

Understanding Point-Intercept Survey Data – Littoral Frequency of Occurrence

Littoral Frequency of Occurrence (LFOO) is one of the most common metrics used from point-intercept data, as it relays how often aquatic plants are found within the zone of the lake that can support aquatic plants (littoral zone). This metric is calculated by taking the number of sampling points with a given species, divided by the number of sampling points that season that were found to be less than or equal to the maximum depth of plants. EWM was found at 121 locations in 2023 (Table 1, Figure 1). Of the entire point-intercept sampling grid, 608 sampling points were determined to be 34 feet deep or less, which was the maximum depth at which plants were found on the point-intercept survey in 2023. $121 / 608 = 19.5\%$ LFOO for EWM.

With increasing water clarity (likely due to zebra mussels) and overall aquatic plants growing to deeper depths, the littoral zone is expanding. While EWM was found on more sampling locations in 2023 compared to 2012, the LFOO is less due to the larger denominator of sampling points in 2023 (608) compared to 2012 (474).

Table 1. 2012-2023 point-intercept survey data synopsis. Please note these data are in draft form.

Year	Max Depth of Plants (ft.)	Points w/ EWM	Sampling points < Max Depth of Plants	EWM LFOO %
2012	28	120	474	25.3
2013	31	149	447	33.3
2014	28	35	447	7.8
2015	28	92	460	20.0
2016	-	-	-	-
2017	29	1	460	0.2
2018	32	8	463	1.7
2019	32	12	525	2.3
2020	32	1	563	0.2
2021	32	12	564	2.1
2022	31	68	500	13.6
2023	34	121	608	19.9

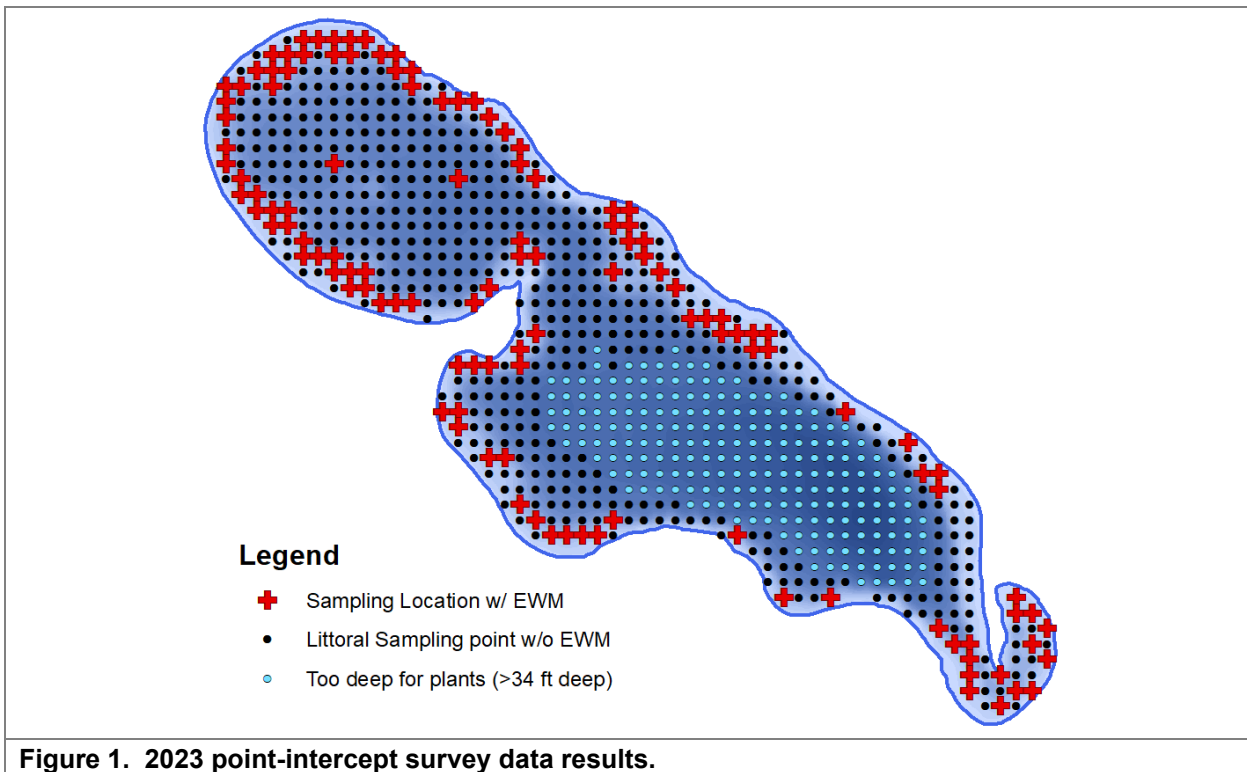


Figure 1. 2023 point-intercept survey data results.