

Following are the results of the chemical testing I performed on Lake Altoona during 2013. The following tests we performed on samples taken at the depths indicated at the location designated "Deep Hole" which is approximately 400 yards NNW from the handicapped fishing pier.

Date, time	July 6, 2013	July 29, 2013	Aug 24, 2013		
Weather conditions	86°F winds S 10-15	75°F winds calm	84°F, winds SE 10-15 mph		
Sample depth (ft)	5	5	5	10	15
Dissolved Oxygen (mg/l)	8.35	8.45	11.1	5.7	0.2
Temp at depth (°F)	76	70	75	72	68
pH	7.5	7.5	10.0	9.5	9.2
Acidity, total (mg/l)	0	0	0	0	0
Alkalinity, Active (mg/l)	0	0	14	8	8
Alkalinity, total (mg/l)	32	36	34	36	34
Hardness (ppm)	26	32	33	34	36
Sulfate (ppm)	0.3	0	0	0	0
Phosphorus, ortho (ppm)	0.23	0.02	0.02	0.02	0.05
Phosphorus, total (ppm)	0.31	0.18	0.18	0.12	0.21
Nitrate (ppm)	0.6	0.5	0.4	0.4	0.4
Nitrite (ppm)	0	0	0	0	0
Iron (ppm)	0.6	0.3	0.3	0.3	0.6
Chloride (ppm)	not tested	not tested	1.5	2.0	1.5
Conductivity (umhos/cm)	95	109	123	117	118

I have added Chloride to the matrix in order to check runoff from calcium chloride use for settling dust on dirt roads. I will also add mercury testing next year, as well as additional testing points and dates.

I plan to have an in-depth discussion next year for those of you who are interested in the effect these parameters have on the health of our lake.

Additional readings taken at the "Deep Hole"

Date	07/06/2013	07/29/2013	08/24/2013
Secchi Disk depth (ft)	1.75	2.25	3.25
DO @ 3 ft Temp @ 3 ft	8.55 77°F (25.0°C)	8.73 71°F (21.7°C)	13.3 76°F (24.4°C)
DO @ 6 ft Temp @ 6 ft	8.35 76°F (24.4°C)	8.45 70°F (21.1°C)	11.1 75°F (23.9°C)
DO @ 9 ft Temp @ 9 ft	6.30 73°F (22.8°C)	7.56 67°F (19.4°C)	5.7 72°F (21.2°C)
DO @ 12 ft Temp @ 12 ft	1.95 70°F (21.1°C)	6.48 66°F (19.0°C)	1.8 69°F (20.6°C)
DO @ 15 ft Temp @ 15 ft	1.20 69°F (20.6°C)	4.46 67°F (19.4°C)	<0.2 68°F (20.0°C)
DO @ 17.6 ft Temp @ 17.6 ft (17.6' = bottom)	0.92 69°F (20.6°C)	1.20 67°F (19.4°C)	<0.2 66°F (18.8°C)