

Summary of water-quality data for Forest Lake for 2005

Prepared by

Bill Rose, Hydrologist

US Geological Survey

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Water-quality data for Forest Lake for 2005

[mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter]

[<, less than; M, present but not quantified]

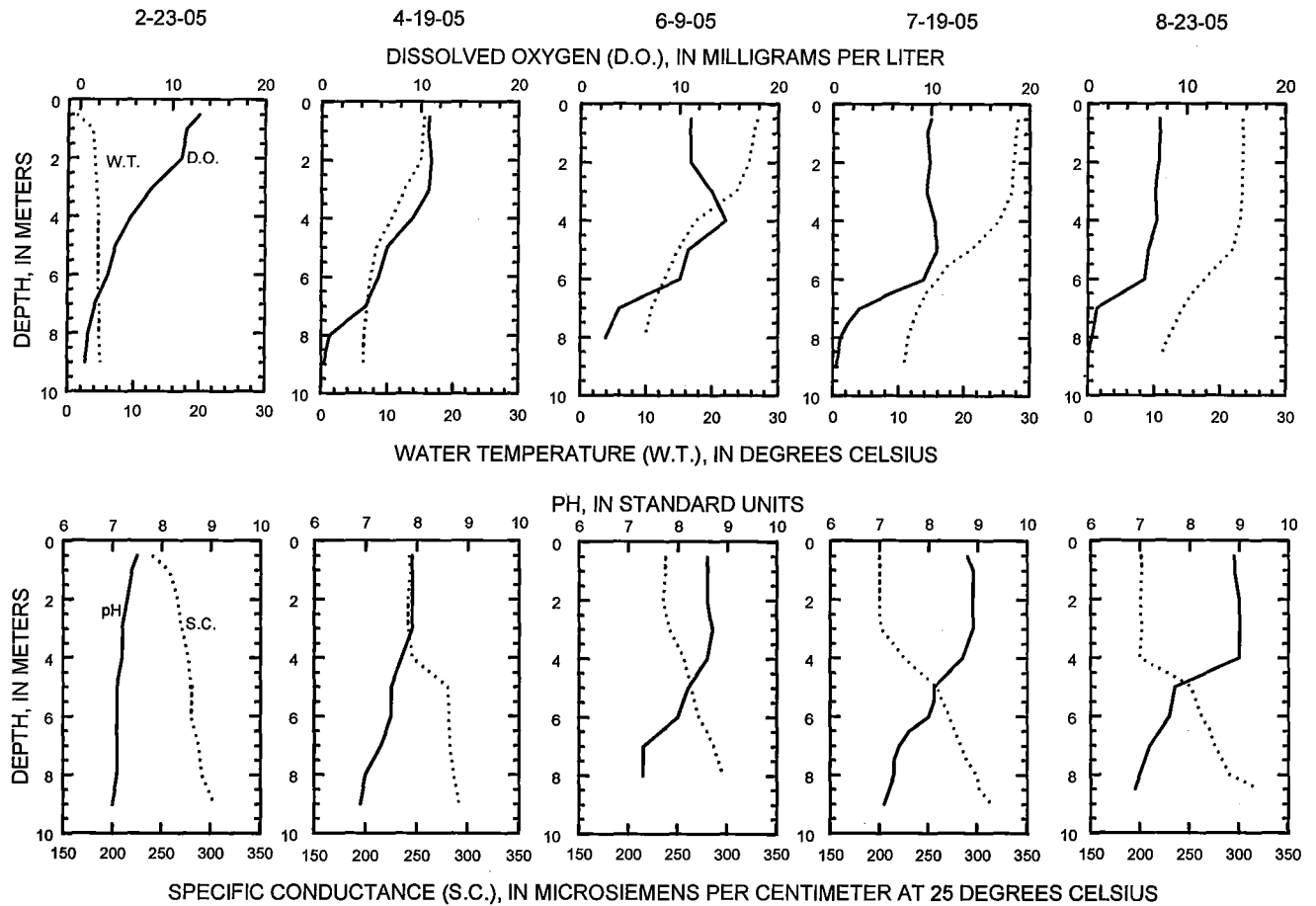
<u>Dates</u>	<u>Units</u>	<u>February 23, 2005</u>		<u>April 19,2005</u>		<u>June 9,2005</u>		<u>July 19,2005</u>		<u>August 23,2005</u>	
Times		1450	1459	1020	1029	1520	1528	1300	1313	1130	1140
Transparency, Secchi depth	meters	--	--	4.5	--	3.9	--	4.2	--	2.7	--
Sampling depth	meters	0.5	9.0	0.5	9.0	0.5	8.0	0.5	9.0	0.5	8.5
Apparent color	platinum-cobalt	--	--	15	--	--	--	--	--	--	--
Turbidity	NTU	--	--	<1	--	--	--	--	--	--	--
Dissolved oxygen	mg/L	12.9	0.7	10.9	0.3	11.2	2.6	10.0	0.3	7.3	0.1
pH	standard units	7.5	7.0	7.9	6.9	8.6	7.3	8.8	7.1	8.9	6.9
Specific conductance	µS/cm @ 25C	241	304	243	292	238	297	200	315	202	320
Temperature	degrees C	1.2	5.0	15.6	6.4	26.9	9.9	28.3	10.7	23.5	11.3
Hardness	mg/L as CaCO3	--	--	130	--	--	--	--	--	--	--
Calcium	mg/L	--	--	27.1	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	15.0	--	--	--	--	--	--	--
Potassium	mg/L	--	--	<1.00	--	--	--	--	--	--	--
Sodium	mg/L	--	--	2.9	--	--	--	--	--	--	--
Chloride	mg/L	--	--	5.4	--	--	--	--	--	--	--
Silica	mg/L	--	--	0.108	--	--	--	--	--	--	--
Sulfate	mg/L	--	--	<4.5	--	--	--	--	--	--	--
Residue, ROE@180	mg/L	--	--	138	--	--	--	--	--	--	--
NH3+orgN	mg/L as N	--	--	0.58	--	--	--	--	--	--	--
Ammonia	mg/L as N	--	--	0.016	--	--	--	--	--	--	--
NO2+NO3	mg/L as N	--	--	<.019	--	--	--	--	--	--	--
Orthophosphate	mg/L as P	--	--	0.006	--	--	--	--	--	--	--
Phosphorus	mg/L	0.021	0.032	0.019	0.053	0.017	0.048	0.014	0.111	0.017	0.049
Chlorophyll a	µg/L	--	--	1.29	--	2.31	--	2.87	--	5.48	--
Iron	µg/L	--	--	< 100	--	--	--	--	--	--	--
Manganese	µg/L	--	--	M	--	--	--	--	--	--	--

Depth profiles of field parameters for Forest Lake for 2005 sampling visits

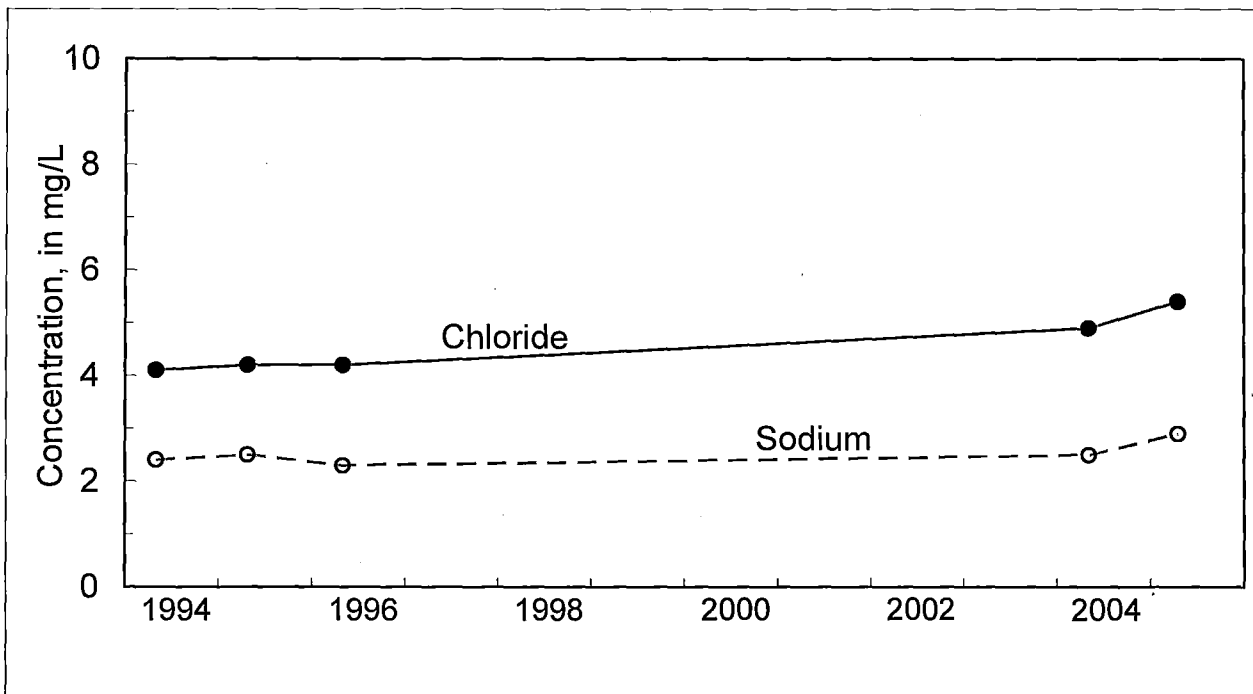
Date & Time	Depth (meters)	Dissolved oxygen (mg/L)	pH	Specific conductance S/cm)	Temperature (°C)
2/23/2005 14:50	0.5	12.9	7.5	241	1.2
2/23/2005 14:51	1	11.6	7.4	258	3.8
2/23/2005 14:52	2	11.0	7.3	267	4.0
2/23/2005 14:53	3	7.9	7.2	271	4.4
2/23/2005 14:54	4	5.6	7.2	278	4.6
2/23/2005 14:55	5	3.9	7.1	281	4.6
2/23/2005 14:56	6	3.1	7.1	281	4.6
2/23/2005 14:57	7	1.7	7.1	288	4.7
2/23/2005 14:58	8	1.0	7.1	292	4.8
2/23/2005 14:59	9	0.7	7.0	304	5.0
4/19/2005 10:20	0.5	10.9	7.9	243	15.6
4/19/2005 10:21	1	10.8	7.9	244	15.4
4/19/2005 10:22	2	11.1	7.9	242	15.0
4/19/2005 10:23	3	10.9	7.9	242	12.6
4/19/2005 10:24	4	9.2	7.7	246	10.6
4/19/2005 10:25	5	6.6	7.5	281	8.3
4/19/2005 10:26	6	5.8	7.5	282	7.5
4/19/2005 10:27	7	4.5	7.3	283	6.9
4/19/2005 10:28	8	0.9	7.0	287	6.5
4/19/2005 10:29	9	0.3	6.9	292	6.4
6/9/2005 15:20	0.5	11.2	8.6	238	26.9
6/9/2005 15:21	1	11.1	8.6	238	26.2
6/9/2005 15:22	2	11.2	8.6	236	25.6
6/9/2005 15:23	3	13.3	8.7	242	23.6
6/9/2005 15:24	4	14.7	8.6	257	17.5
6/9/2005 15:25	5	10.9	8.2	264	14.8
6/9/2005 15:26	6	10.1	8.0	272	12.8
6/9/2005 15:27	7	3.9	7.3	287	10.8
6/9/2005 15:28	8	2.6	7.3	297	9.9

**Depth profiles of field parameters for Forest Lake for 2005 sampling visits--
continued**

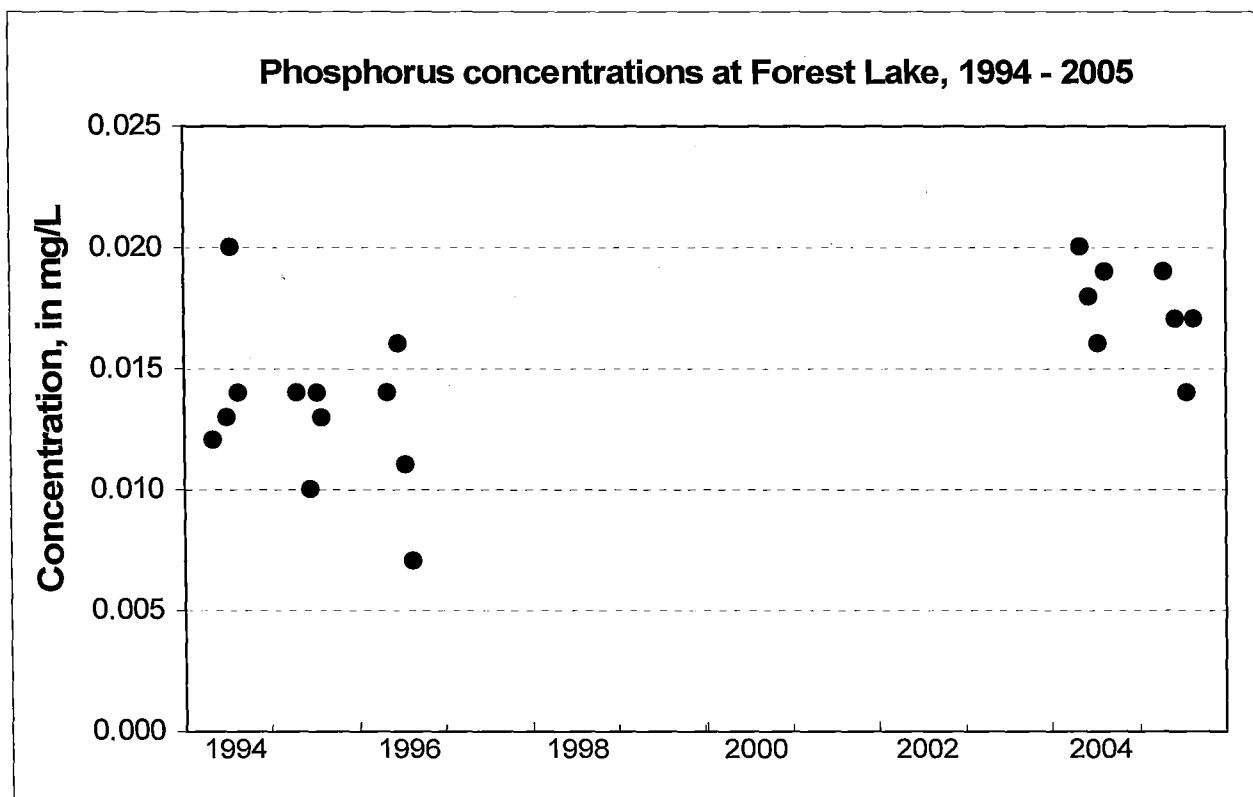
Date & Time	Depth	Dissolved oxygen	pH	Specific conductance	Temperature
7/19/2005 13:00	0.5	10.0	8.8	200	28.3
7/19/2005 13:01	1	9.6	8.9	200	27.9
7/19/2005 13:02	2	9.9	8.9	200	27.6
7/19/2005 13:03	3	9.5	8.9	202	27.3
7/19/2005 13:04	4	10.4	8.7	226	25.3
7/19/2005 13:05	5	10.6	8.1	259	20.9
7/19/2005 13:06	5.5	9.9	8.1	265	17.6
7/19/2005 13:07	6	9.2	8.0	272	16.0
7/19/2005 13:08	6.5	5.8	7.6	277	14.1
7/19/2005 13:09	7	2.7	7.4	284	13.0
7/19/2005 13:10	7.5	1.6	7.3	290	12.2
7/19/2005 13:11	8	0.8	7.3	300	11.5
7/19/2005 13:12	8.5	0.6	7.2	302	11.2
7/19/2005 13:13	9	0.3	7.1	315	10.7
8/23/2005 11:30	0.5	7.3	8.9	202	23.5
8/23/2005 11:31	1	7.3	8.9	202	23.6
8/23/2005 11:32	2	7.2	9	201	23.5
8/23/2005 11:33	3	6.8	9	202	23.4
8/23/2005 11:34	4	7	9	200	23.1
8/23/2005 11:35	5	6.1	7.7	252	21.9
8/23/2005 11:36	6	5.8	7.6	263	17.7
8/23/2005 11:37	6.5	3.4	7.4	271	15.7
8/23/2005 11:38	7	0.9	7.2	276	14.3
8/23/2005 11:39	8	0.4	7	291	12.3
8/23/2005 11:40	8.5	0.1	6.9	320	11.3

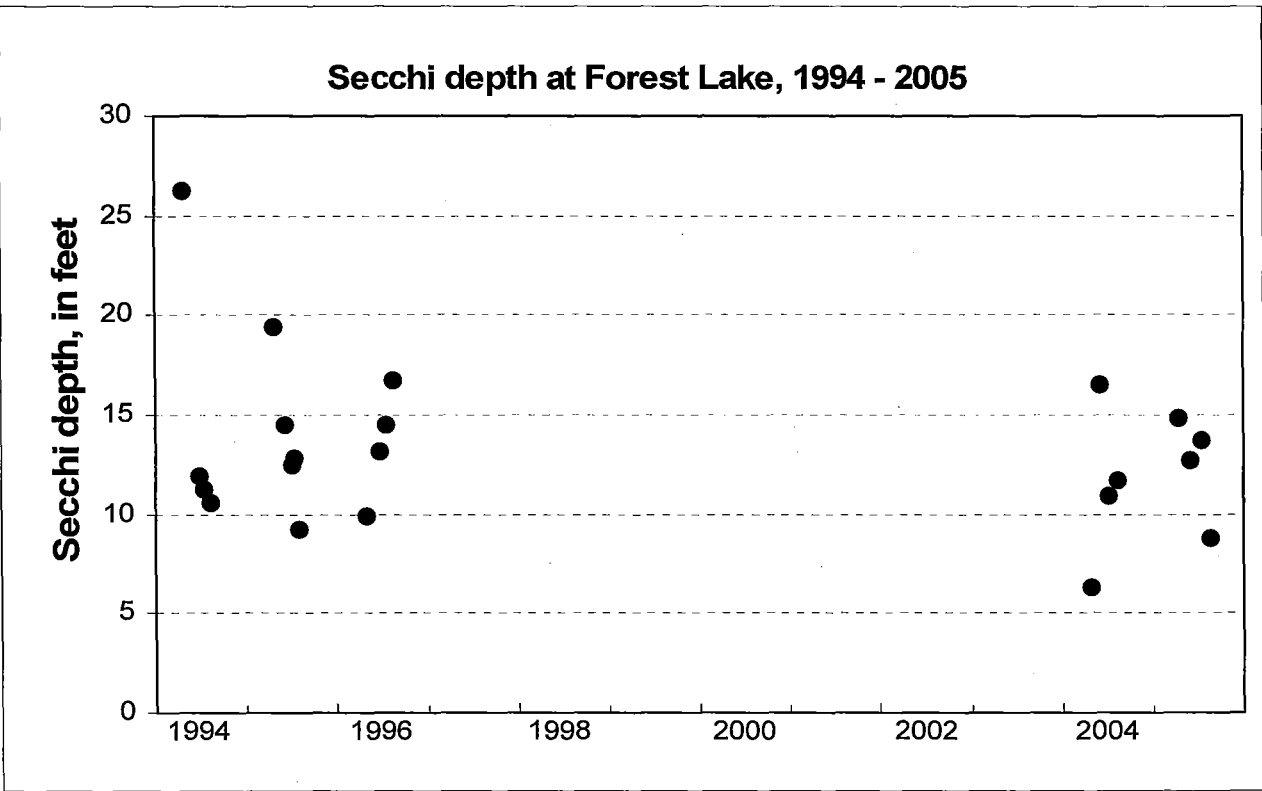
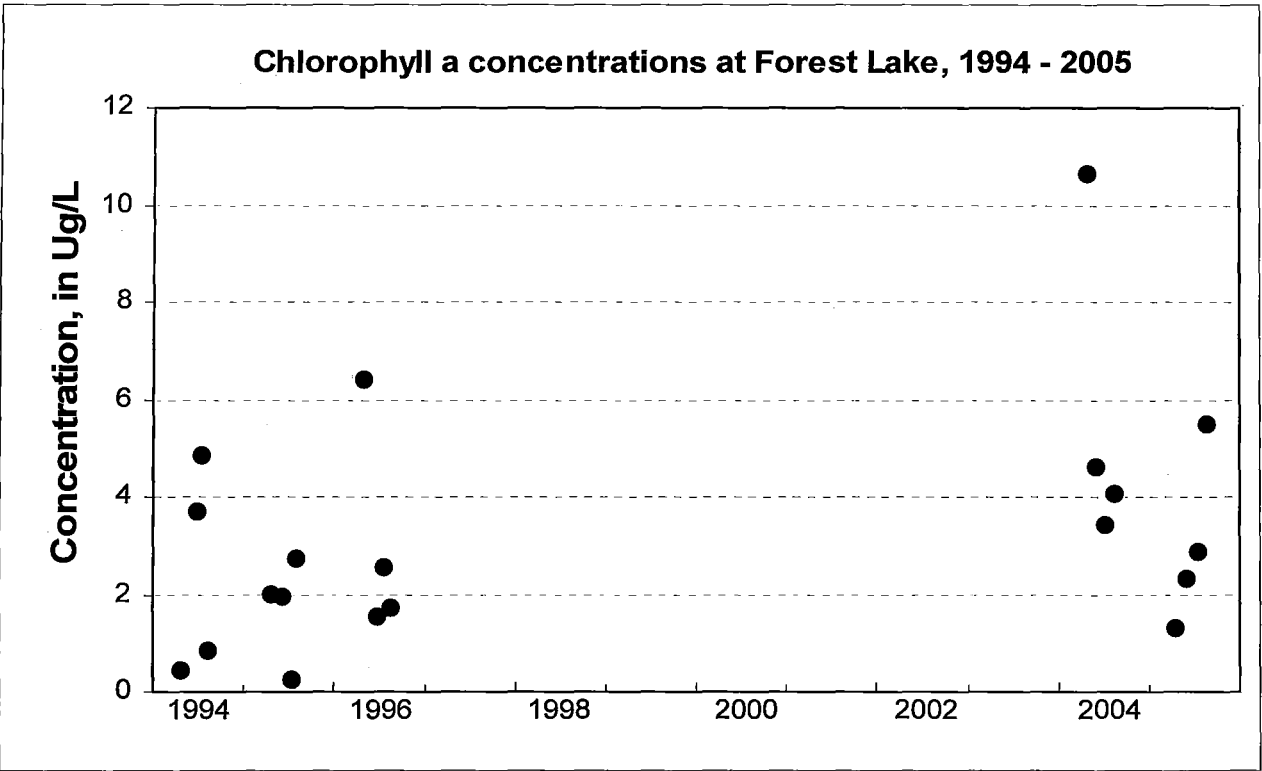


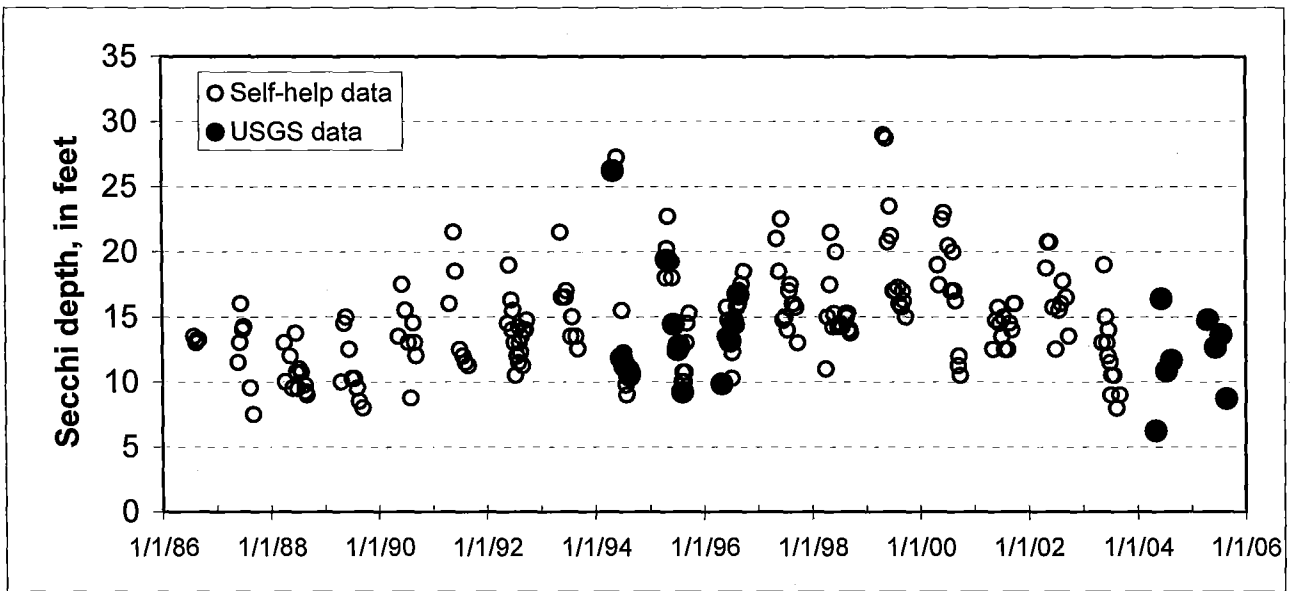
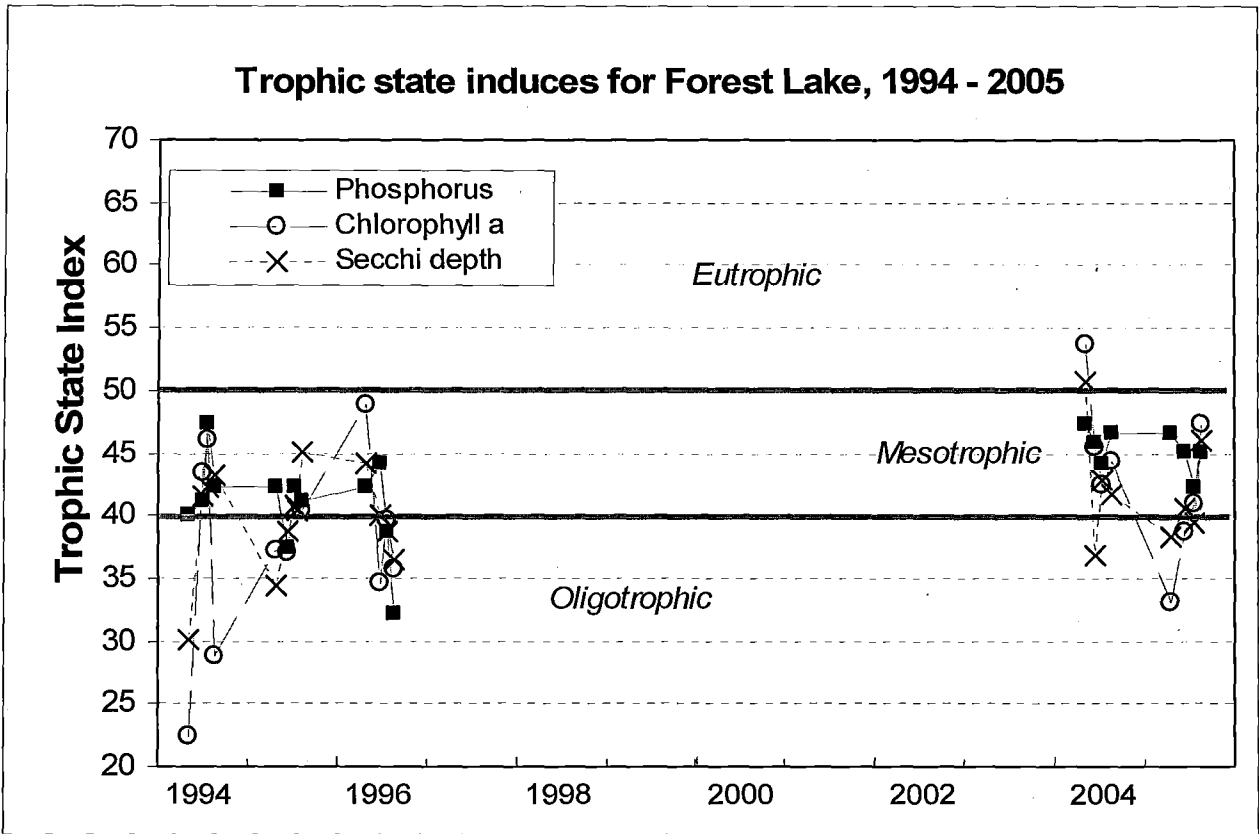
Depth profiles of temperature, dissolved oxygen concentration, pH, and specific conductance at Forest Lake near Dundee, Wisconsin, February - August 2005



Trends in sodium and chloride concentration in Forest Lake Near Dundee, Wisconsin, 1994 - 2004.







Spring and summer Secchi depths in Forest Lake, 1986 - 2005.