

Summary of water quality data and desired target values for samples collected in Grand Lake St. Marys during 2010.

Sampling stations are evenly spaced from west to east across the midpoint of the lake.
Units are in meters (m), parts per million (ppm), parts per billion (ppb) and standard units (SU).

Measurement	Target ¹	April 15			May 10			June 9			July 14			August 19			September 15			October 7		
		L2	L1	L3																		
water clarity²	≥ 1.19 m	2.10	1.80	0.78	0.40	0.68	0.51	0.44	0.46	0.29	0.32	0.24	0.30	0.20	0.20	0.20	0.18	0.18	0.18	0.22	0.18	0.18
dissolved oxygen	≥ 6.0 ppm	6.4	7.4	8.5	8.2	7.7	7.3	9.3	7.1	6.7	16.0	13.8	3.1	11.2	7.8	12.5	8.5	8.07	11.8	11.6	11.1	8.6
algal productivity³	≤ 14.0 ppb	2.7	4.4	41.3	42.3	5.6	17.7	77.7	53.4	67.5	140	323	206	243	241	263	276	252	314	258	293	260
pH	6.5-9.0 SU	8.3	8.3	8.4	8.1	8.0	8.4	8.5	8.2	8.1	9.3	9.4	8.1	9.5	9.1	9.5	8.9	8.8	9.4	9.0	8.9	9.1
total phosphorus	≤ 34 ppb	104	91	95	83	75	96	86	88	102	140	92	298	254	89	227	296	391	166	254	170	149
total nitrogen	≤ 930 ppb	4090	3460	3770	4340	4500	4190	4840	4300	5430	1170	1490	2080	1580	1580	2530	1760	4410	1860	3130	2410	2250
ammonia nitrogen	≤ OMZA ppm	1.16 (0.7)	0.90 (0.7)	0.41 (0.5)	1.59 (1.0)	2.03 (1.3)	1.80 (0.5)	1.84 (0.4)	2.09 (0.7)	1.87 (0.9)	<.05 (0.1)	<.05 (0.1)	0.33 (0.6)	<.05 (0.1)	<0.5 (0.1)	<.05 (0.1)	<.05 (0.2)	<.05 (0.2)	<.05 (0.1)	<.05 (0.2)	<.05 (0.2)	<.05 (0.1)

¹ Targets for pH, dissolved oxygen and ammonia are statewide criteria codified in Ohio Administrative Code Chapter 3745-1 established to protect aquatic life. Outside Mixing Zone Average (OMZA) criteria for ammonia are based on temperature and pH of the sample and are presented in parenthesis. Targets for secchi disk transparency, chlorophyll a, total phosphorus and total nitrogen are draft criteria previewed in the Ohio 2010 Integrated Water Quality Monitoring and Assessment Report established to protect the lake habitat of impounded reservoirs in the Eastern Corn Belt Plains ecoregion and intended to be met as a seasonal median value

² depth of secchi disk measurement

³ measure of chlorophyll a content (photosynthetic pigment) in filtered water