

Leaser Lake

Lehigh County

2021 Fishery Restoration Update/2022 Management Changes

[Leaser Lake](#) is a 117-acre impoundment located in Lynn Township, Lehigh County, that has been managed with miscellaneous special regulations following dam renovations and subsequent refilling in 2015. This regulation was applied to promote the development of fish populations and the associated fishery by prohibiting the harvest of all coolwater and warmwater fish species to allow fish to grow, mature and become self-sustaining. Additionally, the rules served to protect game fish populations maintained by an annual stocking of juveniles to allow for adequate growth and development of a population size structure desired by anglers. Leaser Lake has been routinely monitored since completion of the dam renovation project to evaluate development of its fish populations. During 2021, biologists from the Pennsylvania Fish and Boat Commission's Area 6 fisheries management office conducted a trap-net survey in early spring and nighttime boat electrofishing survey in late spring at Leaser Lake.



View of Leaser Lake from the north boat ramp.

Trap Net Survey

Eight Pennsylvania-style trap nets were set during April 19-21, 2021 at depths ranging from 3 to 12 feet and allowed to fish overnight. The target species of this survey were Black Crappies, Bluegills, Brown Bullheads, Pumpkinseeds, White Crappies, and Yellow Perch; however, all fish encountered were counted, measured, and released alive.

Table 1. Summary of fish species collected from Leaser Lake on April 19-21, 2021.

Species	Number Caught	Size Range (inches)
Black Crappie	15	7 – 12
White Crappie	25	7 – 14
Yellow Perch	39	6 – 11
Bluegill	318	3 – 7
Pumpkinseed	1	5
Brown Bullhead	39	11 – 15
Chain Pickerel	5	16 – 25
Channel Catfish	1	21
Hybrid Sunfish	5	6 – 7
Walleye	1	23

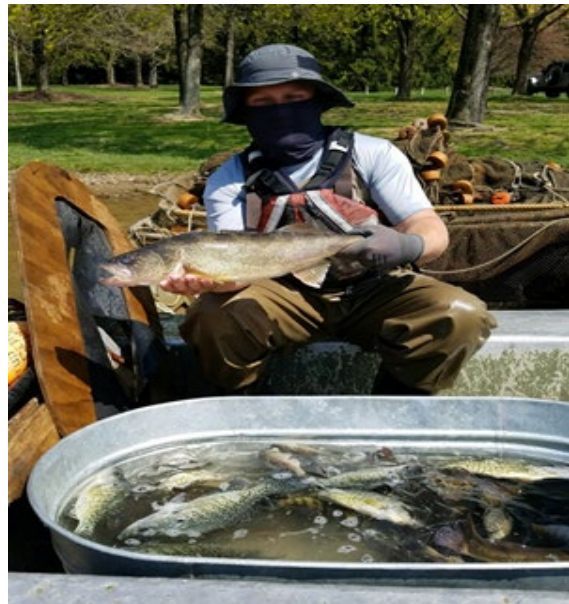
A total of 449 fish comprised of ten fish species were captured during trap netting efforts. Panfishes (Black Crappies, Bluegills, hybrid sunfish, Pumpkinseeds, White Crappies, and Yellow Perch) dominated (89.8%) the total catch. Bluegills were the most abundant species captured in trap nets and comprised 71% of the total catch. However, most (94%) Bluegills were of intermediate sizes (5 – 7 in), with few fish exceeding 7 in. Age data attained from scales suggest this population is growing slower than the statewide average and may explain why few Bluegills are growing to larger sizes in this population.

Black Crappies, White Crappies, and Yellow Perch were collected at lower abundances than Bluegills. However, individuals of these species grew at rates faster than the statewide average and reached larger sizes. Crappie and Yellow Perch populations can sometimes experience failed reproductive events that can lead to year class failure, but age data suggest that natural reproduction has occurred annually for these species. Consistent recruitment (fish transitioning from juveniles to adults) from these spawning events will ensure persistence of these popular fisheries.



Two White Crappies collected during the trap-net evaluation.

The species other than panfish encountered during this survey included, Brown Bullheads, Chain Pickerel, Channel Catfish, and Walleye. Besides Brown Bullheads, the other species were captured in low abundance. The catch rate of Brown Bullheads was 0.19 fish/hr, which exceeds the statewide average of 0.15 fish/hr, and most of these fish exceeded 12 in. Numerous quality-sized Brown Bullheads should provide anglers with additional fishing opportunities.



Two quality-sized Brown Bullheads and the lone Walleye collected during Leaser Lake spring trap netting.

Nighttime Boat Electrofishing Survey

Nighttime boat electrofishing was conducted on May 25, 2021 when 5 shoreline transects totaling 75 minutes of effort were completed. Largemouth Bass were the target species of this evaluation; however, tiger muskellunge were also collected. A total of 118 Largemouth Bass ranging 3 to 19.1 inches were captured during this survey (Figure 1). This equates to a total catch rate of 94.4 fish/hr, which is slightly lower than the catch rate observed during the fall 2020 survey (Figure 2). However, the difference in catch rates is likely due to young-of-the-year being captured in the fall 2020 survey. The observation of young-of-the-year fish in the 2020 sample was promising, since reproduction appeared limited in previous surveys and a stocking of fingerlings occurred in 2019 to bolster the population. The catch rate of Largemouth Bass exceeding 12 in and 15 in was 17.6 fish/hr and 10.4 fish/hr, respectively, which nearly doubled the 2018 and 2020 catch rates (Figure 2).

Largemouth Bass growth rates in Leaser Lake are slightly faster than the statewide average, suggesting that the growth potential exists for producing a high-quality fishery. This is evident in the catch rate of large fish in this year's sample that includes three fish greater than 19 in , which were the largest fish collected during a directed bass survey since Leaser Lake was refilled (with the exception of one Largemouth Bass exceeding 20 in that was captured last fall while sampling for tiger muskellunge).

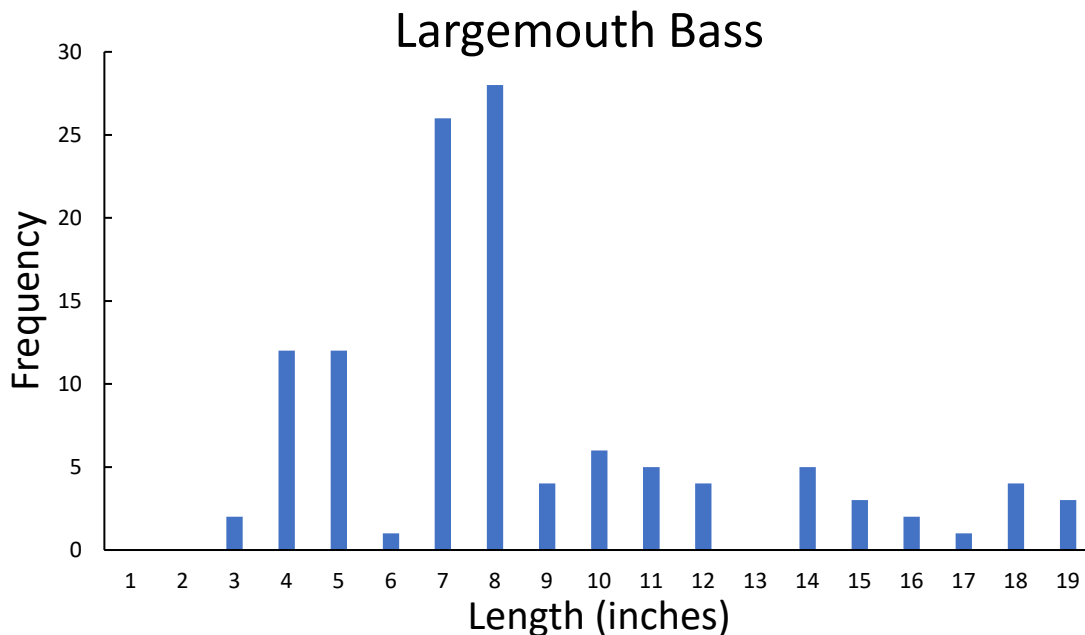


Figure 1. Length frequency distribution of Largemouth Bass captured during the May 25, 2021 electrofishing survey.

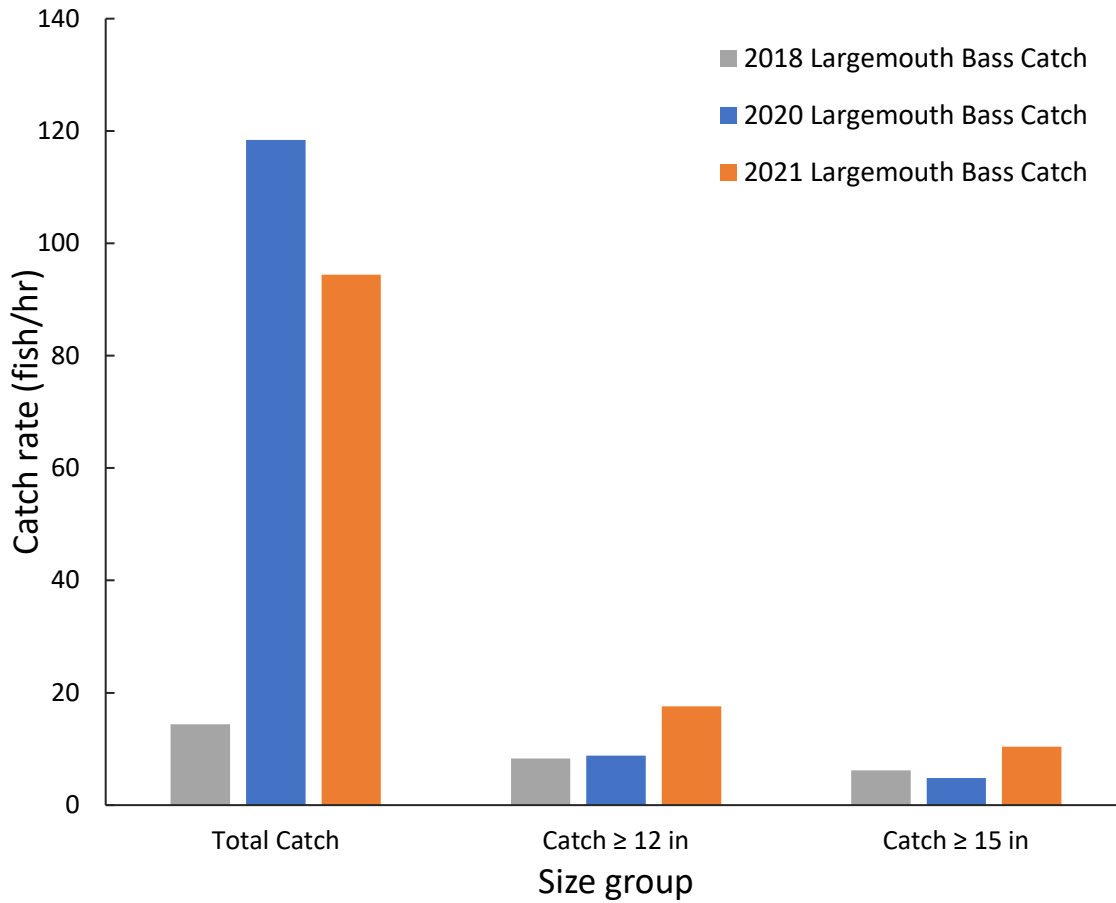


Figure 2. Catch rates of Largemouth Bass collected from Leaser Lake during 2018, 2020, and 2021 surveys.

Three adult tiger muskellunge were collected during the 2021 electrofishing survey that ranged in size from 33 to 37 in. Additionally, several adult tiger muskellunge were observed, but avoided capture. These encounters with adult fish suggest that anglers should continue to have success when targeting tiger muskellunge. However, few small tiger muskellunge and no pure Muskellunge have been captured during the last several surveys at Leaser Lake, despite stocking these species at equal rates since 2016. Therefore, a change to stocking only tiger muskellunge was made in 2021 in attempt to maintain this very popular fishery.

2022 Regulation Changes

The following represent changes to the Leaser Lake fishing regulations beginning January 1, 2022:

- Leaser Lake was added to the [Panfish Enhancement Special Regulations Program](#) for crappies (Black and White Crappies) and Yellow Perch. The creel limit for each species is 20 per day with a minimum size limit of 9 in.
- The Leaser Lake black bass population will be managed under the [Big Bass Program](#) Special Regulations, which allows a 4 fish per day creel limit with a 15 in minimum size limit.
- All other species will be managed under [Commonwealth Inland Regulations](#).
- Due to the popularity of the coolwater and warmwater fisheries, as well as the stocked trout fishing opportunities, Leaser Lake was added to the [Stocked Trout Waters Open to Year-Round Fishing Program](#).

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