

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
WATER RESOURCES DIVISION**

STAFF REPORT

**NUTRIENT CHEMISTRY SURVEY OF FORD AND BELLEVILLE LAKES
WASHTENAW AND WAYNE COUNTIES
APRIL-SEPTEMBER 2018, 2021, AND 2023**

INTRODUCTION

In 1995 staff from the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division (WRD), completed a phosphorus loading analysis (Kosek, 1996a) and subsequent phosphorus Total Maximum Daily Load (TMDL) (Kosek, 1996b) for Ford and Belleville Lakes. Ford and Belleville Lakes are highly eutrophic lakes within the Huron River watershed in Washtenaw and Wayne Counties, respectively. The objective of the loading analysis was to determine the appropriate phosphorus loading needed to meet the goal of 30 micrograms per liter ($\mu\text{g/L}$) for total phosphorus (TP) in Belleville Lake, which was established in 1987 by the Michigan Water Resources Commission as part of an effort to restore designated uses to Belleville Lake. To meet the goal of 30 $\mu\text{g/L}$ for TP in Belleville Lake, it was determined that TP concentrations could not exceed 50 $\mu\text{g/L}$ in the Huron River, just upstream of Ford Lake. Therefore, the Ford and Belleville Lakes Phosphorus TMDL (Kosek, 1996b; MDEQ, 2004) established the goals of 50 $\mu\text{g/L}$ upstream of Ford Lake (Huron River at Michigan Avenue) and 30 $\mu\text{g/L}$ as a lake-wide average in Belleville Lake during the months of April-September of each year. In 2019 the TMDL was revised with a goal of 30 $\mu\text{g/L}$ TP for both Ford and Belleville Lakes and no set goal for the Huron River (Holden, 2019).

Water quality monitoring of Ford and Belleville Lakes is currently conducted biennially during the growing season months (April-September) to determine the progress toward meeting the phosphorus goals established as part of the TMDL. This report presents the results of sampling efforts from 2018, 2021, and 2023 (note; sampling did not occur as scheduled in 2020 because of the COVID pandemic) and then compares them to earlier monitoring results from 1994-2018 (Kosek, 1997; Alexander, 1997; 2002; Roush, 2004; 2005; 2006; and 2007; Varricchione, 2015; Chambers, 2019). Raw data from 2021 and 2023 will be presented in tables at the end of this report.

METHODS AND MONITORING LOCATIONS

Water chemistry sampling was conducted monthly from May-September in 2018 and 2021 and April-September 2023 at 4 sites in both Ford and Belleville Lakes and 1 site in

the Huron River (Figure 1). At a minimum, grab samples were collected near the surface at all lake sites for the following parameters: TP, ortho phosphate, ammonia, nitrate + nitrite, nitrite, Kjeldahl nitrogen, and total suspended solids (TSS). Depending on the depth at each location, mid-depth and near-bottom (approximately 3 feet off the bottom), water chemistry samples were also collected using a Van Dorn sampler. Additionally, depth-integrated water samples for chlorophyll a analysis were collected by lowering and raising a bottle sampler through the photic zone (considered twice the depth of the Secchi disk measurement for this study). Water clarity was determined using a Secchi disk at each site. Temperature, dissolved oxygen (DO), specific conductance, and pH profiles were measured at each site using an EXO sonde (YSI Incorporated, Yellow Springs, Ohio). Grab samples were also collected concurrently with lake data at 1 station on the Huron River. The river station was located at Michigan Avenue, which is just upstream of Ford Lake (Figure 1). Samples were analyzed for the following parameters: TP, ortho phosphate, ammonia, nitrate + nitrite, nitrite, Kjeldahl nitrogen, and TSS. Temperature, DO, specific conductance, and pH were occasionally measured at these sites using a YSI “6-Series” (600) multiparameter sonde.

All lake and river samples were collected and preserved according to EGLE protocol (EGLE, 2023). The samples were analyzed at the EGLE Environmental Laboratory using standard United States Environmental Protection Agency (U.S. EPA) methods (Table 1).

Table 1. Analytical methods and reporting limits.

Parameter	Analytical Method	Reporting Limit (µg/L *)
Total Phosphorus	EPA 365.4	10
Kjeldahl Nitrogen	EPA 351.2	100
Ammonia	EPA 350.1	10
Nitrate+Nitrite	EPA 353.2	10
Ortho-phosphate	EPA 365.1	10
Chlorophyll a	10200H (Standard Methods)	1

To statistically evaluate patterns in either site average (Huron River) or lake-wide average (Ford and Belleville Lakes) TP concentrations over time, a Seasonal Mann-Kendall test was used to test for a significant monotonic (overall positive or negative) trend in data collected from 1994-2023. The Seasonal Mann-Kendall test is a nonparametric equivalent to a monotonic trend regression analysis. The test yields a p-value and test statistic (*S*). The test statistic convey the strength and direction of the trend. When *S* is a large, positive value it indicates that more recently collected data are consistently and substantially larger than data that were collected at earlier sampling dates (i.e., an upward trend). Conversely, a large, negative *S* value indicates that more recently collected data are consistently and substantially smaller (i.e., a downward trend). When the absolute value of *S* is small, there is no evidence of a trend.

RESULTS AND DISCUSSION

Huron River at Michigan Avenue

Water chemistry results from 2021 and 2023 for the Huron River sites are listed in Tables 4-14. Monthly and yearly average TP concentrations from 1994-2023 at the Huron River's Michigan Avenue site are shown in Figures 2 and 3, respectively. The highest concentrations in 2018, 2021, and 2023 were 70 µg/L (August 2018), 66 µg/L (July 2021), and 92 µg/L (May 2023; Figure 2). The Seasonal Mann-Kendall test showed no evidence that TP concentrations have significantly increased or decreased since 1994 ($S = -46$, $p = 0.115$; Figure 3). TP concentrations in the Huron River had been decreasing (Chambers, 2019); however, the average TP concentrations in 2021 and 2023 were greater than previous years.

Ford and Belleville Lakes

Water chemistry results from 2021 and 2023 for Ford and Belleville Lakes are presented in Tables 4-14. A comparison of average monthly and yearly TP concentrations from 1994-2023 is shown in Figures 4 and 5 (Ford Lake), and Figures 6 and 7 (Belleville Lake). Monthly and yearly average Secchi depths from 1994-2023 are shown in Figures 8 and 9 (Ford Lake), and Figures 10 and 11 (Belleville Lake). A comparison of average annual TP concentrations in the surface versus near-bottom depths of Ford and Belleville Lakes in 2018, 2021, and 2023 are presented in Figures 12 and 13, respectively. Additionally, a comparison of spring versus summer TP concentrations in Ford and Belleville Lakes is shown in Figures 14 and 15.

Ford Lake

From 2018-2023, lake-wide average TP concentrations ranged widely among years. In 2018 the minimum TP concentration was 39 µg/L (May), and the maximum concentration was 87 µg/L (August). In 2021, TP concentrations ranged from 41.33 µg/L (June) to 49.44 µg/L (September). In 2023, TP concentrations ranged from 49.44 µg/L (September) to 67.44 µg/L (August). As in past years, TP concentrations in Ford Lake continue to exhibit a great deal of inter-annual variability, and there is no evidence that TP concentrations have significantly increased or decreased since 1994 ($S = -9$, $p = 0.78$). The average TP concentration in the lake exceeded the target goal of 30 µg/L all 16 times the lake was sampled between 2018 and 2023.

Similar to TP concentrations, lake-wide average Secchi depths do not appear to be exhibiting any noticeable trends. In 2018 and 2021, the greatest average Secchi depths were recorded in June (6.3 and 8.7 feet, respectively). In 2023, the greatest average Secchi depth was 6.6 feet in May. Lake-wide average chlorophyll concentrations varied between 4.1 and 79 µg/L in 2018, 2.3 and 31 µg/L in 2021, and 3.6 and 62 µg/L in 2023. Ford and Belleville Lakes experience annual cyanobacteria blooms (Chambers, 2019; Parker, 2022 and 2023). Cyanobacteria blooms were observed in both lakes by EGLE staff in 2023 and confirmed reports of cyanobacteria blooms, in both lakes, were received in 2024.

Overall Carlson's Trophic Status Index (TSI) values (the mean of individual TSI values for chlorophyll a, Secchi depth, and TP [Carlson, 1977; Goodwin et al., 2014]) were computed for site F-4; the deeper, downstream site of the Ford Lake impoundment. These results indicated that site F-4 continues to be eutrophic (Table 2).

Belleville Lake

Similar to Ford Lake, lake-wide average TP concentrations in Belleville Lake have not significantly declined since 1994 (Seasonal Mann-Kendall: $S = -7$, $p = 0.834$). The average TP concentration in the lake exceeded the target goal of 30 $\mu\text{g/L}$ all 16 times the lake was sampled between 2018 and 2023. The highest TP concentrations recorded in each year were 113.4 $\mu\text{g/L}$ (June 2018), 53 $\mu\text{g/L}$ (August 2021), and 180.4 $\mu\text{g/L}$ (July 2023).

Like Ford Lake, no trends in Secchi depths were observed in Belleville Lake. The greatest average depths were observed in June 2018 (4.5 feet), June 2021 (7.4 feet), and May 2023 (4.6 feet). Lake-wide average chlorophyll concentrations in Belleville Lake varied between 5.9 and 44 $\mu\text{g/L}$ in 2018, 5.3 and 32 $\mu\text{g/L}$ in 2021, and 9 and 68 $\mu\text{g/L}$ in 2023. Overall Carlson's TSI values were computed for site B-4; the deeper, downstream site of the Ford Lake impoundment. These results indicated that site B-4 continues to be eutrophic (Table 2).

Influence of Lake Sediments and Low DO Conditions

Ford and Belleville Lakes have been classified as polymictic lakes (i.e., shallow lakes that mix more than twice in a year). Although the lakes are generally mixed, deeper portions (depths of approximately 20 feet or greater) can thermally stratify (e.g., sites B-3, B-4, F-3, and F-4). Since 2009 EGLE has examined data collected from Ford and Belleville Lakes for signs of anoxia in the hypolimnion. A lake is considered to be anoxic if the DO concentration is below 0.5 milligrams per liter (mg/L) in the hypolimnion for at least 2 weeks, but no longer than 7 months. Anoxia in the hypolimnion can trigger the release of phosphorus from lake sediments and contribute to internal loading (Wetzel, 2001). Past research conducted on Ford Lake has indicated that the lake sometimes exports more phosphorus than what enters the lake meaning that sources of phosphorus may exist either at or within the lake itself, not just upstream of the lake (Lehman, 2011). Given that EGLE has not conducted continuous DO monitoring at these locations, the temporal and spatial extent of potential hypolimnetic anoxia is unknown. Therefore, an instantaneous value of <1.5 mg/L was used to indicate when the lakes might be "approaching anoxic" conditions, and a value of <0.5 mg/L was used to signal when the lakes might be anoxic. Several instances of approaching and possible anoxia were recorded for both lakes, particularly in 2018 and 2023 (Table 3). Average TP concentrations in the bottoms of Ford and Belleville Lakes also tended to be higher than at the surface of the lakes in 2018 and 2023 (Figures 12 and 13, respectively), indicating possible internal nutrient loading from anoxic conditions.

Comparison of Spring vs. Summer Phosphorus Concentrations

Spring (April-June) and summer (July-September) average TP concentrations were examined separately to further identify possible sources of phosphorus in Ford and

Belleville Lakes. In general, summer concentrations were higher than spring concentrations. In some cases, concentrations in summer were more than 2 times greater than spring concentrations (Figures 14 and 15). One notable exception was in 2018 when the spring average TP concentration (78.25 µg/L) in Belleville Lake was 24 µg/L greater than the summer concentration (54.03 µg/L). The higher spring concentration occurred after an abnormal, permanent short-term discharge from the YUCA Wastewater Treatment Plant through their emergency outfall, which discharged over 8,000 pounds of TP to the lake from September 2017 through January 2018. The discrepancy between spring and summer concentrations suggests the common occurrence of anoxia at the bottom of the lakes producing some internal loading. While sources discharging directly to the lake could contribute to these higher concentrations, the timing coincides with the time of year when the lakes may be thermally stratified.

CONCLUSION

Current water quality data indicate that Ford and Belleville Lakes are still considered eutrophic impoundments. TP concentrations had been trending downward in the Huron River (Chambers, 2019); however, average TP concentrations in 2021 and 2023 were higher than previous years, resulting in no discernable trend in TP since 1994. In Ford and Belleville Lakes, intermittent anoxia with higher hypolimnetic TP concentrations, combined with observed, higher late summer TP levels, indicate there is ongoing internal loading of phosphorus in both lakes. However, reducing the external loads of phosphorus will lead to internal load reductions over the long term.

Field Work By:

Michael Alexander, Environmental Manager
Jeff Varricchione, Aquatic Biologist
John Matousek, Aquatic Biologist
Alyssa Riley, Environmental Manager
Kevin Goodwin, Aquatic Biologist
William Keiper, Aquatic Biologist
Amanda Chambers, Aquatic Biologist
Sam Noffke, Aquatic Biologist
Dawn Roush, Aquatic Biologist
Kelly Turek, Aquatic Biologist
Matt Wesener, Aquatic Biologist
Great Lakes Watersheds Assessment, Restoration, and Management Section
Water Resources Division

Report By:

Aaron Parker, Senior Aquatic Biologist
Great Lakes Watersheds Assessment, Restoration, and Management Section
Water Resources Division

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.

People with disabilities may request this material in an alternative format by emailing EGLE-Accessibility@Michigan.gov or calling 800-662-9278.

REFERENCES

- Alexander, M. 1997. A Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April-September 1997. MDEQ, Surface Water Quality Division, Report #MI/DEQ/SWQ-97/128.
- Alexander, M. 2002. Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April, May, June, and September 1998, April and June 1999, and April-September 2001. MDEQ, Surface Water Quality Division, Report #MI/DEQ/SWQ-02/037.
- Carlson, R. E. 1977. A Trophic State Index for Lakes. *Limnology and Oceanography*. 22(2):361-369.
- Chambers, A. 2019. Nutrient Chemistry Survey of Ford and Belleville Lakes Washtenaw and Wayne Counties April-September 2014, 2016, and 2018. Report #MI/EGLE/WRD-19/012.
- EGLE. 2023. Quality Assurance Manual for Ambient Water, Sediment, and Biological Sampling. Michigan Department of Environment, Great Lakes, and Energy, Water Resources Division, Lansing, Michigan
- Goodwin, K., S. Noffke, and J. Smith. 2014. Assessment Methodology (Chapter 4) in Water Quality and Pollution Control in Michigan: 2014 Sections 303(d), 305(b), and 314 [Integrated Report](#). Michigan Department of Environmental Quality, Water Resources Division, Report #MI/DEQ/WRD-14/001.
- Holden, S. 2019. Total Maximum Daily Load for Total Phosphorus in Ford and Belleville Lakes Washtenaw and Wayne Counties.
- Kosek, S. 1996a. A Phosphorus Loading Analysis and Proposed TMDL for Ford and Belleville Lakes, Washtenaw and Wayne Counties, December 1994-November 1995. MDEQ, Surface Water Quality Division, Report #MI/DEQ/SWQ-96/005.
- Kosek, S. 1996b. Total Maximum Daily Load for Phosphorus in Ford and Belleville Lakes. MDEQ, Surface Water Quality Division.
- Kosek, S. 1997. A Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April-September 1996. MDEQ, Surface Water Quality Division, Report #MI/DEQ/SWQ-97/044.
- Lehman, J. T. 2011. Nuisance Cyanobacteria in an Urbanized Impoundment: Interacting Internal Phosphorus Loading, Nitrogen Metabolism, and Polymixis. *Hydrobiologia* 611:277-287.
- MDEQ. 2004. Total Maximum Daily Load for Phosphorus in Ford and Belleville Lakes. MDEQ, Surface Water Quality Division.

- Parker, A. 2022. Cyanobacteria Bloom Monitoring in Michigan Inland Lakes. Report #I/EGLE/WRD-22/005.
- Parker, A. 2023. Cyanobacteria Bloom Monitoring in Michigan Inland Lakes During 2021 and 2022. Report #MI/EGLE/WRD-23/002.
- Roush, D. 2004. Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April-September 2002, April-October 2003. MDEQ, Water Division, Report #MI/DEQ/WD-04/038.
- Roush, D. 2005. Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April-September 2004. MDEQ, Water Bureau, Report #MI/DEQ/WB-05/043.
- Roush, D. 2006. Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April-September 2005. MDEQ, Water Bureau, Report #MI/DEQ/WB-06/041.
- Roush, D. 2007. Nutrient Chemistry Survey of Ford and Belleville Lakes, Washtenaw and Wayne Counties, April-September 2006. MDEQ, Water Bureau, Report #MI/DEQ/WB-07-057.
- Varricchione, J. 2015. Nutrient Chemistry Surveys of Ford and Belleville Lakes and Select Middle Huron River Mainstem and Tributary Sites, Washtenaw and Wayne Counties, April-September 2009 and April-September 2012. MDEQ, Water Resources Division, Report #MI/DEQ/WRD-15/007.
- Wetzel, R.G. 2001. Limnology: Lake and River Ecosystems, 3rd edition. Academic Press, London. 1006 pp.

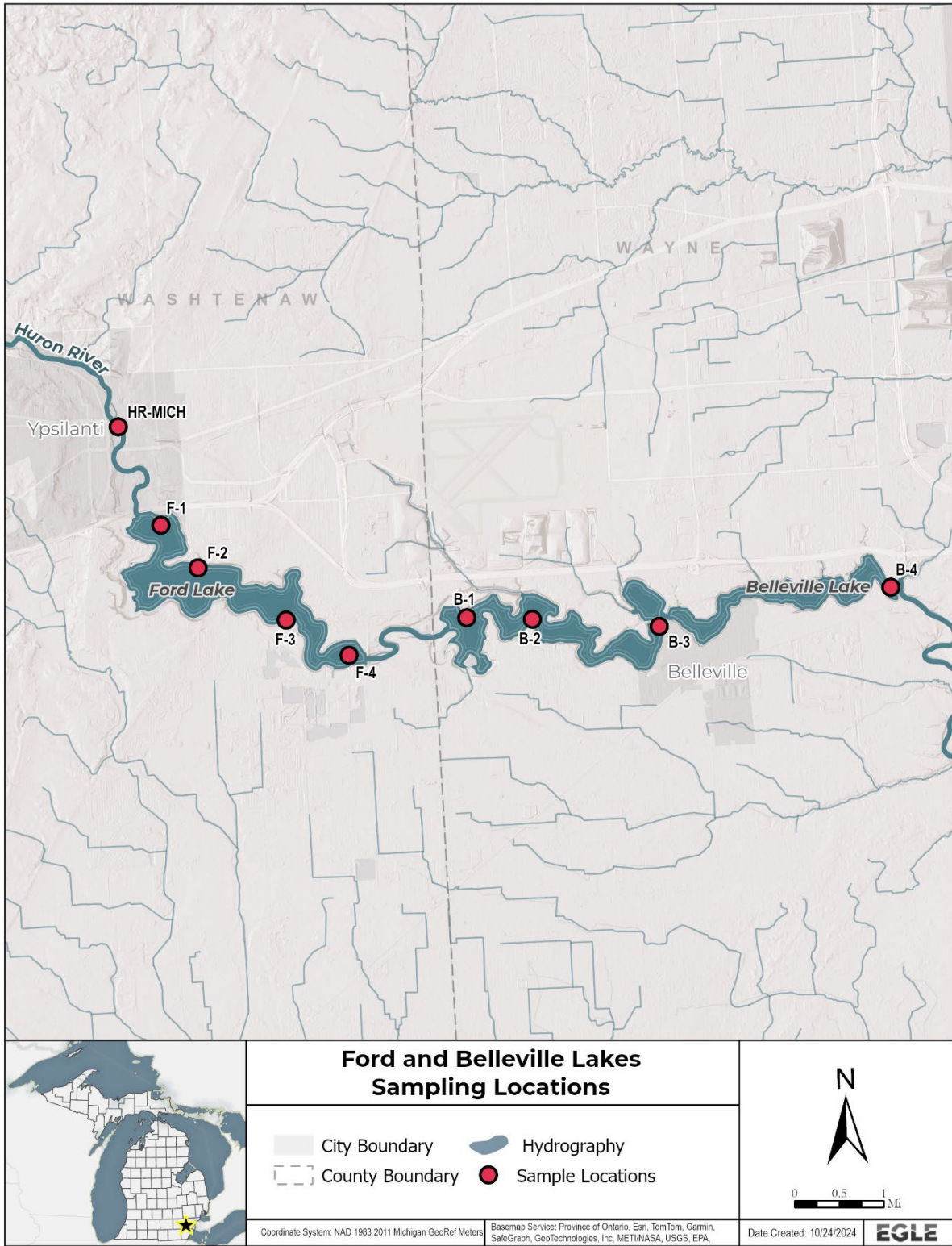


Figure 1. Sampling locations in the Huron River and Ford and Belleville Lakes.

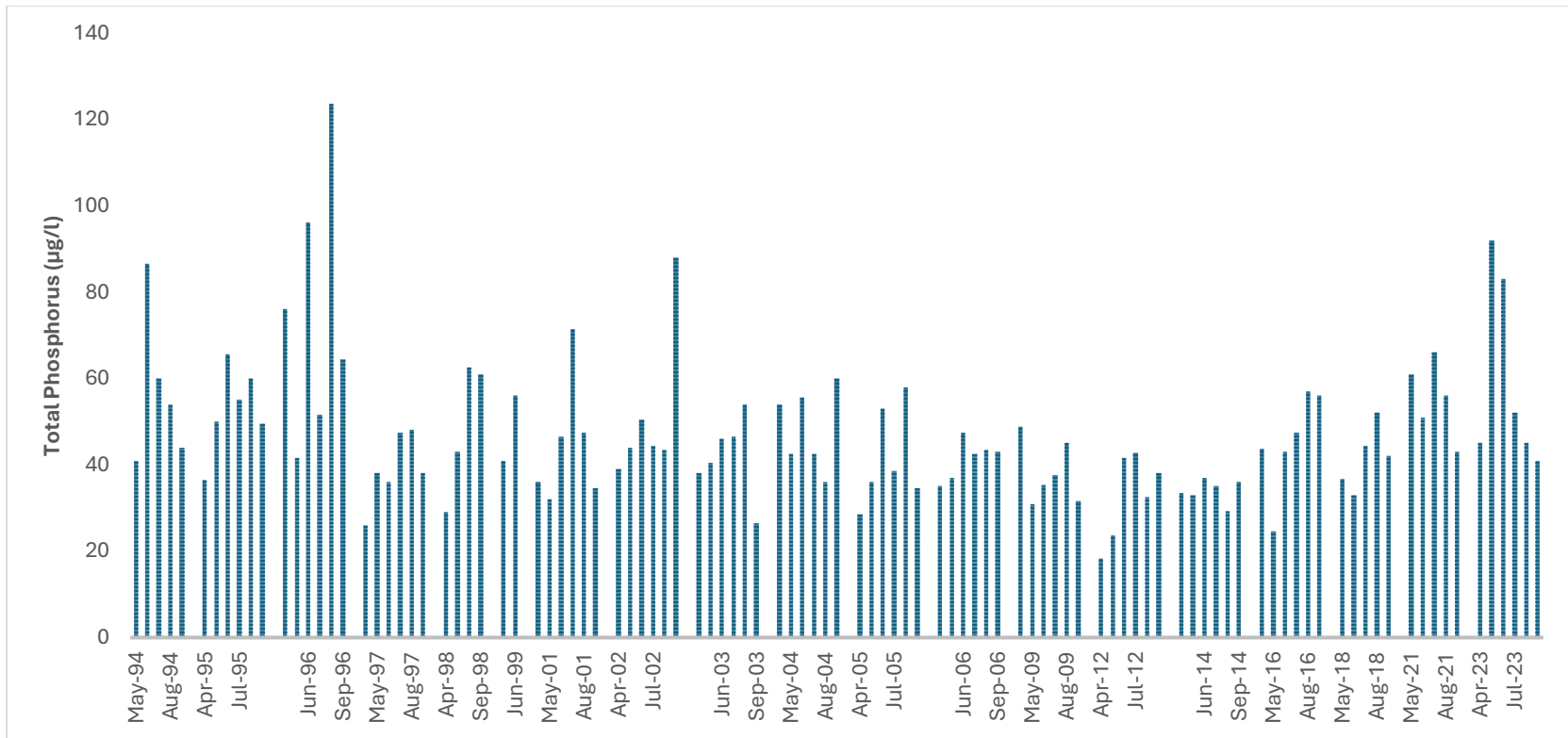


Figure 2. Monthly TP (µg/L) concentrations in the Huron River at the Michigan Avenue site, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023.

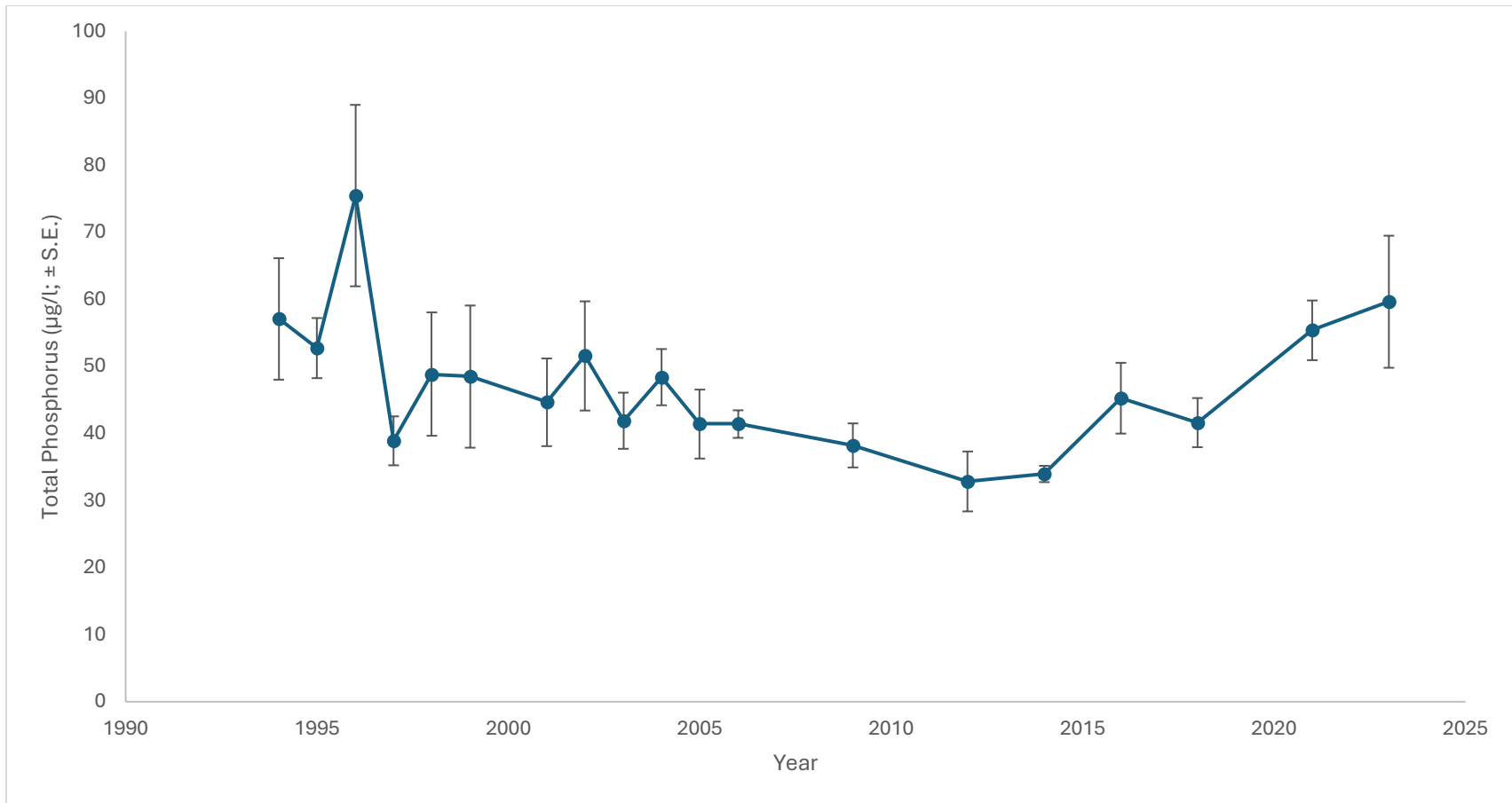


Figure 3. Yearly Mean TP ($\mu\text{g/L}$) concentrations in the Huron River at the Michigan Avenue site, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023. Error bars represent standard error of the mean.

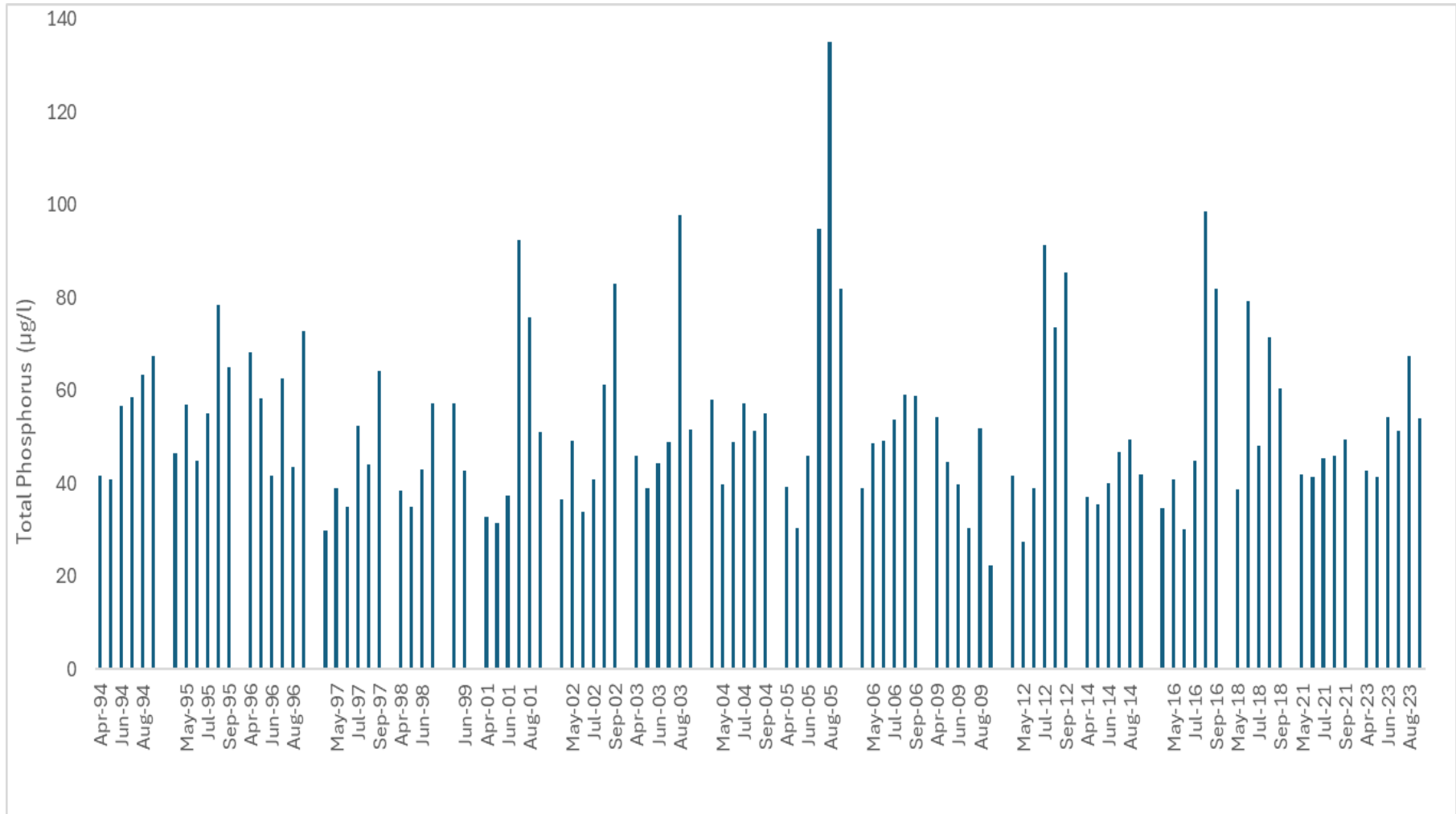


Figure 4. TP (µg/L) concentrations in Ford Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023.

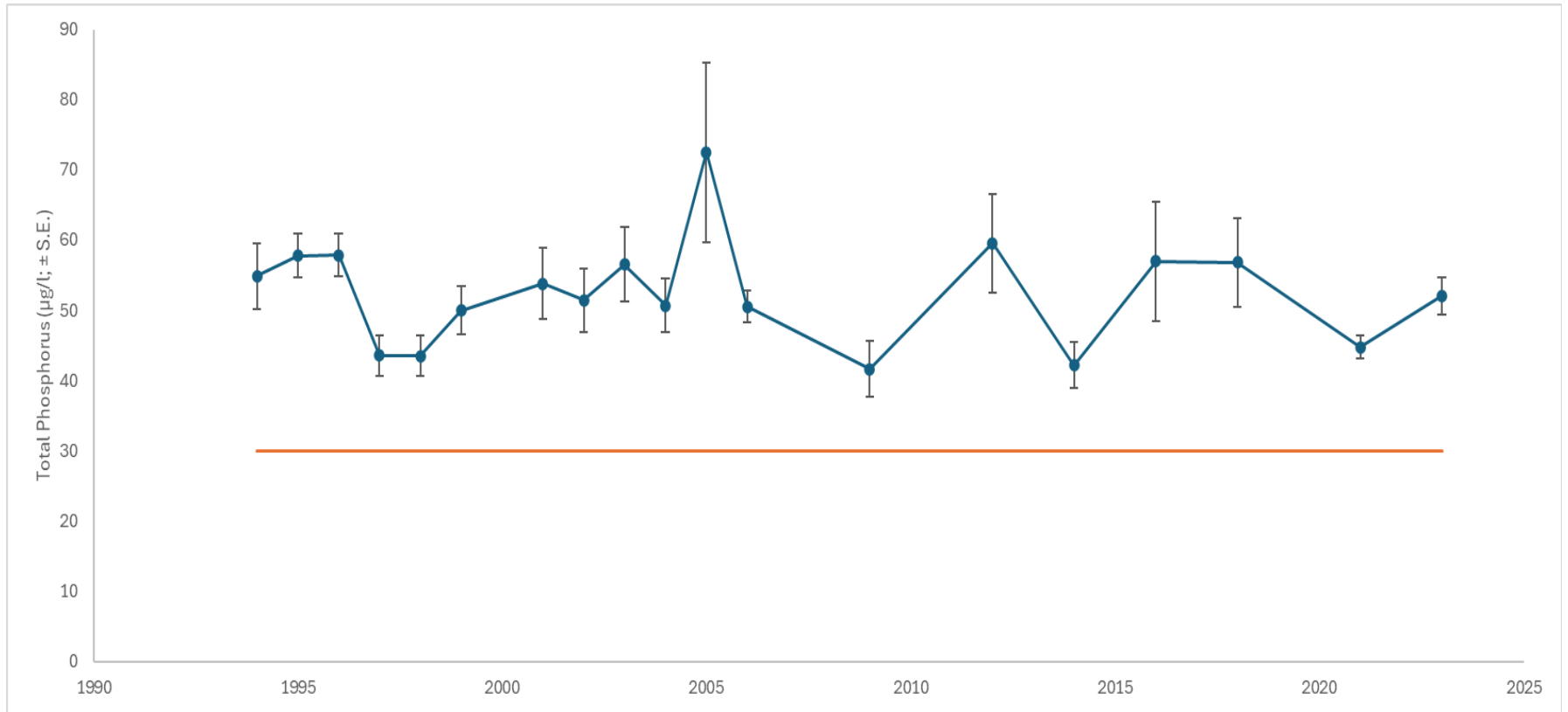


Figure 5. Mean TP ($\mu\text{g/L}$) concentrations in Ford Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023. Error bars represent standard error of the mean. Horizontal red line indicates the 30 $\mu\text{g/L}$ TP goal established for this site in the TMDL.

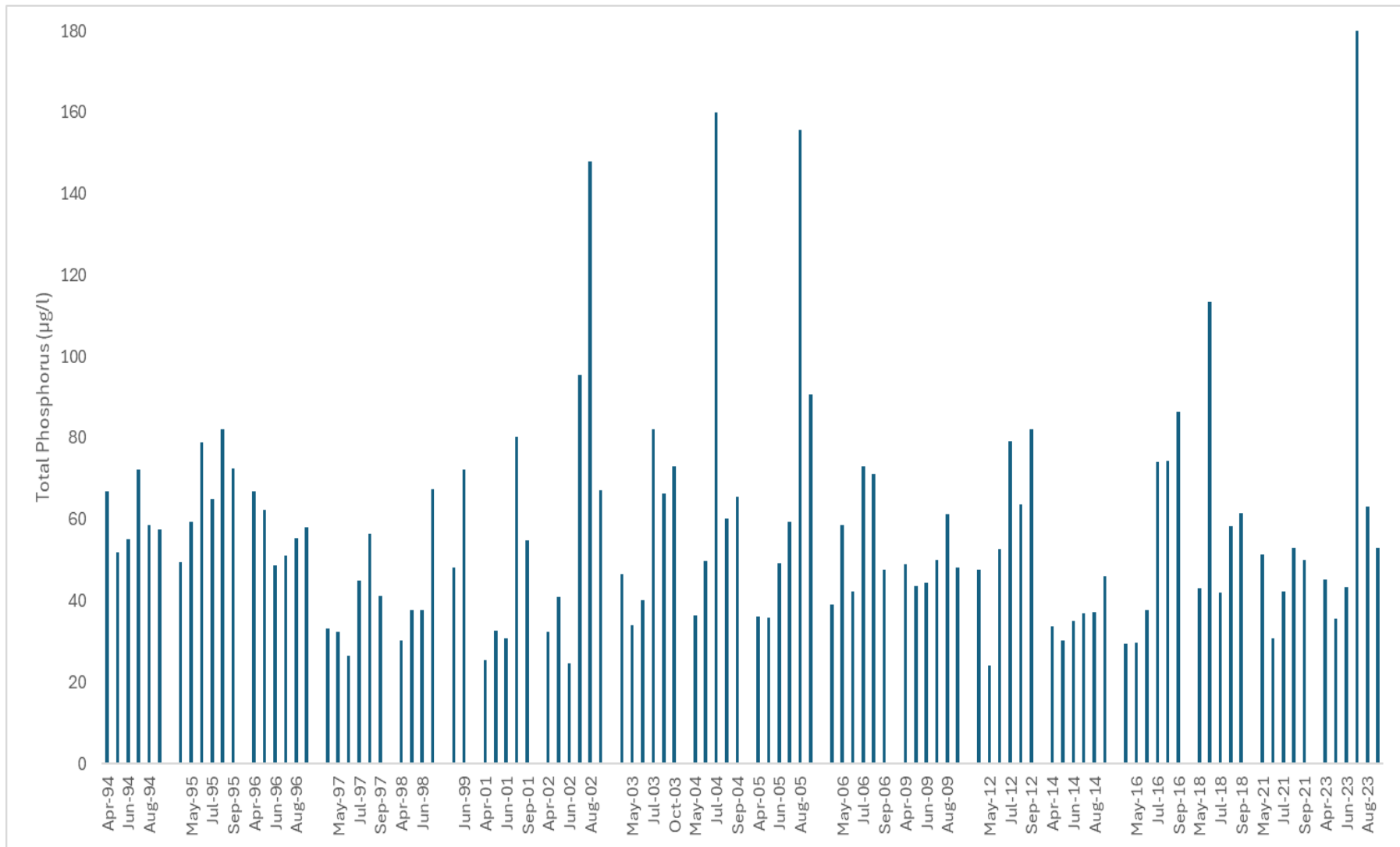


Figure 6. TP (µg/L) concentrations in Belleville Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023.

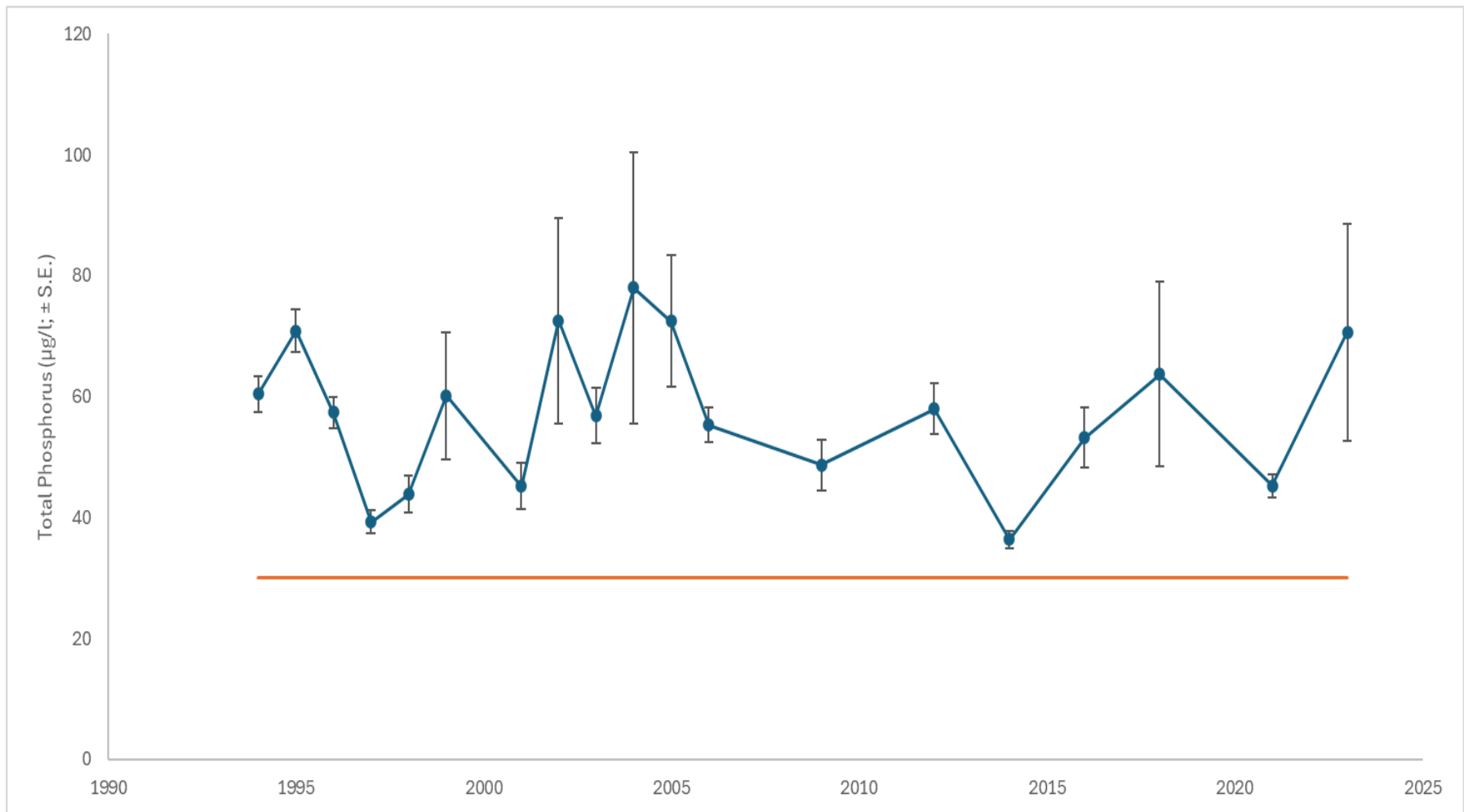


Figure 7. Mean TP ($\mu\text{g/L}$) concentrations in Belleville Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023. Error bars represent standard error of the mean. Horizontal red line indicates the 30 $\mu\text{g/L}$ TP goal established for this site in the TMDL.

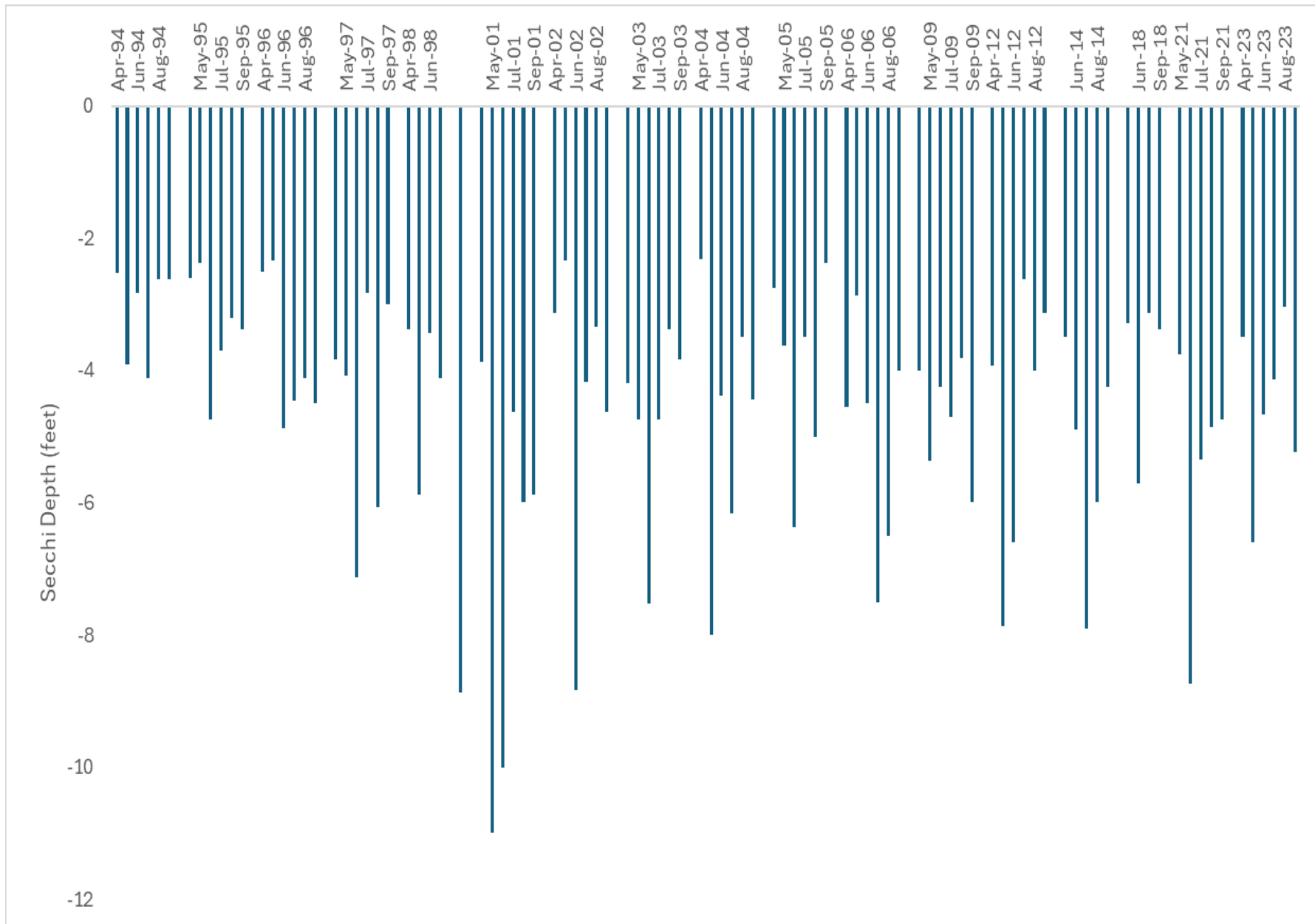


Figure 8. Mean Secchi depths (feet) in Ford Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023.

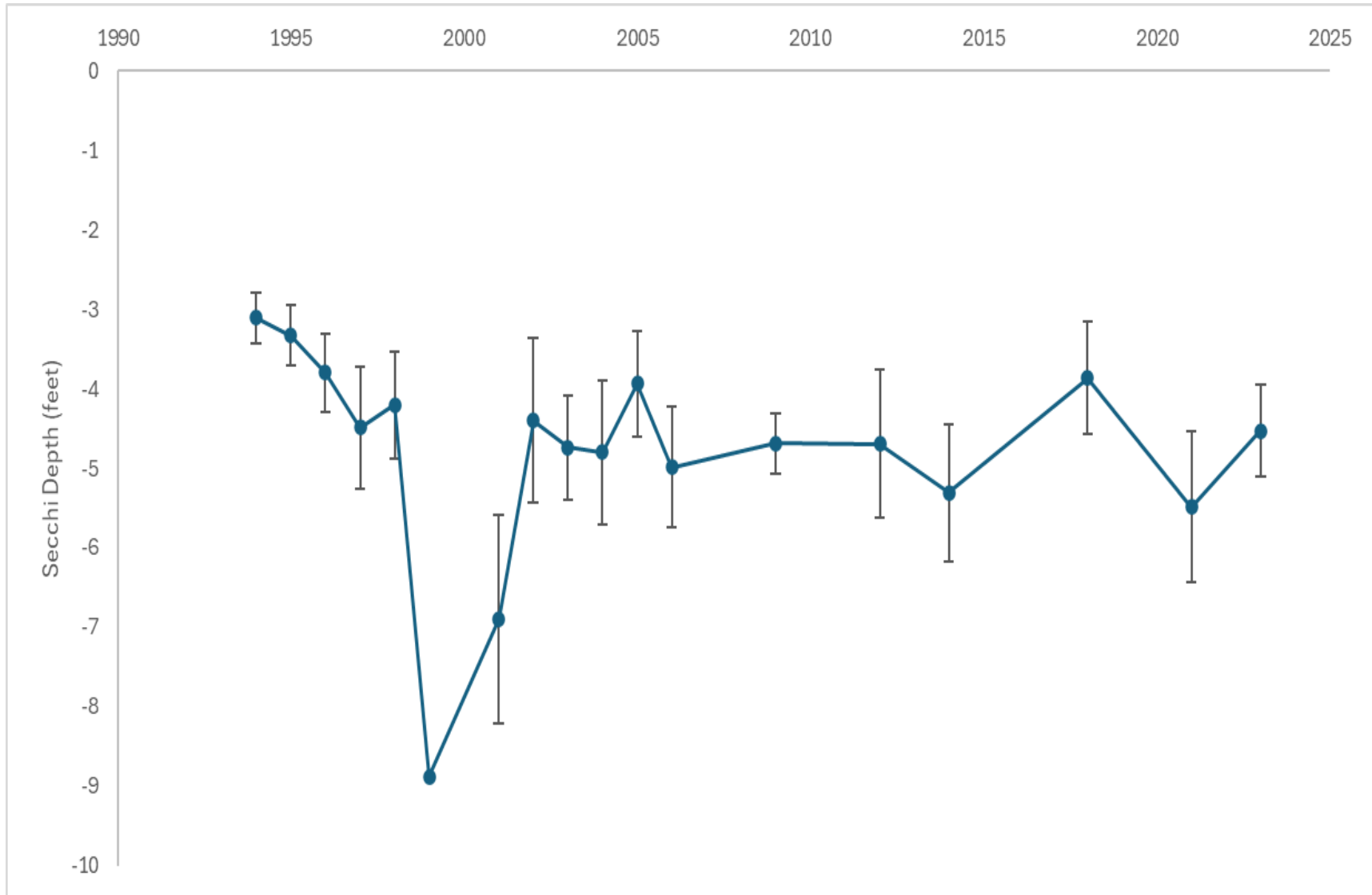


Figure 9. Mean Secchi depths (feet) in Ford Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023. Error bars represent standard error of the mean.

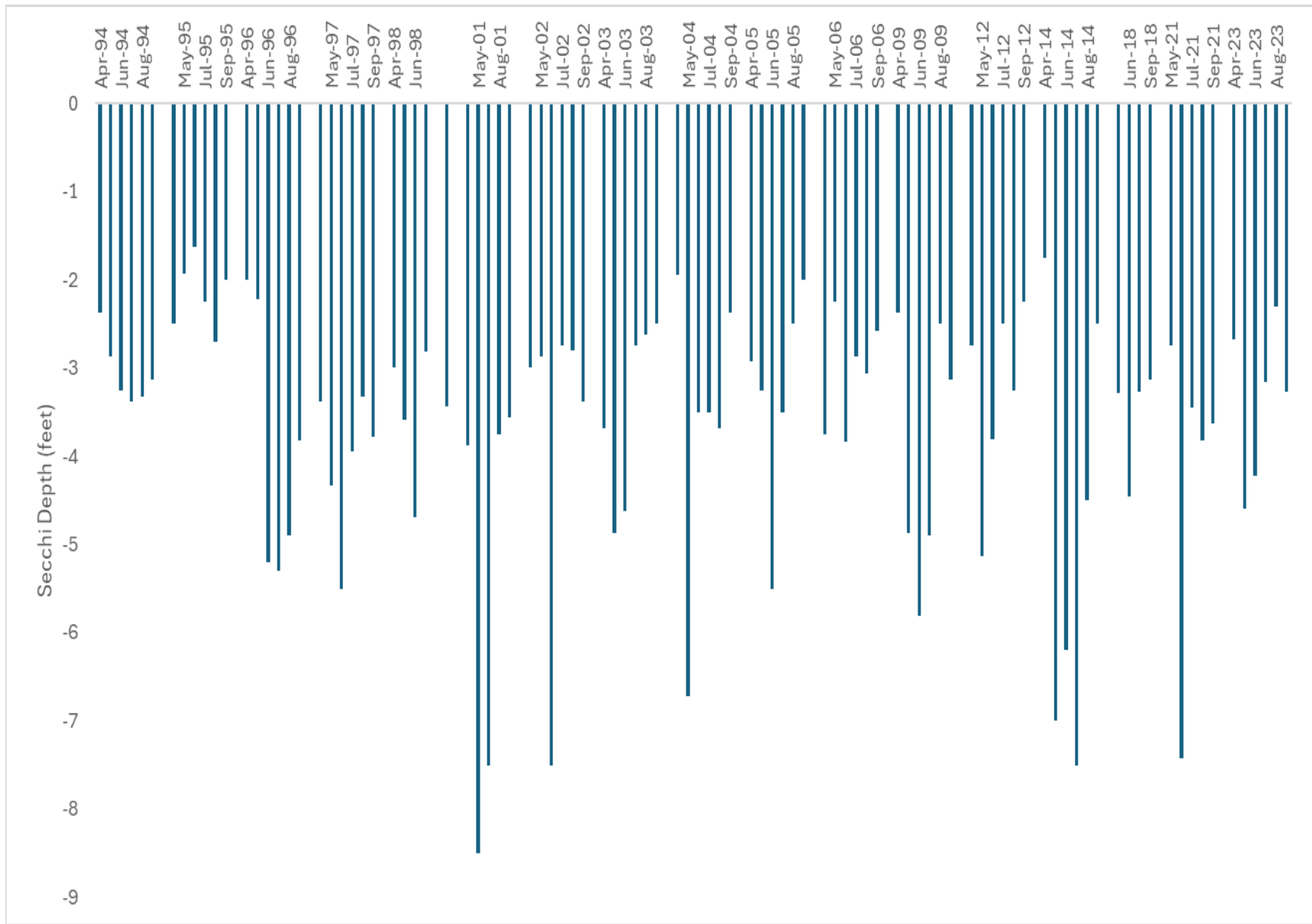


Figure 10. Mean Secchi depths (feet) in Belleville Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023.

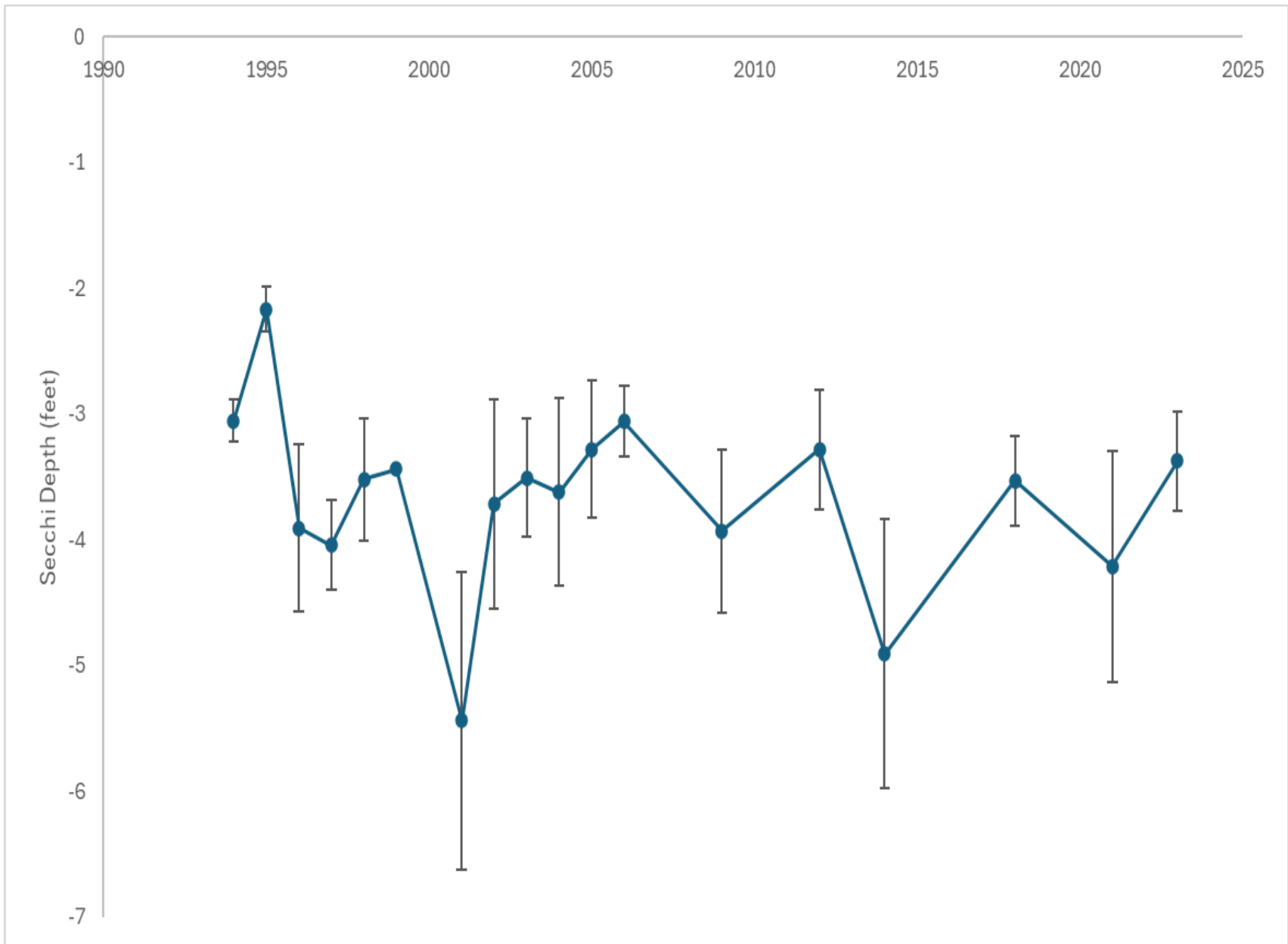


Figure 11. Mean Secchi depths (feet) in Belleville Lake, 1994-1999, 2001-2006, 2009, 2012, 2014, 2016, 2018, 2021, and 2023. Error bars represent standard error of the mean.

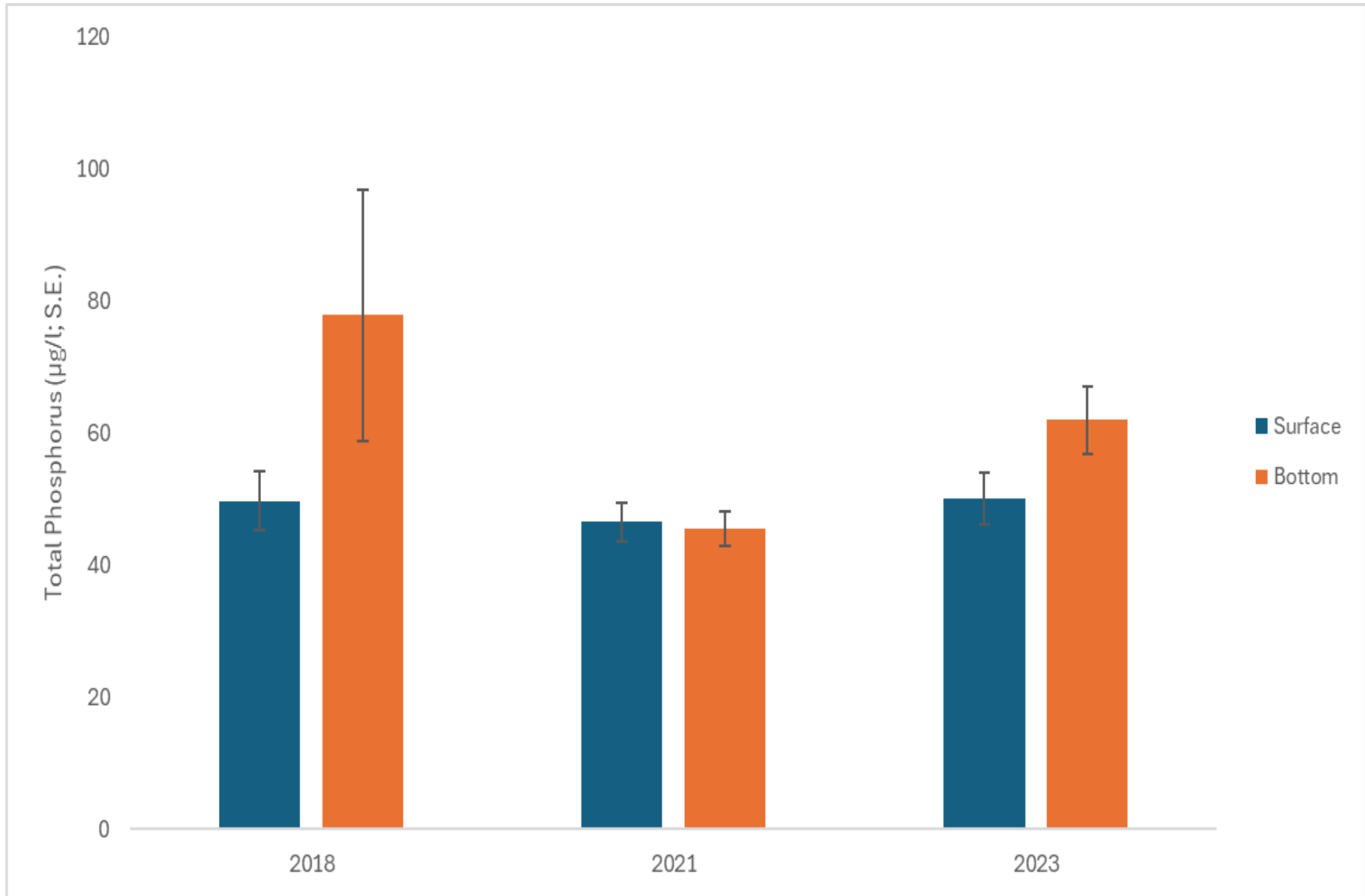


Figure 12. Surface versus bottom TP concentrations (µg/L) in Ford Lake in 2018, 2021, and 2023.

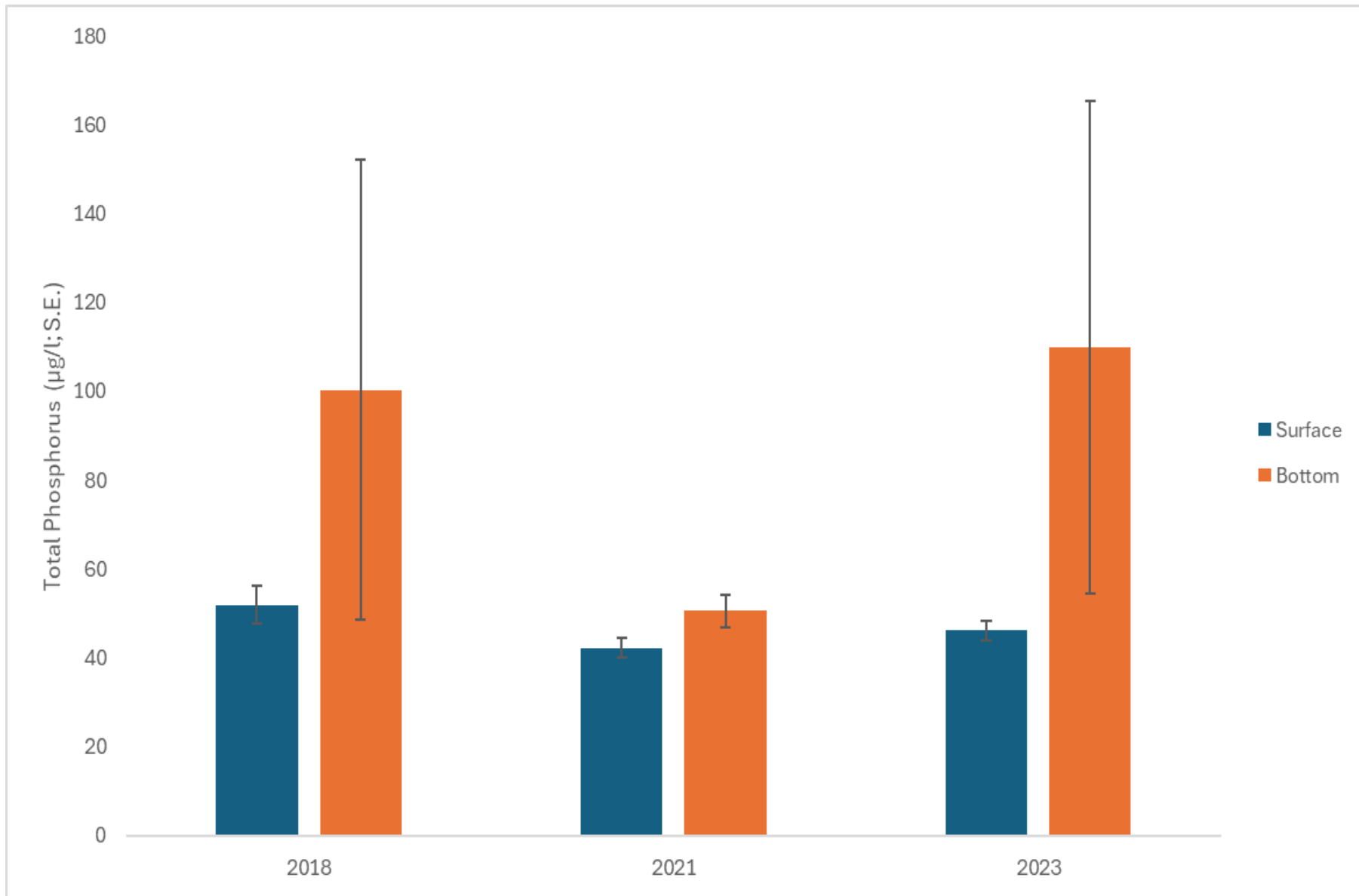


Figure 13. Surface versus bottom TP concentrations (µg/L) in Belleville Lake in 2018, 2021, and 2023.

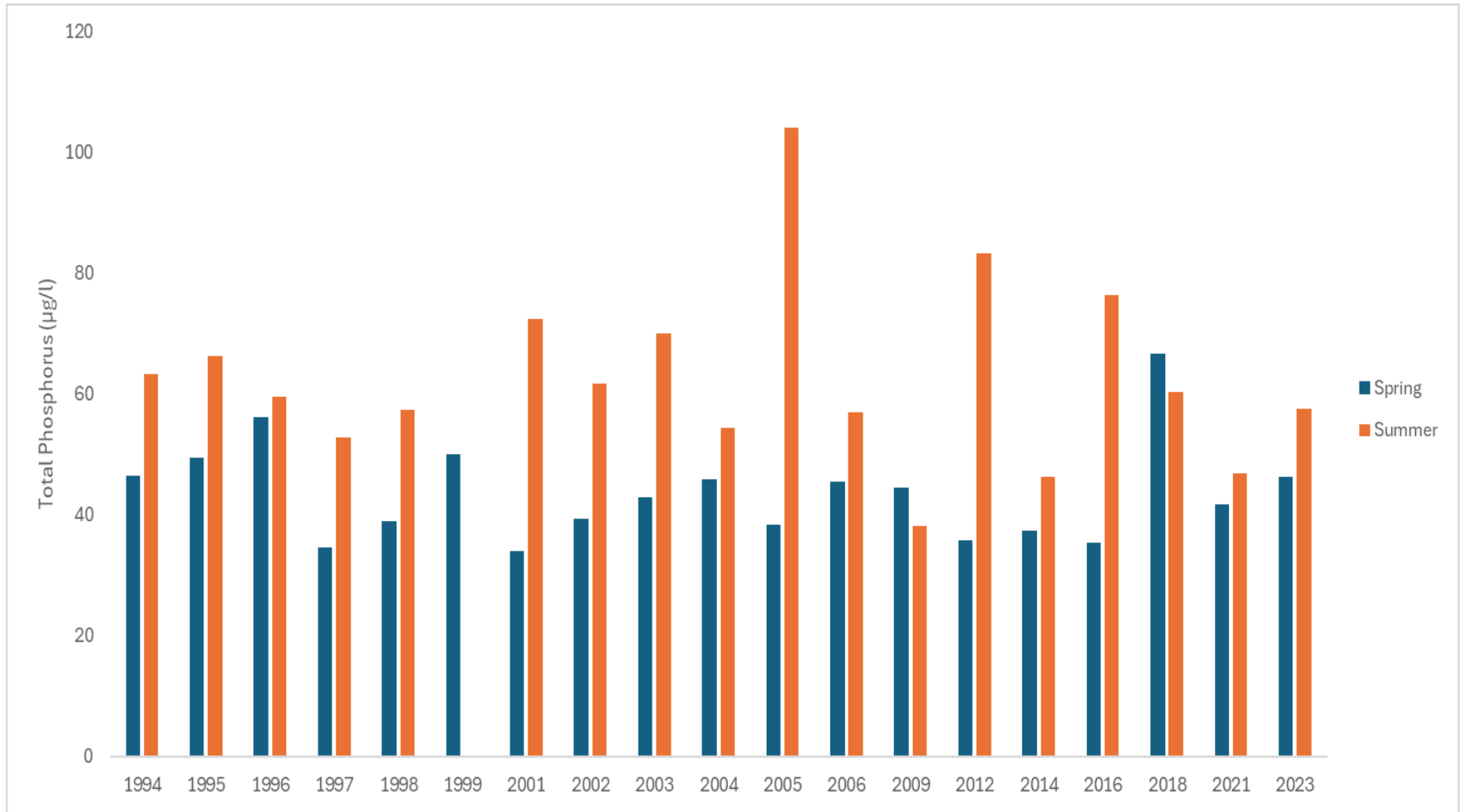


Figure 14. Spring versus summer TP concentrations (µg/L) in Ford Lake.

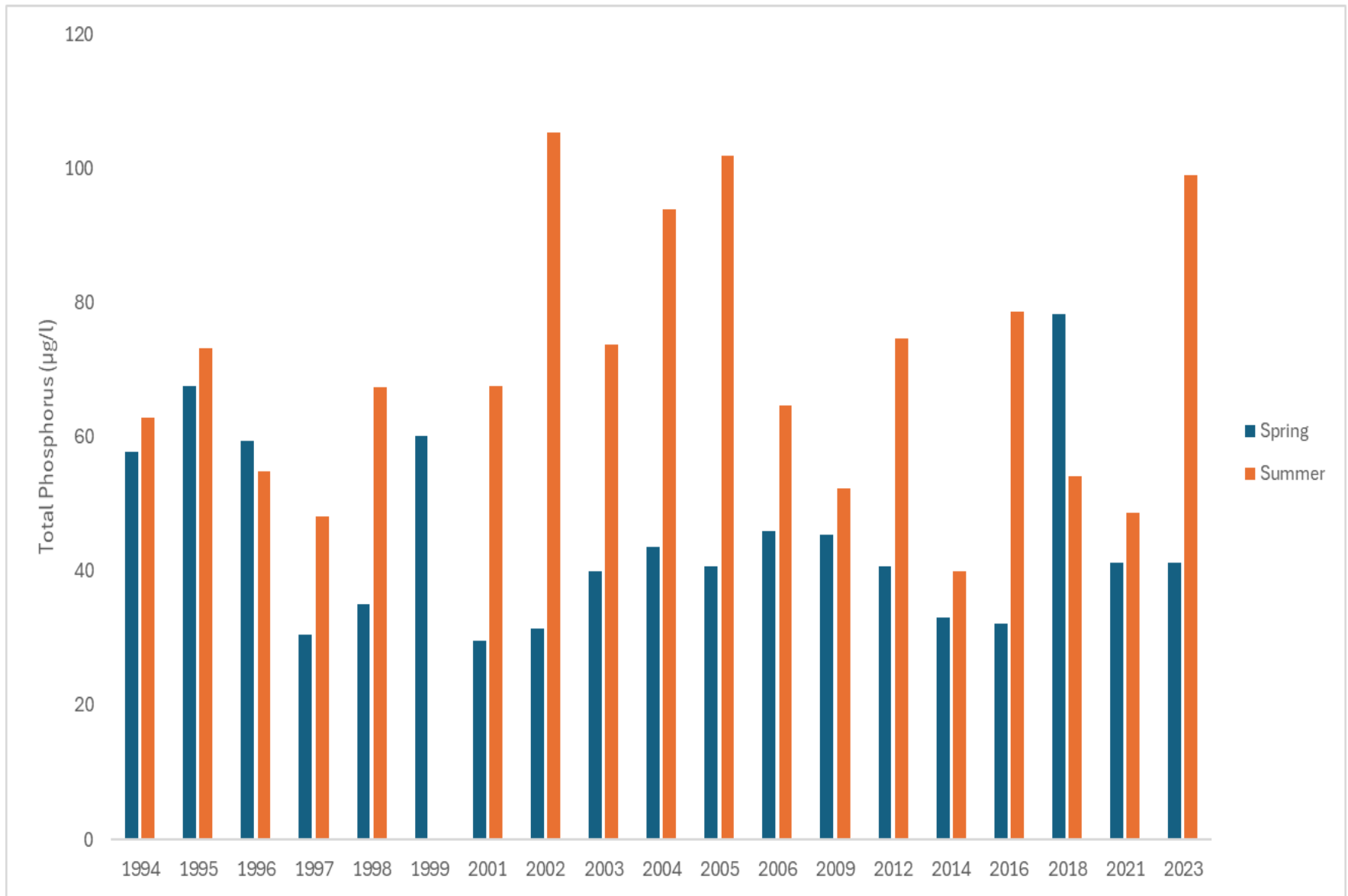


Figure 15. Spring versus summer TP concentrations ($\mu\text{g/L}$) in Belleville Lake.

Table 2. Computation of Carlson's TSI for the deeper, downstream sites (F-4 and B-4) in Ford and Belleville Lakes. Computations, equations, and criteria, as described in Goodwin et al. (2014; see Section 4.6.1), were used to compute TSIs using data from the months May-September. These computations were made as far back as 2001; earlier datasets were not as complete. TP samples were collected near the surface, while chlorophyll a samples were collected using a depth-integrated technique in the photic zone. SD = Secchi disk transparency; TP = total phosphorus; and CHL = chlorophyll. The range for eutrophic lakes in overall Carlson TSI scores is 48-61.

Lake Site	Year	Mean S.D. (May-Sep)	Mean T.P. (Jul-Sep)	Median CHL (May-Sep)	Carlson TSI (S.D.)	Carlson TSI (T.P.)	Carlson TSI (CHL)	Overall TSI	Lake Trophic Status
F-4	2023	5.1	43.3	20.2	54	58	60	57	Eutrophic
B-4	2023	5.1	49.0	33.1	54	60	65	60	Eutrophic
F-4	2021	5.4	44.7	19.4	53	59	60	57	Eutrophic
B-4	2021	5.4	44.0	18.2	53	59	59	57	Eutrophic
F-4	2018	4.9	59	18	54	63	59	59	Eutrophic
B-4	2018	4.2	48	17	56	60	58	58	Eutrophic
F-4	2016	5.7	100	15	52	71	57	60	Eutrophic
B-4	2016	5.3	91	15	53	69	57	60	Eutrophic
F-4	2014	5.3	30	19.5	53	53	60	55	Eutrophic
B-4	2014	5.5	43	8.9	53	58	52	54	Eutrophic
F-4	2012	5.8	52.7	19	52	61	59	58	Eutrophic
B-4	2012	3.9	43.3	21	58	59	60	59	Eutrophic
F-4	2009	5.5	21	14	53	48	56	52	Eutrophic
B-4	2009	4.8	41.7	22	55	58	61	58	Eutrophic
F-4	2006	7.3	35	9.6	49	55	53	52	Eutrophic
B-4	2006	3.4	50.7	24	59	61	62	61	Eutrophic
F-4	2005	6.4	42.3	18	50	58	59	56	Eutrophic
B-4	2005	4.8	50	16	55	61	58	58	Eutrophic
F-4	2004	6.5	31.7	13.5	50	54	56	53	Eutrophic
B-4	2004	5.6	61.3	25	52	64	62	59	Eutrophic
F-4	2003	5.7	41	22.4	52	58	61	57	Eutrophic
B-4	2003	6	48	11.5	51	60	55	55	Eutrophic
F-4	2002	5.4	49.3	16	53	60	58	57	Eutrophic
B-4	2002	4.6	48.3	17	55	60	58	58	Eutrophic

F-4	2001	8.9	45.3	7	46	59	50	51	Eutrophic
B-4	2001	9.1	69	6.5	45	65	49	53	Eutrophic

Table 3. Sampling dates and sites when bottom conditions in Ford and Belleville Lakes were approaching, or possibly, exhibiting anoxia.

Lake	Site	Month/Year	Dissolved Oxygen	
			(mg/l)	Condition
Ford	F-2	8/2018	1.16	Approaching Anoxia
Ford	F-3	7/2018	0.58	Approaching Anoxia
Ford	F-3	8/2018	0.24	Possible Anoxia
Ford	F-4	7/2018	0.15	Possible Anoxia
Ford	F-4	8/2018	0.13	Possible Anoxia
Belleville	B-4	6/2018	0.11	Possible Anoxia
Belleville	B-4	7/2018	0.27	Possible Anoxia
Belleville	B-4	8/2018	0.15	Possible Anoxia
Ford	F-4	8/2021	0.31	Possible Anoxia
Ford	F-4	5/2023	1.11	Approaching Anoxia
Ford	F-4	6/2023	0.33	Possible Anoxia
Ford	F-4	7/2023	0.32	Possible Anoxia
Belleville	B-4	6/2023	0.29	Possible Anoxia
Belleville	B-4	7/2023	0.35	Possible Anoxia
Belleville	B-4	8/2023	0.92	Approaching Anoxia

Table 4. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake May 2021. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-1	5/3/2021	0	Ortho-P: T	0.049	0.007	0.68	0.66	0.012	0.01	0.86	16	4	3.0	10.69	857	15.0	7.99
B-1	5/3/2021	1.8			.				.					10.65	859	14.6	8.06
B-1	5/3/2021	2.98			.				.					10.33	865	14.1	8.08
B-2	5/3/2021	0.09	NH3: W; Ortho-P: T	0.052	0.009	0.67	0.66	0.013	ND	0.86	21	3	2.5	11.18	861	15.6	8.05
B-2	5/3/2021	1.86										.		11.22	861	15.6	8.16
B-2	5/3/2021	4.02										.		10.91	863	15.5	8.17
B-2	5/3/2021	5.94	NH3: W; Ortho-P: T	0.05	0.008	0.67	0.66	0.013	ND	0.9	.	3	.	11.1	861	15.2	8.19
B-3	5/3/2021	0.17	NH3: W	0.05	0.01	0.55	0.53	0.015	ND	1	32	3	2.5	11.57	854	15.2	8.09
B-3	5/3/2021	1.99												11.6	855	15.1	8.2
B-3	5/3/2021	3.93												11.04	858	15.0	8.19
B-3	5/3/2021	5.99												10.5	859	14.8	8.15
B-3	5/3/2021	7.92												10.4	861	14.8	8.15
B-3	5/3/2021	10.04	Ortho-P: T	0.059	0.008	0.58	0.57	0.015	0.01	0.82	.	8	.	10.18	864	14.8	8.14
B-3	5/3/2021	12.09												10.08	864	14.8	8.15
B-3	5/3/2021	14.14												9.75	864	14.7	8.14
B-3	5/3/2021	16.15												9.44	866	14.6	8.11
B-3	5/3/2021	18.11		0.066	0.012	0.57	0.56	0.016	0.03	0.9	.	12	.	9.39	864	14.5	8.1
B-4	5/3/2021	0	NH3: W; Ortho-P: T	0.046	0.009	0.56	0.55	0.015	ND	0.77	24	4	3.0	10.95	868	14.5	8.17
B-4	5/3/2021	2.01												10.91	867	14.4	8.2
B-4	5/3/2021	4.63												10.81	869	14.4	8.22
B-4	5/3/2021	6.16												10.74	869	14.4	8.23
B-4	5/3/2021	8.07												10.71	869	14.4	8.23
B-4	5/3/2021	10.08												10.66	869	14.3	8.23
B-4	5/3/2021	12.19	NH3: T; Ortho-P: T	0.045	0.007	0.57	0.56	0.015	0.007	0.61	.	5		10.37	870	14.1	8.21
B-4	5/3/2021	13.92												10.35	870	14.0	8.21

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-4	5/3/2021	16.04												10.36	870	14.0	8.21
B-4	5/3/2021	17.88												10.19	871	13.8	8.2
B-4	5/3/2021	19.89												10.21	870	13.7	8.21
B-4	5/3/2021	22	Ortho-P: T	0.046	0.007	0.58	0.57	0.015	0.01	0.66	.	6		10.16	870	13.6	8.21
HRMICH	5/3/2021	0	NO ₂ /NO ₃ : H; NO ₂ : H, T; Ortho-P: H,T	0.061	0.009	0.98	0.97	0.009	0.04	0.73	.	2		9.42	887	16.6	7.96
F-1	5/3/2021	0	NO ₂ : T, Ortho-P: H,T	0.041	0.008	1	0.99	0.009	0.04	0.73	6.3	4	4.0	8.42	893	16.2	7.71
F-1	5/3/2021	1.84												8.42	892	16.2	7.71
F-1	5/3/2021	2.16												8.41	894	16.2	7.71
F-2	5/3/2021	0.07	Ortho-P: H,T	0.046	0.008	0.9	0.89	0.011	0.02	0.79	6.2	3	3.5	10.45	885	15.0	7.86
F-2	5/3/2021	1.78												10.42	886	15.0	7.87
F-2	5/3/2021	4.24												10.37	886	14.9	7.87
F-2	5/3/2021	5.97												10.31	886	14.9	7.88
F-2	5/3/2021	8.11												10.27	887	14.8	7.89
F-2	5/3/2021	10.54												10.28	886	14.8	7.9
F-2	5/3/2021	11.94												10.14	885	14.5	7.9
F-2	5/3/2021	14.08												9.64	881	13.5	7.9
F-2	5/3/2021	14.4	Ortho-P: H,T	0.041	0.007	0.9	0.88	0.011	0.02	0.67	.	5		9.5	878	13.4	7.93
F-3	5/3/2021	0	NH ₃ : W, Ortho-P: T	0.041	0.008	0.88	0.87	0.012	ND	0.74	12	7	3.5	10.83	877	14.5	8.15
F-3	5/3/2021	1.88												10.73	878	14.4	8.14
F-3	5/3/2021	3.82												10.59	878	14.3	8.13
F-3	5/3/2021	6.02												10.56	877	14.3	8.13
F-3	5/3/2021	8.12												10.51	878	14.3	8.13
F-3	5/3/2021	10.1												10.54	878	14.2	8.13
F-3	5/3/2021	11.99												10.49	878	14.2	8.13
F-3	5/3/2021	14.26	Ortho-P: T	0.036	0.006	0.87	0.86	0.011	0.01	0.66		8		10.11	876	13.7	8.11
F-3	5/3/2021	15.99												10	875	13.3	8.1
F-3	5/3/2021	18.16												9.38	875	13.0	8.06

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-3	5/3/2021	20.4	Ortho-P: T	0.045	0.007	0.85	0.84	0.012	0.03	0.67	.	6		8.74	875	12.9	8.02
F-4	5/3/2021	0	NH3: W, Ortho-P: T	0.046	0.006	0.83	0.82	0.012	ND	0.83	13	3	4.0	11.14	869	14.2	8.15
F-4	5/3/2021	2												11.14	867	14.2	8.15
F-4	5/3/2021	4.06												11.13	867	14.2	8.14
F-4	5/3/2021	6.05												11.09	868	14.1	8.14
F-4	5/3/2021	8.01												11	866	14.0	8.16
F-4	5/3/2021	10.02												10.97	866	13.9	8.16
F-4	5/3/2021	12.07												10.91	866	13.9	8.17
F-4	5/3/2021	13.94												10.88	867	13.9	8.18
F-4	5/3/2021	16.03	NH3: T, Ortho-P: T	0.037	0.006	0.82	0.8	0.012	0.008	0.98	.	3		10.79	864	13.7	8.17
F-4	5/3/2021	18.04												10.69	867	13.5	8.17
F-4	5/3/2021	20.32												10.53	866	13.2	8.16
F-4	5/3/2021	22.17												10.35	866	12.9	8.15
F-4	5/3/2021	23.99												10.3	865	12.9	8.15
F-4	5/3/2021	25.95												10.23	865	12.8	8.15
F-4	5/3/2021	28.15	Ortho-P: T	0.044	0.005	0.8	0.79	0.012	0.02	0.78	.	5		9.69	866	12.6	8.11

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 5. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake June 2021. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-1	6/2/2021	0	Ortho-P: W	0.035	ND	0.58	0.56	0.017	0.06	0.72	9.7	14	4.9	9.56	884	19.0	8.07
B-2	6/2/2021	0.19	Ortho-P: T	0.028	0.009	0.52	0.51	0.016	0.05	0.66	5.3	10	6.5	10.02	884	20.2	8.11
B-2	6/2/2021	2.88												10.03	884	20.2	8.11
B-2	6/2/2021	6.27												10.38	882	19.8	8.1
B-2	6/2/2021	8.21	Ortho-P: T	0.058	0.009	0.41	0.39	0.017	0.1	0.92	.			8.55	885	18.7	7.86
B-3	6/2/2021	0.19	Ortho-P: W	0.028	ND	0.49	0.48	0.015	0.03	0.63	6.2	8	8.5	10.06	881	19.7	8.17
B-3	6/2/2021	2.55												10.07	882	19.7	8.18
B-3	6/2/2021	6.16												10.05	882	19.7	8.18
B-3	6/2/2021	8.95	Ortho-P: W	0.027	ND	0.5	0.48	0.016	0.04	0.72	.	10	.	10	882	19.6	8.17
B-3	6/2/2021	15.2												9.31	878	18.4	8.06
B-3	6/2/2021	18.05	Ortho-P: T	0.028	0.005	0.49	0.47	0.017	0.05	0.68	.	10		7.46	880	17.8	7.91
B-4	6/2/2021	0.29	Ortho-P: W	0.025	ND	0.5	0.49	0.014	0.06	0.66	9.7	8	9.8	9.76	889	20.1	8.2
B-4	6/2/2021	3												9.79	889	20.1	8.21
B-4	6/2/2021	6												9.92	890	19.9	8.23
B-4	6/2/2021	9.05												9.33	889	19.4	8.19
B-4	6/2/2021	12.1												8.31	891	18.8	8.13
B-4	6/2/2021	15.05	Ortho-P: T	0.025	0.005	0.49	0.48	0.014	0.08	0.66	.	8		7.22	890	18.4	8.06
B-4	6/2/2021	18.1												5.46	892	17.7	7.92
B-4	6/2/2021	20.95	Ortho-P: W	0.024	ND	0.47	0.45	0.015	0.16	0.74	.	4		3.27	897	16.7	7.77
F-1	6/2/2021	0.16		0.077	0.012	0.93	0.91	0.016	0.07	0.7	15	22		7.3	922	19.5	7.94
F-2	6/2/2021	0.18	Ortho-P: T	0.068	0.005	0.74	0.72	0.016	0.06	1	2.6	6	12.5	9.94	889	20.6	8.25
F-2	6/2/2021	1.99												9.96	890	20.6	8.26
F-2	6/2/2021	4.13												9.96	889	20.6	8.26
F-2	6/2/2021	6.3												9.89	891	20.6	8.25
F-2	6/2/2021	8.17												9.66	895	20.5	8.22
F-2	6/2/2021	9.96	Ortho-P: W	0.029	ND	0.74	0.72	0.016	0.06	0.68	.	4	.	10.5	904	20.0	8.21
F3	6/2/2021	0.45	Ortho-P: W	0.03	ND	0.68	0.67	0.016	0.02	0.7	26	6	7.2	11.14	881	20.4	8.33
F3	6/2/2021	2.92												11.92	881	20.1	8.36

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F3	6/2/2021	6.03												10.25	888	19.7	8.26
F3	6/2/2021	9.1	Ortho-P: T	0.033	0.006	0.74	0.73	0.018	0.05	0.88	.	8	.	9.9	892	19.6	8.21
F3	6/2/2021	11.95												9.71	894	19.4	8.19
F3	6/2/2021	15.09												9.1	896	19.0	8.13
F3	6/2/2021	18.04												7.9	902	18.3	7.99
F3	6/2/2021	20.86	Ortho-P: T	0.036	0.005	0.79	0.77	0.02	0.13	0.81	.	8		6.19	910	17.7	7.79
F4	6/2/2021	0.37	Ortho-P: W	0.026	ND	0.58	0.56	0.017	0.01	0.79	19	10	6.5	12.69	867	20.4	8.37
F4	6/2/2021	3.08												12.78	868	20.3	8.38
F4	6/2/2021	6.09												12.71	871	20.2	8.38
F4	6/2/2021	9.03												12.62	869	19.7	8.34
F4	6/2/2021	12.09												12.07	872	19.3	8.31
F4	6/2/2021	14.98	Ortho-P: W	0.036	ND	0.66	0.64	0.017	0.01	0.86	.	10	.	8.7	886	18.9	8.13
F4	6/2/2021	21.06												6.5	901	18.0	7.9
F4	6/2/2021	24.04												5.97	903	17.7	7.84
F4	6/2/2021	26.84	Ortho-P: W	0.037	ND	0.77	0.75	0.019	0.1	0.82	.	8	.	4.6	902	17.2	7.74
HRMICH	6/2/2021	0.12	Ortho-P: A03	0.051	0.008	1	1	0.013	0.05	0.75	.	14		8.58	921	19.5	7.99

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 6. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake July 2021. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-1	7/7/2021	0	Ortho-P: T	0.039	0.006	1.4	1.3	0.057	0.13	0.97	19	8	3.9	7.64		26.5	7.91
B-1	7/7/2021	1.03												7.67		26.4	7.91
B-1	7/7/2021	2.02												7.69		26.2	7.92
B-1	7/7/2021	2.92												7.13		25.8	7.83
B-1	7/7/2021	3.91												4.9		25.3	7.59
B-2	7/7/2021	0.42	Ortho-P: T	0.041	0.007	1.4	1.4	0.056	0.09	0.95	21	10		8.46		27.3	8.03
B-2	7/7/2021	2.01												8.24		27.2	8
B-2	7/7/2021	4.06												7.76		26.6	7.94
B-2	7/7/2021	5.94												7.43		26.3	7.91
B-2	7/7/2021	8.06	Ortho-P: T	0.052	0.009	1.3	1.3	0.055	0.13	1		16		7.1		26.0	7.88
B-3	7/7/2021	0.34	Ortho-P: T; KN; A04	0.033	0.006	1.1	1	0.041	0.04	0.83	29	10	3.0	10.34		28.3	8.26
B-3	7/7/2021	1.94												10.4		28.2	8.27
B-3	7/7/2021	4												10.33		28.2	8.25
B-3	7/7/2021	6.01												10.22		28.2	8.25
B-3	7/7/2021	7.92												9.75		27.5	8.18
B-3	7/7/2021	9.98	Ortho-P: T; A03	0.035	0.005	1.2	1.1	0.042	0.06	0.81	.	12		8.76		27.2	8.07
B-3	7/7/2021	12.09												6.5		26.5	7.79
B-3	7/7/2021	14.13												6.07		26.4	7.74
B-3	7/7/2021	16.08												4.72		25.9	7.62
B-3	7/7/2021	17.99												4.59		25.9	7.6
B-3	7/7/2021	19.75												4.26		25.8	7.57
B-3	7/7/2021	19.75	Ortho-P: T	0.054	0.009	0.98	0.93	0.044	0.27	1	.	18		4.26		25.8	7.57
F-1	7/7/2021	0		0.07	0.013	0.86	0.85	0.016	0.05	1	5.2	8	4.5	7.36		26.6	7.92
F-1	7/7/2021	0.59												7.33		26.6	7.93
F-1	7/7/2021	1.46												7.29		26.5	7.91
F-1	7/7/2021	2.45												7.13		26.4	7.89
F-1	7/7/2021	3.12												7.06		26.3	7.87

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-2	7/7/2021	0.26	Ortho-P: W	0.043	ND	1.1	1	0.037	0.02	1	15	6	5.5	9.8		27.5	8.17
F-2	7/7/2021	2												9.81		27.4	8.18
F-2	7/7/2021	3.96												9.78		27.4	8.19
F-2	7/7/2021	5.96												9.76		27.4	8.19
F-2	7/7/2021	8.03												8.71		26.9	8.09
F-2	7/7/2021	10.07												7.24		26.1	7.9
F-2	7/7/2021	11.95												6.6		25.5	7.81
F-2	7/7/2021	14.14												4.6		24.8	7.59
F-2	7/7/2021	15.22	Ortho-P: T	0.057	0.007	1.2	1.2	0.056	0.25	1.1				2.81		24.3	7.47
F-3	7/7/2021	1.99	Ortho-P: W	0.041	ND	1.4	1.4	0.051	0.02	0.96	25	6	5.2	11.44		28.1	8.43
F-3	7/7/2021	3.95												10.77		27.5	8.36
F-3	7/7/2021	5.94												10.55		27.3	8.32
F-3	7/7/2021	8.05												9.62		27.0	8.2
F-3	7/7/2021	10.03												9.17		26.8	8.15
F-3	7/7/2021	11.95	Ortho-P: W	0.039	ND	1.4	1.4	0.053	0.04	0.93	.	4		8.15		26.3	8.02
F-3	7/7/2021	13.96												6.66		25.3	7.81
F-3	7/7/2021	16.03	Ortho-P: T	0.041	0.005	1.5	1.4	0.059	0.2	1.1	.	10		5.16		24.5	7.63
F-4	7/7/2021	0.17	Ortho-P: T	0.037	0.005	1.4	1.4	0.053	0.02	0.94	25	6	6.2	11.21		28.1	8.46
F-4	7/7/2021	1.96												11.25		28.1	8.44
F-4	7/7/2021	3.98												11.27		28.1	8.44
F-4	7/7/2021	5.96												11.22		28.0	8.45
F-4	7/7/2021	7.94												10.29		27.5	8.32
F-4	7/7/2021	9.99												9.17		26.8	8.16
F-4	7/7/2021	12												7.49		25.9	7.93
F-4	7/7/2021	13.97												5.66		24.9	7.68
F-4	7/7/2021	16.03	Ortho-P: W; TP: A04	0.035	ND	1.5	1.5	0.055	0.12	0.94	.	8	.	5.35		24.5	7.65
F-4	7/7/2021	18.08												5.11		24.3	7.63
F-4	7/7/2021	19.94												4.92		24.1	7.6
F-4	7/7/2021	22.06												4.14		23.8	7.55
F-4	7/7/2021	24.06												3.46		23.6	7.51
F-4	7/7/2021	26												2.92		23.5	7.48

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-4	7/7/2021	28.04												2.24		23.3	7.44
F-4	7/7/2021	28.98		0.045	0.021	1.2	1.1	0.069	0.4	1.3		12		1.8		23.2	7.42
HRMICH	7/7/2021	0		0.066	0.023	0.92	0.9	0.016	0.04	0.82		14		7.95		26.4	7.94

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 7. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake in August 2021. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-1	8/11/2021	0.39	Ortho-P: W; TP: A03	0.046	ND	0.35	0.33	0.024	0.11	0.95	17	8	3.3	6.55		25.9	7.98
B-2	8/11/2021	0.17	Ortho-P: W	0.056	ND	0.31	0.29	0.021	0.03	0.89	26	10	3.3	8.91		26.8	8.27
B-2	8/11/2021	1.63												8.92		26.8	8.27
B-2	8/11/2021	3.47												8.9		26.7	8.27
B-2	8/11/2021	5.72												8.6		26.6	8.24
B-2	8/11/2021	8.26	Ortho-P: T	0.065	0.005	0.3	0.28	0.02	0.06	0.92	.	16		6.48		26.3	8
B-3	8/11/2021	0.62	Ortho-P: W; TP: A03	0.046	ND	0.26	0.24	0.017	0.02	0.88	27	6	4.9	9.41		27.2	8.34
B-3	8/11/2021	1.96												9.42		27.2	8.34
B-3	8/11/2021	1.99												9.41		27.2	8.34
B-3	8/11/2021	3.87												9.35		27.2	8.34
B-3	8/11/2021	6.02												9.32		27.2	8.34
B-3	8/11/2021	8.09	Ortho-P: W	0.056	ND	0.26	0.25	0.017	0.02	0.9		8		9.34		27.2	8.34
B-3	8/11/2021	10.13												9.28		27.2	8.33
B-3	8/11/2021	12.24												9.17		27.1	8.32
B-3	8/11/2021	14.26												8.29		26.8	8.28
B-3	8/11/2021	16.58	Ortho-P: W	0.049	ND	0.26	0.25	0.017	0.03	0.83	.	6		1.63		25.4	7.63
F-1	8/11/2021	0.2		0.059	0.017	0.83	0.82	0.008	0.03	0.74	6	8	3.9	6.78		25.9	7.98
F-2	8/11/2021	0.24	Ortho-P: T	0.053	0.005	0.41	0.39	0.013	0.02	0.9	27	8	4.9	10.02		26.6	8.46
F-2	8/11/2021	1.47												10.01		26.6	8.46
F-2	8/11/2021	3.58												10.02		26.6	8.46
F-2	8/11/2021	5.85												9.88		26.6	8.45
F-2	8/11/2021	8.11												9.46		26.5	8.4
F-2	8/11/2021	10.01												9.36		26.5	8.4
F-2	8/11/2021	11.96												8.86		26.5	8.35
F-2	8/11/2021	13.25												6.83		25.9	8.12
F-3	8/11/2021	0.33	Ortho-P: W;NH ₃ : T	0.045	ND	0.27	0.26	0.014	0.007	0.91	31	10	5.3	11.25		26.7	8.57

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-3	8/11/2021	1.52												10.94		26.6	8.54
F-3	8/11/2021	4.46												10.6		26.6	8.51
F-3	8/11/2021	6.29												10.55		26.6	8.51
F-3	8/11/2021	8.2												10.37		26.6	8.5
F-3	8/11/2021	9.8	Ortho-P: W	0.039	ND	0.31	0.29	0.014	0.03	0.83	.	6		10.19		26.5	8.49
F-3	8/11/2021	12.12												9.96		26.4	8.46
F-3	8/11/2021	14.19												6.64		25.4	8.08
F-3	8/11/2021	16.23												5.06		25.1	7.92
F-3	8/11/2021	18.16												4.6		25.0	7.87
F-3	8/11/2021	19.82	Ortho-P: T	0.04	0.007	0.38	0.37	0.015	0.2	0.89	.	6		3.63		24.7	7.78
F-4	8/11/2021	0.02	Ortho-P: W;NH ₃ : T	0.047	ND	0.25	0.23	0.014	0.008	0.87	25	8	5.3	11.28		26.7	8.56
F-4	8/11/2021	1.47												11.32		26.7	8.55
F-4	8/11/2021	3.73												11.22		26.7	8.56
F-4	8/11/2021	6.19												11.08		26.6	8.53
F-4	8/11/2021	7.96												10.87		26.6	8.52
F-4	8/11/2021	10.34												10.67		26.5	8.51
F-4	8/11/2021	11.74												9.8		26.3	8.47
F-4	8/11/2021	13.95	Ortho-P: W	0.037	ND	0.32	0.3	0.013	0.03	0.82		10		8.95		26.0	8.32
F-4	8/11/2021	16.34												6.44		25.1	8.03
F-4	8/11/2021	18.31												4.81		24.7	7.89
F-4	8/11/2021	20.2												3.98		24.5	7.81
F-4	8/11/2021	22.32												3.33		24.3	7.75
F-4	8/11/2021	24.08												1.82		24.0	7.65
F-4	8/11/2021	26.35												0.36		23.8	7.55
F-4	8/11/2021	28.13	Ortho-P: T	0.047	0.005	0.41	0.39	0.019	0.24	0.98		8		0.31		23.5	7.51
HRMICH	8/11/2021	0		0.056	0.021	0.96	0.95	0.008	0.04	0.72		6		7.54		25.9	8

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 8. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake September 2021. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-1	9/28/2021	0.1		0.044	0.01	0.61	0.59	0.017	0.06	0.71	9.1	8	4.6	7.5		19.6	7.94
B-1	9/28/2021	2.65												8.68		18.9	8.15
B-2	9/28/2021	0.04	Ortho-P: T	0.049	0.008	0.71	0.69	0.018	0.05	0.75	18	6	3.6	9.05		19.7	8.2
B-2	9/28/2021	2.91												8.95		19.4	8.2
B-2	9/28/2021	6.01												8.72		19.1	8.15
B-2	9/28/2021	9.02		0.05	0.01	0.71	0.7	0.016	0.06	0.76	.	10	.	8.23		18.7	8.07
B-3	9/28/2021	0.09	Ortho-P: T	0.05	0.009	0.73	0.71	0.019	0.04	0.79	23	18	3.0	8.81		19.9	8.16
B-3	9/28/2021	2.96												8.71		19.5	8.2
B-3	9/28/2021	5.85												8.21		19.3	8.14
B-3	9/28/2021	8.99												8.17		19.3	8.13
B-3	9/28/2021	12.11	Ortho-P: T	0.054	0.009	0.74	0.72	0.019	0.06	0.82	.	16		8.15		19.3	8.11
B-3	9/28/2021	15.09												8.14		19.3	8.11
B-3	9/28/2021	18.06	Ortho-P: T	0.057	0.008	0.72	0.71	0.018	0.06	0.76		8		8.13		19.3	8.11
B-4	9/28/2021	0.16	Ortho-P: T	0.044	0.007	0.48	0.46	0.02	0.1	0.88	21	10	3.3	8.23		20.7	8.21
B-4	9/28/2021	3.14												8.46		20.1	8.27
B-4	9/28/2021	6.06												8.26		20.0	8.26
B-4	9/28/2021	9.03												7.55		19.7	8.19
B-4	9/28/2021	11.98	Ortho-P: T	0.044	0.009	0.48	0.46	0.02	0.11	0.82		14		7.41		19.7	8.17
B-4	9/28/2021	14.99												7.36		19.6	8.17
B-4	9/28/2021	18.1												7.33		19.6	8.16
B-4	9/28/2021	21.12		0.059	0.014	0.48	0.46	0.021	0.14	0.83		20		6.98		19.6	8.13
F-1	9/28/2021	0	NO ₂ :W	0.045	0.015	0.68	0.68	ND	0.03	0.71	2.5	8	4.3	8.95		18.9	8
F-1	9/28/2021	2.1												8.98		18.8	8
F-2	9/28/2021	0		0.047	0.02	0.91	0.9	0.008	0.07	0.74	2.3	4	4.9	8.82		18.8	7.98
F-2	9/28/2021	2.17												8.79		18.5	7.99
F-2	9/28/2021	5.43												8.53		18.2	7.94
F-2	9/28/2021	9.01												8.34		18.0	7.92
F-2	9/28/2021	10.83		0.056	0.022	0.74	0.73	0.01	0.09	0.77		8		8.03		17.9	7.88

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-3	9/28/2021	0.87	Ortho-P: T	0.04	0.009	0.72	0.71	0.013	0.02	0.68	16	6	4.9	9.95		18.9	8.19
F-3	9/28/2021	3.09												9.95		18.9	8.21
F-3	9/28/2021	5.97												9.91		18.9	8.23
F-3	9/28/2021	8.92												9.85		18.8	8.25
F-3	9/28/2021	11.96	Ortho-P: T	0.046	0.008	0.72	0.7	0.013	0.02	0.76	.	4		8.8		18.4	8.12
F-3	9/28/2021	15.05												8.21		18.0	7.98
F-3	9/28/2021	17.68												7.8		17.9	7.92
F-3	9/28/2021	20.9		0.061	0.024	0.69	0.68	0.009	0.11	0.77	.	14		7.54		17.8	7.85
F-4	9/28/2021	0.04	Ortho-P: W; NH ₃ : T	0.05	ND	0.71	0.7	0.017	0.007	0.83	15	6	4.9	10.57		19.6	8.36
F-4	9/28/2021	2.6												10.44		19.5	8.37
F-4	9/28/2021	6.11												9.28		19.2	8.26
F-4	9/28/2021	9.01												8.35		18.7	8.09
F-4	9/28/2021	11.9												8.01		18.5	8.05
F-4	9/28/2021	14.86		0.041	0.015	0.71	0.7	0.014	0.07	0.65		6		7.87		18.2	8
F-4	9/28/2021	18.07												7.65		18.0	7.93
F-4	9/28/2021	21.11												7.35		18.0	7.9
F-4	9/28/2021	24												7.24		17.9	7.88
F-4	9/28/2021	27												7.1		17.8	7.85
F-4	9/28/2021	29.87		0.059	0.024	0.63	0.62	0.012	0.13	0.75	.	16		7.05		17.8	7.84
HRMICH	9/28/2021	0	Ortho-P: A03	0.043	0.015	0.69	0.69	0.005	0.02	0.66	.	8		9.18		18.8	8.01

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 9. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake April 2023. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
HRMICH	4/13/2023	0	Ortho-P: W	0.045	ND	0.7	0.69	0.007	0.02	0.64	.	1		9.47		13.7	7.79
F-1	4/13/2023	0.255918	Ortho-P: W	0.043	ND	0.66	0.66	0.007	0.02	0.65	13	11	2.9	9.32		14.2	7.85
F-1	4/13/2023	1.985005												9.31		13.9	7.99
F-1	4/13/2023	3.136636												9.29		13.9	8.04
F-2	4/13/2023	0.255918	Ortho-P: W	0.044	ND	0.64	0.64	0.008	0.02	0.7	16	9	3.3	10		13.8	8.02
F-2	4/13/2023	3.307248												10.02		13.6	8.15
F-2	4/13/2023	6.276553												9.98		13.5	8.18
F-2	4/13/2023	10.24328												10.2		13.0	8.21
F-2	4/13/2023	12.78606												10.13		12.6	8.23
F-3	4/13/2023	0.255918	Ortho-P: W; NH3: T	0.038	ND	0.64	0.63	0.008	0.006	0.66	17	6	3.8	10.51		14.2	8.17
F-3	4/13/2023	3.34662												10.55		13.0	8.26
F-3	4/13/2023	6.621058												10.33		12.8	8.23
F-3	4/13/2023	9.67895												10.27		12.8	8.23
F-3	4/13/2023	13.04198	Ortho-P: W; NH3: T	0.04	ND	0.65	0.64	0.008	0.009	0.7		11		10.17		12.8	8.22
F-3	4/13/2023	16.38531												10.24		12.4	8.22
F-3	4/13/2023	19.34806												9.07		11.4	8.08
F-3	4/13/2023	20.29627	Ortho-P: W	0.048	ND	0.67	0.66	0.008	0.03	0.64		11		8.85		11.3	8.04
F-4	4/13/2023	0.259199	Ortho-P: W; NH3: W	0.037	ND	0.66	0.65	0.009	ND	0.66	22	5	4.0	11.03		13.3	8.36
F-4	4/13/2023	3.454893												11.27		12.7	8.39
F-4	4/13/2023	6.13547												11.46		12.6	8.41
F-4	4/13/2023	9.770818												10.9		12.4	8.36

F-4	4/13/2023	13.06822												10.84		12.4	8.35
F-4	4/13/2023	16.51984	Ortho-P: W; NH3: T	0.036	ND	0.67	0.66	0.009	0.007	0.66	.	5		10.85		12.3	8.35
F-4	4/13/2023	19.65647												10.89		12.1	8.33
F-4	4/13/2023	22.38626												10.78		11.8	8.3
F-4	4/13/2023	26.46455												9.69		10.1	8.14
F-4	4/13/2023	29.69305												6.03		8.9	7.82
F-4	4/13/2023	28.94498	Ortho-P: W	0.055	ND	0.73	0.72	0.01	0.04	0.71	.	22		7.1		9.3	7.88
B-1	4/13/2023	0.357629	Ortho-P: W	0.039	ND	0.66	0.65	0.009	0.02	0.79	22	7	2.8	11.2		13.5	8.28
B-1	4/13/2023	3.51067												11.28		12.6	8.27
B-2	4/13/2023	0.272323	Ortho-P: W	0.042	ND	0.69	0.68	0.01	0.01	0.72	22	8	2.7	11.03		13.9	8.3
B-2	4/13/2023	3.402397												10.99		13.7	8.33
B-2	4/13/2023	6.59481												10.96		13.5	8.33
B-2	4/13/2023	8.13688												10.84		13.2	8.32
B-3	4/13/2023	0.288728	Ortho-P: W; NH3: T	0.043	ND	0.71	0.7	0.011	0.007	0.78	23	16	2.8	11.15		14.6	8.23
B-3	4/13/2023	3.399116												11.19		14.5	8.32
B-3	4/13/2023	6.680116												11.19		14.1	8.34
B-3	4/13/2023	9.770818	Ortho-P: W; NH3: T	0.052	ND	0.71	0.7	0.011	0.009	0.78	.	13		11.21		13.8	8.36
B-3	4/13/2023	12.98948												11.08		13.6	8.35
B-3	4/13/2023	17.20885												10.89		13.4	8.34
B-3	4/13/2023	19.94848	Ortho-P: W	0.052	ND	0.71	0.7	0.012	0.01	0.77	.	17		10.86		13.4	8.33
B-4	4/13/2023	0.498712	Ortho-P: W	0.042	ND	0.79	0.78	0.013	0.01	0.8	21	6	2.5	10.76		13.3	8.31
B-4	4/13/2023	3.399116												10.58		12.3	8.27
B-4	4/13/2023	5.984544												10.23		11.9	8.23
B-4	4/13/2023	9.852843												10.15		11.9	8.23
B-4	4/13/2023	12.71059	Ortho-P: W	0.046	ND	0.8	0.78	0.012	0.02	0.72	.	10		10.13		11.9	8.23
B-4	4/13/2023	16.52968												10.13		11.9	8.22

B-4	4/13/2023	19.95832												10.04		11.8	8.21
B-4	4/13/2023	22.89482	Ortho-P: W	0.046	ND	0.8	0.79	0.012	0.02	0.73	.	13		10.01		11.8	8.21

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 10. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake May 2023. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
HRMICH	5/16/2023	0.12	TSS: T	0.092	0.047	0.85	0.84	0.007	0.01	0.8	.	2		9.23		25.2	8.22
F-1	5/16/2023	0.85		0.085	0.034	0.85	0.84	0.008	0.02	0.79	26	7	4.5	8.17		25.6	8.3
F-1	5/16/2023	2.01												8.19		25.6	8.28
F-1	5/16/2023	3.01												8.37		25.6	8.3
F-2	5/16/2023	0.54	Ortho-P: T; TSS: T	0.041	0.008	0.6	0.6	0.008	0.02	0.66	5.8	2	7.1	10.1		25.7	8.51
F-2	5/16/2023	2.02												10.12		25.7	8.44
F-2	5/16/2023	4.05												10.06		25.6	8.43
F-2	5/16/2023	6.04												10.01		25.6	8.41
F-2	5/16/2023	8.02												9.68		25.5	8.4
F-2	5/16/2023	10.02	Ortho-P: T	0.037	0.008	0.56	0.55	0.008	0.03	0.68		4		8.27		25.0	8.28
F-3	5/16/2023	0.5	Ortho-P: T; NH ₃ : T	0.032	0.005	0.53	0.52	0.01	0.008	0.67	14	4	8.0	10.14		26.1	8.6
F-3	5/16/2023	2.08												10.2		26.0	8.52
F-3	5/16/2023	4.04												10.21		26.0	8.49
F-3	5/16/2023	6.04												10.2		26.0	8.48
F-3	5/16/2023	8.05												10.19		26.0	8.48
F-3	5/16/2023	10.04												10.18		25.9	8.47
F-3	5/16/2023	12.03												10.12		25.8	8.48
F-3	5/16/2023	14.02	Ortho-P: T; TSS: T	0.035	0.004	0.56	0.54	0.01	0.01	0.74		2		9.27		24.7	8.36
F-3	5/16/2023	16.05												9.31		23.4	8.32
F-3	5/16/2023	18.08												6.96		22.4	7.98
F-3	5/16/2023	20.05	Ortho-P: T	0.034	0.007	0.52	0.51	0.009	0.11	0.7		5		6.51		21.6	7.87
F-4	5/16/2023	0.5	Ortho-P: W; TSS: T	0.03	ND	0.49	0.48	0.011	0.02	0.7	14	3	6.8	10.85		26.5	8.95
F-4	5/16/2023	2.05												10.96		26.3	8.79
F-4	5/16/2023	4.03												10.98		26.2	8.65
F-4	5/16/2023	6.03												10.98		26.1	8.58

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-4	5/16/2023	8.06												10.98		26.1	8.57
F-4	5/16/2023	10.03												10.96		26.1	8.56
F-4	5/16/2023	12.01												10.89		25.9	8.55
F-4	5/16/2023	14.03												10.9		25.2	8.52
F-4	5/16/2023	16.05	Ortho-P: W; TSS: T	0.027	ND	0.58	0.57	0.009	0.01	0.66		3		11.13		23.6	8.48
F-4	5/16/2023	18.07												9.32		22.7	8.34
F-4	5/16/2023	20.02												8.56		22.2	8.25
F-4	5/16/2023	22.05												7.55		21.3	8.12
F-4	5/16/2023	24.07												6.34		20.7	7.94
F-4	5/16/2023	26.01												5.26		20.2	7.79
F-4	5/16/2023	28.01												2.98		19.8	7.54
F-4	5/16/2023	30.08	Ortho-P: W	0.052	ND	0.39	0.38	0.01	0.22	0.94		16		1.11		19.0	7.38
B-1	5/16/2023	0.51	Ortho-P: W	0.032	ND	0.42	0.41	0.011	0.03	0.86	9	23	3.6	10.27		25.5	9.2
B-1	5/16/2023	2.07												10.38		25.2	8.54
B-2	5/16/2023	0.53	Ortho-P: W	0.038	ND	0.44	0.43	0.01	0.02	0.85	14	3	3.0	10.48		25.9	9.19
B-2	5/16/2023	2.07												10.77		25.2	8.73
B-2	5/16/2023	4.02												10.79		25.1	8.64
B-2	5/16/2023	6.04	Ortho-P: W	0.059	ND	0.41	0.39	0.012	0.03	0.86		10		10.82		24.0	8.42
B-3	5/16/2023	0.53	Ortho-P: W	0.036	ND	0.43	0.42	0.01	0.01	0.75	17	4	4.5	11.02		26.7	8.87
B-3	5/16/2023	2.05												11.11		26.6	8.73
B-3	5/16/2023	4.03												11.28		26.0	8.67
B-3	5/16/2023	6.06												11.74		25.4	8.65
B-3	5/16/2023	8.03	Ortho-P: W; NH ₃ : W	0.034	ND	0.45	0.44	0.01	ND	0.73		6		11.88		25.2	8.57
B-3	5/16/2023	10.03												10.8		24.8	8.48
B-3	5/16/2023	12.01												10.76		24.7	8.44
B-3	5/16/2023	14.06												10.71		24.6	8.42
B-3	5/16/2023	16.01												9.76		24.2	8.28

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-3	5/16/2023	18.05	Ortho-P: W; NH ₃ : T	0.032	ND	0.42	0.41	0.01	0.007	0.66		8		8.17		23.6	8.13
B-4	5/16/2023	0.51	Ortho-P: W	0.028	ND	0.46	0.45	0.01	0.04	0.66	9.5	ND	7.3	10.19		26.2	8.69
B-4	5/16/2023	2.02												10.23		26.1	8.52
B-4	5/16/2023	4.03												10.28		25.9	8.46
B-4	5/16/2023	6.05												10.3		25.9	8.44
B-4	5/16/2023	8.08												10.32		25.9	8.44
B-4	5/16/2023	10.04												10.39		25.7	8.44
B-4	5/16/2023	12.02												10.5		25.3	8.44
B-4	5/16/2023	14.05												10.57		25.1	8.43
B-4	5/16/2023	16.04	Ortho-P: W	0.027	ND	0.45	0.44	0.011	0.03	0.64		5		11.35		24.5	8.47
B-4	5/16/2023	18.03												9.48		22.5	8.29
B-4	5/16/2023	20.04												6.96		21.7	8.01
B-4	5/16/2023	22.12	Ortho-P: W	0.035	ND	0.49	0.48	0.012	0.06	0.7		5		2.41		20.5	7.57

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 11. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake June 2023. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
HRMICH	6/12/2023	0		0.083	0.026	1.8	1.8	0.056	0.19	1.1		4		6.7	963	26.2	7.75
F-1	6/12/2023	0	CHL: A07; N	0.096	0.041	1.3	1.3	0.064	0.37	1.3	18	4	3.6	5.66	954	26.4	7.63
F-1	6/12/2023	0.42												5.55	953	26.5	7.68
F-1	6/12/2023	1.19												5.57	953	26.5	7.71
F-1	6/12/2023	2.19												5.64	951	26.5	7.72
F-1	6/12/2023	2.82												5.59	951	26.5	7.73
F-2	6/12/2023	0		0.057	0.007	0.63	0.6	0.027	0.17	1.1	26	4	4.1	7.34	902	28.0	8.09
F-2	6/12/2023	1.23												7.25	902	28.0	8.11
F-2	6/12/2023	2.61												7.22	904	27.9	8.16
F-2	6/12/2023	4.18												7.69	904	27.8	8.25
F-2	6/12/2023	5.63												7.68	905	27.7	8.26
F-2	6/12/2023	7.01												7.73	904	27.7	8.28
F-2	6/12/2023	8.52												7.72	905	27.7	8.28
F-2	6/12/2023	9.87												7.58	907	27.6	8.27
F-2	6/12/2023	11.07												7.25	913	27.5	8.23
F-2	6/12/2023	12.31	NO ₃ /NO ₂ : A04	0.075	0.006	0.77	0.73	0.034	0.16	1.2		13		7.17	913	27.5	8.22
F-3	6/12/2023	0		0.041	0.005	0.6	0.59	0.018	0.04	0.86	22	6	4.5	8.64	876	28.1	8.34
F-3	6/12/2023	1.54												8.62	875	28.2	8.36
F-3	6/12/2023	3.29												8.62	875	28.2	8.4
F-3	6/12/2023	5.01												8.6	875	28.2	8.43
F-3	6/12/2023	6.8												8.57	876	28.1	8.44
F-3	6/12/2023	8.49												8.58	876	28.2	8.45
F-3	6/12/2023	10.11												8.58	876	28.1	8.46
F-3	6/12/2023	11.9												8.58	876	28.1	8.46
F-3	6/12/2023	11.91	Ortho-P: T	0.044	0.004	0.61	0.59	0.019	0.04	0.86		4		8.57	876	28.1	8.46
F-3	6/12/2023	14.04												8.56	876	28.1	8.46
F-3	6/12/2023	15.8												8.55	878	28.1	8.45

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-3	6/12/2023	17.55												8.53	879	28.1	8.46
F-3	6/12/2023	19.54												8.46	881	28.0	8.45
F-3	6/12/2023	20.45												2.78	878	26.9	8.14
F-3	6/12/2023	22.09		0.066	0.014	0.24	0.22	0.014	0.28	1.1		11		4.37	877	27.3	8.24
F-4	6/12/2023	0	Ortho-P: T	0.028	0.004	0.52	0.51	0.013	0.03	0.73	16	4	6.5	9.19	858	28.4	8.35
F-4	6/12/2023	3												9.18	858	28.4	8.39
F-4	6/12/2023	6.28												9.19	859	28.4	8.42
F-4	6/12/2023	9.47												9.2	859	28.4	8.42
F-4	6/12/2023	12.63												9.22	858	28.4	8.43
F-4	6/12/2023	15.96												9.25	858	28.3	8.46
F-4	6/12/2023	19.42												9.21	859	28.3	8.47
F-4	6/12/2023	22.5	Ortho-P: W	0.029	ND	0.5	0.48	0.011	0.08	0.74		2		5.68	868	27.5	8.07
F-4	6/12/2023	24.54												5.29	850	26.6	7.97
F-4	6/12/2023	27.94												1.17	858	25.3	7.68
F-4	6/12/2023	30.26		0.052	0.012	0.3	0.29	0.013	0.37	1.1		3		0.33	863	24.3	7.63
B-1	6/12/2023	0.02	Ortho-P: W	0.04	ND	0.34	0.32	0.015	0.17	0.87	11	4	4.5	6.5	854	26.4	7.97
B-1	6/12/2023	0.68												6.4	856	26.4	7.96
B-1	6/12/2023	1.63												6.35	855	26.3	7.96
B-1	6/12/2023	2.56												6.44	855	26.2	7.97
B-1	6/12/2023	2.65												6.38	855	26.2	7.97
B-2	6/12/2023	0.01	Ortho-P: T	0.053	0.004	0.26	0.24	0.014	0.2	0.97	13	8	1.8	6.52	864	27.0	8.05
B-2	6/12/2023	0.72												6.49	865	27.0	8.03
B-2	6/12/2023	1.87												6.48	865	27.0	8.03
B-2	6/12/2023	2.73												6.49	864	27.0	8.02
B-2	6/12/2023	3.6												6.48	864	27.0	8.02
B-2	6/12/2023	4.56												6.48	864	27.0	8.01
B-2	6/12/2023	5.64												6.48	864	27.0	8.02
B-2	6/12/2023	6.71												6.49	863	27.0	8.02
B-2	6/12/2023	7.69												6.49	862	26.9	8.02
B-2	6/12/2023	8.63	Ortho-P: W	0.061	ND	0.26	0.25	0.014	0.18	1.2		10		6.43	860	26.9	8.02
B-3	6/12/2023	0.02	Ortho-P: W	0.04	ND	0.2	0.19	0.01	0.14	0.87	15	5	3.4	6.85	859	27.8	8.23
B-3	6/12/2023	1.75												6.85	860	27.8	8.18

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-3	6/12/2023	3.1												6.79	860	27.8	8.17
B-3	6/12/2023	4.9												6.71	860	27.8	8.15
B-3	6/12/2023	6.46												6.56	860	27.7	8.13
B-3	6/12/2023	8.1												6.46	860	27.7	8.12
B-3	6/12/2023	9.88	Ortho-P: W	0.042	ND	0.2	0.19	0.01	0.14	0.88		7		6.37	860	27.7	8.11
B-3	6/12/2023	11.53												6.26	860	27.7	8.1
B-3	6/12/2023	12.76												6.23	860	27.6	8.1
B-3	6/12/2023	14.46												6.15	860	27.6	8.08
B-3	6/12/2023	16.46												6.06	860	27.6	8.08
B-3	6/12/2023	18.09												5.67	861	27.6	8.04
B-3	6/12/2023	18.86												5.07	853	27.5	8.05
B-3	6/12/2023	19.09	Ortho-P: W	0.053	ND	0.19	0.18	0.011	0.17	0.9		12		5.13	844	27.6	8.02
B-4	6/12/2023	0.01	Ortho-P: W	0.026	ND	0.28	0.27	0.009	0.06	0.7	11	2	7.3	7.58	853	28.1	8.25
B-4	6/12/2023	1.5												7.59	853	28.0	8.29
B-4	6/12/2023	3.33												7.58	854	28.0	8.3
B-4	6/12/2023	5.09												7.57	854	28.0	8.3
B-4	6/12/2023	6.98												7.58	855	28.0	8.33
B-4	6/12/2023	8.85												7.57	855	28.0	8.34
B-4	6/12/2023	10.77												7.56	855	28.0	8.34
B-4	6/12/2023	12.78		0.03	0.016	0.27	0.26	0.009	0.06	0.7		ND		7.55	855	28.0	8.33
B-4	6/12/2023	14.95												7.51	855	28.0	8.32
B-4	6/12/2023	17.66												7.29	855	27.8	8.31
B-4	6/12/2023	19.78												5.57	853	27.0	8.14
B-4	6/12/2023	21.69												0.89	845	24.6	7.77
B-4	6/12/2023	23.98												0.39	851	22.5	7.71
B-4	6/12/2023	24.97		0.044	0.009	0.19	0.18	0.01	0.3	1		4		0.29	838	22.2	7.57

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 12. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake July 2023. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
HRMICH	7/18/2023	0.28		0.052	0.016	1.1	1.1	0.016	0.05	0.71		1		7.75	859	23.2	7.63
F-1	7/18/2023	0.3		0.071	0.025	0.92	0.9	0.023	0.05	0.79	7.4	5	3.8	8.42	848	24.2	7.96
F-1	7/18/2023	0.64												8.25	848	24.1	8.12
F-1	7/18/2023	1.84												7.25	846	23.4	8.08
F-1	7/18/2023	3.01												7.63	845	23.3	8.12
F-1	7/18/2023	3.45												7.78	845	23.3	8.13
F-2	7/18/2023	0.3		0.054	0.006	0.56	0.53	0.03	0.17	1	23	4	4.5	7.72	818	25.3	8.39
F-2	7/18/2023	1.62												7.71	817	25.1	8.41
F-2	7/18/2023	3.48												7.84	818	25.0	8.43
F-2	7/18/2023	5.45												8.09	823	24.8	8.45
F-2	7/18/2023	7.28												7.16	817	24.8	8.38
F-2	7/18/2023	8.91												7.3	821	24.6	8.37
F-2	7/18/2023	10.65												7.53	825	24.6	8.39
F-2	7/18/2023	11.64		0.061	0.011	0.66	0.63	0.03	0.15	0.97		5		7.24	826	24.6	8.35
F-3	7/18/2023	0.31	Ortho-P: W	0.044	ND	0.46	0.43	0.031	0.11	0.93	28	4	4.0	8.6	812	25.7	11.2
F-3	7/18/2023	1.35												8.75	809	25.5	10.37
F-3	7/18/2023	3.22												8.7	806	25.4	9.56
F-3	7/18/2023	4.89												8.22	807	25.3	9.11
F-3	7/18/2023	6.71												7.81	808	25.2	8.84
F-3	7/18/2023	8.69												7.56	807	25.1	8.66
F-3	7/18/2023	10.38												7.51	808	25.1	8.58
F-3	7/18/2023	12.07	Ortho-P: W	0.052	ND	0.44	0.41	0.032	0.12	0.95		4		7.49	810	25.1	8.52
F-3	7/18/2023	14.11												7.44	810	25.1	8.47
F-3	7/18/2023	15.93												7.23	812	25.1	8.44
F-3	7/18/2023	17.93												6.91	813	25.1	8.39
F-3	7/18/2023	19.95												6.23	815	25.0	8.3
F-3	7/18/2023	21		0.062	0.013	0.46	0.43	0.03	0.22	1		6		5.84	816	24.9	8.26

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-4	7/18/2023	0.31	Ortho-P: W	0.032	ND	0.35	0.32	0.032	0.04	0.84	27	4	4.3	9.61	800	26.2	10.75
F-4	7/18/2023	2.74												9.49	797	25.6	9.95
F-4	7/18/2023	6.13												8.94	797	25.5	9.14
F-4	7/18/2023	9.86												8.6	798	25.4	8.8
F-4	7/18/2023	16.51												7.38	800	25.3	8.49
F-4	7/18/2023	18.92												6.62	801	25.3	8.34
F-4	7/18/2023	21.65	Ortho-P: W	0.03	ND	0.33	0.3	0.032	0.15	0.88		4		4.24	809	25.1	8.11
F-4	7/18/2023	23.65												0.48	824	24.5	7.76
F-4	7/18/2023	26.61												0.34	839	23.6	7.73
F-4	7/18/2023	28.6												0.32	845	23.2	7.67
F-4	7/18/2023	28.89		0.056	0.013	0.21	0.15	0.06	0.58	1.2		6		0.33	848	23.0	7.6
B-1	7/18/2023	0.33		0.064	0.01	0.32	0.24	0.076	0.24	0.97	16	1	3.7	7.13	815	26.1	9.78
B-1	7/18/2023	0.51												7.49	814	25.4	9.53
B-1	7/18/2023	1.22												7.65	813	25.1	8.97
B-1	7/18/2023	1.88												6.55	816	24.6	8.53
B-1	7/18/2023	2.29												6.16	816	24.4	8.31
B-1	7/18/2023	2.75												4.66	817	24.2	8.08
B-1	7/18/2023	3.02												4.98	817	24.2	8
B-1	7/18/2023	3.21												4.76	818	24.1	7.89
B-1	7/18/2023	3.67												4.76	818	24.2	7.86
B-1	7/18/2023	3.8												4.68	819	24.2	7.79
B-2	7/18/2023	0.33												9.94	805	26.1	9.18
B-2	7/18/2023	0.71	Ortho-P: W	0.058	ND	0.28	0.22	0.06	0.08	0.97	36	6	2.0	9.89	806	25.8	9.01
B-2	7/18/2023	1.77												10.11	802	25.2	8.93
B-2	7/18/2023	2.92												9.46	801	24.7	8.66
B-2	7/18/2023	4.15												8.38	802	24.5	8.44
B-2	7/18/2023	5.23												7.55	804	24.4	8.27
B-2	7/18/2023	6.32												7.15	805	24.3	8.21
B-2	7/18/2023	7.51												6.95	807	24.3	8.17
B-2	7/18/2023	8.44												5.44	821	24.1	8.01

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-2	7/18/2023	9.42												4.37	830	24.0	7.9
B-2	7/18/2023	9.32	Ortho-P: W	0.076	ND	0.25	0.2	0.048	0.25	1.1		23		4.37	830	24.0	7.88
B-3	7/18/2023	0.32	Ortho-P: W	0.048	ND	0.18	0.15	0.031	0.06	0.93	35	5	3.3	9.62	812	26.9	9.37
B-3	7/18/2023	1.07												9.74	811	26.6	9.2
B-3	7/18/2023	3.27												8.27	809	25.3	8.54
B-3	7/18/2023	5.66												6.87	811	25.0	8.37
B-3	7/18/2023	7.27												6.39	811	25.0	8.26
B-3	7/18/2023	9.15	Ortho-P: W	0.054	ND	0.18	0.15	0.033	0.19	1		7		6.35	811	25.0	8.21
B-3	7/18/2023	13.09												6.07	811	24.9	8.13
B-3	7/18/2023	15.01												5.88	811	24.9	8.09
B-3	7/18/2023	16.28												5.71	812	24.9	8.06
B-3	7/18/2023	18.53												4.24	814	24.8	7.92
B-3	7/18/2023	19.37												3.76	814	24.7	7.89
B-3	7/18/2023	19.66	Ortho-P: T	0.055	0.004	0.18	0.15	0.032	0.24	0.97		8		4.24	813	24.7	7.87
B-4	7/18/2023	0.33	NH ₃ : T	0.039	0.007	0.051	0.033	0.018	0.007	0.91	68	5	3.7	11.27	808	27.1	9.31
B-4	7/18/2023	3.07												11.02	806	25.9	9.29
B-4	7/18/2023	5.27												10.2	806	25.7	8.99
B-4	7/18/2023	7.82												10.04	807	25.5	8.79
B-4	7/18/2023	10.87												9.44	808	25.4	8.68
B-4	7/18/2023	13.65												8.6	810	25.3	8.57
B-4	7/18/2023	16.55												8.17	811	25.3	8.51
B-4	7/18/2023	19.24												4.96	818	24.8	8.17
B-4	7/18/2023	22.52	NO ₂ : T	0.26	0.2	0.016	ND	0.005	1.2	1.9		6		0.41	854	21.6	7.79
B-4	7/18/2023	25.61												0.38	879	17.5	7.81
B-4	7/18/2023	27.85	NO ₃ /NO ₂ : W	0.97	0.93	ND	ND	0.012	4	5.4		12		0.35	884	16.4	7.53

Laboratory codes: W = Reported value is less than the method detection limit (MDL).
T = Reported value is less than the reporting limit (RL). Result is estimated.
A = Result is estimated due to high matrix spike recovery.
H= Recommended laboratory holding time was exceeded.

Table 13. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake August 2023. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
HRMICH	8/17/2023	0												8.35	797	22.3	8
F-1	8/17/2023	0		0.046	0.018	0.88	0.87	0.011	0.06	0.65	4.2	2	4.2	7.66	781	22.0	7.99
F-1	8/17/2023	0.86												7.65	781	22.0	7.99
F-1	8/17/2023	1.87												7.62	781	22.0	7.99
F-1	8/17/2023	2.97												7.66	781	22.0	7.99
F-2	8/17/2023	0	Ortho-P: W	0.087	ND	0.33	0.31	0.017	0.1	1.4	62	7	2.5	8.72	789	23.9	8.36
F-2	8/17/2023	1.6												8.83	788	23.9	8.38
F-2	8/17/2023	2.91												8.68	789	23.9	8.37
F-2	8/17/2023	4.52												8.64	789	23.9	8.37
F-2	8/17/2023	5.92												8.64	789	23.9	8.37
F-2	8/17/2023	7.48												8.61	789	23.9	8.38
F-2	8/17/2023	8.84												8.6	789	23.9	8.37
F-2	8/17/2023	10.64												8.6	789	23.9	8.37
F-2	8/17/2023	12.04												8.49	788	23.9	8.36
F-2	8/17/2023	12.97	Ortho-P: W	0.091	ND	0.28	0.26	0.017	0.09	1.3		6		8.3	789	23.9	8.34
F-3	8/17/2023	0.06	Ortho-P: W	0.071	ND	0.17	0.16	0.015	0.05	1.1	28	6	2.1	10.21	779	24.6	8.52
F-3	8/17/2023	2.41												8.28	784	24.4	8.27
F-3	8/17/2023	4.97												6.32	787	24.1	8.11
F-3	8/17/2023	7.5												6.19	791	23.9	8.11
F-3	8/17/2023	9.97												6.24	791	23.8	8.12
F-3	8/17/2023	12.51		0.059	0.006	0.28	0.26	0.016	0.21	0.96		2		5.49	796	23.5	8.04
F-3	8/17/2023	15.05												5.64	796	23.3	8.05
F-3	8/17/2023	17.67												5.55	796	23.2	8.02
F-3	8/17/2023	20.01												5.39	797	23.2	8
F-3	8/17/2023	22.42		0.077	0.043	0.42	0.4	0.018	0.26	0.96		10		5.28	797	23.2	7.98
F-4	8/17/2023	0.03	Ortho-P: W	0.058	ND	0.16	0.14	0.014	0.21	1	27	7	3.3	7.49	783	24.4	8.24
F-4	8/17/2023	3.13												7.13	783	24.4	8.19

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-4	8/17/2023	5.95												6.91	784	24.3	8.16
F-4	8/17/2023	9.13												5.89	785	24.3	8.04
F-4	8/17/2023	11.98												4.7	786	24.2	7.91
F-4	8/17/2023	14.96		0.056	0.006	0.16	0.14	0.013	0.3	0.99		5		4.93	785	24.1	7.92
F-4	8/17/2023	17.94												4.48	786	24.0	7.89
F-4	8/17/2023	20.93												4.84	787	24.0	7.93
F-4	8/17/2023	23.94												4.97	787	24.0	7.95
F-4	8/17/2023	26.93												4.97	791	23.8	7.99
F-4	8/17/2023	27.99	Ortho-P: T	0.062	0.005	0.17	0.16	0.015	0.26	0.97		3		4.6	794	23.7	7.96
B-1	8/17/2023	0		0.058	0.008	0.21	0.18	0.03	0.23	0.96	21	5	2.8	5.67	788	24.0	7.9
B-1	8/17/2023	1.05												5.63	788	24.0	7.91
B-1	8/17/2023	1.89												5.55	788	24.0	7.87
B-1	8/17/2023	3.02												4.48	789	23.8	7.81
B-2	8/17/2023	0	Ortho-P: W	0.062	ND	0.2	0.17	0.032	0.18	0.98	30	12	1.8	7.39	779	24.0	8.09
B-2	8/17/2023	0.95												7.35	779	24.0	8.09
B-2	8/17/2023	1.93												7.39	779	24.0	8.09
B-2	8/17/2023	3.01												7.29	779	23.9	8.08
B-2	8/17/2023	4.07												7.2	779	23.9	8.07
B-2	8/17/2023	5.01												7.13	778	23.9	8.05
B-2	8/17/2023	6.05												7.07	777	23.9	8.05
B-2	8/17/2023	6.93												6.86	771	23.8	8.04
B-2	8/17/2023	8.05	Ortho-P: W	0.071	ND	0.17	0.14	0.031	0.18	1		23		6.81	770	23.7	8.03
B-3	8/17/2023	0	Ortho-P: W	0.06	ND	0.12	0.1	0.021	0.06	1	54	8	2.3	8.39	777	24.2	8.23
B-3	8/17/2023	1.51												8.4	777	24.2	8.25
B-3	8/17/2023	2.93												8.38	777	24.2	8.24
B-3	8/17/2023	4.44	Ortho-P: W	0.066	ND	0.1	0.08	0.023	0.05	1		7		8.37	777	24.2	8.23
B-3	8/17/2023	5.95												8.38	777	24.2	8.23
B-3	8/17/2023	7.4												8.38	777	24.2	8.24
B-3	8/17/2023	8.95												8.36	777	24.2	8.24
B-3	8/17/2023	10.52												8.37	777	24.2	8.24
B-3	8/17/2023	12.02												8.37	777	24.2	8.24
B-3	8/17/2023	13.6												8.37	777	24.2	8.24

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-3	8/17/2023	14.99												8.33	777	24.2	8.24
B-3	8/17/2023	16.04	Ortho-P: W	0.066	ND	0.12	0.1	0.022	0.05	1.1		10		8.28	777	24.2	8.23
B-4	8/17/2023	0	Ortho-P: W, A03; NO ₂ : T; NO ₃ /NO ₂ : W	0.064	ND	ND	ND	0.002	ND	1.1	67	9		10.23	772	25.0	8.5
B-4	8/17/2023	2.42												9.96	773	25.0	8.49
B-4	8/17/2023	4.97												9.77	774	25.0	8.47
B-4	8/17/2023	7.5												9.05	774	25.0	8.42
B-4	8/17/2023	10.02												6.53	778	24.6	8.16
B-4	8/17/2023	12.58	Ortho-P: W; NO ₂ : T	0.06	ND	0.011	ND	0.003	0.11	1.1		4		5.02	779	24.3	7.96
B-4	8/17/2023	14.92												4.83	778	24.3	7.94
B-4	8/17/2023	17.53												4.7	778	24.3	7.92
B-4	8/17/2023	20.06												4.12	779	24.3	7.86
B-4	8/17/2023	22.48	NO ₂ : T	0.062	0.018	0.013	ND	0.004	0.35	1.1		4		0.92	784	24.0	7.67

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.

Table 14. Water Chemistry data for Huron River, Ford Lake, and Belleville Lake September 2023. All values were reported as mg/L unless specified. Parameters include temperature (°C), pH (SU), dissolved oxygen (DO), conductivity (Cond; uS/cm), total phosphorus (TP), total nitrogen (TN), orthophosphate (OP), nitrate plus nitrite (NO₃ + NO₂), nitrate-calculated (NO₃-Calc), nitrite (NO₂), ammonia (NH₃), Kjeldahl nitrogen (KN), and total suspended solids (TSS), Secchi disk transparency (SD).

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
HRMICH	9/12/2023	0	NO ₂ : T	0.041	0.013	1.1	1.1	0.009	0.04	0.61		2		8.32		21.4	7.81
F-1	9/12/2023	0.16		0.044	0.014	1.1	1	0.011	0.05	0.76	3.6	7	4.3	7.92		21.5	7.88
F-1	9/12/2023	0.58												7.9		21.5	7.88
F-1	9/12/2023	2.05												7.88		21.5	7.89
F-1	9/12/2023	3.01												7.87		21.5	7.89
F-1	9/12/2023	3.26												7.85		21.5	7.9
F-2	9/12/2023	0.16	Ortho-P: W	0.048	ND	0.53	0.52	0.013	0.02	0.9	29	5	5.4	9.39		22.9	8.19
F-2	9/12/2023	1.51												9.37		23.0	8.21
F-2	9/12/2023	3.01												9.5		23.0	8.23
F-2	9/12/2023	4.53												9.52		23.0	8.22
F-2	9/12/2023	6.01												9.58		23.0	8.23
F-2	9/12/2023	7.55												9.52		22.9	8.22
F-2	9/12/2023	9.05												9.49		22.9	8.22
F-2	9/12/2023	10.57												8.61		22.9	8.12
F-2	9/12/2023	12.02												6.51		22.5	7.86
F-2	9/12/2023	13.54												5.78		22.4	7.79
F-2	9/12/2023	13.99		0.05	0.015	0.6	0.59	0.015	0.11	0.8		4		5.59		22.4	7.77
F-3	9/12/2023	0.15	Ortho-P: W; NH ₃ : T	0.036	ND	0.43	0.42	0.013	0.006	0.77	30	2	5.4	9.65		23.1	8.29
F-3	9/12/2023	2												9.63		23.1	8.31
F-3	9/12/2023	4.08												9.54		23.1	8.3
F-3	9/12/2023	6.03												9.58		23.1	8.31
F-3	9/12/2023	7.91												9.51		23.1	8.3
F-3	9/12/2023	10.04												9.45		23.1	8.3
F-3	9/12/2023	12	Ortho-P: W; NH ₃ : T	0.043	ND	0.44	0.42	0.015	0.009	0.78		2		9.43		23.1	8.3
F-3	9/12/2023	13.97												9.36		23.1	8.29
F-3	9/12/2023	15.99												9.35		23.1	8.29
F-3	9/12/2023	18												7.44		22.9	8.05

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
F-3	9/12/2023	19.98												5.47		22.4	7.78
F-3	9/12/2023	21.84		0.056	0.017	0.58	0.56	0.016	0.16	0.71		5		4.69		22.4	7.7
F-4	9/12/2023	0.14	Ortho-P: T	0.04	0.006	0.46	0.44	0.014	0.09	0.7	15	ND	5.9	7.73		23.0	8.09
F-4	9/12/2023	2.99												7.62		23.0	8.07
F-4	9/12/2023	6.02												6.97		23.0	8.02
F-4	9/12/2023	9.03												6.99		23.0	8.02
F-4	9/12/2023	12.03												7.08		23.0	8.03
F-4	9/12/2023	15.08		0.05	0.016	0.48	0.47	0.014	0.13	0.73		2		7.06		23.0	8.03
F-4	9/12/2023	18.06												6.84		23.0	8.01
F-4	9/12/2023	21.04												6.72		23.0	7.99
F-4	9/12/2023	23.95												4.64		22.8	7.74
F-4	9/12/2023	26.87												3.32		22.6	7.65
F-4	9/12/2023	30.02		0.12	0.077	0.43	0.41	0.018	0.51	1.1		5		1.74		22.3	7.55
B-1	9/12/2023	0.21		0.051	0.018	0.49	0.47	0.026	0.13	0.7	10	1	3.3	6.84		22.9	7.96
B-1	9/12/2023	0.47												6.93		22.8	7.96
B-1	9/12/2023	1.01												7.07		22.8	7.96
B-1	9/12/2023	1.51												7.2		22.8	7.97
B-1	9/12/2023	1.96												7.4		22.8	7.98
B-1	9/12/2023	1.99												7.37		22.8	7.98
B-1	9/12/2023	2.45												7.89		22.7	7.99
B-1	9/12/2023	2.98												7.89		22.6	7.99
B-1	9/12/2023	3.49												7.97		22.6	8.01
B-2	9/12/2023	0.2	Ortho-P: T	0.053	0.008	0.38	0.35	0.024	0.06	0.82	30	6	2.3	8.69		22.9	8.17
B-2	9/12/2023	0.91												8.63		22.9	8.16
B-2	9/12/2023	1.98												8.59		22.9	8.16
B-2	9/12/2023	3.03												8.23		22.8	8.12
B-2	9/12/2023	3.96												7.91		22.7	8.08
B-2	9/12/2023	5.03												7.31		22.6	8
B-2	9/12/2023	6.02												6.75		22.6	7.93
B-2	9/12/2023	6.99												6.44		22.5	7.9
B-2	9/12/2023	7.98												6.3		22.5	7.88
B-2	9/12/2023	8.28		0.062	0.022	0.46	0.43	0.026	0.16	0.78		7		6.26		22.5	7.88

SITE NAME	DATE	Depth (ft)	Lab Code	TP	OP	NO ₃ +NO ₂	NO ₃ -Calc	NO ₂	NH ₃	KN	CHL	TSS	SD	DO	Cond	Temp	pH
B-3	9/12/2023	0.18	Ortho-P: T	0.048	0.006	0.32	0.3	0.021	0.03	0.86	36	6	2.6	9.06		22.8	8.24
B-3	9/12/2023	1.02												9.04		22.8	8.24
B-3	9/12/2023	2.01												9.05		22.8	8.24
B-3	9/12/2023	2.99												9.02		22.8	8.24
B-3	9/12/2023	4.5												8.77		22.8	8.22
B-3	9/12/2023	5.89												8.54		22.7	8.19
B-3	9/12/2023	7.51	Ortho-P: W	0.048	ND	0.33	0.3	0.022	0.04	0.76		6		8.53		22.7	8.19
B-3	9/12/2023	9.09												8.58		22.7	8.2
B-3	9/12/2023	10.63												8.51		22.7	8.2
B-3	9/12/2023	11.95												8.15		22.7	8.17
B-3	9/12/2023	13.56												7.14		22.6	8.07
B-3	9/12/2023	14.99												6.79		22.6	8.03
B-3	9/12/2023	16.5												6.57		22.6	8.01
B-3	9/12/2023	17	Ortho-P: T	0.059	0.009	0.31	0.28	0.023	0.12	0.72		13		6.55		22.6	8.01
B-4	9/12/2023	0.18	Ortho-P: T	0.044	0.005	0.25	0.23	0.02	0.18	0.8	22	4	4.9	6.82		23.5	8.01
B-4	9/12/2023	2.5												6.92		23.5	8.03
B-4	9/12/2023	5.05												6.69		23.5	8.01
B-4	9/12/2023	7.49												6.57		23.4	8
B-4	9/12/2023	9.96												6.59		23.4	8
B-4	9/12/2023	12.53	Ortho-P: T	0.045	0.007	0.24	0.22	0.02	0.18	0.85		3		6.48		23.4	7.99
B-4	9/12/2023	15.06												6.26		23.3	7.97
B-4	9/12/2023	17.48												5.9		23.3	7.94
B-4	9/12/2023	19.98												5.7		23.3	7.91
B-4	9/12/2023	22.27		0.067	0.028	0.22	0.2	0.02	0.4	1.1		11		3.42		23.2	7.72

Laboratory codes:

W = Reported value is less than the method detection limit (MDL).

T = Reported value is less than the reporting limit (RL). Result is estimated.

A = Result is estimated due to high matrix spike recovery.

H= Recommended laboratory holding time was exceeded.