

Mauch Chunk Lake

Carbon County

2024 Trap netting and night electrofishing surveys

Mauch Chunk Lake (330 acres), located in Carbon County, is open to the public for water-based recreation. Two launch ramps (Launch A GPS: 40.843610, -75.802340; Launch B GPS: 40.831004, -75.830069) are available, off Lentz Trail/East White Bear Drive, with associated parking facilities and amenities. Self-sustaining populations of panfish and black basses reside in the lake, managed under the Commonwealth Inland Waters and the Big Bass Program regulations, respectively.

Area 5 biologists used trap net and night-boat electrofishing surveys to evaluate the abundance and size distributions of the lake's fish populations. Sixteen overnight trap nets were set from April 16th to April 19th of 2024. Net leads were set directly onshore extending perpendicular to the shoreline into the lake, directing fish towards the lifting enclosure (pot) situated at depths varying from 4.0 ft to 15.5 ft. On June 9th, 2024, 11 single-pass night-boat electrofishing sites were sampled. Sites consisted of 10-minute shoreline transects, encompassing a total of 2.4 miles (38%) of shoreline. All fish were enumerated by species, measured (total length), and released.

2024 Trap Netting

A total of 765 fish were captured using trap nets representing 12 different species (Table 1). Bluegill (N = 313), Black Crappie (N = 261), Yellow Bullhead (N = 66), and Pumpkinseed (N = 37) were most abundant. Brown Bullhead, Chain Pickerel, Golden Shiner, Green Sunfish, Largemouth Bass, White Sucker, and Yellow Perch were observed infrequently (N ≤ 30).

Bluegill sizes varied from 2-10 inches; mostly (84%) comprised of 7-8-inch fish with 94% of captured Bluegills at or above quality length (≥ 6-inch; Table 3). The length of captured Black Crappies varied from 6-12 inches with majority of fish (81%) residing in the 9-inch and 10-inch length classes. Yellow Bullheads between 7-inch and 13-inch length classes were observed with the majority (61%) of them being from the 10-inch to 11-inch length classes. Captured Pumpkinseeds were primarily (57%) 8 inches long.

2024 Night-boat Electrofishing

The 2024 night-boat electrofishing surveys collected a total catch of 420 individuals representing 10 different species (Table 2). Bluegill (N = 207), Largemouth Bass (N = 53), and Green Sunfish (N = 34) were most abundant species. Banded Killifish, Chain Pickerel, Golden Shiner, Pumpkinseed, Yellow Bullhead, and Yellow Perch were observed infrequently (N ≤ 30). The majority (55%) of captured Largemouth Bass were between 4 and 7 inches with another length-class at 13 inches representing 13% of the total catch. Captured Bluegills were primarily (61%) between 4-5 inches. Thirty-four Green Sunfish were captured, 70% of them were between 5 and 7 inches.

Largemouth Bass Monitoring Time-series Trends

The relative abundance of Largemouth Bass is best reflected by the catch rate using night-boat electrofishing (Figures 1 and 2). Since 2016, catch rates have been relatively stable with an apparent decline for the 2024 season. Yet, the broad confidence intervals in any given year are not suggestive of a significant change to the black bass relative abundance within the lake. Thus, the Largemouth Bass population is considered stable. Interestingly, occurrences of big bass (i.e., ≥ 15-inches) represented 5.6% of the 2024 season total catch. Maintenance stocking of Golden Shiners was initiated in 2023 to broaden the lake's forage base to reduce competition among bass. It is still too soon to evaluate if this effort is positively influencing bass size distribution. Maintenance stockings of Golden Shiners are anticipated to continue through the 2025 season.

Conclusion

Panfish and bass populations appear stable within Mauch Chunk Lake. The Commission remains hopeful the continued maintenance stocking of forage fishes into the lake will reduce resource competition, bolstering the Largemouth Bass abundance and improve size distribution. Yet, anglers can anticipate a pleasant fishing experience with the present-day fish populations.

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Table 3. Length-frequency distribution by species of fish captured using trap nets at Mauch Chunk Lake, April 2024.

Length (in)	Species											
	Golden Shiner	White Sucker	Yellow Bullhead	Brown Bullhead	Chain Pickerel	Lepomis hybrids	Green Sunfish	Pumpkinseed	Bluegill	Largemouth Bass	Black Crappie	Yellow Perch
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	6	0	0	0
3	0	0	0	0	0	0	1	0	0	0	0	0
4	0	0	0	0	0	0	1	0	6	0	0	0
5	0	1	0	0	0	0	0	1	7	0	1	0
6	0	0	1	0	0	4	0	7	23	0	12	0
7	1	0	3	0	0	0	0	21	80	0	20	2
8	9	0	11	2	0	0	0	8	184	0	126	3
9	3	0	19	2	0	0	0	0	5	0	86	10
10	0	0	21	2	0	0	0	0	2	0	15	14
11	0	0	6	6	0	0	0	0	0	0	1	1
12	0	0	5	3	0	0	0	0	0	2	0	0
13	0	0	0	4	2	0	0	0	0	0	0	0
14	0	0	0	2	1	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	1	0	0
16	0	0	0	0	2	0	0	0	0	1	0	0
17	0	0	0	0	1	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	1	0	0	0	0	0	0	0
20	0	0	0	0	2	0	0	0	0	0	0	0
21	0	0	0	0	1	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	1	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	2	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
Total	13	1	66	21	13	4	2	43	313	4	261	30

Table 4. Length-frequency distribution by species of fish captured during night-boat electrofishing at Mauch Chunk Lake, June 2024

Length (in)	Species									
	Golden Shiner	Yellow Bullhead	Chain Pickerel	Banded Killifish	Lepomis hybrids	Green Sunfish	Pumpkinseed	Bluegill	Largemouth Bass	Yellow Perch
1	0	0	0	0	0	1	0	0	0	0
2	0	0	0	0	1	1	0	8	0	0
3	0	0	0	1	6	3	1	31	1	0
4	0	0	0	0	9	4	2	90	8	1
5	0	0	0	0	12	9	3	36	6	16
6	0	2	0	0	9	6	1	18	5	2
7	0	2	0	0	6	9	4	18	10	6
8	0	0	0	0	0	0	0	0	0	0
9	0	3	0	0	3	0	9	6	1	0
10	1	3	0	0	0	0	2	0	3	0
11	0	6	0	0	0	0	0	0	1	0
12	0	4	0	0	0	0	0	0	5	0
13	0	1	0	0	0	0	0	0	7	1
14	0	0	3	0	0	0	0	0	3	0
15	0	0	1	0	0	0	0	0	1	0
16	0	0	2	0	0	0	0	0	1	0
17	0	0	2	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	1	0
21	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0
26	0	0	1	0	0	0	0	0	0	0
Total	1	21	9	1	46	34	22	207	53	26

Figure 1. Annual mean Largemouth Bass catch rates (fish/h) and associated 95% confidence intervals by trap net (TN) and night-boat electrofishing (NBE) surveys.

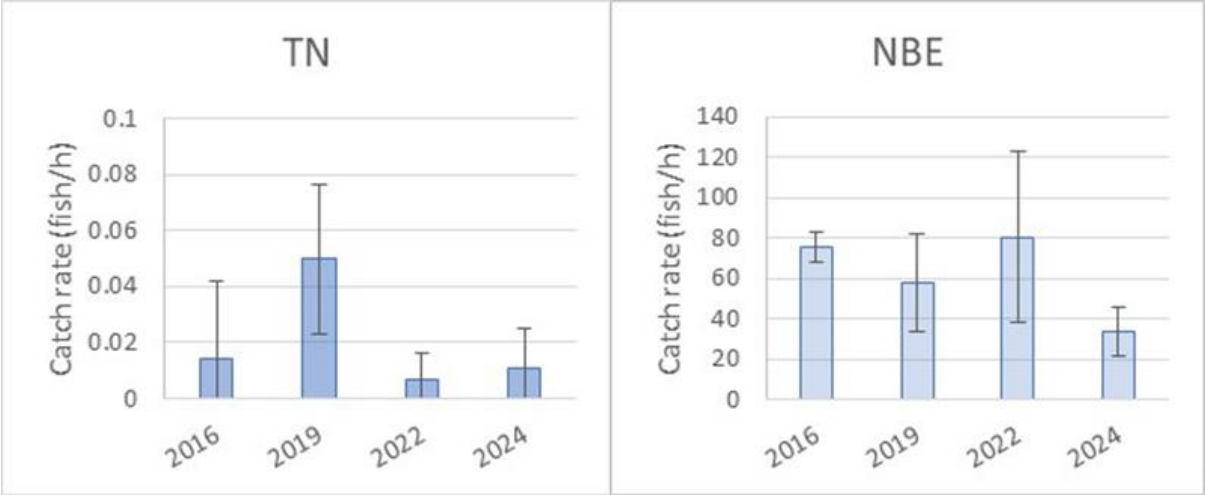


Figure 2. Length-frequency distribution of Largemouth Bass captured by night-boat electrofishing. The dark grey bar is representative of the 15-inch minimum length limit associated with Big Bass regulation.

