

Leaser Lake

Lehigh County

Fishery Restoration Update

[Leaser Lake](#), a 117-acre impoundment owned by the Pennsylvania Fish and Boat Commission (PFBC), is located in Lynn Township, Lehigh County, approximately 20 miles west-northwest of Allentown. The dam impounds two unnamed tributaries to Ontelaunee Creek. The PFBC completely dewatered the lake in 2008-2009 to make dam and spillway repairs and modifications per Pennsylvania Department of Environmental Protection Dam Safety standards. Following completion of the repairs and modifications, as well as construction of numerous habitat enhancement devices ([Leaser Lake Habitat Plan](#)), the impoundment was nearly completely refilled by spring of 2013. When it was then determined that additional repairs were needed to the dam, the lake was partially drained by 20 vertical feet in late summer, 2014 and fully refilled in 2015.



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Aerial photo of Leaser Lake, Lehigh County.

The Commission resumed annual adult trout stocking during spring, 2013 to provide immediate angling opportunities for stocked trout. Upon near-refilling of the lake, the Commission opened the lake to fishing under a miscellaneous special regulation that allowed for the harvest of trout under Commonwealth inland seasons, sizes, and creel limits, but allowed only catch-and-release fishing for all other fish species.

Initial stockings of fingerling warmwater and coolwater species began in 2013 and, depending upon the species, were terminated or continued through 2017. Stockings included Bluegill, Brown Bullhead, Chain Pickerel, Channel Catfish, Largemouth Bass, Muskellunge, Tiger Muskellunge, Walleye, White Crappie and Yellow Perch, as well as forage species (see Tables 1-4). This report summarizes post-stocking survey findings and the angling opportunities to come at Leaser Lake.

Following initial stocking of warmwater and coolwater fish cursory fish population surveys or “check-ups,” were conducted with various sampling gear types, including seines and backpack electrofishers to examine near-shore areas for forage and evidence of reproductive success, as well as boat electrofishing and trap netting to examine the early growth, survival, and early abundance. These very limited surveys occurred from 2013-2016, and served to guide stocking programs.

A more comprehensive electrofishing survey was conducted on June 9, 2016 to evaluate the stocking success and fisheries development of Leaser Lake. The electrofishing survey was complemented with a smaller scale trap-net survey. Nighttime boat electrofishing was conducted along the northern and southern shorelines, primarily targeting Largemouth Bass. All bass captured were measured for total length and released. The relative abundance of bass was determined using catch per hour of electrofishing effort for total catch, bass ≥ 12 inches, and bass ≥ 15 inches.

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Largemouth Bass electrofishing catch rates were good at Leaser Lake in 2016. A total of 39 bass were captured, ranging from 4 to 17 inches in length. The catch rates of bass ≥ 12 inches and ≥ 15 inches already exceeded the average catch rates for southeastern Pennsylvania lakes and, as another reference, the statewide objectives for the [Big Bass Program](#) (see Figure 1). The Leaser Lake total catch rate of bass was slightly above the statewide objectives for the Big Bass Program, but fell below the southeastern Pennsylvania lake average. The relatively low total catch rate in comparison to the catch rate of bass ≥ 12 inches and ≥ 15 inches was due to limited or no reproduction of bass to that point. Largemouth Bass reproduction was first observed in 2016 during a shallow shoreline backpack electrofishing survey. The size structure of the Largemouth Bass population at Leaser Lake should continue to broaden and provide excellent bass angling opportunities.

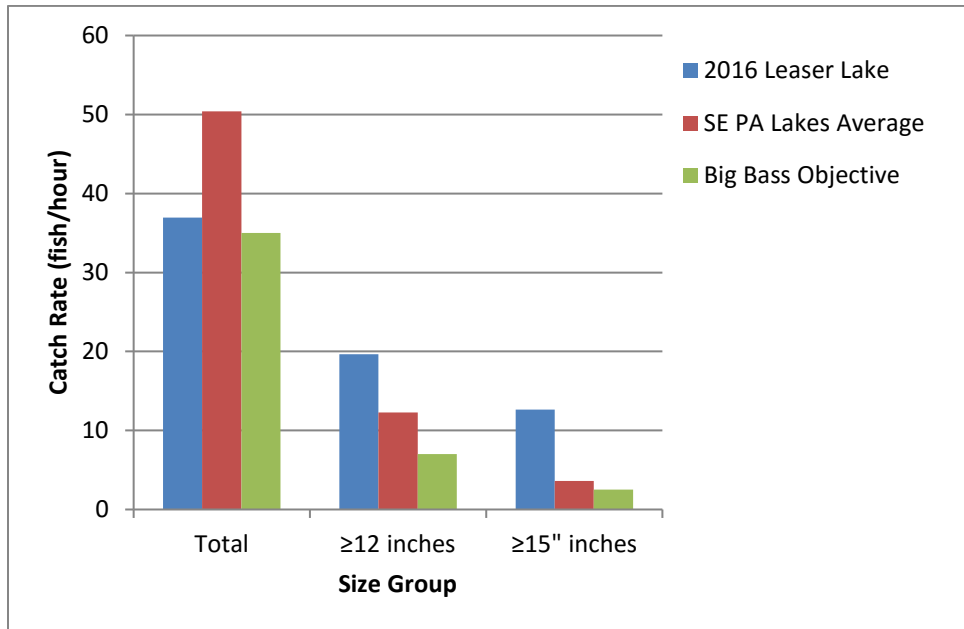


Figure 1. Catch rates of Largemouth Bass collected in Leaser Lake on June 9, 2016 compared to average catch rates for southeastern Pennsylvania lakes and statewide catch rate objectives for the Big Bass Program.

Several reports strongly suggested better than average survival and growth rates of very small Tiger Muskellunge fingerlings stocked in 2013 due to a lack of predators and a

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substantial forage base for young, smaller fish. Anglers reported catching numerous Tiger Muskellunge up to 36 inches relatively quickly, however, the condition (plumpness) of many fish caught was poor, indicating a temporary shortage of larger forage fish in this newly reclaimed impoundment. The 2016-night electrofishing and 2016 three net trap surveys combined yielded ten Tiger Muskellunge that ranged from 22-33 inches in lengths, all from the single 2013 stocking. Catch rates were well above minimum statewide standards.

Chain Pickerel up to 21 inches were caught by anglers and seen in surveys. Not only had Chain Pickerel been stocked, but some had survived in the stream or small historical ponds or quarries that remained filled with water during the drawdowns.

No Channel Catfish were captured during the initial monitoring surveys of Leaser Lake. Consequently, following the effort expended by Blue Mountain High School students and their teacher in construction and installation of 60 Channel Catfish spawning boxes, the PFBC stocked 109 Channel Catfish adults in fall, 2016 to more quickly initiate utilization of the spawning boxes and potentially develop a fishery supported through reproduction rather than stocking. Subsequent surveys will target Channel Catfish to determine population levels and if natural reproduction is occurring. In contrast, stocking of Brown Bullhead fingerlings was successful, as 21 fish between 11 and 13 inches were captured during the three-net trap net survey. It is expected that Brown Bullhead will spawn successfully in Leaser Lake as in the past.

White Crappie were favored for stocking over Black Crappie due to poor Black Crappie survival in the past and relatively poor crappie fishing that existed. Sixty-Seven White Crappie between 10 and 13 inches were captured during the trap net survey as well as five Black Crappie from an unknown source(s).

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Adult Yellow Perch were also present in low numbers with fish captured in the trap nets that were up to 12 inches long. Given the number of three to five-inch Yellow Perch captured in trap nets and by electrofishing, it appeared that there was successful survival of Yellow Perch stocked in 2015 as well as good reproductive success in 2015 or 2016. With the early June timing of the trap net survey the overall abundance and size structure of the Yellow Perch population was difficult to ascertain since Yellow Perch are most vulnerable to trap-net gear during the early spring.

Bluegills were relatively abundant, with some exceeding eight inches in length. Exceptionally good reproduction of Bluegill was documented, and no further stocking of Bluegill will be necessary. Also, small populations of Pumpkinseed and Green Sunfish survived the drawdown and persisted through natural reproduction.

Forage fish present at Leaser Lake included Banded Killifish, Creek Chubsuckers, Golden Shiners and Spotfin Shiners. Banded Killifish and Creek Chubsuckers persisted during the drawdown period with population abundance increasing in the absence of predators and ideal “new lake” near-shore habitat. Creek Chubsuckers were assumed to be extirpated due to their absence in numerous fish population surveys conducted since the lake’s construction in the 1970’s. It is speculated that a small population survived in a tributary and reproduced exceptionally well in the “new lake” environment. Spotfin Shiners were seined from Blue Marsh Reservoir and stocked into the lake during the summers of 2013 and 2015 with the idea of developing a reproducing population. Golden Shiners were established through an initial stocking of 23,400 fingerlings in 2013. They should reproduce as well. The surveys indicated the lake contains adequate forage to support healthy gamefish populations.



A quality size Largemouth Bass caught from Leaser Lake in 2016.

If you plan on fishing Leaser Lake, please be advised that only electric powered motors are permitted. All species except trout are currently being managed under immediate catch and release regulations. Anglers pursuing bass should target the southern shoreline, dam breast and the abundant wood cover along most of the shoreline. The extended drawdown allowed terrestrial woody vegetation to become established along the exposed shores. While advantageous to the establishment of a quality fishery, this makes fishing a bit more of a challenge especially from shore. Open areas are present, however, and shoreline fishing occurs.

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Tiger Muskellunge fishing is exceptionally good, at least for the time being, and Chain Pickerel fishing should be good now or in the near future. Those pursuing Tiger Muskellunge or Muskellunge should be prepared with the appropriate landing nets and pliers to quickly and effectively release the fish, as they are easily stressed and killed due to poor handling techniques.

Table 1.		
Year	Species	Quantity
2013	Brown Bullhead	4744
2013	Chain Pickerel	418
2013	Channel Catfish	2400
2013	Golden Shiner	23400
2013	Largemouth Bass	1700
2013	Tiger Muskellunge	1148
2013	White Crappie	5800
2013	Yellow Perch	5800

Table 3.		
Year	Species	Quantity
2015	Brown Bullhead	4332
2015	Chain Pickerel	733
2015	Channel Catfish	4800
2015	Largemouth Bass	2996
2015	Muskellunge	100
2015	Walleye	2900
2015	White Crappie	5800
2015	Yellow Perch	5800

Table 2.		
Year	Species	Quantity
2014	Bluegill	5000
2014	Brown Bullhead	1061
2014	Channel Catfish	1500
2014	Largemouth Bass	750
2014	White Crappie	2500
2014	Yellow Perch	2500

Table 4.		
Year	Species	Quantity
2016	Channel Catfish	4800
2016	Tiger Muskellunge	300
2016	Walleye	2900
2016	White Crappie	5800

Table 5.		
Year	Species	Quantity
2017	Tiger Muskellunge	125
2017	Muskellunge	125

Tables 1-4. PFBC Hatchery Warmwater/Coolwater fingerling stocking records for Leaser Lake, 2013-2017.

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