

Lake Oneida

Butler County

2020 Trap Net, Hoop Net and Night Electrofishing Surveys



A pair of 16-inch Crappies from Lake Oneida

Trap Net Survey

Lake Oneida is a 143-acre reservoir that impounds Connoquenessing Creek in Oakland Township, Butler County. The lake is owned by the Pennsylvania American Water Company. Only shore fishing is permitted, wading and boating are prohibited. Despite these restrictions, Lake Oneida experiences substantial angler use.

Fisheries Management Area 1 conducted a trap net survey of Lake Oneida during the week of May 18-22, 2020. We completed 9 overnight sets totaling 210.3 hours of effort. Our primary targets for this survey were the panfish populations in Lake Oneida consisting of Black Crappies, White Crappies, Bluegills, Yellow Perch and Channel Catfish. While these species were primarily targeted, we count all fish captured and measured the length of most. Table 1 provides a summary of all the fish we captured. We measure and collect scale samples from selected species to calculate age and growth statistics. We make fisheries management decisions based upon these data.

Table 1. Number and size range of fish captured in trap nets in Lake Oneida during the week of May 18, 2020.

Species	Number caught	Size range (inches)
Black Crappies	720	3 – 14
White Crappies	1,145	3 – 12
Bluegills	442	3 - 7
Pumpkinseeds	10	5 - 6
Yellow Perch	68	5 - 9
Channel Catfish	9	18 – 30
Brown Bullheads	65	10 – 15
Yellow Bullheads	4	11 – 13
Rock Bass	1	7
Golden Shiners	43	Count Only
Common Carp	10	Count Only
White Suckers	146	Count Only

Black Crappies and White Crappies provide the bulk of the fishery in Lake Oneida. However, most of these species are less than quality size (9 inches). Only 2% of White Crappies and 3% of Black Crappies were equal to or greater than 9 inches. Bluegills and Pumpkinseeds exhibited slightly better size structure with 19% of the combined total exceeding quality size (7 inches). Channel Catfish were all quality size, but overall abundance was low. Yellow Perch exhibited low abundance and poor size structure. The Lake Oneida Brown Bullhead population is good to fair in abundance with specimens collected up to 15 inches in length. As we engage in more detailed data analysis, to include growth analysis, we will be considering management options that attempt to enhance the abundance of quality size panfish.

Baited Tandem Hoop Net Survey

The PFBC's Lake Habitat Section placed Channel Catfish Spawning Boxes in Lake Oneida in 2016. These boxes provide Channel Catfish, a cavity nester, with crucial spawning habitat ([PA Angler & Boater Article](#)). Fisheries Management Area 1 set Baited Tandem Hoop Nets (BTHNs) to evaluate the Channel Catfish population. These nets are baited specifically to attract Channel Catfish, however, we only captured three. Our total catch from the BTHNs is presented in Table 2. One aspect of BTHNs in Area 1 is their tendency to capture some large individuals of non-target species. The BTHNs captured multiple Crappies between 14 and 16 inches, a 20-inch Largemouth Bass and a 29-inch Hybrid Striped Bass (an unauthorized introduction).



The 29-inch Hybrid Striped Bass

Table 2. Number and size range of fish captured in baited tandem hoop nets in Lake Oneida during the week of May 18, 2020.

Species	Number caught	Size range (inches)
Channel Catfish	3	15 - 26
Black Crappies	13	7 – 16
White Crappies	9	9 – 14
Bluegills	8	6 - 7
Largemouth Bass	6	11 – 20
Hybrid Striped Bass	1	29
Brown Bullheads	10	11 - 15
Yellow Bullheads	1	13
Common Carp	1	Count Only
White Suckers	16	Count Only

Night Electrofishing Survey

Area 1 performed three electrofishing runs, 20 minutes per run, totaling one hour of electrofishing on the evening of May 27, 2020. Due to work restrictions we only had one netter on the front of the boat, which reduced our catch rate. Our night electrofishing catch for 2020 is compared to previous surveys in Table 3. The size structure of the Largemouth Bass population has improved dramatically since our first survey in 2010. Catch rates in 2020 of 44 bass per hour greater than 12 inches and 20 bass per hour greater than 15 inches are excellent. There is an abundant food supply consisting of Golden Shiners and juvenile crappies and sunfish to keep them well fed.

Table 3. Number and size range of fish captured by night electrofishing in Lake Oneida during surveys in 2010, 2015 and 2020.

Size Group (in.)	2010	2015	2020
3			
4	9	2	
5	13	12	4
6	1		3
7	2	4	3
8	23	14	3
9	13	4	4
10	52	2	4
11	69	2	5
12	9	1	14
13	1	2	8
14		2	2
15		4	8
16		2	6
17		1	4
18		1	2
19			
20			
21			
22	1	1	
Total Catch	193	54	70
Effort (hours)	1.33	0.67	1.0
CPUE (#/hour)	145.1	80.6	70.0
CPUE \geq 12 in.	8.3	20.9	44.0
CPUE \geq 15 in.	0.8	13.4	20.0



Some nice Largemouth Bass

Fisheries Management Area 1