

# Minsi Lake

## Northampton County

### April 2021 Fisheries Restoration Progress Evaluation

Minsi Lake is a 117-acre impoundment located in Northampton County. In the spring of 2017, the lake was drained to repair dam structural issues. Subsequent repairs were completed in the fall of 2019 and the lake was refilled by Spring, 2020. The Division of Fisheries Management, Area 5 implemented a five-year restocking plan (Table 1). The intent was to restore Minsi Lake to the high-quality bass-panfish fishery that existed prior to dam reconstruction. Concurrent spring and fall stockings of adult trout into Minsi Lake also occurred. Success of the restoration program will be evaluated biannually, 2021 – 2027. The lake is currently managed under [Miscellaneous Waters with Special Regulations](#). No harvest rules apply to all species, except trout; it is unlawful to take, kill or possess any fish, except trout. Catch and release fishing is permitted for all species, however all species caught other than trout must be immediately returned unharmed. For trout, [Commonwealth Inland Waters](#) regulations apply.

**Table 1. The anticipated five-year re-stocking plan for Minsi Lake, 2020 – 2024.**

<b>Minsi Lake 01F Northampton County Re-Stocking Plan 2020-2024</b>						
<i>Species</i>	<i>Life Stage</i>	<i>Stocking Year</i>				
		2020	2021	2022	2023	2024
<b>Gamefishes</b>						
<i>Largemouth Bass</i>	<i>FING</i>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<i>Yellow Perch</i>	<i>FING</i>		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<i>Black Crappie</i>	<i>FING</i>		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<i>Pumpkinseed</i>	<i>FING</i>				<b>X</b>	<b>X</b>
<i>Bluegill</i>	<i>FING</i>				<b>X</b>	<b>X</b>
<b>Forage fishes</b>						
<i>Golden shiner</i>	<i>All</i>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>

During April 19 – 22, 2021, biologists from Area 5 and Pleasant Mount Hatchery completed a total of nine trap net sites, set at various fixed-stations throughout the lake. The nets were left for approximately 24 hours prior to retrieval and processing. The 2021 collections describe a baseline from which success of the restoration stockings can be assessed.

Trap netting captured a total of 301 fish representing 10 different species (Table 2). Bluegill (N = 110) and Pumpkinseed (N = 76) were the most abundant fish captured. They were followed by Largemouth Bass (N = 38) and Golden Shiners (N = 32). Species captured in lower abundances included: Brown Bullhead (N = 15), Rainbow Trout- Hatchery (N = 15), Chain Pickerel (N = 7), American Eel (N = 6), Smallmouth Bass (N = 1) and Alewife (N = 1). Black Crappies and Yellow Perch were not captured as the springtime trap net survey occurred prior to the 2021 stockings, but they are expected in future assessments as they become established through stockings.

The occurrence of Golden Shiners is encouraging demonstrating establishment of a forage base.

Total length of captured fish were tabulated to gain insight to initial population size distributions. Largemouth Bass sizes were principally representative of fish lengths expected after a single year's growth from the 2020 stockings (Figure 1). However, two large-sized (> 11-in.) individuals were also captured. Both the Bluegill and Pumpkinseed size distributions were indicative of quality sized ( $\geq$  6-in) fish in the lake population (Figure 2). Occurrences of large-sized bass and quality-sized Bluegill and Pumpkinseed are likely individuals from a remnant population that remained in a residual pool through reconstruction, migrants out of up-lake tributaries, or fast-growing individuals advantaged by minimal competition for aquatic resources.

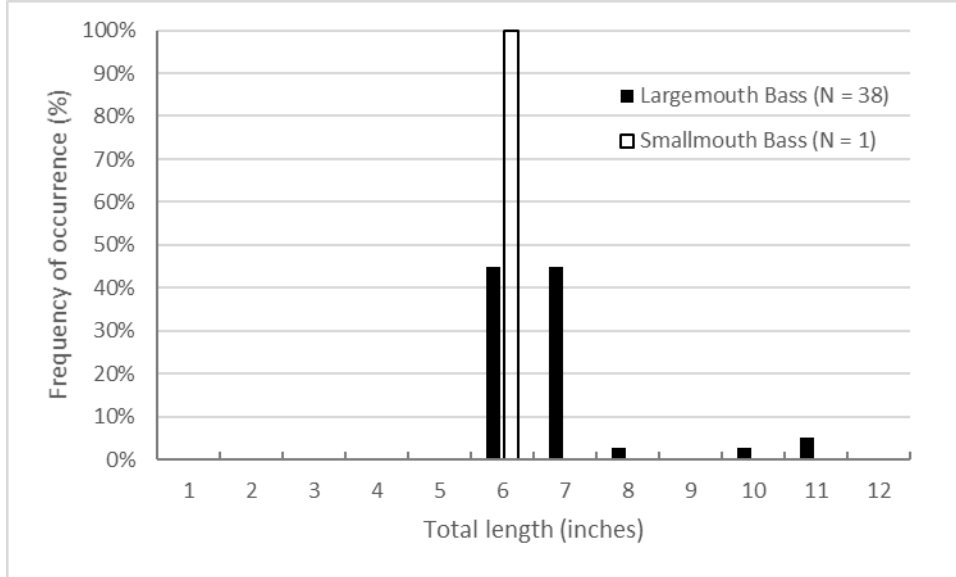
**Table 2. Total catch (N) and mean CPUE (catch/hr.) from the nine trap net sites, combined, Minsi Lake, April 2021.**

Site	Effort (hrs.)	Brown Bullhead (N)	Am. Eel (N)	Rainbow Trout – Hatchery (N)	Pumpkinseed (N)	Bluegill (N)	Largemouth Bass (N)	Smallmouth Bass (N)	Golden Shiner (N)	Chain Pickerel (N)	Alewife (N)	Total (N)
TN 1	24.2	4	3	7	10	14	7	0	15	2	0	62
TN 2	23.1	2	0	4	10	17	4	0	0	0	0	37
TN 3	24.5	1	0	0	24	22	15	0	6	0	0	68
TN 4	22.3	2	0	2	9	26	2	0	0	0	1	42
TN 5	22.6	0	0	0	0	1	0	0	0	0	0	1
TN 7	20.8	0	0	0	0	0	1	0	0	1	0	2
TN 10	23.9	6	3	2	2	9	5	1	0	0	0	28
TN 11	24.3	0	0	0	18	13	4	0	10	2	0	47
TN 12	25.0	0	0	0	3	8	0	0	1	2	0	14
Total (N)		15	6	15	76	110	38	1	32	7	0	301
CPUE (Mean)		0.070	0.028	0.071	0.353	0.517	0.176	0.005	0.146	0.033	0.000	

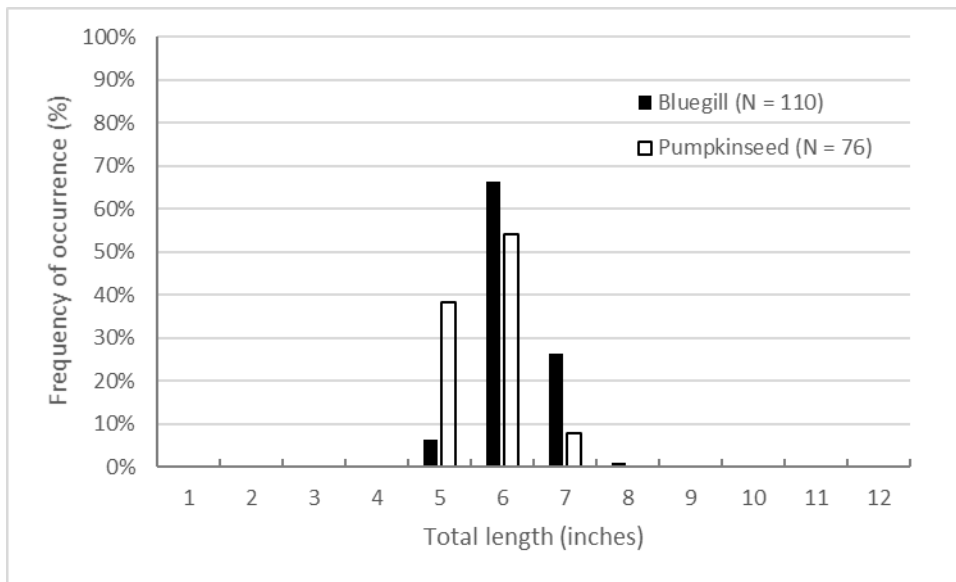
When a lake has been drawn down for an extended period, fast growing terrestrial vegetation (i.e., trees, shrubs and grasses), quickly colonize the exposed lakebed. Upon refilling, the submerged reforested lakebed provides abundant fish habitat. Over time, the terrestrial plants and grasses will die-off, eventually becoming replaced with aquatic emergent and submergent vegetations coupled with man-made fish habitat structures, providing a diversity of fish habitat. Furthermore, the decomposition of terrestrial vegetation releases nutrients into the lake water. These nutrients help create a bump in the lake's fertility that jump starts the food chain and leads to rapid growth of the developing fish and aquatic community. Typically, this is described as "new lake" syndrome and individual fish and fish populations usually demonstrate exceptional growth.

We are pleased with our evaluation of initial restoration stockings into Minsi Lake. Furthermore, Bluegill and Pumpkinseed currently support excellent panfishing opportunities. It is expected that individual fish populations will increase over time and fish community structure will increase in complexity over time as stocked fish become self-sustaining. Biologists will continue to monitor the lake's restoration through scheduled surveys.

**Figure 1. Length frequency distributions for Largemouth Bass and Smallmouth Bass collected during trap netting Minsi Lake, April 2021.**



**Figure 2. Length frequency distributions for Bluegill and Pumpkinseed collected during trap netting Minsi Lake, April 2021.**



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