

# Lake Springfield, Site 1

Greene County

2006 DATA



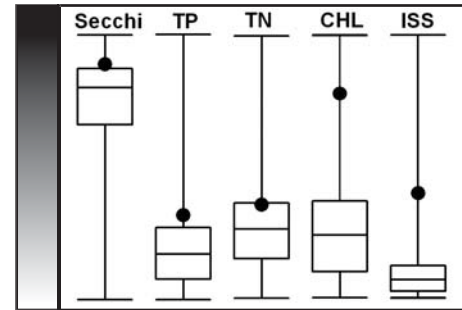
Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
5/1	14	77	1230	6.2	15.9
5/22	27	40	1270	28.8	11.9
6/12	23	61	780	38.3	12.3
6/26	18	67	570	48.8	13.7
7/20	18	67	910	50.5	14.4
8/12	15	89	970	90.4	16.0
9/4	12	95	1050	105.8	22.2
9/25	20	66	750	84.0	13.3
<b>Mean</b>	<b>24</b>	<b>68</b>	<b>913</b>	<b>43.8</b>	<b>14.7</b>

2006 SUMMARY

Water from this lake is used to cool a power plant for the City of Springfield. Warm water from the plant tends to keep the lake mixed at the dam. As a result of this mixing, sediments and phosphorus are resuspended from the bottom.

Thanks to the warm water and constant mixing, the algae are very productive. Despite the dam's lower TN concentrations and only slightly higher TP concentrations, the mean chlorophyll concentration is more than double what is observed at site 2.

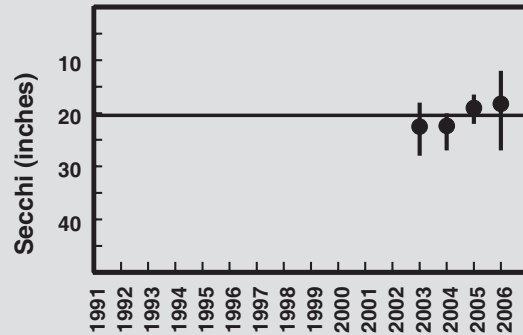
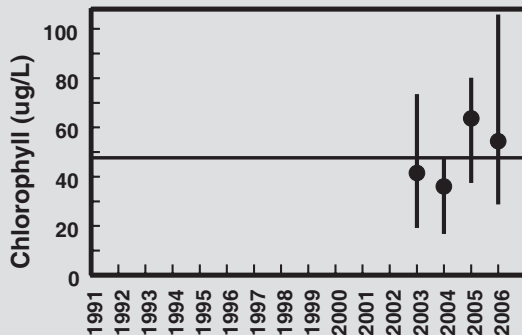
Nutrient, chlorophyll and sediment concentrations are higher than found in 75% of Missouri lakes. As a consequence, there is less clarity in Springfield Lake than is observed in 75% of Missouri lakes.



Relative Rank Graph  
See page 11 for details

TRENDS

Chlorophyll and phosphorus concentrations were higher in 2005 and 2006 than in the two preceding years. Secchi transparency has been slightly lower in the last two years. Nitrogen concentrations do not exhibit any trend.



# Springfield Lake, Site 2

Greene County

2006 DATA



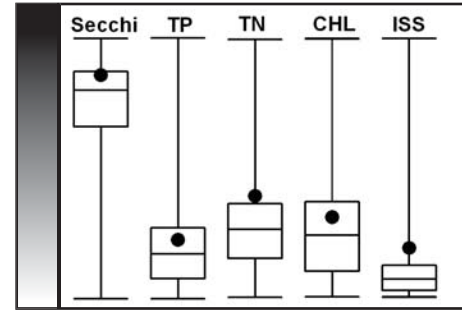
Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
5/1	22	74	1700	3.6	17.3
5/22	18	105	1570	4.4	15.2
6/12	36	38	940	36.6	6.1
6/26	33	60	860	34.7	4.9
7/20	46	59	830	29.5	2.9
8/12	22	48	530	46.2	9.9
9/4	32	30	740	33.2	7.4
9/25	38	28	1270	12.6	4.8
<b>Mean</b>	<b>29</b>	<b>50</b>	<b>986</b>	<b>18.1</b>	<b>7.3</b>

2006 SUMMARY

This uplake site represents conditions on the James River as it enters Springfield Lake. Concentrations of chlorophyll and ISS are much lower here than at the dam. The opposite is seen on most reservoirs, but the mixing caused by the power plant resuspends sediments and cycles algae through the “photic” zone at the dam.

Nutrient concentrations are similar among the two sites, and Secchi transparency at site 2 is only 5 inches greater than at the dam.

All parameters rank at or near the 75 percentile of Missouri lakes.



Relative Rank Graph  
See page 11 for details

TRENDS

Higher concentrations of suspended sediments and chlorophyll (not shown) at site 2 led to a decrease in the 2006 mean Secchi transparency, relative to previous years.

