Lake Springfield

Site 1

2011 DATA

Greene County
Latitude: 37.1122 Longitude: -93.2608

Date	5/5	5/17	6/9	6/28	7/21	8/11	8/27	9/24	Mean
Secchi (inches)	32	30	28	25	20	18	18	22	24
TP (µg/L)	44	29	34	56	66	70	69	54	50
TN (µg/L)	1160	1210	960	630	630	680	590	780	800
CHL (µg/L)	1.6	6.9	16.4	32.7	26.8	35.3	39.5	37.0	17.3
ISS (mg/L)	7.0	8.2	11.5	10.0	11.6	17.0	15.9	13.3	11.3

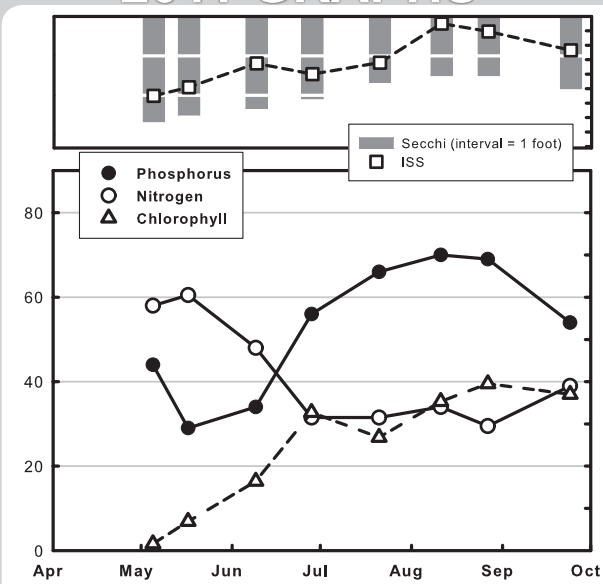
With an average 2011 water clarity reading of just 2 feet, Lake Springfield is among the more turbid of Missouri lakes. Lake Springfield is used as a cooling water source for the James River Power Plant, so the water is warmer than ambient air temperatures would suggest. The warm water encourages algae growth and the flow can resuspend sediment from the bottom, both of which will reduce water clarity.

Phosphorus concentrations are high for the region, partly due to the lake's location downstream of an urban area and partly due to the resuspension of sediment-bound phosphorus.

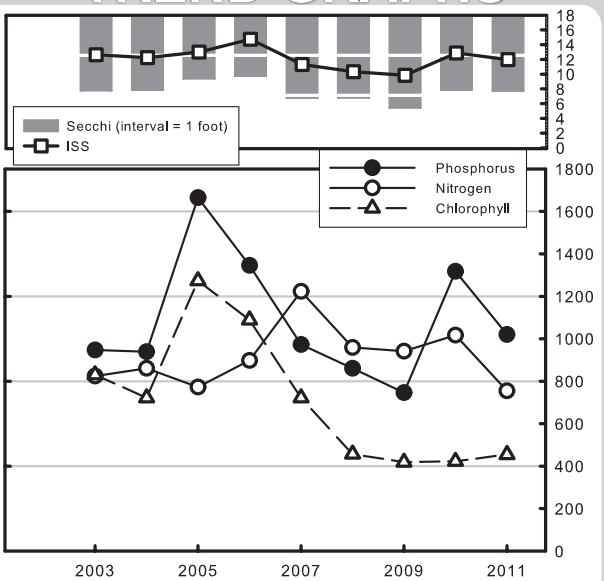
Long-term data suggest no changes in water clarity, suspended sediment or nutrients in the 9 seasons of monitoring. Concentrations of chlorophyll have been extremely consistent in the past 4 years, with values approximately half as high as measured in the previous 5 years.

Lake Springfield Sites

2011 GRAPHS



TREND GRAPHS



See page 3 for help interpreting graphs

Lake Springfield

Site 2

2011 DATA

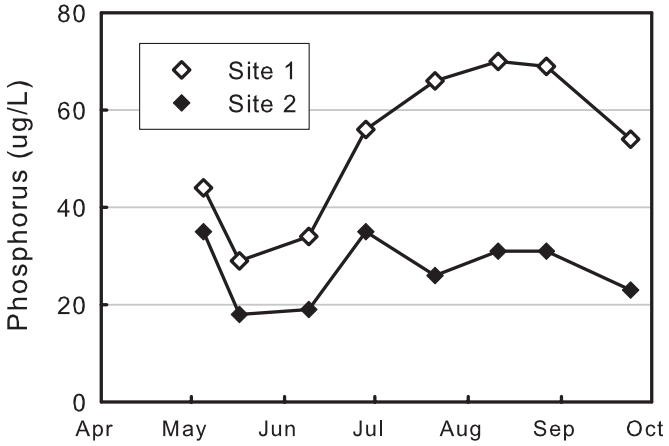
Greene County
Latitude: 37.1263 Longitude: -93.2256

Date	5/5	5/17	6/9	6/28	7/21	8/11	8/27	9/24	Mean
Secchi (inches)	40	71	57	45	41	38	38	50	46
TP (µg/L)	35	18	19	35	26	31	31	23	26
TN (µg/L)	1550	1300	1210	970	690	770	570	1250	986
CHL (µg/L)	0.6	1.9	1.6	15.7	9.5	3.3	15.9	1.6	3.5
ISS (mg/L)	7.8	4.2	4.3	3.8	3.7	7.0	5.6	3.4	4.8

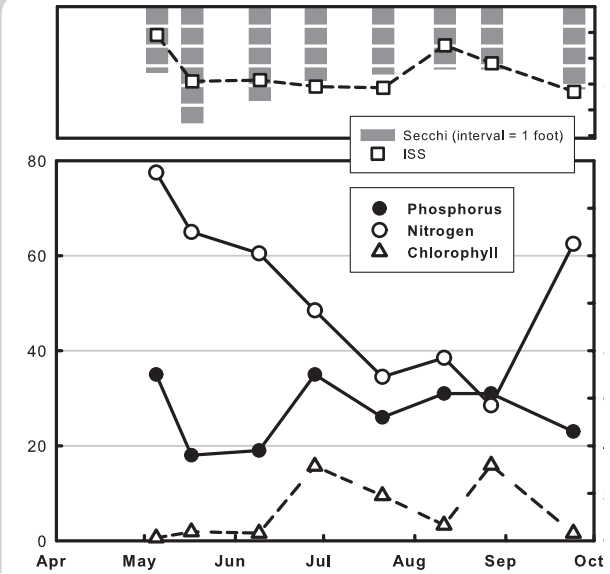
Lake Springfield Site 2 is located near the inflow from the James River, at the opposite end of the lake from Site 1. This site is unaffected by the warm water from the power plant that dominates the water quality of Site 1.

Water clarity at Site 2 is double that of Site 1, on average. The differences in Secchi readings can be attributed to differences in chlorophyll and suspended sediment concentrations, both of which are significantly lower at Site 2. Phosphorus concentrations were also lower at Site 2 than at Site 1 (see graph, right), though nitrogen concentrations were similar at both sites.

Long-term data suggest no changes in water clarity, suspended sediment or nutrients in the 9 seasons of monitoring. Concentrations of chlorophyll have been extremely consistent in the past 5 years, with values approximately 1/3 as high as measured in the previous 4 years.



2011 GRAPHS



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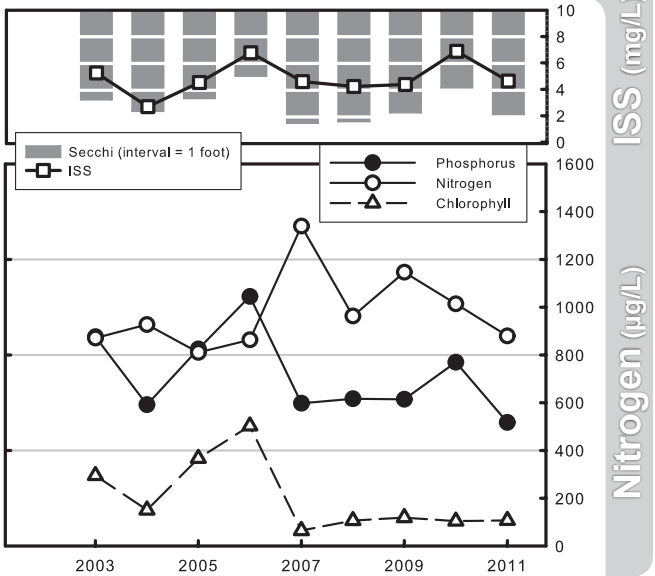

See page 3 for help interpreting graphs