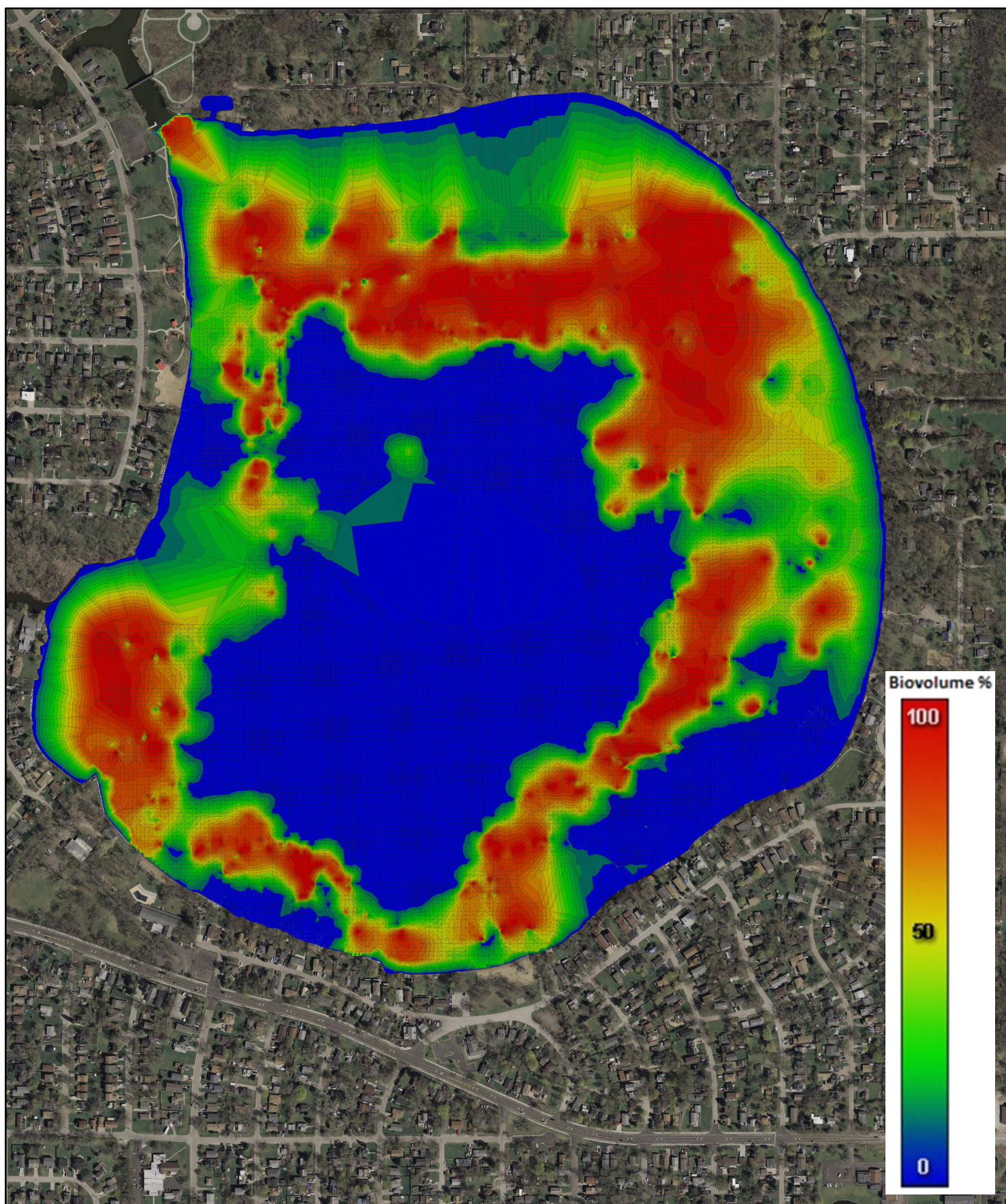


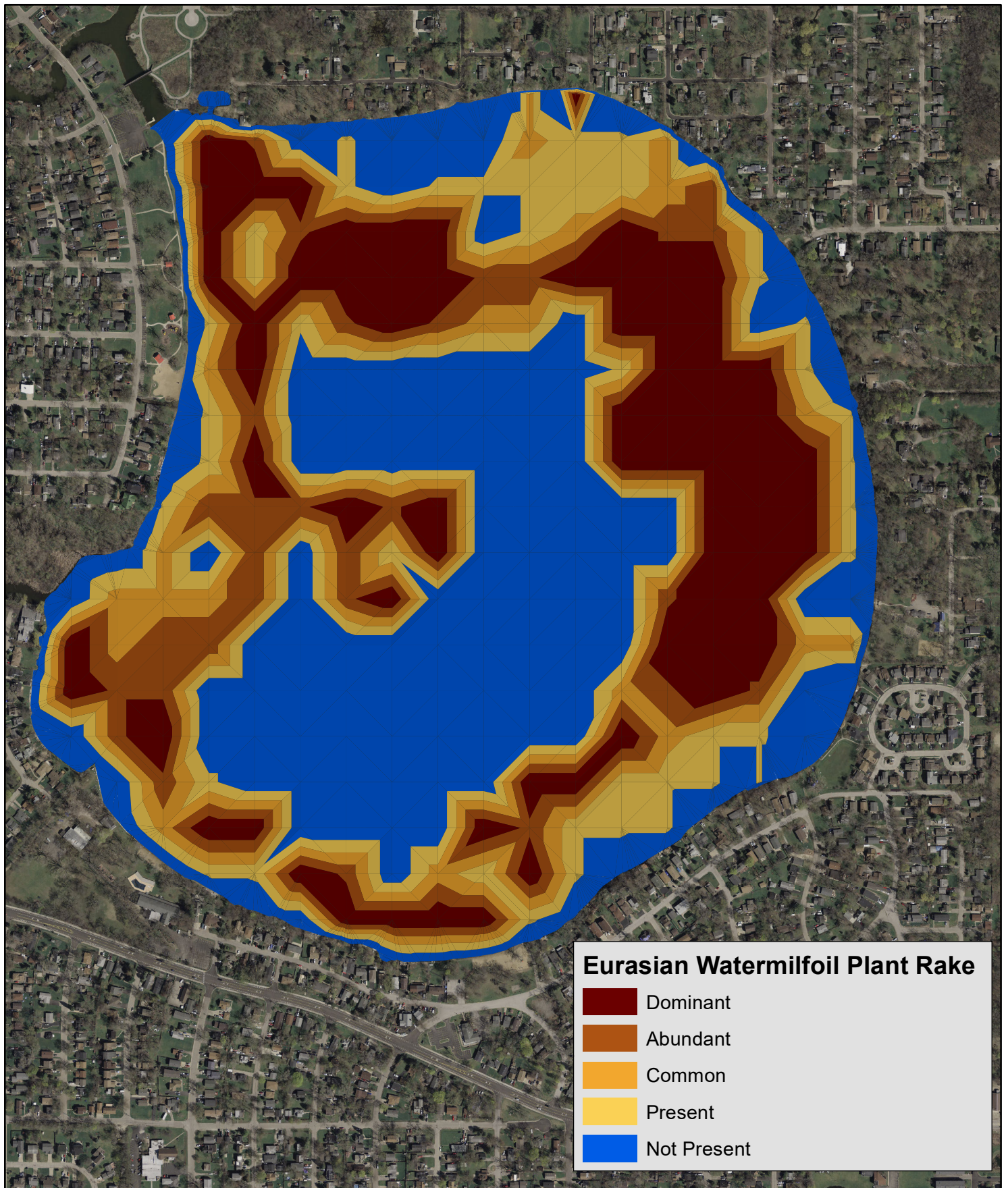
Round Lake Plant Grid, 2019



Round Lake Plant Biovolume, August 2019



Round Lake Eurasian Watermilfoil Plant Rake, August 2019



Bathymetric Map of Round Lake, Lake County, IL



Morphometric Data

Surface Area: 229.98 acres
Maximum Depth: 30.38 feet
Average Depth: 8.64 feet
Lake Volume: 1986.64 acre-feet
Shoreline Length: 2.44 miles
Lake Elevation: 761.72 feet, msl
Dam Elevation: 761.46 feet, msl

Survey Data Collected June 29, 2007

This map is intended for water quality reference only, not intended for navigational, swimming, or diving purposes.



Appendix B:

Tables

Round Lake Water Quality Summary Table: 2003, 2009, & 2019

2019	Epilimnion															
DATE	DEPTH	ALK	TKN	NH ₃ -N	NO ₂ +NO ₃ -N	TP	SRP	Cl ⁻	TDS	TSS	TS	TVS	SECCHI	COND	pH	DO
15-May	3	142	0.57	<0.1	<0.05	0.018	<0.005	215	544	10	588	94	19.5	0.9882	8.44	11.53
12-Jun	3	119	0.54	<0.1	<0.05	0.012	<0.005	214	513	1.6	568	92	14.60	0.9260	8.54	8.82
17-Jul	3	123	0.62	<0.1	<0.05	0.019	<0.005	216	513	<1.0	515	63	17.20	0.9265	8.6	7.93
14-Aug	3	116	0.67	<0.1	<0.05	0.017	<0.005	206	507	3.3	531	89	8.35	0.9130	8.66	10.47
18-Sep	3	112	0.77	<0.1	<0.05	0.029	<0.005	177	438	5.5	470	86	5.22	0.7757	8.81	10.3

Average 122 0.63 <0.1 <0.05 0.019 <0.005 206 NA 4.3^k 534 85 12.97 0.9059 8.61 9.81

2009	Epilimnion															
DATE	DEPTH	ALK	TKN	NH ₃ -N	NO ₂ +NO ₃ -N	TP	SRP	Cl ⁻	TDS	TSS	TS	TVS	SECCHI	COND	pH	DO
12-May	3	156	0.86	<0.1	<0.05	0.033	<0.005	299	NA	2.9	743	105	7.87	1.3200	7.88	8.42
9-Jun	3	146	0.77	<0.1	<0.05	0.026	<0.005	290	NA	2.8	732	109	6.70	1.2720	8.66	9.98
14-Jul	3	141	0.70	<0.1	<0.05	0.018	<0.005	267	NA	4.0	682	114	5.40	1.1770	8.33	9.11
11-Aug	3	140	0.71	<0.1	<0.05	0.026	<0.005	273	NA	2.8	697	123	6.30	1.1980	8.18	8.06
15-Sep	3	131	0.65	<0.1	<0.05	0.014	<0.005	256	NA	2.5	668	104	8.80	1.1790	8.53	10.16

Average 143 0.74 <0.1 <0.05 0.023 <0.005 277 NA 3.0 704 111 7.01 1.2292 8.32 9.15

2003	Epilimnion															
DATE	DEPTH	ALK	TKN	NH ₃ -N	NO ₃ -N*	TP	SRP	Cl ⁻	TDS	TSS	TS	TVS	SECCHI	COND	pH	DO
19-May	3	151	0.88	<0.1	<0.05	0.032	0.006	NA	610	3.5	627	98	4.99	1.0820	8.62	9.47
17-Jun	3	136	0.89	<0.1	<0.05	0.023	<0.005	NA	598	2.6	617	110	8.69	1.0640	8.67	8.70
22-Jul	3	123	0.82	<0.1	<0.05	0.025	<0.005	NA	602	4.5	622	125	5.61	1.0400	8.65	7.86
19-Aug	3	128	0.89	<0.1	<0.05	0.020	<0.005	NA	591	4.0	669	160	5.61	1.0740	8.68	7.83
23-Sep	3	127	0.96	<0.1	<0.05	0.027	<0.005	NA	582	3.0	610	116	6.37	1.1050	8.44	7.01

Average 133 0.89 <0.1 <0.05 0.025 0.006^k NA 597 3.5 629 122 6.25 1.0730 8.61 8.17

Glossary																
ALK = Alkalinity, mg/L CaCO ₃	TDS = Total dissolved solids, mg/L TSS = Total suspended solids, mg/L TS = Total solids, mg/L TVS = Total volatile solids, mg/L SECCHI = Secchi disk depth, ft. COND = Conductivity, milliSiemens/cm DO = Dissolved oxygen, mg/L															
TKN = Total Kjeldahl nitrogen, mg/L																
NH ₃ -N = Ammonia nitrogen, mg/L																
NO ₂ +NO ₃ -N = Nitrate + Nitrite nitrogen, mg/L																
NO ₃ -N = Nitrate + Nitrite nitrogen, mg/L																
TP = Total phosphorus, mg/L																
SRP = Soluble reactive phosphorus, mg/L																
Cl ⁻ = Chloride, mg/L																

k = Denotes that the actual value is known to be less than the value presented.

NA= Not applicable

* = Prior to 2006 only Nitrate - nitrogen was analyzed

Round Lake Water Quality Summary Table: 2003, 2009, & 2019

2019	Hypolimnion															
DATE	DEPTH	ALK	TKN	NH ₃ -N	NO ₂ +NO ₃ -N	TP	SRP	Cl ⁻	TDS	TSS	TS	TVS	SECCHI	COND	pH	DO
15-May	28	145	0.58	<0.100	<0.05	<0.010	0.006	218	561	3.1	599	94	NA	1.0209	7.90	3.36
12-Jun	28	155	0.84	0.319	<0.05	<0.010	0.065	222	549	4.0	593	79	NA	0.9970	7.86	2.40
17-Jul	28	181	1.37	0.500	<0.05	0.31	0.23	217	554	8.0	533	71	NA	1.0066	7.52	0.20
14-Aug	27	191	1.91	1.030	<0.05	0.459	0.38	215	563	9.7	617	116	NA	1.0250	7.28	0.15
18-Sep	27	156	1.50	0.841	<0.05	0.224	0.22	214	542	6.6	564	85	NA	0.9836	7.24	0.19
Average		166	1.24	0.558 ^k	<0.05	0.203 ^k	0.180	217	554	6.3	581	89	NA	1.0066	7.56	1.26

2009	Hypolimnion															
DATE	DEPTH	ALK	TKN	NH ₃ -N	NO ₂ +NO ₃ -N	TP	SRP	Cl ⁻	TDS	TSS	TS	TVS	SECCHI	COND	pH	DO
12-May	28	162	1.21	0.496	<0.05	0.066	0.023	307	NA	7.6	751	101	NA	1.3430	7.40	0.27
9-Jun	25	161	1.37	<0.1	<0.05	0.091	0.025	296	NA	5.5	756	108	NA	1.3230	7.94	0.83
14-Jul	28	185	2.52	1.920	<0.05	0.219	0.165	300	NA	4.2	757	114	NA	1.3420	7.09	0.20
11-Aug	27	210	3.72	3.090	<0.05	0.288	0.26	300	NA	4.5	774	125	NA	1.3590	7.02	0.22
15-Sep	27	176	3.20	2.330	<0.05	0.167	0.08	277	NA	6.2	713	108	NA	1.3100	7.26	0.21
Average		179	2.40	1.567 ^k	<0.05	0.166	0.111	296	NA	5.6	750	111	NA	1.3354	7.34	0.35

2003	Hypolimnion															
DATE	DEPTH	ALK	TKN	NH ₃ -N	NO ₃ -N*	TP	SRP	Cl ⁻	TDS	TSS	TS	TVS	SECCHI	COND	pH	DO
19-May	28	154	1.12	0.119	<0.05	0.043	<0.005	NA	602	5.9	626	102	NA	1.0830	7.69	1.66
17-Jun	27	164	1.70	0.533	<0.05	0.065	0.008	NA	608	7.1	628	105	NA	1.0790	7.33	0.07
22-Jul	27	200	2.85	1.620	<0.05	0.121	0.044	NA	632	6.4	662	136	NA	1.1060	7.18	0.10
19-Aug	28	228	4.01	2.850	<0.05	0.230	0.197	NA	610	6.7	653	111	NA	1.1390	7.03	0.05
23-Sep	27	145	1.78	0.983	<0.05	0.116	0.064	NA	570	6.5	622	100	NA	1.1550	7.32	2.52
Average		178	2.29	1.221	<0.05	0.115	0.313 ^k	NA	604	6.5	638	111	NA	1.1124	7.31	0.88

Glossary	
ALK = Alkalinity, mg/L CaCO ₃ TKN = Total Kjeldahl nitrogen, mg/L NH ₃ -N = Ammonia nitrogen, mg/L NO ₂ +NO ₃ -N = Nitrate + Nitrite nitrogen, mg/L NO ₃ -N = Nitrate + Nitrite nitrogen, mg/L TP = Total phosphorus, mg/L SRP = Soluble reactive phosphorus, mg/L Cl ⁻ = Chloride, mg/L	TDS = Total dissolved solids, mg/L TSS = Total suspended solids, mg/L TS = Total solids, mg/L TVS = Total volatile solids, mg/L SECCHI = Secchi disk depth, ft. COND = Conductivity, milliSiemens/cm DO = Dissolved oxygen, mg/L

k = Denotes that the actual value is known to be less than the value presented.

NA= Not applicable

* = Prior to 2006 only Nitrate - nitrogen was analyzed

Round Lake Multiparameter Data, 2019

Date	Depth (Ft.)	Depth Text (Ft.)	Temp	SpCond (ms/cm)	DO mg/l	DO Sat	pH	BGA RFU
5/15/2019	0.67	0.5	15.60	0.9872	11.60	116.80	8.10	-0.02
5/15/2019	1.12	1.0	14.93	0.9898	11.68	116.00	8.40	0.17
5/15/2019	2.04	2.0	14.78	0.9888	11.54	114.30	8.45	0.19
5/15/2019	3.04	3.0	14.73	0.9882	11.53	114.00	8.44	0.20
5/15/2019	4.08	4.0	14.72	0.9883	11.54	114.10	8.43	0.08
5/15/2019	6.10	6.0	14.60	0.9882	11.63	114.60	8.44	0.14
5/15/2019	8.08	8.0	14.12	0.9876	10.56	103.00	8.40	0.11
5/15/2019	10.07	10.0	13.59	0.9884	10.60	102.30	8.35	0.21
5/15/2019	12.08	12.0	13.34	0.9894	10.44	100.10	8.33	0.19
5/15/2019	14.07	14.0	13.16	0.9899	10.24	97.80	8.30	0.13
5/15/2019	16.13	16.0	12.99	0.9904	10.06	95.70	8.28	0.18
5/15/2019	18.03	18.0	12.73	0.9928	9.33	88.20	8.24	0.22
5/15/2019	20.10	20.0	12.58	0.9944	8.81	83.10	8.19	0.15
5/15/2019	22.09	22.0	12.50	0.9972	8.44	79.40	8.16	0.19
5/15/2019	24.10	24.0	12.15	1.0062	7.02	65.60	8.09	0.25
5/15/2019	26.07	26.0	11.93	1.0114	5.29	49.20	7.96	0.30
5/15/2019	28.11	28.0	11.55	1.0209	3.36	31.00	7.90	0.29
5/15/2019	29.81	30.0	10.96	1.0330	1.10	10.00	7.78	0.20

Date	Depth (Ft.)	Depth Text (Ft.)	Temp	SpCond (ms/cm)	DO mg/l	DO Sat	pH	BGA RFU
6/12/2019	0.49	0.5	21.34	0.9256	8.83	100.00	8.22	0.17
6/12/2019	1.18	1.0	21.36	0.9262	8.82	99.90	8.42	-0.01
6/12/2019	2.11	2.0	21.35	0.9263	8.82	99.90	8.48	0.03
6/12/2019	3.12	3.0	21.36	0.9262	8.82	99.80	8.54	0.11
6/12/2019	4.05	4.0	21.35	0.9263	8.81	99.80	8.57	0.01
6/12/2019	6.04	6.0	21.34	0.9267	8.81	99.70	8.60	-0.03
6/12/2019	8.12	8.0	21.34	0.9267	8.80	99.60	8.61	0.00
6/12/2019	10.10	10.0	21.33	0.9269	8.79	99.50	8.61	-0.01
6/12/2019	12.17	12.0	21.31	0.9272	8.75	99.00	8.62	0.01
6/12/2019	14.09	14.0	20.47	0.9361	7.85	87.40	8.55	0.00
6/12/2019	16.12	16.0	18.02	0.9637	6.46	68.50	8.41	0.03
6/12/2019	18.10	18.0	16.27	0.9804	4.65	47.50	8.35	0.09
6/12/2019	20.12	20.0	15.23	0.9843	3.00	30.00	8.24	0.26
6/12/2019	22.09	22.0	14.51	0.9872	1.72	16.90	8.10	0.19
6/12/2019	24.13	24.0	13.93	0.9914	0.93	9.10	8.01	0.23
6/12/2019	26.10	26.0	13.32	0.9949	0.29	2.80	7.92	1.48
6/12/2019	28.14	28.0	13.16	0.9971	0.25	2.40	7.86	0.76
6/12/2019	30.11	30.0	12.95	0.9992	0.23	2.10	7.82	0.63

Round Lake Multiparameter Data, 2019

Date	Depth (Ft.)	Depth Text (Ft.)	Temp	SpCond (ms/cm)	DO mg/l	DO Sat	pH	BGA RFU
7/17/2019	0.45	0.5	27.59	0.9268	7.95	101.10	8.60	0.02
7/17/2019	1.05	1.0	27.62	0.9260	7.94	101.00	8.60	-0.03
7/17/2019	2.04	2.0	27.48	0.9266	7.94	100.80	8.60	-0.01
7/17/2019	3.08	3.0	27.43	0.9265	7.93	100.60	8.60	-0.06
7/17/2019	4.05	4.0	27.40	0.9262	7.96	100.80	8.60	0.09
7/17/2019	6.02	6.0	27.37	0.9264	7.93	100.40	8.60	-0.08
7/17/2019	8.10	8.0	27.34	0.9262	7.91	100.10	8.60	-0.03
7/17/2019	10.02	10.0	27.30	0.9264	7.87	99.60	8.59	-0.01
7/17/2019	12.03	12.0	27.21	0.9262	5.92	74.70	8.35	-0.11
7/17/2019	14.07	14.0	25.13	0.9292	4.07	49.50	8.04	0.18
7/17/2019	16.04	16.0	22.90	0.9397	2.07	24.20	7.74	0.14
7/17/2019	18.08	18.0	19.80	0.9569	1.90	20.90	7.75	0.10
7/17/2019	20.11	20.0	18.65	0.9601	3.04	32.70	7.88	0.71
7/17/2019	22.04	22.0	17.45	0.9709	2.10	22.00	7.74	1.08
7/17/2019	24.10	24.0	16.10	0.9829	0.60	6.10	7.56	6.12
7/17/2019	26.09	26.0	15.15	0.9928	0.23	2.30	7.55	2.47
7/17/2019	28.04	28.0	14.27	1.0066	0.20	1.90	7.52	1.66
7/17/2019	30.01	30.0	13.97	1.0105	0.18	1.80	7.46	4.35

Date	Depth (Ft.)	Depth Text (Ft.)	Temp	SpCond (ms/cm)	DO mg/l	DO Sat	pH	BGA RFU
8/14/2019	0.41	0.5	23.88	0.0039	8.08	95.80	6.90	0.12
8/14/2019	1.01	1.0	26.37	0.9136	8.43	104.80	8.65	0.03
8/14/2019	2.10	2.0	26.36	0.9134	8.42	104.80	8.65	0.07
8/14/2019	3.09	3.0	26.37	0.9134	8.42	104.70	8.66	0.04
8/14/2019	4.10	4.0	26.34	0.9132	8.42	104.60	8.66	0.14
8/14/2019	6.09	6.0	26.32	0.9134	8.39	104.30	8.66	0.14
8/14/2019	8.12	8.0	26.25	0.9133	8.23	102.10	8.65	0.24
8/14/2019	10.14	10.0	26.23	0.9132	8.19	101.50	8.65	0.27
8/14/2019	12.06	12.0	26.19	0.9132	8.18	101.40	8.65	0.17
8/14/2019	14.04	14.0	25.94	0.9190	5.45	67.20	8.34	0.00
8/14/2019	16.06	16.0	25.40	0.9255	2.21	27.00	7.83	0.10
8/14/2019	18.05	18.0	24.13	0.9396	0.31	3.70	7.53	0.48
8/14/2019	20.69	20.0	21.20	0.9724	0.25	2.80	7.44	2.26
8/14/2019	22.14	22.0	19.46	0.9837	0.17	1.80	7.41	0.90
8/14/2019	24.23	24.0	17.84	0.9979	0.17	1.80	7.40	0.97
8/14/2019	26.08	26.0	16.01	1.0218	0.15	1.60	7.30	0.84
8/14/2019	28.10	28.0	15.42	1.0279	0.15	1.50	7.26	0.76
8/14/2019	30.11	30.0	14.86	1.0353	0.15	1.40	7.18	1.64

Round Lake Multiparameter Data, 2019

Date	Depth (Ft.)	Depth Text (Ft.)	Temp (°C)	SpCond (ms/cm)	DO (mg/L)	DO Sat	pH	BGA RFU
9/18/2019	0.66	0.5	22.64	0.7766	10.04	116.50	8.78	0.47
9/18/2019	1.04	1.0	22.64	0.7766	10.10	117.10	8.78	0.57
9/18/2019	2.04	2.0	22.63	0.7762	10.18	118.10	8.79	0.61
9/18/2019	3.09	3.0	22.61	0.7757	10.30	119.40	8.81	0.44
9/18/2019	4.18	4.0	22.56	0.7740	10.44	120.90	8.82	0.52
9/18/2019	6.03	6.0	22.44	0.7702	10.54	121.80	8.84	0.54
9/18/2019	8.13	8.0	22.24	0.7595	7.61	87.60	8.55	0.80
9/18/2019	10.09	10.0	21.96	0.7688	5.80	66.40	8.25	0.79
9/18/2019	12.10	12.0	21.78	0.7860	3.99	45.50	7.99	0.58
9/18/2019	14.01	14.0	21.33	0.8283	1.20	13.50	7.64	0.12
9/18/2019	16.13	16.0	21.12	0.8698	0.36	4.10	7.56	0.17
9/18/2019	18.05	18.0	20.97	0.8856	0.27	3.00	7.54	-0.01
9/18/2019	20.08	20.0	20.78	0.8951	0.25	2.80	7.53	0.19
9/18/2019	22.17	22.0	20.52	0.9029	0.22	2.40	7.51	0.02
9/18/2019	24.16	24.0	19.96	0.9218	0.20	2.30	7.47	-0.01
9/18/2019	26.15	26.0	18.90	0.9631	0.20	2.20	7.31	0.03
9/18/2019	28.11	28.0	17.67	1.0042	0.19	2.00	7.16	0.10
9/18/2019	29.84	30.0	16.55	1.0336	0.18	1.90	7.06	0.22