6 - 12
Walleye	19	15 - 28

*Panfish*

A total of 455 Bluegills were captured during the trap net survey, making this the most abundant species captured. The majority (82%) of Bluegill captured measured  $\geq 7$  in (322 fish  $> 7$  in and 50 fish  $> 8$  in), which are the lengths preferred by anglers. Black Crappie was the second most abundant (103 fish) species encountered, and most fish (84%) exceeded 9 in. Yellow Perch were consistently encountered during the survey, and a few of these fish were of larger sizes. Other panfish species, including Pumpkinseeds and White Crappies were also encountered during the survey, but at a low abundance. The size structure of these populations should appeal to anglers fishing at Tuscarora Lake.

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### *Muskellunge*

Muskellunge have been stocked into Tuscarora Lake by Muskies Inc. Chapter 50 across four stocking events (2011, 2013, 2016, and 2018). Additionally, the PFBC stocked Muskellunge at Tuscarora Lake in 2020. A total of 10 Muskellunge were captured ranging 32 to 48 in. during the April trap net survey. Five (50%) of the fish captured exceeded 40 in. The capture of 10 Muskellunge during this survey greatly surpasses catches observed in previous surveys when few, if any, Muskellunge or tiger muskellunge were encountered. Tuscarora Lake provides excellent opportunities for anglers to target Muskellunge, including trophy-sized fish.



PFBC Area 6 Fisheries Biologist Tyler Grabowski displaying a 48 in Muskellunge collected during the April 2023 trap net survey.

### *Walleye*

A total of 19 Walleyes ranging 15 to 28 in., were captured. All Walleyes captured exceeded 15 in, which is the minimum length limit for harvest. The catch rate of legal-length Walleyes was 0.137 fish/hr, which exceeds the post-spawn statewide objective of 0.075 fish/hr. This catch rate suggests that Tuscarora Lake supports a good Walleye population.

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### *Stocked Trout*

Similar to [previous evaluations](#), five hatchery Rainbow Trout were captured during the April 2023 trap net survey. These fish were stocked in the fall and survived throughout the fall and winter and into spring. These trout may provide anglers with additional trout fishing opportunities during the spring.

### **2024 Trap Net Survey**

In February 2024, a near complete drawdown of Tuscarora Lake occurred. To determine the status of fish populations following the drawdown, biologists from the PFBC Area 6 office conducted a trap net survey on May 21 and 22, 2024. Species composition and size structure were comparable between this survey and the 2023 trap net survey (Table 3). While relative abundance of some species differed between surveys, increases, or decreases in fish counts do not necessarily mean that the population size changed. It is likely these species were encountered at different rates due to spawning patterns and/or seasonal habitat preferences since the survey was conducted a month later in the year. The results of this survey suggest that forage and sportfish populations remain in the lake and that Tuscarora Lake continues to provide fantastic fishing opportunities.

Tuscarora Lake offers a variety of species for anglers to pursue, including warmwater, coolwater, and coldwater (stocked trout) species. If you plan on fishing at Tuscarora Lake by boat, please be advised that only electric motors are permitted. Please see DCNR's [website](#) for the full range of recreational activities offered at Tuscarora State Park.

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Table 3. Summary of fish species, number, and length range (in.) collected from Tuscarora Lake from May 21-22, 2024 during the trap net survey.

Species	Number	Length Range (in.)
Golden Shiner	81	NA
White Sucker	20	NA
Brown Bullhead	3	15
Muskellunge	2	40 - 48
Chain Pickerel	1	24
Pumpkinseed	41	5 - 8
Bluegill	255	4 - 8
White Crappie	14	6 - 14
Black Crappie	174	6 - 13
Yellow Perch	69	5 - 9
Walleye	17	16 - 29

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