

Pennsylvania Fish & Boat Commission Biologist Report

Conneaut Lake

Crawford County

Spring 2025 Trap Net and Night Boat Electrofishing Surveys



Pumpkinseeds caught in trap nets at Conneaut Lake, ranging from 6 to 9 inches.

Conneaut Lake is a 929-acre natural lake located in the town of Conneaut Lake in Crawford County. The Pennsylvania Fish and Boat Commission (PFBC) manages Conneaut Lake as a warmwater/coolwater fishery using [Commonwealth Inland Waters](#) regulations. Conneaut Lake is stocked with 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 Pennsylvania Fish and Boat Commission (PFBC) conducted a fish population survey at Conneaut Lake using trap nets to target Muskellunge and panfish and boat electrofishing to evaluate black bass species. The objectives of the survey were to evaluate the overall abundance

and size structure of warmwater and coolwater fish populations and determine if yearling Muskellunge stocking in Conneaut Lake is meeting the minimum criteria for producing a high-quality Muskellunge fishery as outlined in the PFBC's [Muskellunge Management Plan](#); Pennsylvania-style trap nets were used to sample the lake's Muskellunge and panfish populations. We returned in May to conduct a night-time boat electrofishing survey to sample the black bass populations.

Muskellunge and Panfish Trap Net Assessment

During the week of April 21st, 2025, staff from Fisheries Management Areas 1 & 2 completed 32 overnight sets of Pennsylvania-style trap nets totaling 741.83 hours of effort.



Fisheries Biologist Garrett Herigan with a Muskellunge captured from Conneaut Lake.

Muskellunge

Fifteen Muskellunge were captured during our trap net survey in 2025 ranging from 29 to 44 inches in length. Trap net catch per unit effort (CPUE), in 2025, was slightly lower than the 2019 survey but is still an improvement compared to surveys done in 2008 and 2012 (Table 1). PFBC began routinely stocking yearling Muskellunge (12-14 in. fish) in 2014, and it seems that this change to stocking strategy from fingerlings to yearlings has bolstered the Muskellunge population. This year's catch rates may have been negatively affected by dropping water temperatures at the beginning of our

survey, but even so, Muskellunge CPUE (fish/hour) exceeded the minimum catch rate objective for a quality fishery. Therefore, Muskellunge stocking will continue biannually at Conneaut Lake.

Table 1. Year, number, catch per unit effort (CPUE, fish/hour), and length of Muskellunge captured during five spring trap net survey between 2001 and 2025 at Conneaut Lake.

Year	Number	CPUE	Length Range (in.)
2001	4	0.02	35-43
2008	0	0.00	NA
2012	2	0.00	37-48
2019	14	0.03	28-41
2025	15	0.02	29-44



Fisheries Biologist Aide Joel Dean with an average-sized Bowfin captured in Conneaut Lake.

Panfish

A total of 3,266 fish across 20 different species were captured in trap nets, with panfish comprising 98% of total trap net catch (Table 2). The predominate panfish species captured were Bowfin, Yellow Bullhead, Brown Bullhead, Rock Bass, Pumpkinseed, Bluegill, Black Crappie, and Yellow Perch. Approximately 47% of Bluegills captured were greater than or equal to 6 inches in length, with 41 individuals reaching 8 inches long. The majority of Pumpkinseed captured (74%) were greater than or equal to 6 inches in length, with 22 individuals reaching 8-9 inches long. An astounding 95% of Black Crappie collected were of quality length (8 inches or larger), with 194 out of 392 captured fish measuring in at 10 inches long. Conneaut Lake offers an excellent opportunity

for Bowfin, with 44% of the catch being 20 inches or larger. There is also a strong population of Brown and Yellow bullheads. Most (91%) of Brown Bullheads captured were 12 inches or larger; with 33 individuals reaching 15-16 inches long. Almost two-thirds of Rock Bass captured were 7 inches or longer. Yellow Perch are present in Conneaut Lake at a much lower density than other panfish and most common length group captured was 3 inches long (40%).

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

Species	Number	Length Range (in.)
Longnose Gar	1	30
Bowfin	199	14-30
Common Carp	1	Not measured
Golden Shiner	15	Not measured
White Sucker	1	Not measured
Golden Redhorse	1	23
Silver Redhorse	10	24-29
Yellow Bullhead	81	2-14
Brown Bullhead	175	7-16
Northern Pike	21	20-32
Muskellunge	15	29-44
Rock Bass	69	2-10
Pumpkinseed	132	2-9
Bluegill	2,092	1-8
Warmouth	7	6-8
Smallmouth Bass	9	16-21
Largemouth Bass	5	14-18
Black Crappie	392	4-15
Yellow Perch	38	3-8
Walleye	2	23-24

Black Bass Night-Time Boat Electrofishing Assessment

PFBC staff returned to Conneaut Lake on the night of May 20th to evaluate the status of the black bass population via night-time boat electrofishing (NTBEF). Three runs totaling 1.5 hours of effort were conducted along accessible shoreline. Both Largemouth and Smallmouth bass were captured during our survey. A total of 105 Largemouth Bass were collected, ranging from 5 to 21 inches, with a total catch rate of 70 fish/hour. A total of 39 Smallmouth Bass were collected, ranging from 7 to 20 inches, with a total catch rate of 26 fish/hr. The total black bass CPUE was 96 fish/hr.

The Largemouth Bass and Smallmouth Bass populations have boomed in terms of total catch, catch greater than 12 inches, and catch greater than 15 inches (Figures 2 & 3) in recent years. Catch rates for black bass have essentially tripled in all three categories since the previous survey in 2021. The opportunity to catch black bass in Conneaut Lake has never been better, with the possibility of landing a 20-plus inch bass of either species.



Left: Fisheries Biologist Aide Isaak Jones with a Largemouth Bass; Right: Fisheries Biologist Garrett Herigan with a Smallmouth Bass from Conneaut Lake.

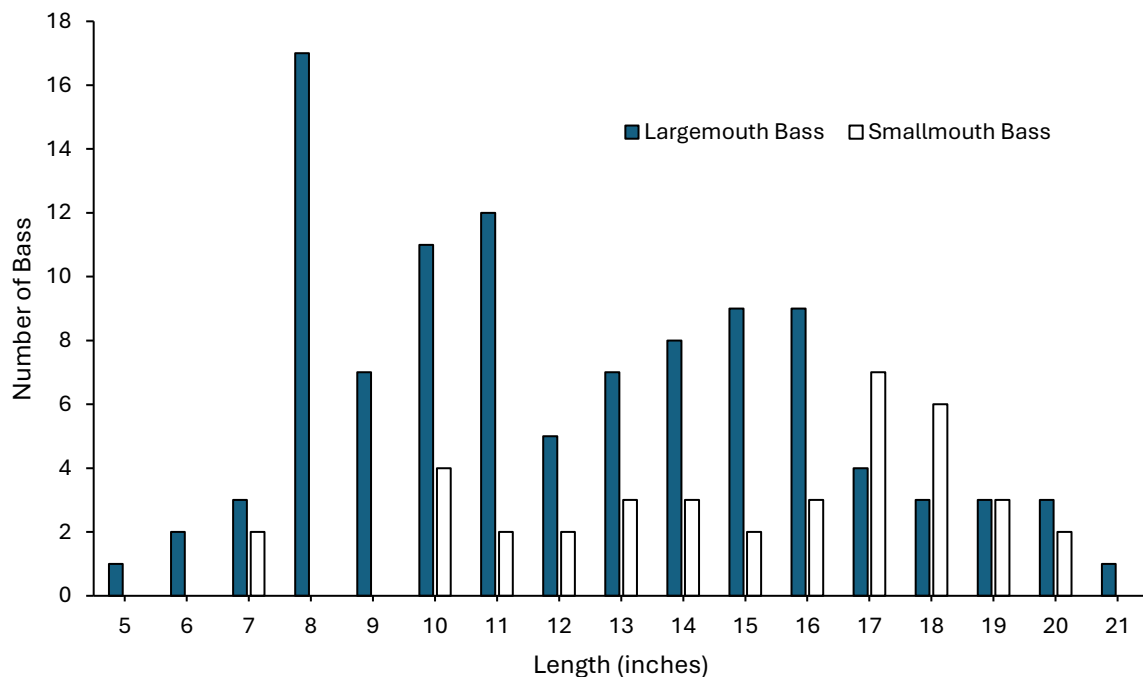


Figure 1. Length-frequency distribution of black bass from Conneaut Lake; Spring 2025.

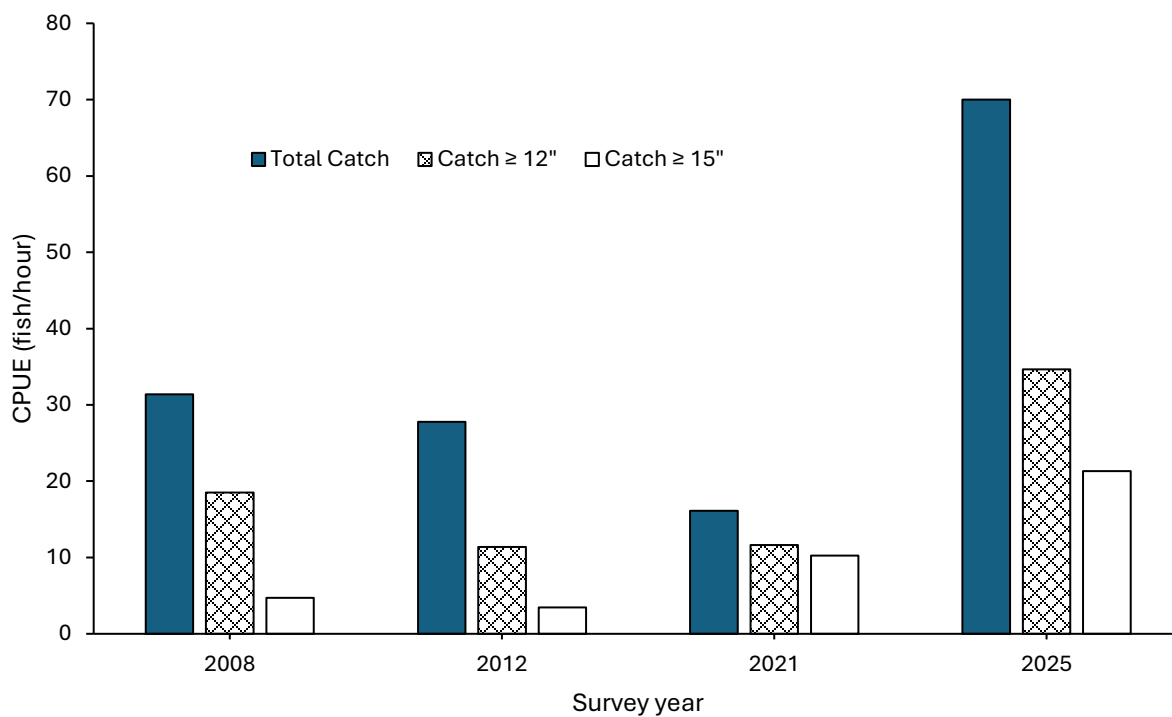


Figure 2. Largemouth Bass night-time boat electrofishing CPUE (fish/hour) at Conneaut Lake from 2008 to present.

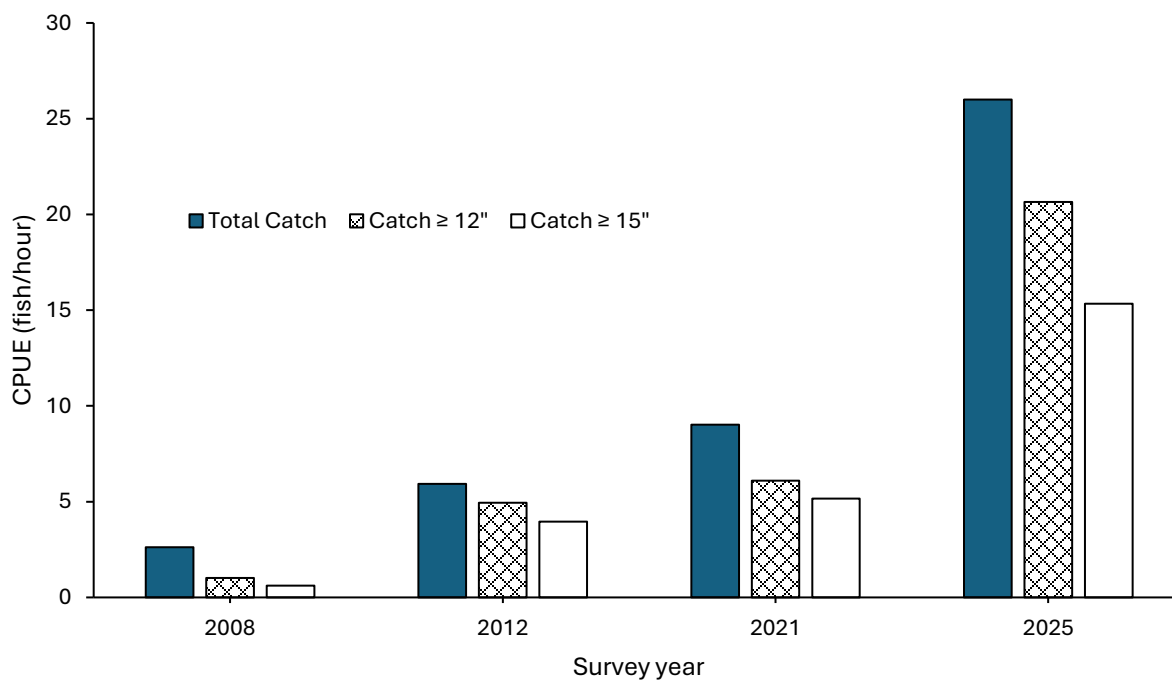


Figure 3. Smallmouth Bass night-time boat electrofishing CPUE (fish/hour) at Conneaut Lake from 2008 to present.



Two quality Black Crappies caught in trap nets on Conneaut Lake

Conclusion

Overall, Conneaut Lake supports several robust fish populations that offer excellent fishing opportunities. Muskellunge stockings are producing good numbers as well as sizable fish for anglers. Bluegills, Pumpkinseeds, Black Crappies, Bowfins, and bullheads are all abundant within Conneaut Lake with a high proportion at quality-length; creating a more than desirable panfish fishery. Additionally, the Largemouth and Smallmouth bass populations are at an all-time high, making Conneaut Lake worthy of a fishing trip.

Good Luck!

Fisheries Management Area 2