

Shenango River Lake

Mercer County

2023 Lake Survey



A 29-inch Hybrid Striped Bass from Shenango River Lake

Fisheries Management Area 1 conducted a trap netting and night electrofishing survey on Shenango River Lake in spring of 2023 to assess fish populations including crappie, bass, and other species. The trap net survey ran from April 17–27, 2023. Night electrofishing, targeting black bass, took place from May 30 – June 1, 2023.

Since 2019, Shenango River Lake has been managed under Panfish Enhancement Regulations for crappie. A minimum size limit of 9 inches and a daily limit of 20 crappie is enforced. Crappie numbers were lower in the 2023 trap net survey than in past surveys (Figure 1). Black Crappie size structure improved, with over 51% of the population measuring greater than the legal size of 9 inches (Figure 2; Figure 3). The majority of the White Crappie population remained over the legal size limit, and several trophy-sized individuals from 13-15 inches were captured.

Figure 1: Crappie catch per trap net hour from 1990 to 2023 in Shenango River Lake.

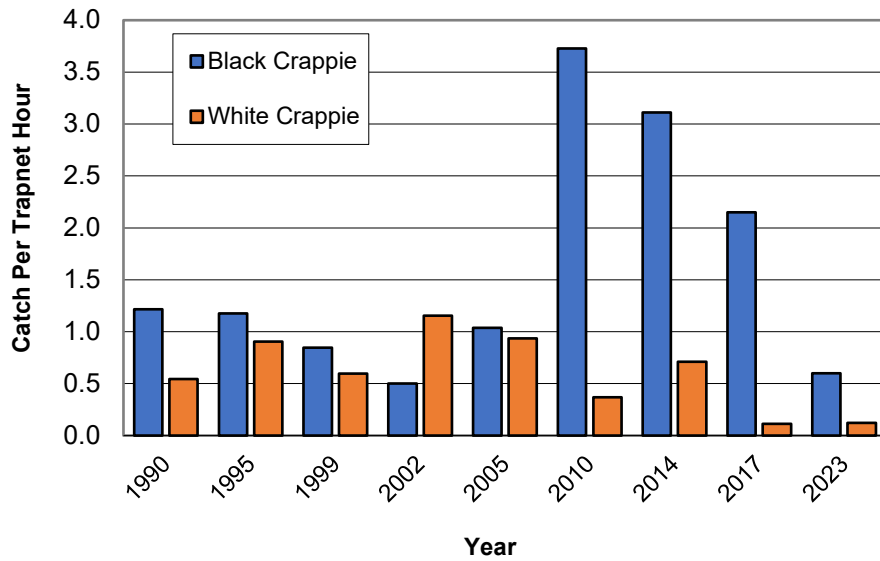


Figure 2: Size distribution of crappie from Shenango River Lake in spring 2023.

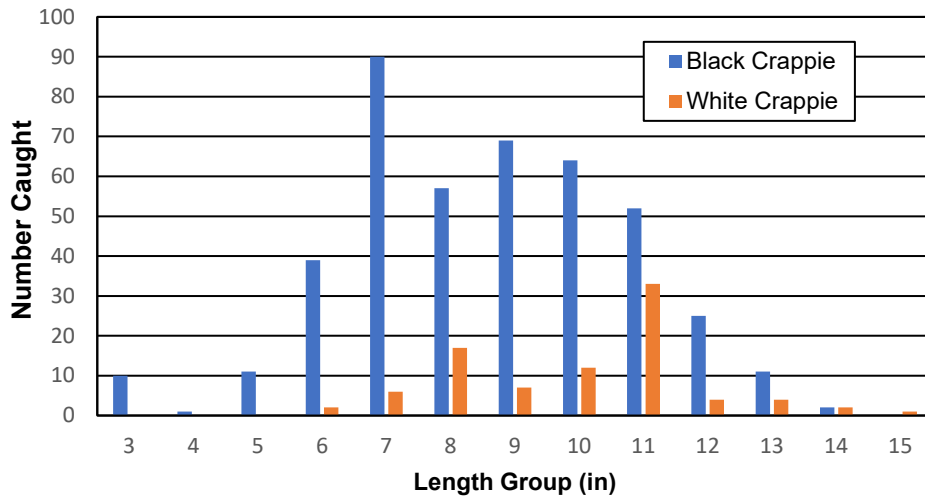
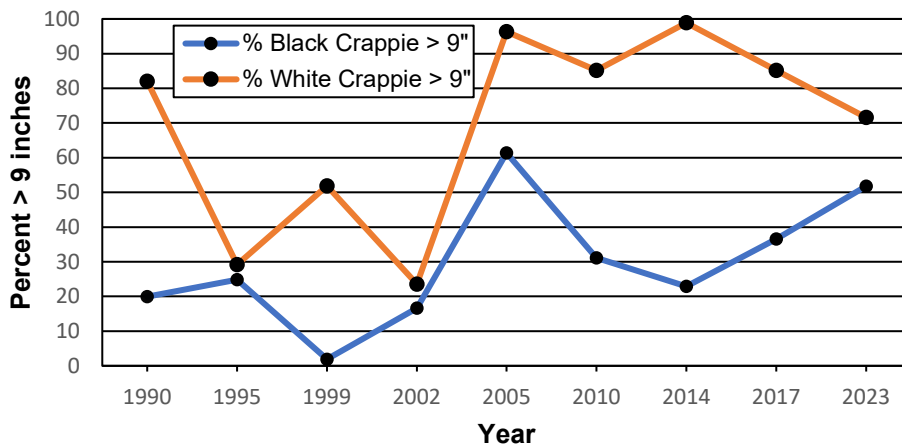


Figure 3: Proportion of crappie greater than 9 inches from Shenango River Lake, 1990-2023.





Area Fisheries Manager Tim Wilson with quality White Crappie from Shenango River Lake

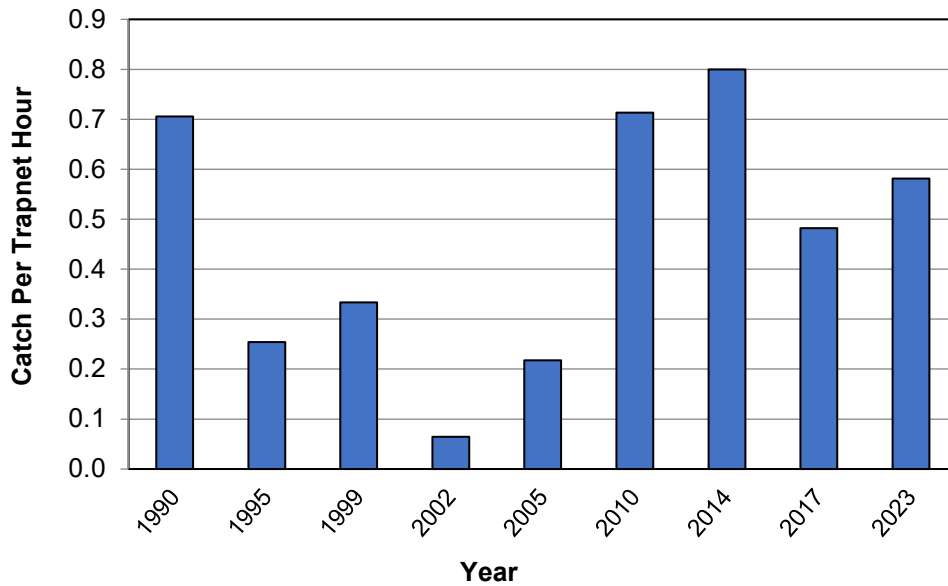
While Black Crappie catch per hour was down in spring 2023, a good proportion of the population is available for anglers to harvest (greater than 9 inches). Many of the Black Crappie in the 7-inch size group (Figure 2) should grow large enough for anglers to harvest in 2024 or 2025, as past surveys have indicated average growth rates in Shenango River Lake Black Crappie.

Table 1: Game fish species caught in trap net survey of Shenango River Lake, 2023.

Species	Number Caught	Average Size (in)	Largest Size (in)
Black Crappie	431	8.5	14
White Crappie	88	9.8	15
Bluegill	418	5.4	8
Yellow Perch	23	6.6	12
Channel Catfish	1102	18.9	30
Flathead Catfish	8	40.5	43
White Bass	96	10.6	16
Hybrid Striped Bass	2	21.2	29
Walleye	11	23	26
Northern Pike	31	27.4	35
Muskellunge	3	35.1	36

Bluegill catch per trap net hour increased from 2017 to 2023 (Figure 4), but only 15% of Bluegill caught were greater than 7 inches in length.

Figure 4: Bluegill catch per trap net hour from 1990 to 2023 in Shenango River Lake.



Extremely high numbers of Channel Catfish present a great opportunity to catch large and hard fighting fish, with many trophy-sized fish from 25-30 inches long available. Shenango River Lake also holds modest numbers of Northern Pike, with large specimens up to 35 inches present. While Muskellunge have not been stocked since 2013, a few individuals are still found. Walleye numbers were relatively low, despite annual stockings. Flathead Catfish were first discovered in Shenango River Lake in 2014. Like in 2017, several adult Flathead Catfish were captured in the spring 2023 trap net survey. Since only large adults were captured, it is unclear whether this species is reproducing successfully, or what effect a population of Flathead Catfish may have on the other fish populations of Shenango River Lake.



A large Flathead Catfish from Shenango River Lake

While White Bass catch increased in 2023, only 2 Hybrid Striped Bass were captured. However, past experiences indicate that our trap nets do not catch large numbers of Hybrid Striped Bass, even when numbers support a productive fishery. Our goal is to stock 17,800 fingerlings every year (5 per acre). In recent years, decreased fingerling availability from our out-of-state sources has led to reduced or missed stocking events in 2017, 2018, 2022 and 2023 and likely contributed to the reduced catch of Hybrid Striped Bass in 2023.

Table 2: Stocking history for Hybrid Striped Bass fingerlings in Shenango River Lake since 2010.

Year	Number Stocked
2023	2,000
2022	0
2021	17,800
2020	11,000
2019	17,800
2018	8,900
2017	0
2016	26,700
2015	35,660
2014	17,800
2013	11,352
2012	4,998
2011	17,800
2010	6,390

Table 3: Other fish species caught in trap net survey of Shenango River Lake, 2023.

Species	Number Caught	Species	Number Caught
Pumpkinseed	9	Gizzard Shad	113
Brown Bullhead	116	Spottail Shiner	231
Yellow Bullhead	35	Alewife	12
Common Carp	250	Golden Shiner	30
Golden Redhorse	120	Emerald Shiner	1
Spotted Sucker	7	Quillback	851

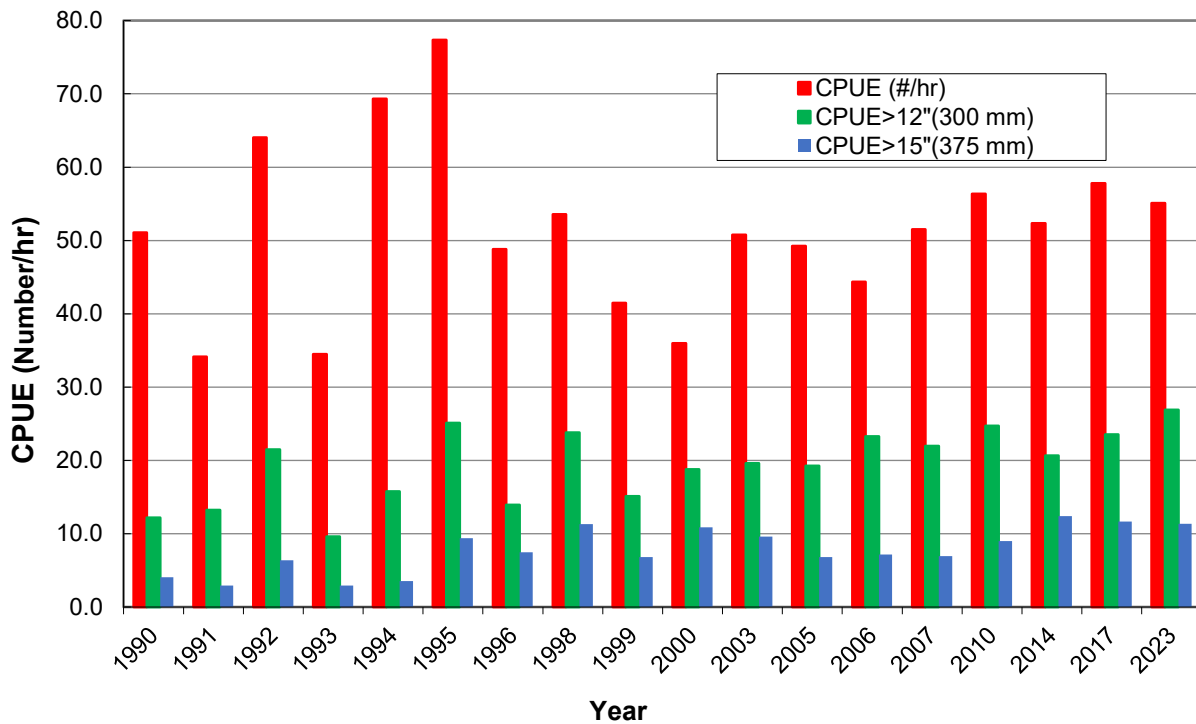
Other panfish available in Shenango River Lake include Brown and Yellow Bullhead, which are found in good size and number. A variety of baitfish including Gizzard Shad, Spottail Shiner, and other species provide a diverse forage base for the predators in the lake. The Alewife was first found in Shenango River Lake in 2017 and appears to have established a small population.



Tim Wilson and Fisheries Biologist Aide Reed Coulson with a pair of quality Largemouth Bass

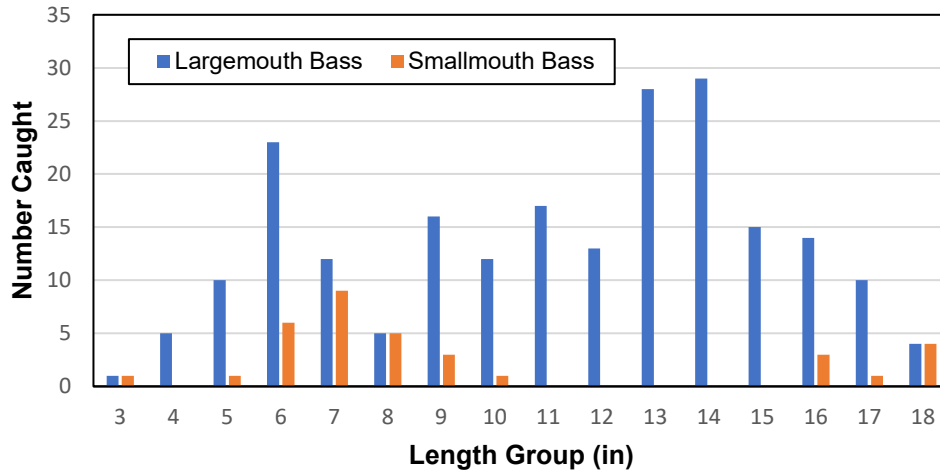
Shenango River Lake has been managed under Big Bass Regulations since 1991. Bass populations have remained very steady since then, with a gradual trend in growth for both numbers and size since 2000 (Figure 5).

Figure 5: Night electrofishing catch rates for all black bass species from Shenango River Lake.



In total, 214 Largemouth Bass and 34 Smallmouth Bass were captured during the spring 2023 night electrofishing survey. Size structure of the bass population is excellent, with many quality-sized individuals of both species present (Figure 6). The average length of Largemouth Bass was 11.1 inches, and the longest individual was 18 inches. The average length of Smallmouth Bass was 9.3 inches, and the longest individual was 18 inches.

Figure 6: Size distribution of black bass species from Shenango River Lake in spring 2023.



Fisheries Management Area 1