

Willow Lake Fish Survey (#:222002)
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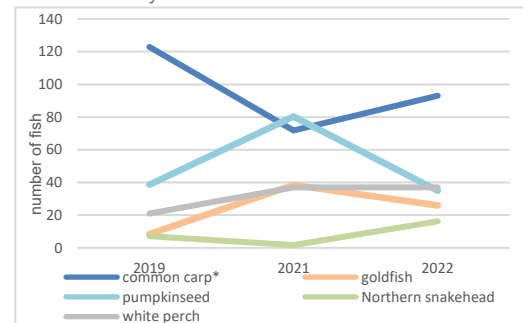
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Willow lake is a 45-acre waterbody, in the Long Island Watershed. Nestled in Flushing Meadows Corona Park, Queens, the lake is directly connected to 95-acre Meadow Lake, and eventually Flushing Bay. DEC has surveyed Willow Lake, most years, since 2005 when Northern snakehead were discovered within its boundaries. Fishing access is very limited due to a heavily vegetated shoreline. DEC freshwater fishing regulations for Region 2 are catch-and-release fishing year around, except for Northern snakehead which should be removed and reported to DEC, and a freshwater fishing license is required for anglers 16 years and older.

DEC R2 Fisheries staff conducted a one-night boat electrofishing survey on April 20, 2022 at Willow Lake with the objectives to collect fish for contaminant testing, as part of the toxic substance monitoring program (TSMP), and compare catch rates for all fish species. Three, 20-minute runs covered most of the shoreline. One, additional, 15-minute run targeting snakeheads was executed in the canal between Meadow and Willow Lakes.

A total of 115 fish of seven species were captured, including brown bullhead, gizzard shad, goldfish, pumpkinseed, silverside, Northern snakehead, and white perch. Ninety-six common carp and 39 American eels were observed. Carp were the most abundant fish observed or captured, followed by American eel, pumpkinseed, goldfish, white perch, and Northern snakehead (Table 1). A total of four gizzard shad were captured. All were greater than eleven inches, with an average length of 16.3 in. Northern snakehead catch rates increased from the two previous surveys (Figure 1). All were of memorable or greater in size (≥ 19.7 in), with $PSD^1=100$, $RSD_m^2=81$, and $RSD_i^2=19$. White perch had a $PSD=95$, and five were memorable (≥ 11.8 in). Goldfish lengths ranged from approximately 5.5 inches to 12 in. Samples for TSMP were collected and sent to Hale Creek Field Station for contaminant analyses.

Figure 1. Catch rates of goldfish, pumpkinseed, Northern snakehead, white perch, and common carp* from 2019, 2021, and 2022 Willow Lake surveys. *observed only



For the angler, Willow Lake is difficult to access and secluded, yet for those willing to venture, the lake offers opportunities to catch common carp in abundance, memorable-sized white perch or snakehead, and even large-sized goldfish.

Table 1. Number collected/observed, and length category catch rates of fish species during a boat electrofishing survey of Willow Lake in 2022.

Species	Total catch/ *observed	Time (h)	Catch rates (fish/h; standard error)						
			All sizes	Age-1	\geq Stock	\geq Quality	\geq Preferred	\geq Memorable	\geq Trophy
Common carp	96*	1.03	93	*	*	*	*	*	*
American eel	39*	1.03	38	*	*	*	*	*	*
Pumpkinseed	36	1.03	35	13(10)	18(7)	1(1)	0(0)	0(0)	0(0)
Goldfish	27	1.03	26	*	*	*	*	*	*
White perch	22	1.03	21	0(0)	18(8)	18(7)	15(6)	5(1)	0(0)
Northern snakehead	21	1.29	16	0(0)	16(6)	16(6)	16(6)	16(6)	3(2)
Brown bullhead	4	1.03	4	0(0)	3(4)	2(3)	1(1)	0(0)	0(0)
Gizzard shad	4	1.03	4	0(0)	4(1)	4(1)	*	*	*
Silverside	1	1.03	1	*	*	*	*	*	*

¹Proportional Stock Density (PSD): The percent of the stock sized population of fish that are quality size.

²Relative Stock Density (RSD): The percent of stock sized population of fish that are preferred (RSD_p), memorable (RSD_m), or trophy size (RSD_t).

