

Honeoye Lake Largemouth Bass Survey, 2021 (Survey #: 821008)
 Pete Austerman, Region 8 Fisheries 8/3/2022

Honeoye Lake is a 1,772 acre lake in Ontario County with a maximum depth of 30 feet. Most of the lake is shallow and well vegetated. The primary access point for fishing Honeoye Lake is the New York State Office of Parks Recreation and Historic Preservation (NYSOPRHP) boat launch on the lake’s south end. The Honeoye Lake largemouth bass population has provided anglers with high catch rates over the last 30 years. Night-time boat electrofishing was conducted in June 2021 to check the status of the largemouth bass population. A total of six all-fish and nine gamefish runs were conducted following the DEC black bass and sunfish sampling protocol (Brooking et al. 2018). This electrofishing survey is compared to similar surveys conducted in spring 2010 and spring 2020.

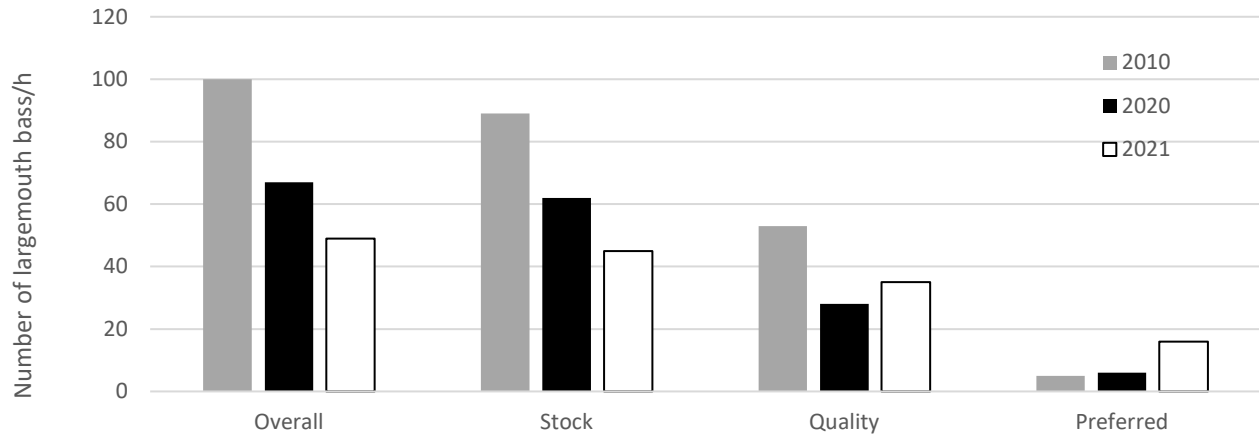
A total of 1,019 fish representing 14 species were collected during 5.2 hours of electrofishing. Largemouth bass were the most numerous species caught (25%) followed by black crappie (19%), yellow perch (9%), bluegill (8%), and pumpkinseed (7%) (Table 1). Catch rates for stock (≥ 8 in), quality (≥ 12), and preferred (≥ 15) largemouth bass were 45, 35, and 16, respectively (Figure 1).

Table 1. Total catch and catch per unit effort CPUE (fish/h) of selected gamefish and panfish species during nighttime, shoreline electrofishing on Honeoye Lake, June 2021.

Species	Total catch	CPUE (fish/h; Standard error)			
		All	\geq Stock	\geq Quality	\geq Preferred
Largemouth Bass	253	48.7 (7.7)	45.3 (2.3)	35.3 (3.9)	15.6 (2.2)
Smallmouth Bass	36	6.9 (1.6)	6.9 (0.7)	5.2 (0.6)	2.7 (0.7)
Black Crappie	195	37.6 (10.3)	37.2 (5.5)	24.7 (8.2)	3.5 (1.1)
Walleye	33	6.4 (1.2)	6.4 (0.5)	4.2 (0.8)	0.6 (0.4)
Bluegill	156	152.9 (65.9)	83.3 (13.4)	49.0 (12.9)	23.5 (9.0)
Pumpkinseed	87	85.3 (20.8)	79.4 (2.8)	68.6 (10.5)	27.5 (10.5)
Rock Bass	27	26.5 (5.0)	19.6 (2.8)	14.7 (3.2)	3.9 (2.9)
Yellow Perch	213	208.8 (77.5)	75.5 (4.6)	22.5 (2.4)	9.8 (3.3)

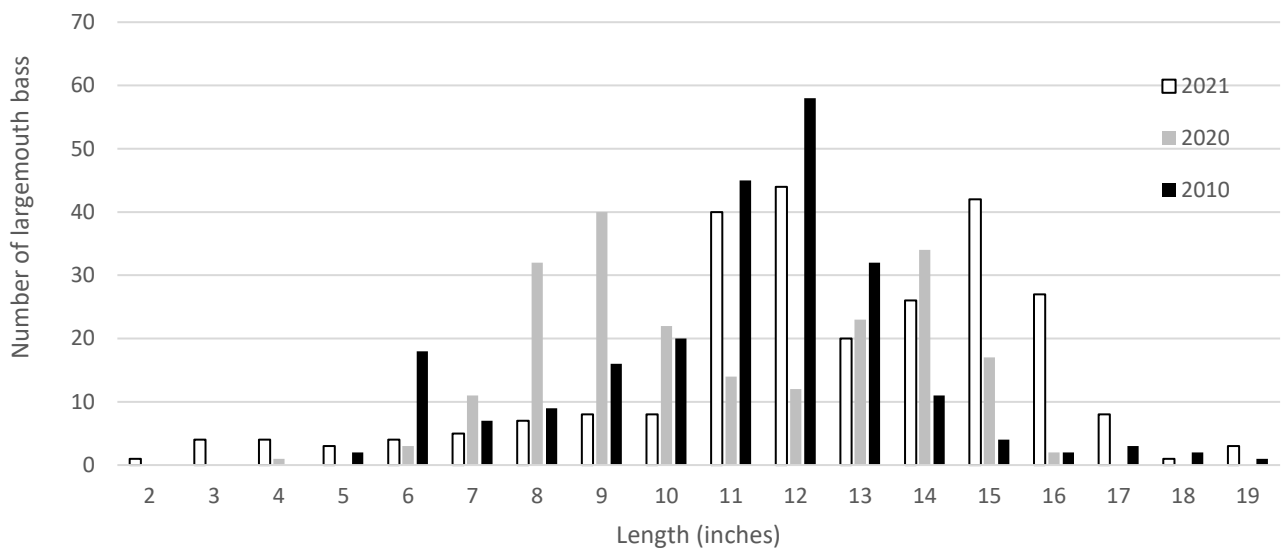


Figure 1. Largemouth bass electrofishing catch rates



The Honeoye Lake largemouth bass population is managed with the goals of providing high angler catch rates of quality size fish and maintaining high densities of stock and quality size fish to benefit panfish growth rates by controlling abundance of juvenile bluegills and pumpkinseeds. Largemouth bass catch rates were lower in 2021 compared to 2020 and 2010 for all fish (overall) and stock size fish. Although catch rates remain high on a statewide basis, the reduction in stock size largemouth bass is concerning because high densities are needed to achieve the goals mentioned above. Our 2017-18 winter creel survey estimated that 72% of legal size largemouth bass caught were harvested during that ice fishing season (Carson 2020). It is unclear if ice fishing harvest has been high enough to cause the recent decline in largemouth bass density but, it may be one contributing factor. Other reasons for the decline may be harvest during summer/fall, impacts from bass tournaments, or unidentified environmental factors. Fishing regulation changes may be considered if the largemouth bass population continues to decline. On a positive note, catch rates of preferred size largemouth bass increased in 2021.

Figure 2. Length frequency distribution of largemouth bass



Brooking, T., J. Loukmas, R. Jackson, and T. VanDeValk. 2018. Black bass and sunfish sampling manual for lakes and ponds. New York State Department of Environmental Conservation, Federal Aid in Sportfish Restoration, F-63-R, Study 2, Job 2-2.3, Albany, New York.

Carson, B. 2020. Honeoye Lake ice fishing survey. Bureau of Fisheries Technical Brief. New York State Department of Environmental Conservation, Avon, NY.