

Pennsylvania Fish & Boat Commission Biologist Report

Canadohta Lake

Crawford County

Spring 2025 Trap Net and Night Boat Electrofishing Surveys



Fisheries Biologist Lucas Hartman with a quality-length Walleye caught in Canadohta Lake.

Canadohta Lake is a naturally-formed, glacial lake which covers 170 acres located in Bloomfield Township, Crawford County. The outlet forms the headwaters of Oil Creek which eventually enters the Allegheny River approximately 46 miles downstream. The Pennsylvania Fish and Boat Commission (PFBC) manages Canadohta Lake as a warmwater/coolwater fishery using Commonwealth Inland Waters Regulations. Canadohta Lake is stocked with fingerling Walleyes annually and yearling Muskellunge biannually and is part of the Brood Stock Lakes Program where it is utilized by our state hatchery system to capture adult fish for spawning purposes; anglers are encouraged to consult the PFBC summary book for further details regarding the [Brood Stock Lakes Program](#) (found on page 15).

The PFBC conducted a fish population survey at Canadohta Lake to evaluate the overall abundance and size structure of the lake's warmwater and coolwater fish populations and determine if stocking in Canadohta Lake is meeting the minimum criteria for producing high-quality Muskellunge and Walleye fisheries as outlined in the PFBC's respective species management plans. Pennsylvania-style trap nets were used to sample the lake's Muskellunge, Walleye and panfish populations. We returned in May to conduct a night-time boat electrofishing survey to survey the black bass populations.

Muskellunge, Panfish, and Walleye Trap Net Assessment

During the week of April 7, 2025, staff from Fisheries Management Area 2 completed 15 overnight sets of Pennsylvania style trap nets totaling 337.08 hours of effort.



A 43" female Muskellunge collected in PA-style trap nets on Canadohta Lake.

Muskellunge

Fourteen Muskellunge were captured in our trap nets in 2025 ranging from 29 to 43 inches in length. One additional individual was captured during black bass night boat electrofishing; however, it was not included in trap net catch per unit effort (CPUE) calculations. Trap net CPUE in 2025 was noticeably lower than the recent surveys listed below (Table 1). However, it is likely the 2017 through 2022 surveys likely benefitted from previous high stocking rates as part of a Muskellunge yearling survival study. Muskellunge CPUE has exceeded the minimum criteria for a quality fishery in each of the last surveys (excluding 2015) and therefore will continue to receive biannual stockings of yearlings.

Table 1. Year, number, catch per unit effort (CPUE, fish/h), and length of Muskellunge captured during seven spring trap net surveys between 2006 and 2025 at Canadohta Lake.

Year	Number	CPUE	Length (in)
2006	16	0.04	25 - 48
2013	16	0.02	25 - 39
2015	5	0.00	29 - 36
2017	52	0.07	25 - 44
2019	45	0.06	26 - 45
2022	76	0.12	13 - 43
2025	14	0.03	30 - 43

Panfish

A total of 5,539 individuals were captured in trap nets representing 14 species (Table 2). The predominate panfish species captured was Yellow Perch comprising 97% of total catch, yet most were undersized; in the 3-5-inch range. Overall, panfish catch was relatively poor. However, when staff returned in May for the black bass night boat electrofishing survey, a decent number of quality-length panfish including Rock Bass, Pumpkinseeds, Bluegills, and Black Crappies were observed.

Table 2. Species, number, and length range of fish captured during 2025 trap net survey on Canadohta Lake.

Species	Number	Length range (in)
Common Shiner	3	-
Golden Shiner	87	-
Bluntnose Minnow	2	-
Brown Bullhead	5	3-10
Northern Pike	4	15-25
Muskellunge	14	29-43
Rock Bass	6	3-8
Pumpkinseed	4	2-6
Bluegill	14	2-6
Smallmouth Bass	2	5-8
Largemouth Bass	4	15-16
Black Crappie	2	7-9
Yellow Perch	5,356	3-12
Walleye	36	13-27



Black Crappies caught in Canadohta Lake during Black Bass Night Electrofishing.

Walleye

A total of 36 Walleyes were captured in 2025. All but one of the fish captured exceeded the minimum legal length (15 inches) with the largest measuring 28 inches long. Fingerling stockings in Canadohta Lake are performing well and have established a quality Walleye fishery in the lake.

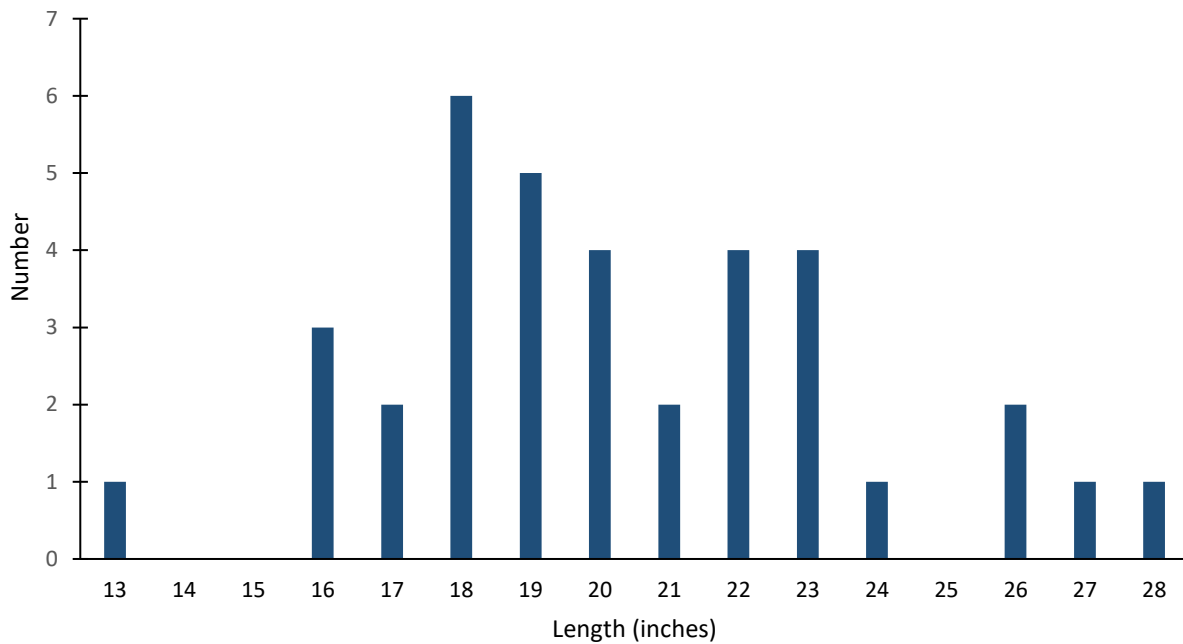


Figure 1. Length-frequency distribution of Walleyes from Canadohta Lake; spring 2025.



Fisheries Biologist Aide Joel Dean with a 26" Walleye (left) and a 12" Yellow Perch (Right) captured in PA-style trap nets on Canadohta Lake.

Black Bass Night-Time Boat Electrofishing Assessment:

PFBC staff returned to Canadohta Lake on the night of May 14th to evaluate the status of the black bass populations using night-time boat electrofishing (NTBEF). Three runs totaling 1.62 hours of effort were conducted along the shoreline. Both Largemouth Bass and Smallmouth Bass were captured in low, but similar abundance. A total of four Largemouth Bass were netted and ranged in length from 15 to 16 inches for a catch rate of 2.48 fish per hour (Figures 1 & 2). Two Smallmouth Bass were captured ranging from 5 to 8 inches in length for a catch rate of 1.24 fish per hour (Figures 1 & 3). The total black bass CPUE was 3.72 fish per hour.

The black bass population in Canadohta Lake has declined over the past 25 years (Figure 2). It is evident that the black bass fishery is lacking compared to the robust Walleye and Muskellunge angling opportunities in Canadohta Lake.



Fisheries Biologist Lucas Hartman with a 16" Largemouth Bass caught in Canadohta Lake (left), Area 2 staff measuring fish during night electrofishing (right).

Conclusion

In conclusion, ongoing Muskellunge and Walleye stockings in Canadohta Lake are producing sizable populations which will provide anglers with good fishing opportunities for those species now and into the future. Canadohta Lake offers a unique experience where Muskellunge and Walleye are the primary predators present. This rather unique scenario provides anglers who are interested in targeting these species with an excellent opportunity to catch a Muskellunge or harvest Walleye. In addition, other species such as Yellow Perch, Bluegill, Black Crappie, and Pumpkinseed can be caught as well and help contribute to a diverse fishery. Largemouth and Smallmouth Bass are present, but in low abundance.



Quality-length Bluegills (top) and Pumpkinseeds (bottom) caught in Canadohta Lake during black bass Night Electrofishing.

Good Luck!
Fisheries Management Area 2