

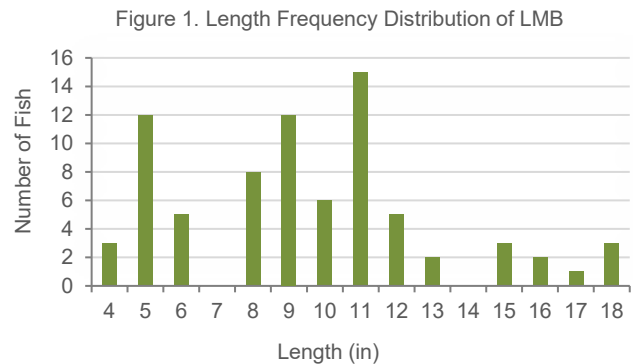
Prospect Park Lake Bass and Sunfish Survey (FIN #:LI-P9)

Steve Wong, Region 2 Fisheries

2/21/2024

Prospect Park Lake is a 55-acre waterbody located within Prospect Park, Brooklyn, which is part of the Long Island Watershed. Prospect Park Lake is the sole freshwater lake in the borough and receives high angling pressure. Fishing is open to the public during park hours, and readily accessible by public transportation and car. NYSDEC regulations require catch-and-release fishing only, and a NYS Freshwater Fishing License for those 16yo and older. The NYC Department of Parks and Recreation and the Prospect Park Alliance have additional fishing regulations and information which can be found at www.nycgovparks.org and www.prospectpark.org, respectively.

Region 2 Fisheries staff conducted a two-night, boat electrofishing survey following the Black Bass and Sunfish Electrofishing Protocol for Lakes and Ponds (Brookings et al. 2018) on the evenings of September 26th and 27th, 2023. The survey's purpose was to determine the status of bass and sunfish populations by documenting the relative abundance, size structure, and condition and growth. Three (10 min) all-fish, and three (23 min) gamefish-only runs were conducted, accounting for electrofishing of nearly the entire lake shoreline. Scales were taken from target fish species to aid in determining age and growth.



Six hundred and eight fish of seven species were captured (Table 1). Additionally, one American eel and three common carp were observed. Largemouth bass (LMB) lengths ranged from 3.6 to 18 in, weights from 0.02 to 3.1 lbs, $Wr^1=89$, $PSD^2=25$, and $RSDp^3=14$. When compared to all lakes DEC has surveyed statewide, catch rates of LMB at Prospect Park Lake were in the upper 14th and 13th percentile for stock and preferred size categories, respectively.

Bluegill lengths ranged from 0.8 to 7.1 in, weights from 0.25 to 3.8 oz, $Wr=89$, $PSD=47$, and $RSDp=0$. Stock density indices point to a high predator (LMB) proportion, unbalancing the relationship to their prey (bluegill).

Table 1. Number collected and length category catch rates for species captured during a boat electrofishing survey of Prospect Park Lake in 2023.

Species	Total catch	Time (h)	Catch rates (fish/h; standard error)				
			All sizes	Age-1	≥Stock	≥Quality	≥Preferred
Black crappie	36	1.65	22(6)	0	22(6)	19(5)	4(1)
Bluegill	360	0.51	706(78)	239(99)	441(122)	208(66)	0
Brown bullhead	1	0.51	2(2)	0	2(2)	2(2)	2(2)
Golden shiner	37	0.51	73(36)	NA	NA	NA	NA
Largemouth bass	77	1.65	37(4)	10(2)	35(5)	9(3)	5(2)
Lepomis sp.	16	0.51	31(23)	NA	NA	NA	NA
Pumpkinseed	79	0.51	155(9)	8(5)	145(13)	29(3)	0
Yellow perch	2	0.51	4(4)	0	4(4)	0	0

Comparing survey results from 2023 to 2019, LMB catch rates (all sizes), relative weight, and stock densities indices have declined over time for unknown reasons. Bluegill catch rates increased for all-size and \geq stock, size categories.

In summary, Prospect Park LMB health and stocks have declined from previous years for unknown reasons, yet the lake is still among the top (LMB) angling lakes DEC has surveyed statewide. Other species such as bluegill, pumpkinseed, black crappie, and even golden shiner are found in abundance, and can provide a fantastic angling opportunity for all types of anglers to enjoy.

Literature Cited

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

¹W_r (Relative Weight) is an index of fish condition and can be used to compare condition between species, lakes and years.

²PSD (Proportional Stock Density) is an index that allows for standardized comparison of size classes of fish and provides a measure of fish population balance. PSD is the percent of the stock-sized population that are quality size.

³RSD_p (Relative Stock Density Preferred) is the percent of the stock sized population that are of preferred size for angling. A RSD_p of 10-25 is considered good for fishing.