

Middle Genesee Lake near Oconomowoc, WI Water-Quality Data Summary

This summary primarily covers the period October 2003 through September 2006, which is the period of water-quality monitoring of Middle Genesee Lake that was partially funded by Wisconsin DNR lake planning grant LPL-912. Emphasis in this summary is on data collected during 2004-06. Data from previous years is included in graphs to illustrate changes or trends.

In reviewing the data, it may be helpful to refer to the methods and explanations of physical and chemical characteristics sections in the USGS annual lake data report "Water-Quality and Lake-Stage Data for Wisconsin Lakes, Water Year 2005" and to Shaw and others (1994) "Understanding Lake Data."

Lake description and sampling locations:

Middle Genesee Lake is classified as a seepage lake. The lake has an intermittently flowing inlet and an intermittently flowing outlet. The average depth of the lake is 2.4 meters, and the surface area is 109 acres (0.17 square miles). The water-quality sampling site is located at the deepest point in the lake at a depth of about 12 meters. Lake stage was monitored on the southwest side of the lake. The locations of the monitoring sites are shown in figure 1.

Lake Data:

The following summarizes some highlights of data given in the tables and shown in the figures.

Lake-stage fluctuations:

Stages were measured from a staff gage on the southwest side of the lake just off the Schubring property and from reference points on the south side of the lake near the boat landing. Local observer, Mr. Tom Schubring, measured stage in addition to the measurements made by USGS personnel. Observed stages since 1996 ranged from 863.89 feet on October 31, 2005 to 867.18 feet on June 13, 2001. Owing to the infrequency of measurements, actual minimum or maximum stages may have been less or greater than those observed. Low stages during late 2005 were similar to those experienced in late 2003 (fig. 2). All stage data collected since 1996 are listed in table 1.

Lake-stage datum:

The datum is believed to be referenced to mean sea level. Reference marks were established on November 20, 1996, and their altitudes were determined by leveling from a DNR staff gage that appeared to be referenced to mean sea level.

Lake-stage reference mark descriptions:

RM1—Lag bolt in south side of 1 ft diameter tree about 0.1 ft above ground. Tree is located about 100 ft west of the boat landing. Established 11/20/96. (Mark apparently destroyed after July 2002)

RM2—Railroad spike in side of power pole at about 1 ft above ground, about 150 ft west of boat landing. Established 11/20/96.

RM3—Top of pipe driven into lake bed about 75 ft west of boat landing and about 10 ft north from willow tree. Established April 1996.

RM-4—Lag bolt in south side of tree about 10 ft south of RM3. Established 6/8/05 to replace destroyed RM1.

Levels were run between reference points annually to determine whether or not they moved during winter.

USGS staff gage:

USGS installed a staff gage on the Schubring property in May 2003, which was referenced to the datum describe above. Tom Schubring read the gage approximately weekly during open-water periods. The staff was removed before onset of ice and reinstalled each spring.

Lake-stage reference point level summary:

Date	RM1	RM2	RM3	RM4
11/20/96	867.786	867.63	865.22*	---
8/5/97	867.786*	867.626	865.24	---
6/3/98	867.786*	867.624	865.278	---
7/6/99	867.786*	867.642	865.315	---
7/5/00	867.786*	867.638	865.358	---
8/21/01	867.774	867.638*	865.334	---
7/3/02	867.779	867.638*	865.347	---
4/24/03	---	867.638*	865.388	---
4/14/04	---	867.638*	865.386	---
6/8/05	---	867.638*	865.438	868.106
6/13/06	---	867.638*	865.44	868.102

* indicates starting point for levels.

Lake-depth profiles:

Vertical profiles of water temperature, dissolved oxygen, pH, and specific conductance were measured over the deepest point in the lake, are listed in tables 2a, b, and c and shown in figures 3a,b, and c. The profiles, which are seasonally similar to each other and to those from previous years, exhibit a pattern that is typical for a thermally stratified lake. During the February through August sampling period, complete water-column mixing was observed on the April (spring turnover) sampling visits. The lake did become thermally stratified through the summer. The lower waters of the lake gradually became anoxic (devoid of oxygen), through the summer. By August the lower 3.5 to 4 meters were anoxic. The anoxic zone is unable to support fish. The pH, which ranged between 7.2 and 8.7, is common for southeastern Wisconsin lakes and poses no problems for aquatic life.

Chemical constituents:

Analyses of water samples collected during spring turnover for selected chemical constituents for chemical characterization of the lake are shown in tables 2a, b, and c. Samples collected at a depth of 0.5 meters show similar constituent concentrations, as would be expected under mixed water column conditions. The constituent values for color, chlorophyll a, chloride, calcium, magnesium, pH, alkalinity, total nitrogen, and total phosphorus are within regional values for this area as described by Lillie and Mason in "Limnological Characteristics of Wisconsin Lakes," 1983, Technical Bulletin No. 138, Department of Natural Resources. There is a trend of increasing concentrations of chloride and sodium,

which is shown in Figure 4. Chloride and sodium concentrations for 2006 were 31 mg/L and 13.8 mg/L respectively. Increasing chloride and sodium concentrations is common to many southeastern Wisconsin lakes. Concentrations of these elements in Middle Genesee Lake are in the low range compared with other southeastern Wisconsin Lakes. The Wisconsin Administrative Code recommends that maximum allowable concentration of chloride in potable water not exceed 250 mg/L. That is the level where most people can start tasting salt in water. For comparison, seawater concentration of chloride is about 19,000 mg/L. Increasing chloride and sodium concentration is common to many southeastern Wisconsin lakes. Road salting is generally believed to be the cause of this trend.

The ratio of dissolved nitrogen to dissolved phosphorus ranged from 55:1 to 74:1, based on the surface concentrations during spring turnover. This ratio suggests the lake is phosphorus limited, which means algal growth is dependent on the amount of phosphorus available rather than available nitrogen.

Three common measures of water quality used as indices are concentrations of near-surface total-phosphorus and chlorophyll *a*, and Secchi depth. At the deep hole, total phosphorus concentrations ranged from 0.009 mg/L on February 19, 2004 to 0.034 mg/L on July 13, 2006, chlorophyll *a* ranged from 0.77 µg/L on April 14, 2004 to 3.69 µg/L on June 8, 2004, and Secchi depths ranged from 2.5 m on August 23, 2006 to 9.15 m on June 8, 2005.

Surface total phosphorus and chlorophyll *a* concentrations, and Secchi depths since 1996 are shown on figure 5. Phosphorus concentrations appear to have increased since the start of monitoring in 1996. The cause of the increase is unknown. However, chlorophyll *a* does not appear to have increased, nor has Secchi depth decreased since 1996.

Total phosphorus concentration 0.5 meters above the lake bottom at the main site ranged from 0.014 mg/L on April 14, 2004 to 0.084 mg/L on August 25, 2005. These total phosphorus concentrations observed during anoxic periods are indicative of minor phosphorus release from the bottom sediments.

Lake condition:

Water-quality index:

Lillie and Mason (1983) classified all Wisconsin lakes using a random data set collected in the summer (July and August). The index, shown on page 17 of "Water-Quality and Lake-Stage data for Wisconsin Lakes, Water Year 2005," is based on surface total-phosphorus and chlorophyll *a* concentrations, and Secchi depths. According to the index, surface total-phosphorus concentrations in Middle Genesee Lake indicate "good" water quality, and chlorophyll *a* concentrations and Secchi depths indicate "very good" water quality.

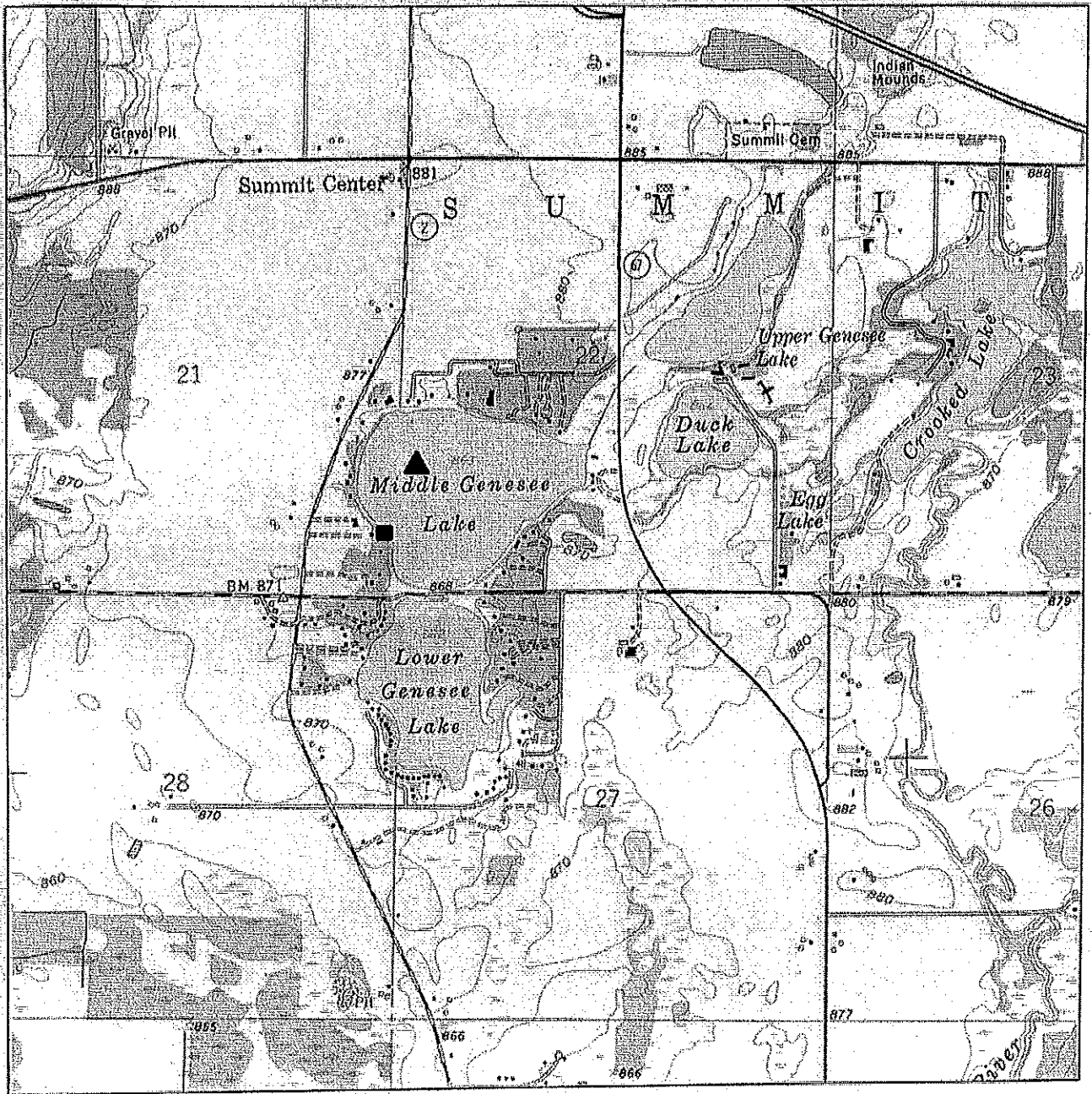
Lillie and Mason (1983) also provided a means of comparing the condition of Middle Genesee Lake with other lakes in southeastern Wisconsin. The comparison in table 6 shows the percentage distribution of southeastern Wisconsin lakes within each condition group and the relative position of Middle Genesee Lake.

Trophic status:

Another means of assessing the nutrient, or trophic, status of a lake is to use Carlson's Trophic State Index (TSI). Figure 5 is a graphical illustration of the variation in Trophic State Indices for Middle Genesee Lake during the study period. The data show the lake to be lower mesotrophic, or a lake with low to moderate nutrient levels.

Ground-water monitoring:

Two piezometers were installed on April 22, 2004. Both piezometers were 1-inch diameter PVC with a 5-foot screened section on the lower ends. The purpose of the piezometers was to facilitate the long-term monitoring of water table altitude in the up-gradient region of Middle Genesee Lake. One of the piezometers was installed just north of the west end of Normandale Drive about 1200 feet north of Middle Genesee Lake. This piezometer was installed to a depth of 13.1 feet below land surface and with the top end 2.5 feet above land surface. The second piezometer was installed just north of the east end of Krueger Drive about 2.5 miles southwest of Middle Genesee Lake. This piezometer was installed to a depth of 8.6 feet below land surface and with the top end 2.6 feet above land surface. Locations of the piezometers are shown in figure 6. Depths-to-water level for Krueger Drive and Normandale Drive piezometers are shown in figure 7 and given in tables 4 and 5 respectively.



EXPLANATION

- ▲ Water-quality monitoring site
- Lake-stage monitoring site

Figure 1. Locations of water-quality and lake-stage monitoring sites on Middle Genesee Lake near Oconomowoc, Wisconsin.

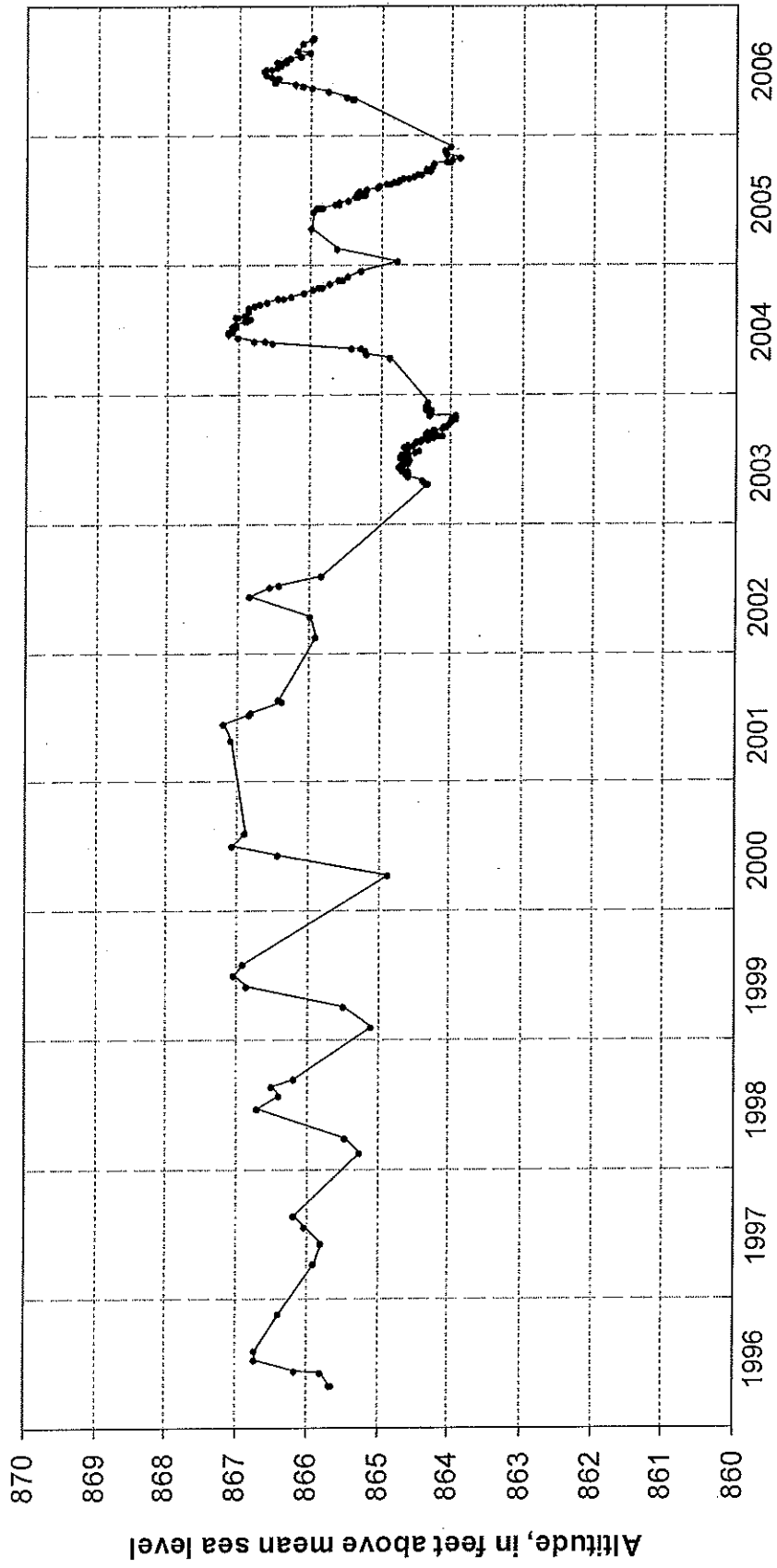


Figure 2. Observed stages for Middle Genesee Lake, 1996 - 2006.

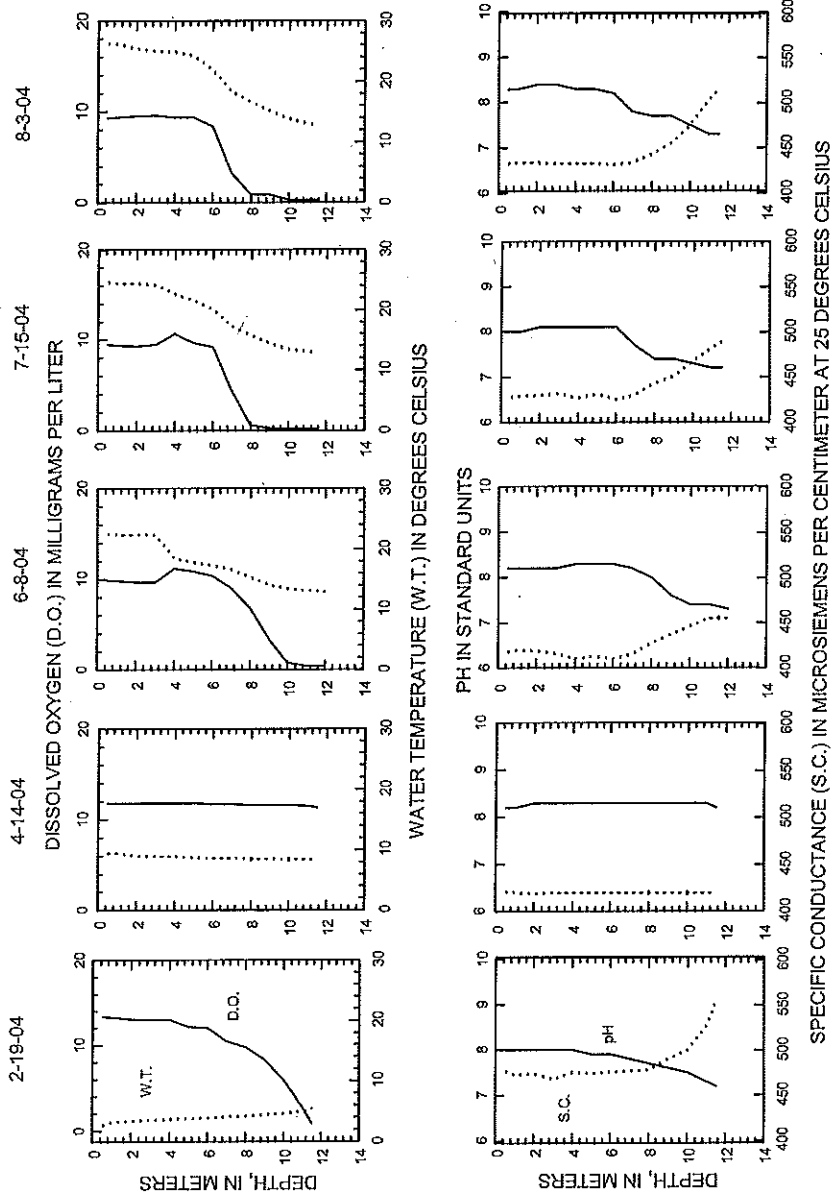


Figure 3a. Lake-depth profiles for Middle Genesee Lake near Oconomowoc, WI, water year 2004.

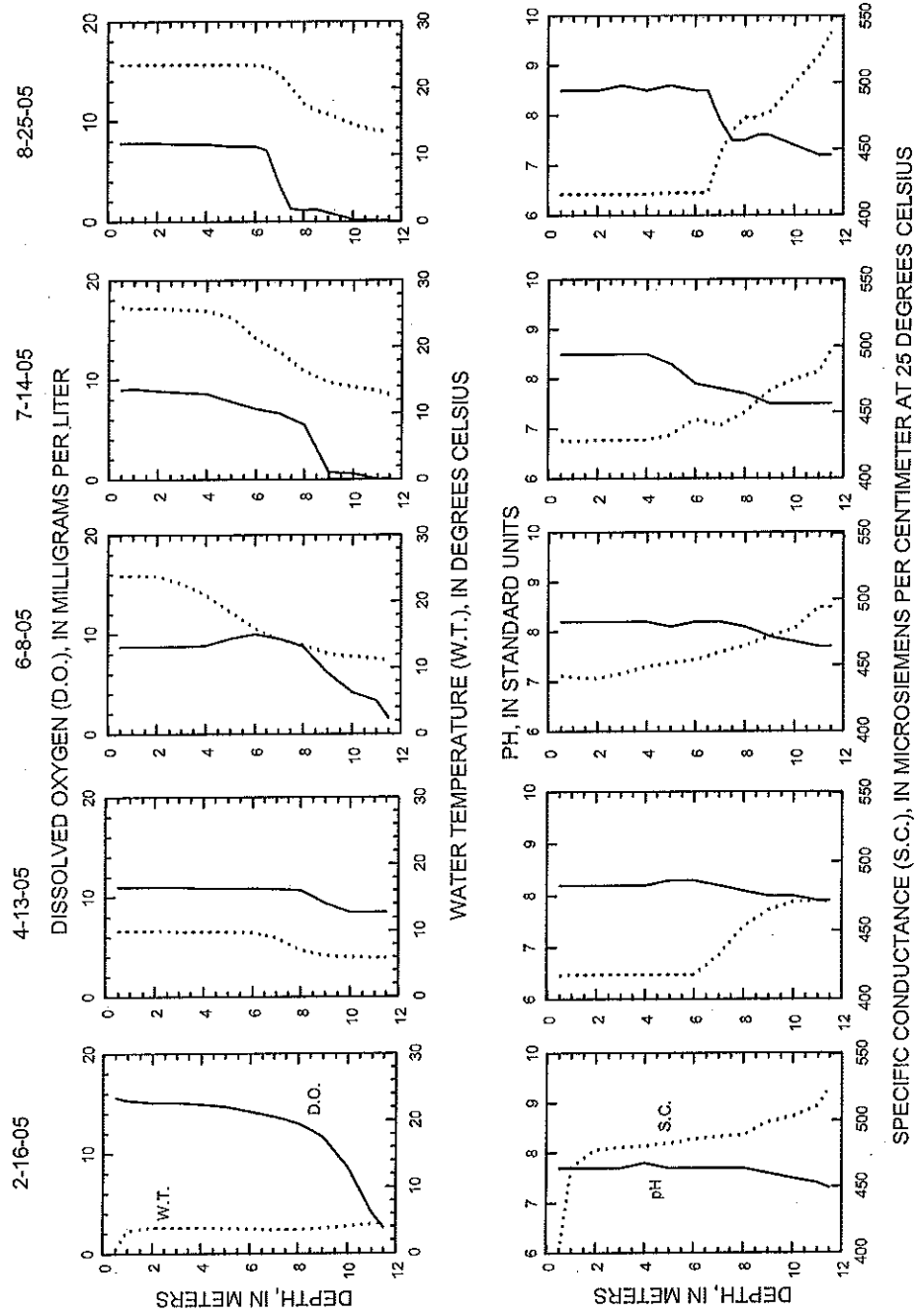


Figure 3b. Lake-depth profiles for Middle Genesee Lake near Oconomowoc, WI, water year 2005.

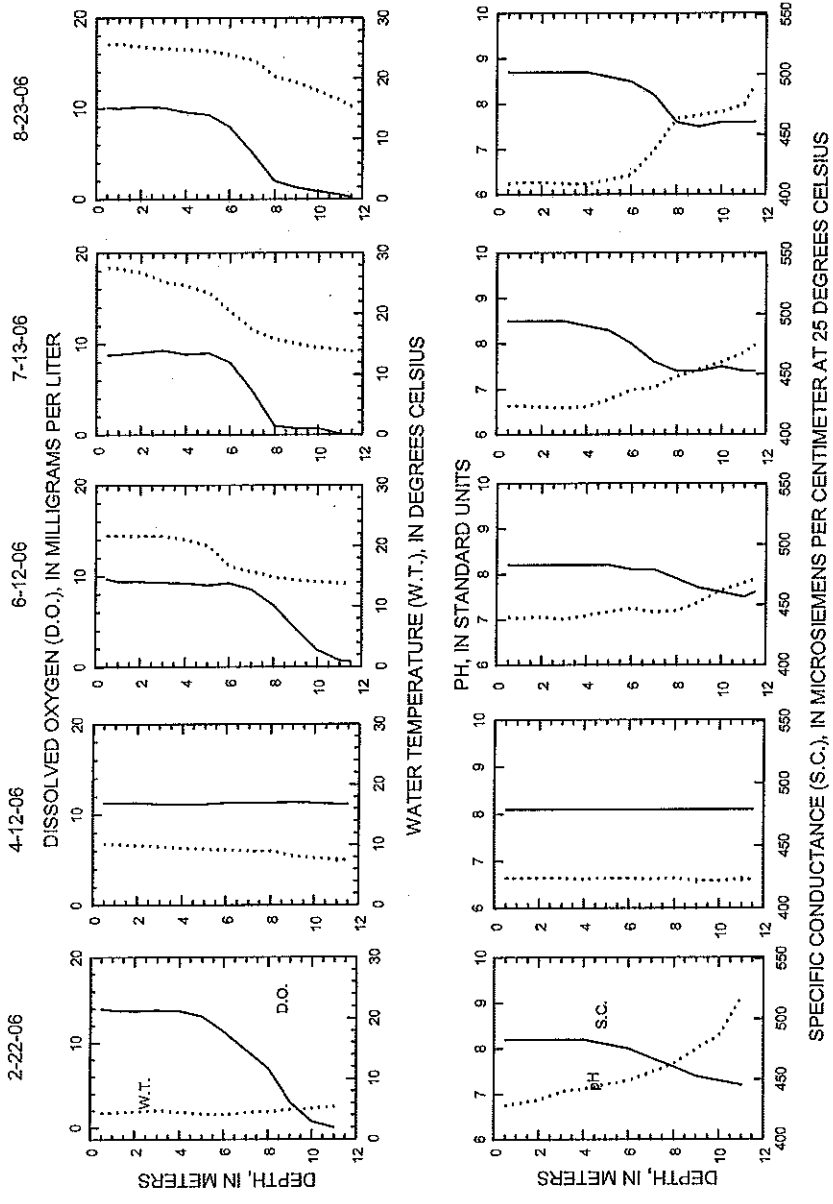


Figure 3c. Lake-depth profiles for Middle Genesee Lake near Oconomowoc, WI, water year 2006.

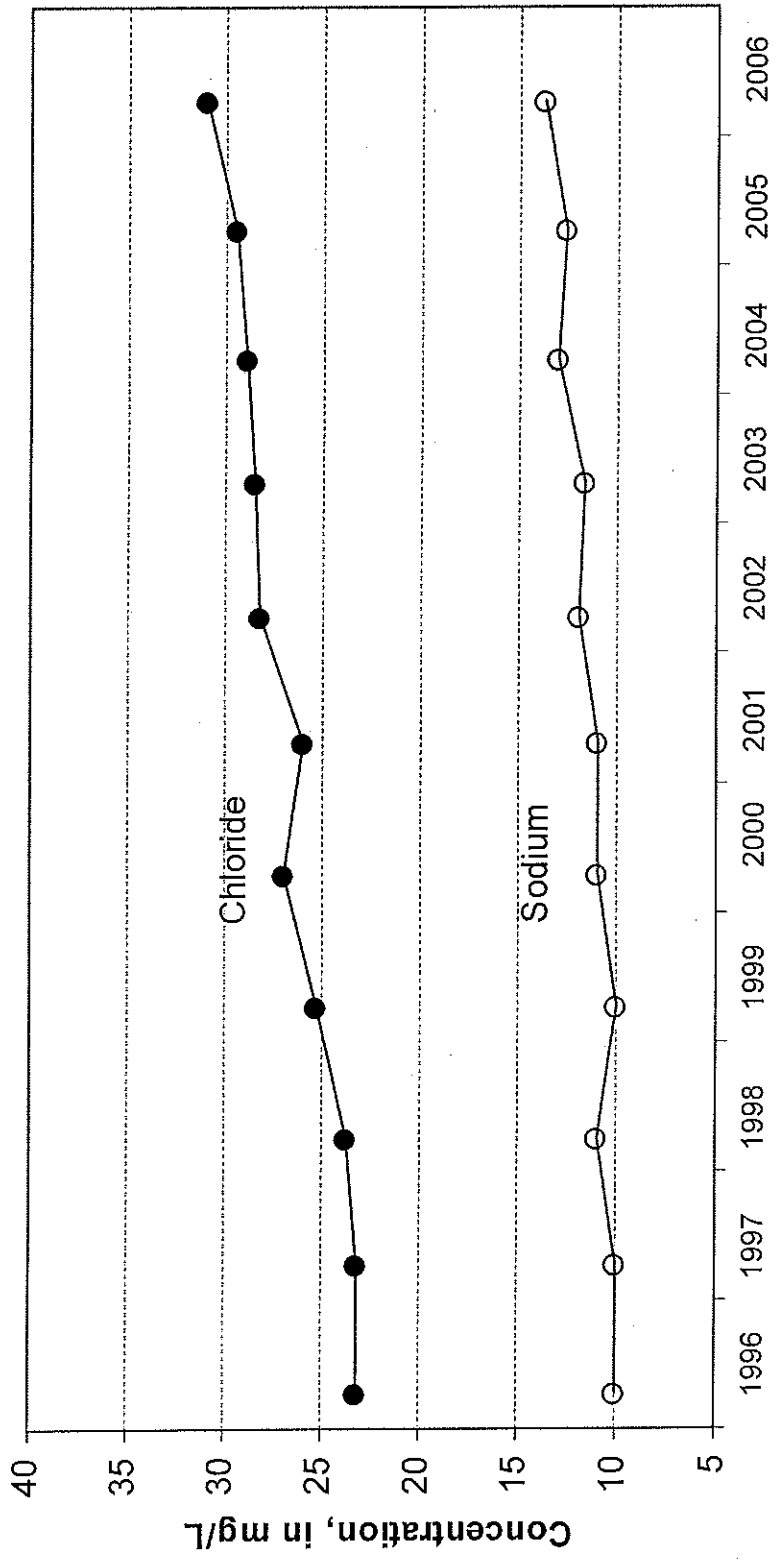


Figure 4. Trends in chloride and sodium at spring turnover in Middle Genesee Lake, 1996 - 2006.

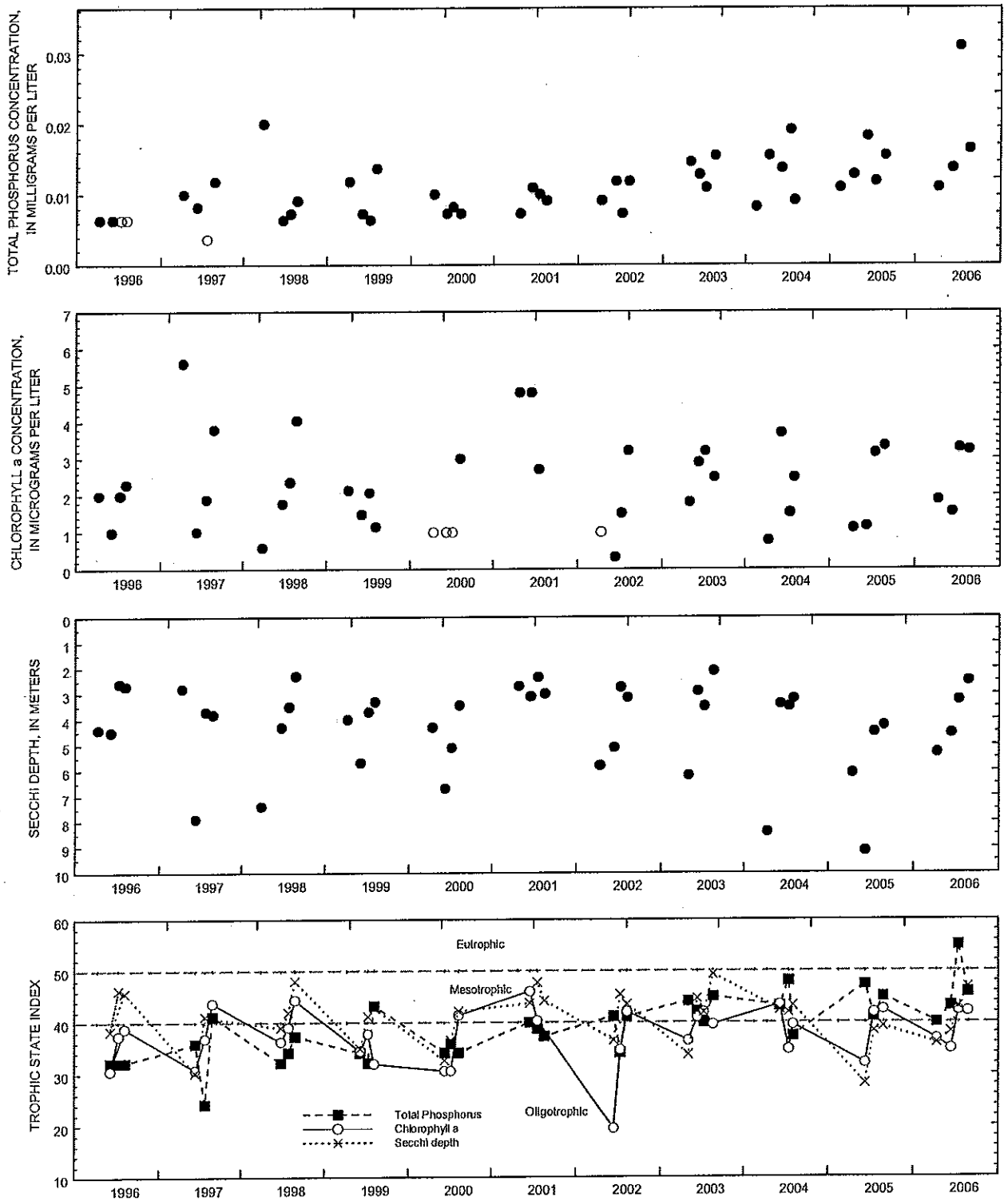


Figure 5. Surface total phosphorus, chlorophyll a concentrations, Secchi depths, and TSI data for Middle Genesee Lake, near Oconomowoc, Wisconsin.

(Open circles on the first two plots indicate laboratory detection limit for selected analyses. Actual concentrations for these particular analyses are less than the plotted circles.)

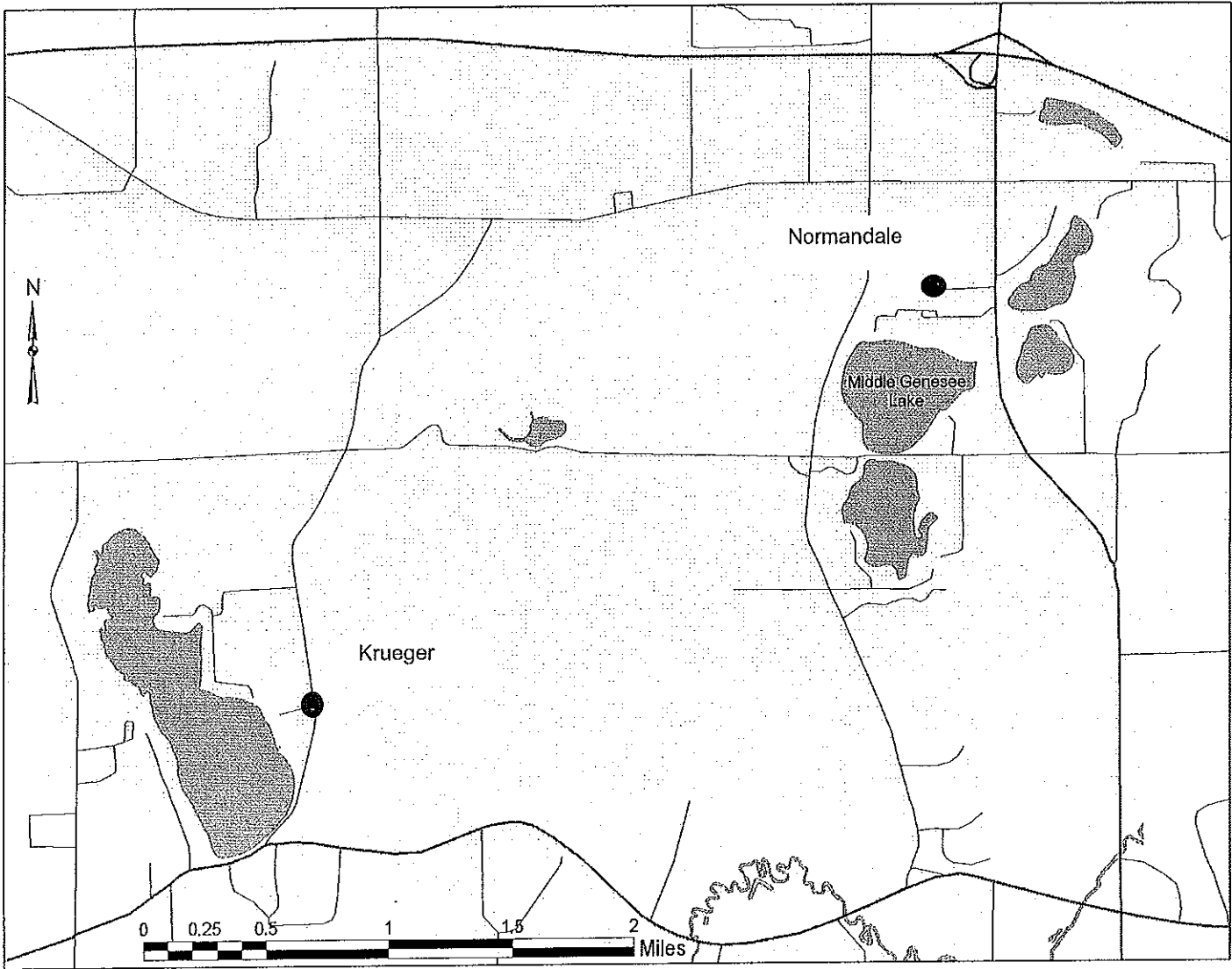


Figure 6. Locations of Normandale Drive and Krueger Drive piezometers near Middle Genesee Lake, near Oconomowoc, Wisconsin.

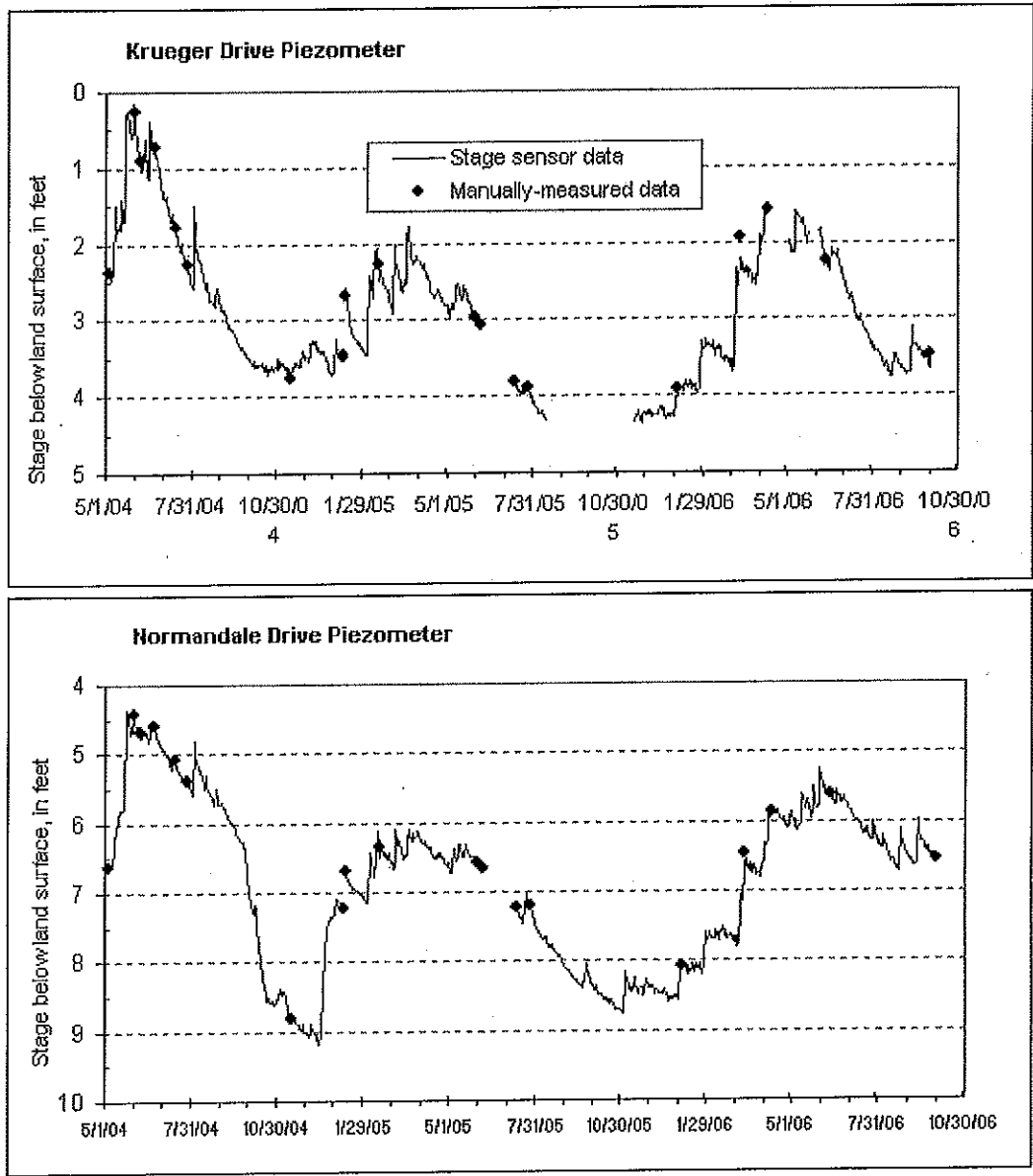


Figure 7. Water levels in Krueger Drive and Normandale Drive piezometers near Middle Genesee Lake near Oconomowoc, Wisconsin, 2003 - 2006.

Table 1. Observed stages for Middle Genesee Lake, 1996 - 2006.

Date	Stage above mean sea level (feet)	Date	Stage above mean sea level (feet)	Date	Stage above mean sea level (feet)
4/29/96	865.64	6/15/03	864.70	10/31/03	863.92
4/30/96	865.66	6/17/03	864.68	11/1/03	863.92
6/5/96	865.78	6/21/03	864.64	11/4/03	864.28
6/13/96	866.16	6/23/03	864.60	11/5/03	864.30
7/11/96	866.73	6/28/03	864.62	11/14/03	864.26
8/6/96	866.71	6/30/03	864.60	11/17/03	864.26
11/20/96	866.38	7/1/03	864.60	11/19/03	864.34
4/9/97	865.90	7/2/03	864.58	11/29/03	864.34
6/9/97	865.78	7/5/03	864.59	12/2/03	864.32
7/22/97	866.03	7/6/03	864.66	12/8/03	864.32
8/25/97	866.18	7/7/03	864.70	4/14/04	864.86
2/17/98	865.25	7/8/03	864.70	4/22/04	865.20
3/30/98	865.45	7/10/03	864.71	5/2/04	865.22
6/25/98	866.68	7/11/03	864.68	5/9/04	865.26
7/27/98	866.37	7/14/03	864.64	5/10/04	865.40
8/25/98	866.49	7/16/03	864.67	5/26/04	866.52
9/12/98	866.17	7/18/03	864.60	5/29/04	866.62
2/10/99	865.08	7/24/03	864.50	5/31/04	866.76
4/7/99	865.48	7/29/03	864.44	6/8/04	867.00
6/2/99	866.85	7/31/03	864.60	6/22/04	867.14
7/6/99	867.04	8/1/03	864.61	6/24/04	867.12
8/3/99	866.91	8/5/03	864.64	6/27/04	867.09
4/13/00	864.87	8/10/03	864.60	7/4/04	867.06
6/7/00	866.40	8/14/03	864.52	7/9/04	867.02
7/5/00	867.06	8/18/03	864.50	7/12/04	867.07
8/9/00	866.88	8/21/03	864.46	7/15/04	867.02
4/26/01	867.07	8/22/03	864.42	7/18/04	867.02
6/13/01	867.18	8/25/03	864.38	7/26/04	866.90
7/12/01	866.83	8/29/03	864.32	7/29/04	866.88
7/17/01	866.79	8/31/03	864.28	7/31/04	866.84
8/15/01	866.35	9/2/03	864.24	8/1/04	866.82
8/21/01	866.40	9/5/03	864.18	8/3/04	866.84
2/12/02	865.88	9/7/03	864.16	8/6/04	867.04
4/11/02	865.97	9/9/03	864.12	8/8/04	867.00
6/11/02	866.81	9/14/03	864.34	8/14/04	866.90
7/3/02	866.55	9/16/03	864.32	8/20/04	866.84
7/8/02	866.42	9/20/03	864.24	8/31/04	866.86
8/7/02	865.82	9/23/03	864.20	9/6/04	866.78
4/24/03	864.31	9/29/03	864.10	9/12/04	866.68
5/1/03	864.36	10/1/03	864.08	9/18/04	866.58
5/5/03	864.40	10/3/03	864.06	9/26/04	866.44
5/13/03	864.60	10/8/03	864.02	9/30/04	866.36
5/20/03	864.62	10/11/03	864.00	10/4/04	866.26
5/26/03	864.60	10/18/03	863.98	10/15/04	866.08
5/28/03	864.60	10/22/03	863.92	10/24/04	865.94
5/31/03	864.68	10/26/03	863.98	10/28/04	865.86
6/10/03	864.74	10/29/03	863.94	10/31/04	865.82

Table 1. Observed stages for Middle Genesee Lake, 1996 - 2006--continued.

Date	Stage above mean sea level (feet)	Date	Stage above mean sea level (feet)
11/8/04	865.72	10/26/05	863.99
11/17/04	865.58	10/31/05	863.89
11/21/04	865.54	11/10/05	864.05
11/29/04	865.44	11/17/05	864.07
12/14/04	865.28	11/30/05	864.01
1/12/05	864.76	4/13/06	865.37
2/16/05	865.61	4/14/06	865.39
4/13/05	865.97	4/21/06	865.49
6/1/05	865.95	5/7/06	865.73
6/8/05	865.89	5/14/06	865.97
6/9/05	865.85	5/20/06	866.09
6/12/05	865.81	5/25/06	866.21
6/19/05	865.63	5/31/06	866.49
6/22/05	865.59	6/1/06	866.49
6/28/05	865.59	6/13/06	866.43
7/2/05	865.45	6/13/06	866.45
7/11/05	865.35	6/19/06	866.55
7/16/05	865.27	6/21/06	866.61
7/18/05	865.21	6/30/06	866.65
7/21/05	865.33	7/5/06	866.61
7/27/05	865.31	7/8/06	866.53
7/30/05	865.23	7/14/06	866.47
8/1/05	865.19	7/19/06	866.41
8/7/05	865.05	7/26/06	866.33
8/12/05	865.01	7/28/06	866.45
8/16/05	864.91	8/3/06	866.33
8/19/05	864.85	8/9/06	866.27
8/24/05	864.81	8/15/06	866.13
8/25/05	864.76	8/22/06	865.99
8/26/05	864.73	8/26/06	866.17
8/31/05	864.67	9/20/06	866.09
9/2/05	864.61	9/29/06	865.97
9/6/05	864.53	10/3/06	865.95
9/10/05	864.47		
9/13/05	864.43		
9/21/05	864.29		
9/25/05	864.35		
9/30/05	864.33		
10/4/05	864.27		
10/12/05	864.23		
10/18/05	864.05		
10/21/05	864.01		

Table 2a. Lake-depth profiles for Middle Genesee Lake, near Oconomowoc, Wisconsin, water year 2004.

Date	Time	Sampling depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm)	Temperature (°C)
FEB 04						
19...	1305	0.5	13.4	8.0	477	2.7
19...	1306	1.0	13.3	8.0	473	3.2
19...	1307	2.0	13.1	8.0	474	3.4
19...	1308	3.0	13.0	8.0	468	3.5
19...	1309	4.0	13.0	8.0	476	3.7
19...	1310	5.0	12.2	7.9	474	3.8
19...	1311	6.0	12.0	7.9	476	3.9
19...	1312	7.0	10.5	7.8	477	4.1
19...	1313	8.0	9.8	7.7	478	4.2
19...	1314	9.0	8.3	7.6	490	4.4
19...	1315	10.0	5.9	7.5	500	4.6
19...	1316	11.0	2.7	7.3	527	4.9
19...	1317	11.5	0.9	7.2	555	5.4
APR 04						
14...	1035	0.5	11.8	8.2	421	9.4
14...	1036	1.0	11.8	8.2	420	9.4
14...	1037	2.0	11.8	8.3	419	9.0
14...	1038	3.0	11.8	8.3	420	8.9
14...	1039	4.0	11.8	8.3	420	8.9
14...	1040	5.0	11.8	8.3	420	8.7
14...	1041	6.0	11.7	8.3	420	8.6
14...	1042	7.0	11.7	8.3	420	8.6
14...	1043	8.0	11.6	8.3	420	8.5
14...	1044	9.0	11.6	8.3	420	8.5
14...	1045	10.0	11.6	8.3	420	8.4
14...	1046	11.0	11.5	8.3	420	8.4
14...	1047	11.5	11.3	8.2	420	8.3
JUN 04						
08...	845	0.5	9.9	8.2	418	22.5
08...	846	1.0	9.8	8.2	420	22.4
08...	847	2.0	9.7	8.2	419	22.4
08...	848	3.0	9.7	8.2	416	22.3
08...	849	4.0	11.2	8.3	410	18.5
08...	850	5.0	10.9	8.3	413	17.8
08...	851	6.0	10.4	8.3	410	17.3
08...	852	7.0	9.1	8.2	415	16.6
08...	853	8.0	6.8	8.0	427	15.3
08...	854	9.0	3.4	7.6	437	14.0
08...	855	10.0	0.8	7.4	446	13.4
08...	856	11.0	0.4	7.4	455	13.1
08...	857	12.0	0.4	7.3	455	12.9

Table 2a. Lake-depth profiles for Middle Genesee Lake, near Oconomowoc, Wisconsin, water year 2004--continued.

Date	Time	Sampling depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance ($\mu\text{S}/\text{cm}$)	Temperature ($^{\circ}\text{C}$)
JUL 04						
15...	1000	0.5	9.5	8.0	428	24.6
15...	1001	1.0	9.4	8.0	429	24.4
15...	1002	2.0	9.3	8.1	430	24.4
15...	1003	3.0	9.5	8.1	432	24.1
15...	1004	4.0	10.7	8.1	427	22.6
15...	1005	5.0	9.7	8.1	431	21.5
15...	1006	6.0	9.2	8.1	425	20.0
15...	1007	7.0	4.5	7.7	430	17.2
15...	1008	8.0	0.6	7.4	443	15.7
15...	1009	9.0	0.3	7.4	451	14.4
15...	1010	10.0	0.2	7.3	468	13.4
15...	1011	11.0	0.2	7.2	482	13.0
15...	1012	11.5	0.2	7.2	489	12.8
AUG 04						
03...	1450	0.5	9.3	8.3	433	26.3
03...	1451	1.0	9.4	8.3	434	26.2
03...	1452	2.0	9.5	8.4	434	25.4
03...	1453	3.0	9.6	8.4	433	25.0
03...	1454	4.0	9.4	8.3	433	24.9
03...	1455	5.0	9.4	8.3	433	24.2
03...	1456	6.0	8.4	8.2	431	21.8
03...	1457	7.0	3.3	7.8	434	18.3
03...	1458	8.0	0.9	7.7	443	16.5
03...	1459	9.0	0.9	7.7	455	15.1
03...	1500	10.0	0.3	7.5	475	13.8
03...	1501	11.0	0.3	7.3	504	13.0
03...	1502	11.5	0.3	7.3	516	12.7

Table 2b. Lake-depth profiles for Middle Genesee Lake, near Oconomowoc, Wisconsin, water year 2005.

Date	Time	Sampling depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance ($\mu\text{S}/\text{cm}$)	Temperature ($^{\circ}\text{C}$)
FEB 05						
16...	1700	0.5	15.6	7.7	401	0.6
16...	1701	1.0	15.3	7.7	465	3.4
16...	1702	2.0	15.1	7.7	478	3.9
16...	1703	3.0	15.1	7.7	480	3.9
16...	1704	4.0	14.9	7.8	481	3.9
16...	1705	5.0	14.7	7.7	483	3.8
16...	1706	6.0	14.2	7.7	486	3.7
16...	1707	7.0	13.7	7.7	488	3.6
16...	1708	8.0	13.0	7.7	489	3.6
16...	1709	9.0	11.6	7.6	499	3.8
16...	1710	10.0	8.6	7.5	503	4.1
16...	1711	11.0	4.0	7.4	511	4.4
16...	1712	11.5	2.6	7.3	524	4.6
16...	1713	12.0	1.2	7.2	537	4.9
APR 05						
13...	925	0.5	11.0	8.2	417	9.9
13...	926	1.0	11.0	8.2	418	9.9
13...	927	2.0	11.0	8.2	418	9.9
13...	928	3.0	11.0	8.2	418	9.8
13...	929	4.0	10.9	8.2	418	9.8
13...	930	5.0	10.9	8.3	418	9.8
13...	931	6.0	10.9	8.3	418	9.7
13...	932	7.0	10.8	8.2	432	8.9
13...	933	8.0	10.7	8.1	453	7.0
13...	934	9.0	9.4	8.0	465	6.2
13...	935	10.0	8.5	8.0	471	6.0
13...	936	11.0	8.5	7.9	472	5.9
13...	937	11.5	8.5	7.9	471	5.9
JUN 05						
08...	1015	0.5	8.8	8.2	442	23.9
08...	1016	1.0	8.8	8.2	441	23.9
08...	1017	2.0	8.8	8.2	440	23.8
08...	1018	3.0	8.8	8.2	444	22.6
08...	1019	4.0	8.9	8.2	449	20.9
08...	1020	5.0	9.6	8.1	452	18.4
08...	1021	6.0	10.0	8.2	454	15.9
08...	1022	7.0	9.6	8.2	460	14.3
08...	1023	8.0	8.8	8.1	465	13.4
08...	1024	9.0	6.1	7.9	472	12.1
08...	1025	10.0	4.2	7.8	478	11.7
08...	1026	11.0	3.3	7.7	494	11.3
08...	1027	11.5	1.6	7.7	494	11.0

Table 2b. Lake-depth profiles for Middle Genesee Lake, near Oconomowoc, Wisconsin, water year 2005--continued.

Date	Time	Sampling depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance ($\mu\text{S}/\text{cm}$)	Temperature ($^{\circ}\text{C}$)
JUL 05						
14...	1130	0.5	9.0	8.5	429	26.0
14...	1131	1.0	9.1	8.5	428	25.8
14...	1132	2.0	8.9	8.5	429	25.8
14...	1133	3.0	8.7	8.5	429	25.6
14...	1134	4.0	8.6	8.5	429	25.4
14...	1135	5.0	7.8	8.3	433	24.4
14...	1136	6.0	7.1	7.9	445	21.1
14...	1137	7.0	6.6	7.8	440	19.2
14...	1138	8.0	5.5	7.7	450	16.2
14...	1139	9.0	0.7	7.5	467	14.6
14...	1140	10.0	0.6	7.5	475	13.9
14...	1141	11.0	0.0	7.5	481	13.3
14...	1142	11.5	0.1	7.5	497	12.7
AUG 05						
25...	1030	0.5	7.8	8.5	416	23.5
25...	1031	1.0	7.8	8.5	416	23.5
25...	1032	2.0	7.8	8.5	416	23.5
25...	1033	3.0	7.7	8.6	416	23.5
25...	1034	4.0	7.7	8.5	416	23.5
25...	1035	5.0	7.5	8.6	417	23.5
25...	1036	6.0	7.5	8.5	417	23.4
25...	1037	6.5	7.1	8.5	417	23.2
25...	1038	7.0	3.8	7.9	446	22.1
25...	1039	7.5	1.3	7.5	464	20.2
25...	1040	8.0	1.1	7.5	474	17.7
25...	1041	8.5	1.2	7.6	474	16.6
25...	1042	9.0	0.9	7.6	478	16.1
25...	1043	10.0	0.2	7.4	499	14.5
25...	1044	11.0	0.1	7.2	521	13.6
25...	1045	11.5	0.1	7.2	538	13.4

Table 2c. Lake-depth profiles for Middle Genesee Lake, near Oconomowoc, Wisconsin, water year 2006.

Date	Time	Sampling depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance ($\mu\text{S}/\text{cm}$)	Temperature ($^{\circ}\text{C}$)
FEB 06						
22...	1335	0.5	14.0	8.2	428	4.4
22...	1336	1.0	13.8	8.2	430	4.4
22...	1337	2.0	13.7	8.2	433	4.6
22...	1338	3.0	13.8	8.2	440	4.8
22...	1339	4.0	13.7	8.2	442	4.5
22...	1340	5.0	13.1	8.1	446	4.2
22...	1341	6.0	11.3	8.0	449	4.1
22...	1342	7.0	9.1	7.8	456	4.4
22...	1343	8.0	7.0	7.6	463	4.6
22...	1344	9.0	3.0	7.4	475	4.9
22...	1345	10.0	0.7	7.3	486	5.1
22...	1346	11.0	0.0	7.2	518	5.4
APR 06						
12...	1305	0.5	11.3	8.1	424	10.2
12...	1306	1.0	11.3	8.1	424	10.1
12...	1307	2.0	11.3	8.1	424	9.9
12...	1308	3.0	11.2	8.1	424	9.7
12...	1309	4.0	11.2	8.1	423	9.5
12...	1310	5.0	11.2	8.1	424	9.3
12...	1311	6.0	11.3	8.1	424	9.2
12...	1312	7.0	11.3	8.1	423	9.0
12...	1313	8.0	11.3	8.1	424	9.0
12...	1314	9.0	11.4	8.1	422	8.2
12...	1315	10.0	11.3	8.1	422	7.8
12...	1316	11.0	11.2	8.1	423	7.5
12...	1317	11.5	11.2	8.1	423	7.5
JUN 06						
12...	1915	0.5	9.7	8.2	440	21.7
12...	1916	1.0	9.4	8.2	439	21.7
12...	1917	2.0	9.4	8.2	440	21.6
12...	1918	3.0	9.3	8.2	438	21.6
12...	1919	4.0	9.2	8.2	441	21.0
12...	1920	5.0	9.0	8.2	444	20.0
12...	1921	6.0	9.2	8.1	447	16.6
12...	1922	7.0	8.5	8.1	444	15.7
12...	1923	8.0	6.8	7.9	445	14.8
12...	1924	9.0	4.2	7.7	452	14.3
12...	1925	10.0	1.9	7.6	462	14.0
12...	1926	11.0	0.7	7.5	468	13.8
12...	1927	12.0	0.6	7.6	471	13.7

Table 2c. Lake-depth profiles for Middle Genesee Lake, near Oconomowoc, Wisconsin, water year 2006--continued.

Date	Time	Sampling depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance ($\mu\text{S}/\text{cm}$)	Temperature ($^{\circ}\text{C}$)
JUL 06						
13...	1600	0.5	8.8	8.5	424	27.6
13...	1601	1.0	8.9	8.5	424	27.4
13...	1602	2.0	9.1	8.5	423	26.7
13...	1603	3.0	9.3	8.5	422	25.2
13...	1604	4.0	8.9	8.4	423	24.6
13...	1605	5.0	9.0	8.3	429	23.4
13...	1606	6.0	8.0	8.0	437	20.3
13...	1607	7.0	4.8	7.6	439	17.2
13...	1608	8.0	1.0	7.4	448	15.8
13...	1609	9.0	0.7	7.4	454	15.0
13...	1610	10.0	0.7	7.5	460	14.4
13...	1611	11.0	0.1	7.4	468	14.0
13...	1612	11.5	0.1	7.4	474	13.8
AUG 06						
23...	1700	0.5	10.1	8.7	409	25.6
23...	1701	1.0	10.0	8.7	410	25.7
23...	1702	2.0	10.2	8.7	410	25.2
23...	1703	3.0	10.1	8.7	409	24.9
23...	1704	4.0	9.6	8.7	409	24.8
23...	1705	5.0	9.3	8.6	412	24.5
23...	1706	6.0	8.0	8.5	416	23.9
23...	1707	6.5	5.1	8.2	437	23.0
23...	1708	7.0	2.0	7.6	463	20.3
23...	1709	7.5	1.3	7.5	466	19.3
23...	1710	8.0	0.9	7.6	469	17.9
23...	1711	9.0	0.5	7.6	475	16.2
23...	1712	10.0	0.2	7.6	491	15.3
23...	1713	11.0	0.1	7.4	523	14.2
23...	1714	11.5	0.1	7.3	529	14.0

Table 3a. Water-quality data for Middle Genesee Lake near Oconomowoc, WI, water year 2004--continued.

Date	Mangan- ese, water, fltrd, ug/L	Residue on evap. at 180degC wat flt mg/L
FEB 2004		
19...	--	--
19...	--	--
APR		
14...	<1	236
14...	--	--
14...	--	--
JUN		
08...	--	--
08...	--	--
08...	--	--
JUL		
15...	--	--
15...	--	--
15...	--	--
AUG		
03...	--	--
03...	--	--
03...	--	--

Remark codes used in this table:
 < -- Less than.

Table 3b. Water-quality data for Middle Genesee Lake near Oconomowoc, WI, water year 2005--continued.

Date	Iron, water, fltrd, ug/L	Mangan- ese, water, fltrd, ug/L	Residue on evap. at 180degC wat flt mg/L
FEB 2005			
16...	--	--	--
16...	--	--	--
APR			
13...	<100	<1	240
13...	--	--	--
13...	--	--	--
JUN			
08...	--	--	--
08...	--	--	--
08...	--	--	--
JUL			
14...	--	--	--
14...	--	--	--
14...	--	--	--
AUG			
25...	--	--	--
25...	--	--	--
25...	--	--	--

Remark codes used in this table:

< -- Less than.

Table 3c. Water-quality data for Middle Genesee Lake near Oconomowoc, WI, water year 2006--continued.

Date	Mangan- ese, water, fltrd, ug/L	Residue on evap. at 180degC wat fit mg/L
FEB 2006		
22...	--	--
22...	--	--
APR		
12...	<.5	226
12...	--	--
12...	--	--
JUN		
12...	--	--
12...	--	--
12...	--	--
JUL		
13...	--	--
13...	--	--
13...	--	--
AUG		
23...	--	--
23...	--	--
23...	--	--

Remark codes used in this table:
 < -- Less than.

Table 4. Daily maximum depth-to-water from land surface at Krueger Drive piezometer near Oconomowoc, Wisconsin, 2004 - 2006

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 430206088313700 WK-07/17E/30-4233 SOURCE AGENCY USGS STATE 55 COUNTY 133
 LATITUDE 430206 LONGITUDE 0883137 NAD27 WELL DEPTH 8.6 GEOLOGIC UNIT 100SDGV DATUM 860 NGVD29

Depth to water level, feet below land surface
 CALENDAR YEAR JANUARY TO DECEMBER 2004
 DAILY MAXIMUM VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	---	---	---	0.31	1.37	2.52	2.79	3.49	3.63	3.46
2	---	---	---	---	---	0.47	1.42	2.54	2.86	3.49	3.50	3.49
3	---	---	---	---	---	0.62	1.40	2.59	2.85	3.52	3.60	3.49
4	---	---	---	---	---	0.73	1.37	1.50	2.88	3.51	3.54	3.48
5	---	---	---	---	---	0.77	1.47	1.89	2.91	3.55	3.56	3.54
6	---	---	---	---	2.40	0.85	1.49	2.10	2.87	3.58	3.58	3.51
7	---	---	---	---	2.46	0.91	1.50	2.07	2.95	3.61	3.55	3.47
8	---	---	---	---	2.47	1.02	1.61	2.17	2.96	3.53	3.58	3.29
9	---	---	---	---	2.36	1.01	1.62	2.21	2.99	3.58	3.63	3.30
10	---	---	---	---	2.39	0.97	1.70	2.20	3.04	3.60	3.61	3.27
11	---	---	---	---	1.50	0.61	1.70	2.24	3.08	3.59	3.61	3.28
12	---	---	---	---	1.79	0.81	1.59	2.32	3.12	3.60	3.62	3.30
13	---	---	---	---	1.82	0.90	1.72	2.36	3.10	3.58	3.68	3.27
14	---	---	---	---	1.82	0.90	1.81	2.46	3.12	3.57	3.69	3.36
15	---	---	---	---	1.73	1.08	1.87	2.53	3.13	3.56	3.63	3.40
16	---	---	---	---	1.80	1.13	1.83	2.59	3.16	3.55	3.65	3.35
17	---	---	---	---	1.81	0.39	1.91	2.51	3.19	3.65	3.66	3.42
18	---	---	---	---	1.42	0.56	1.97	2.58	3.22	3.60	3.66	3.39
19	---	---	---	---	1.58	0.72	2.00	2.61	3.27	3.59	3.64	3.41
20	---	---	---	---	1.70	0.81	2.10	2.63	3.29	3.60	3.56	3.42
21	---	---	---	---	1.69	0.77	1.99	2.72	3.30	3.71	3.60	3.40
22	---	---	---	2.09	0.28	0.79	2.10	2.72	3.35	3.65	3.59	3.46
23	---	---	---	---	0.28	0.85	2.17	2.73	3.37	3.64	3.56	3.48
24	---	---	---	---	0.26	0.84	2.18	2.75	3.35	3.65	3.57	3.54
25	---	---	---	---	0.32	0.90	2.26	2.77	3.35	3.66	3.60	3.54
26	---	---	---	---	0.38	1.01	2.25	2.80	3.42	3.62	3.61	3.57
27	---	---	---	---	0.45	1.09	2.31	2.72	3.43	3.61	3.62	3.65
28	---	---	---	---	0.58	1.15	2.36	2.58	3.43	3.65	3.41	3.68
29	---	---	---	---	0.56	1.25	2.38	2.60	3.48	3.64	3.45	3.66
30	---	---	---	---	0.53	1.30	2.36	2.67	3.51	3.61	3.50	3.71
31	---	---	---	---	0.16	---	2.47	2.74	---	3.61	---	3.69

Table 4. Daily maximum depth-to-water from land surface at Krueger Drive piezometer near Oconomowoc, Wisconsin, 2004 – 2006—continued

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 430206088313700 WK-07/17E/30-4233 SOURCE AGENCY USGS STATE 55 COUNTY 133
 LATITUDE 430206 LONGITUDE 0883137 NAD27 WELL DEPTH 8.6 GEOLOGIC UNIT 100SDGV DATUM 860 NGVD29

Depth to water level, feet below land surface
 CALENDAR YEAR JANUARY TO DECEMBER 2005
 DAILY MAXIMUM VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.68	3.38	2.66	2.21	2.81	2.99	---	4.07	---	---	---	4.22
2	3.63	3.38	2.73	2.22	2.81	---	---	4.09	---	---	---	4.26
3	3.25	3.42	2.78	2.25	2.88	---	---	4.07	---	---	---	4.23
4	3.33	3.45	2.79	2.27	2.94	---	---	4.09	---	---	---	4.24
5	3.37	3.45	2.90	2.30	2.96	---	---	4.15	---	---	---	4.19
6	3.37	3.01	2.81	2.32	2.90	---	---	4.16	---	---	---	4.20
7	3.39	2.63	2.00	2.26	2.79	---	---	4.18	---	---	---	4.25
8	3.46	2.45	2.17	2.33	2.86	---	---	4.22	---	---	---	4.27
9	3.47	2.43	2.32	2.39	2.87	---	---	4.23	---	---	---	4.23
10	3.46	2.51	2.33	2.44	2.78	---	---	4.22	---	---	---	4.23
11	3.47	2.53	2.34	2.45	2.77	---	---	4.21	---	---	---	4.24
12	3.48	2.70	2.43	2.43	2.55	---	---	4.23	---	---	---	4.24
13	---	2.48	2.51	2.54	2.52	---	---	4.24	---	---	---	4.24
14	2.58	2.18	2.59	2.59	2.53	---	3.83	4.28	---	---	---	4.24
15	2.74	2.10	2.63	2.62	2.59	---	3.87	4.30	---	---	---	4.24
16	2.83	2.07	2.61	2.65	2.67	---	3.91	---	---	---	---	4.22
17	2.89	2.20	2.47	2.65	2.71	---	3.93	---	---	---	---	4.18
18	2.95	2.48	2.55	2.69	2.73	---	3.93	---	---	---	---	4.16
19	3.05	2.36	2.52	2.71	2.70	---	3.98	---	---	---	---	4.15
20	3.10	2.34	1.94	2.65	2.54	---	3.95	---	---	---	---	4.21
21	3.14	2.40	1.79	2.67	2.60	---	3.91	---	---	---	4.33	4.18
22	3.19	2.45	1.84	2.62	2.64	---	3.97	---	---	---	4.28	4.25
23	3.19	2.49	2.10	2.60	2.65	---	3.98	---	---	---	4.25	4.31
24	3.25	2.56	2.19	2.65	2.72	---	3.89	---	---	---	4.24	4.28
25	3.24	2.55	2.14	2.70	2.78	---	3.91	---	---	---	4.21	4.25
26	3.27	2.64	2.27	2.70	2.77	---	3.85	---	---	---	4.30	4.28
27	3.31	2.62	2.24	2.74	2.81	---	3.91	---	---	---	4.32	4.27
28	3.31	2.60	2.25	2.78	2.84	---	3.91	---	---	---	4.36	4.24
29	3.33	---	2.24	2.81	2.88	---	3.97	---	---	---	4.28	4.25
30	3.35	---	2.16	2.82	2.89	---	4.01	---	---	---	4.22	4.25
31	3.37	---	2.21	---	---	---	4.03	---	---	---	---	4.24

Table 4. Daily maximum depth-to-water from land surface at Krueger Drive piezometer near Oconomowoc, Wisconsin, 2004 – 2006—continued

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 430206088313700 WK-07/17E/30-4233 SOURCE AGENCY USGS STATE 55 COUNTY 133
 LATITUDE 430206 LONGITUDE 0883137 NAD27 WELL DEPTH 8.6 GEOLOGIC UNIT 100SDGV DATUM 860 NGVD29

Depth to water level, feet below land surface
 CALENDAR YEAR JANUARY TO DECEMBER 2006
 DAILY MAXIMUM VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.28	3.38	3.53	2.45	---	---	2.41	3.34	3.63	3.62	---	---
2	4.28	3.41	3.54	2.39	---	---	2.44	3.33	3.65	3.66	---	---
3	4.09	3.37	3.59	1.98	---	---	2.47	3.38	3.66	3.51	---	---
4	4.03	3.28	3.68	1.91	1.99	---	2.52	3.43	3.63	---	---	---
5	4.01	3.32	3.54	1.98	---	---	2.57	3.41	3.68	---	---	---
6	3.96	3.36	3.59	1.96	2.11	1.86	2.63	3.38	3.71	---	---	---
7	3.93	3.33	3.64	1.88	2.13	1.82	2.68	3.42	3.71	---	---	---
8	3.93	3.35	3.59	1.56	2.13	---	2.70	3.44	3.73	---	---	---
9	3.89	3.34	2.35	1.62	2.12	---	2.75	3.46	3.71	---	---	---
10	3.91	3.38	2.35	1.64	2.13	2.07	2.72	3.42	3.71	---	---	---
11	3.86	3.31	2.53	1.60	2.08	2.13	2.68	3.47	3.70	---	---	---
12	3.94	3.33	2.57	1.59	1.59	---	2.77	3.49	3.65	---	---	---
13	3.82	3.35	2.21	---	---	2.22	2.82	3.52	3.13	---	---	---
14	3.87	3.47	2.27	---	---	2.25	2.83	3.58	3.29	---	---	---
15	3.88	3.40	2.37	---	---	2.26	2.91	3.62	3.34	---	---	---
16	3.89	3.37	2.27	---	---	2.32	2.93	3.64	3.36	---	---	---
17	3.81	3.41	2.40	---	1.70	2.38	2.97	3.59	3.34	---	---	---
18	3.82	3.39	2.36	---	1.74	2.32	3.00	3.62	3.35	---	---	---
19	3.91	3.35	2.40	---	1.70	2.09	3.04	3.63	3.36	---	---	---
20	3.83	3.37	2.31	---	---	2.15	3.01	3.70	3.42	---	---	---
21	3.88	3.47	2.34	---	---	2.13	2.96	3.72	3.44	---	---	---
22	3.87	3.54	2.46	---	---	---	3.01	3.75	3.40	---	---	---
23	3.87	3.53	2.37	---	---	---	3.07	3.76	3.41	---	---	---
24	3.87	3.50	2.37	---	2.01	---	3.12	3.71	3.49	---	---	---
25	3.95	3.56	2.41	---	1.86	2.19	3.15	3.50	3.49	---	---	---
26	3.98	3.50	2.52	---	---	2.12	3.17	3.47	3.53	---	---	---
27	3.97	3.50	2.50	---	---	2.20	3.16	3.51	3.49	---	---	---
28	3.89	3.58	2.51	---	---	2.24	3.20	3.49	3.50	---	---	---
29	3.75	---	2.48	---	---	2.31	3.22	3.54	3.50	---	---	---
30	3.29	---	2.56	---	---	2.35	3.24	3.56	3.55	---	---	---
31	3.33	---	2.42	---	---	---	3.29	3.62	---	---	---	---

Table 5. Daily maximum depth-to-water from land surface at Normandale Drive piezometer near Oconomowoc, Wisconsin, 2004 - 2006

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 430324088283501 WK-07/17E/22-4231 SOURCE AGENCY USGS STATE 55 COUNTY 133
 LATITUDE 430324 LONGITUDE 0882835 NAD27 WELL DEPTH 13.1 GEOLOGIC UNIT 100SDGV DATUM 878 NGVD29

Depth to water level, feet below land surface
 CALENDAR YEAR JANUARY TO DECEMBER 2004
 DAILY MAXIMUM VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	---	---	---	4.51	4.94	5.54	5.72	6.91	8.53	9.01
2	---	---	---	---	---	4.55	4.96	5.57	5.69	7.03	8.43	9.01
3	---	---	---	---	---	4.61	4.94	5.58	5.71	7.11	8.44	9.03
4	---	---	---	---	---	4.65	4.98	4.81	5.76	7.17	8.40	9.05
5	---	---	---	---	---	4.65	5.02	5.01	5.79	7.26	8.42	9.07
6	---	---	---	---	6.56	4.69	5.03	5.10	5.77	7.28	8.47	9.05
7	---	---	---	---	6.63	4.70	5.03	5.11	5.84	7.31	8.41	9.04
8	---	---	---	---	6.67	4.76	5.09	5.19	5.87	7.18	8.41	8.90
9	---	---	---	---	6.64	4.74	5.13	5.22	5.90	7.20	8.45	8.94
10	---	---	---	---	6.64	4.75	5.23	5.23	5.94	7.40	8.46	8.96
11	---	---	---	---	6.35	4.67	5.16	5.26	5.97	7.55	8.53	9.01
12	---	---	---	---	6.19	4.65	5.10	5.30	6.00	7.67	8.65	9.04
13	---	---	---	---	6.14	4.67	5.12	5.30	5.98	7.78	8.73	9.03
14	---	---	---	---	6.10	4.70	5.17	5.41	6.02	7.91	8.83	9.10
15	---	---	---	---	5.99	4.78	5.18	5.50	6.00	8.01	8.81	9.18
16	---	---	---	---	5.87	4.83	5.16	5.38	6.05	8.12	8.82	9.14
17	---	---	---	---	5.83	4.76	5.20	5.30	6.07	8.26	8.76	9.08
18	---	---	---	---	5.80	4.53	5.24	5.43	6.13	8.30	8.82	8.92
19	---	---	---	---	5.80	4.62	5.24	5.51	6.17	8.37	8.81	8.54
20	---	---	---	---	5.81	4.65	5.30	5.51	6.19	8.44	8.80	8.22
21	---	---	---	---	5.77	4.60	5.29	5.59	6.21	8.56	8.86	8.02
22	---	---	---	6.60	5.57	4.63	5.31	5.59	6.24	8.51	8.90	7.77
23	---	---	---	---	4.60	4.69	5.35	5.62	6.26	8.54	8.90	7.61
24	---	---	---	---	4.37	4.73	5.36	5.63	6.25	8.58	8.89	7.51
25	---	---	---	---	4.47	4.74	5.39	5.72	6.27	8.59	8.96	7.44
26	---	---	---	---	4.55	4.78	5.38	5.73	6.34	8.58	8.98	7.41
27	---	---	---	---	4.62	4.82	5.36	5.56	6.34	8.57	8.99	7.41
28	---	---	---	---	4.70	4.85	5.44	5.51	6.47	8.60	8.89	7.39
29	---	---	---	---	4.69	4.89	5.45	5.60	6.66	8.58	8.96	7.34
30	---	---	---	---	4.69	4.91	5.44	5.74	6.81	8.58	9.01	7.38
31	---	---	---	---	4.55	---	5.52	5.73	---	8.54	---	7.35

Table 5. Daily maximum depth-to-water from land surface at Normandale Drive piezometer near Oconomowoc, Wisconsin, 2004 – 2006—continued

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 430324088283501 WK-07/17E/22-4231 SOURCE AGENCY USGS STATE 55 COUNTY 133
 LATITUDE 430324 LONGITUDE 0882835 NAD27 WELL DEPTH 13.1 GEOLOGIC UNIT 100SDGV DATUM 878 NGVD29

Depth to water level, feet below land surface
 CALENDAR YEAR JANUARY TO DECEMBER 2005
 DAILY MAXIMUM VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.32	7.08	6.49	6.21	6.58	6.58	---	7.45	8.04	8.32	8.69	8.32
2	7.28	7.06	6.55	6.23	6.59	---	---	7.48	8.06	8.32	8.74	8.38
3	7.08	7.11	6.58	6.26	6.65	---	---	7.50	8.09	8.36	8.74	8.35
4	7.11	7.15	6.57	6.28	6.71	---	---	7.51	8.11	8.38	8.76	8.38
5	7.11	7.15	6.67	6.30	6.71	---	---	7.56	8.14	8.41	8.73	8.36
6	7.11	6.87	6.64	6.32	6.65	---	---	7.59	8.14	8.37	8.30	8.35
7	7.14	6.71	6.10	6.25	6.38	---	---	7.61	8.16	8.39	8.17	8.44
8	7.17	6.43	6.25	6.31	6.50	---	---	7.66	8.12	8.43	8.28	8.46
9	7.17	6.48	6.32	6.34	6.52	---	---	7.67	8.18	8.46	8.28	8.42
10	7.17	6.61	6.26	6.38	6.55	---	---	7.67	8.21	8.47	8.37	8.42
11	7.20	6.62	6.28	6.36	6.51	---	---	7.67	8.22	8.47	8.42	8.45
12	7.20	6.76	6.34	6.35	6.31	---	---	7.65	8.25	8.46	8.43	8.46
13	---	6.61	6.40	6.41	6.31	---	---	7.66	8.26	8.48	8.39	8.47
14	6.72	6.44	6.45	6.45	6.33	---	7.24	7.71	8.26	8.53	8.42	8.47
15	6.83	6.14	6.51	6.48	6.38	---	7.31	7.75	8.27	8.55	8.39	8.47
16	6.84	6.11	6.50	6.49	6.44	---	7.36	7.79	8.31	8.57	8.24	8.46
17	6.87	6.28	6.45	6.49	6.49	---	7.36	7.79	8.32	8.53	8.33	8.43
18	6.89	6.50	6.45	6.52	6.49	---	7.37	7.77	8.34	8.57	8.35	8.43
19	6.91	6.39	6.41	6.52	6.45	---	7.44	7.76	8.35	8.59	8.45	8.41
20	6.94	6.32	6.26	6.45	6.32	---	7.41	7.82	8.36	8.57	8.40	8.47
21	6.94	6.38	6.10	6.49	6.38	---	7.26	7.83	8.40	8.62	8.47	8.47
22	6.95	6.40	6.19	6.42	6.41	---	7.13	7.83	8.34	8.56	8.43	8.55
23	6.96	6.43	6.24	6.44	6.40	---	7.22	7.87	8.28	8.58	8.40	8.59
24	6.98	6.48	6.25	6.49	6.45	---	7.02	7.89	8.30	8.56	8.40	8.56
25	6.97	6.43	6.15	6.51	6.49	---	7.13	7.90	8.30	8.60	8.39	8.53
26	6.97	6.53	6.27	6.48	6.50	---	7.13	7.93	8.06	8.61	8.50	8.57
27	7.01	6.49	6.21	6.53	6.49	---	7.19	7.91	8.17	8.66	8.48	8.54
28	7.00	6.44	6.20	6.58	6.50	---	7.23	7.90	8.17	8.69	8.44	8.51
29	7.02	---	6.18	6.59	6.53	---	7.31	7.94	8.20	8.71	8.28	8.52
30	7.04	---	6.12	6.59	6.57	---	7.36	7.95	8.26	8.70	8.29	8.51
31	7.05	---	6.16	---	6.60	---	7.41	8.00	---	8.69	---	8.52

Table 5. Daily maximum depth-to-water from land surface at Normandale Drive piezometer near Oconomowoc, Wisconsin, 2004 – 2006—continued

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 430324088283501 WK-07/17E/22-4231 SOURCE AGENCY USGS STATE 55 COUNTY 133
 LATITUDE 430324 LONGITUDE 0882835 NAD27 WELL DEPTH 13.1 GEOLOGIC UNIT 100SDGV DATUM 878 NGVD29

Depth to water level, feet below land surface
 CALENDAR YEAR JANUARY TO DECEMBER 2006
 DAILY MAXIMUM VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8.55	7.67	7.65	6.69	5.99	5.25	5.76	6.23	6.46	6.53	---	---
2	8.49	7.70	7.65	6.65	5.86	5.36	5.80	6.28	6.50	6.58	---	---
3	8.14	7.66	7.69	6.53	5.94	5.39	5.83	6.28	6.52	6.60	---	---
4	8.11	7.60	7.80	6.31	5.98	5.46	5.83	6.33	6.55	---	---	---
5	8.11	7.65	7.65	6.36	6.02	5.52	5.85	6.38	6.54	---	---	---
6	8.09	7.69	7.66	6.35	5.99	5.57	5.88	6.36	6.54	---	---	---
7	8.08	7.66	7.74	6.29	6.10	5.49	5.92	6.37	6.62	---	---	---
8	8.11	7.67	7.77	5.86	6.12	5.56	5.95	6.22	6.62	---	---	---
9	8.10	7.67	7.30	5.91	6.10	5.57	5.97	6.31	6.64	---	---	---
10	8.15	7.68	7.06	5.96	6.08	5.56	5.99	6.34	6.63	---	---	---
11	8.08	7.57	7.13	5.93	6.08	5.60	5.98	6.34	6.64	---	---	---
12	8.19	7.59	7.03	5.93	6.03	5.62	5.97	6.39	6.59	---	---	---
13	8.07	7.59	6.85	5.88	5.62	5.68	6.02	6.43	6.47	---	---	---
14	8.13	7.71	6.57	5.91	5.64	5.68	6.05	6.45	5.99	---	---	---
15	8.15	7.61	6.66	5.90	5.69	5.69	6.03	6.50	6.17	---	---	---
16	8.14	7.56	6.55	5.91	5.72	5.72	6.10	6.56	6.24	---	---	---
17	8.05	7.59	6.68	5.84	5.80	5.75	6.12	6.58	6.28	---	---	---
18	8.07	7.56	6.68	5.90	5.74	5.76	6.15	6.54	6.29	---	---	---
19	8.16	7.52	6.71	5.93	5.71	5.73	6.17	6.55	6.30	---	---	---
20	8.06	7.57	6.61	5.95	5.79	5.57	6.17	6.57	6.32	---	---	---
21	8.10	7.61	6.63	5.98	5.84	5.63	6.16	6.64	6.40	---	---	---
22	8.07	7.68	6.74	5.98	5.86	5.63	6.09	6.67	6.42	---	---	---
23	8.10	7.63	6.65	5.94	5.91	5.64	6.16	6.69	6.37	---	---	---
24	8.06	7.66	6.64	6.00	5.95	5.72	6.20	6.71	6.39	---	---	---
25	8.14	7.66	6.69	6.02	5.91	5.73	6.24	6.66	6.45	---	---	---
26	8.17	7.64	6.78	6.03	5.51	5.72	6.27	6.13	6.45	---	---	---
27	8.18	7.63	6.75	6.07	5.67	5.64	6.27	6.24	6.49	---	---	---
28	8.08	7.72	6.74	6.08	5.72	5.67	6.27	6.29	6.46	---	---	---
29	7.96	---	6.71	6.10	5.81	5.73	6.02	6.32	6.47	---	---	---
30	7.60	---	6.80	6.06	5.80	5.72	6.12	6.37	6.48	---	---	---
31	7.63	---	6.68	---	5.78	---	6.17	6.41	---	---	---	---

Table 6. Condition of Middle Genesee Lake, relative to other southeastern Wisconsin Lakes

	Parameter (late-summer values)	Percentage distribution of lakes in southeast Wisconsin within parameter ranges		
<u>Total Phosphorus (mg/L)</u>				
	<0.010	best condition	7	
Middle Genesee Lake	0.010-0.020	↓	21	
	0.020-0.030		15	
	0.030-0.050		21	
	0.050-0.100		21	
	0.100-0.150		3	
	>0.150		worst condition	12
<u>Chlorophyll a (µg/L)</u>				
Middle Genesee Lake	0-5	best condition	22	
	5-10	↓	31	
	10-15		14	
	15-30		12	
	>30		worst condition	22
<u>Secchi depth (meters)</u>				
	>6.0	best condition	1	
Middle Genesee Lake	3.0-6.0	↓	9	
	2.0-3.0		26	
	1.0-2.0		31	
	<1.0		worst condition	33