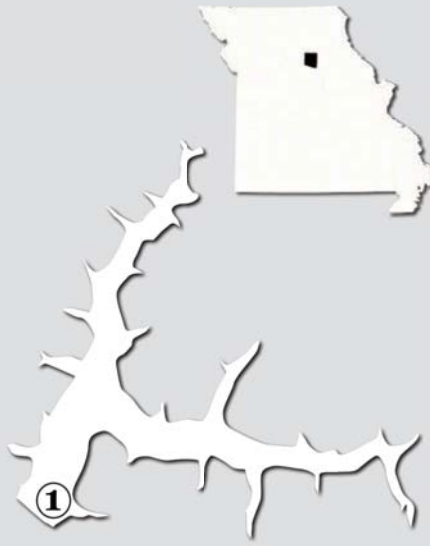
Sugar Creek Lake, Site 1

Randolph County

2006 DATA



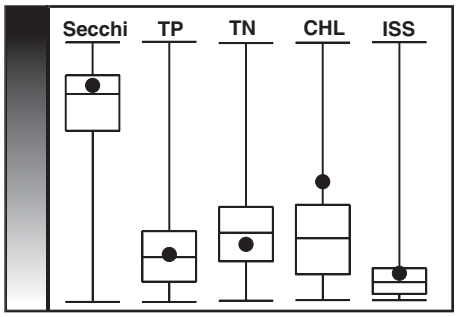
Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/23	31	33	700	12.9	3.8
5/7	34	37	690	30.7	3.7
5/28	24	58	660	33.0	9.3
6/18	36	47	570	23.1	4.9
7/9	41	33	520	14.0	6.1
8/6	31	43	740	39.3	3.4
8/27	34	40	560	27.7	2.4
9/16	36	42	550	30.4	3.4
10/8	32	46	800	44.0	4.4
Mean	**33**	**41**	**637**	**26.4**	**4.3**

2006 SUMMARY

The two sites monitored at Sugar Creek Lake have very comparable water quality, as measured on 9 sample dates in 2006.

The Secchi transparency was slightly higher, while nutrient, algae and sediment concentrations slightly lower at the dam than observed at site 2. The variability at both sites was typical for Sugar Creek Lake.

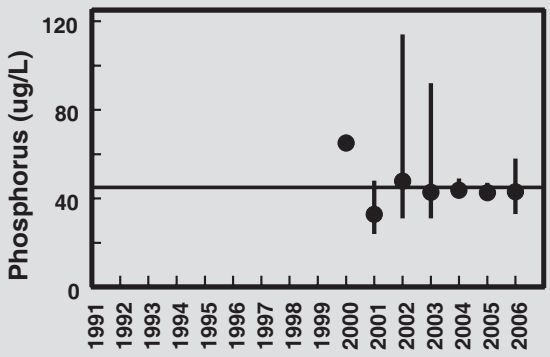
The mean chlorophyll concentrations at site 1 was higher than observed at 75% of Missouri's lakes. All other parameters ranked among the middle 50% of Missouri's lakes.

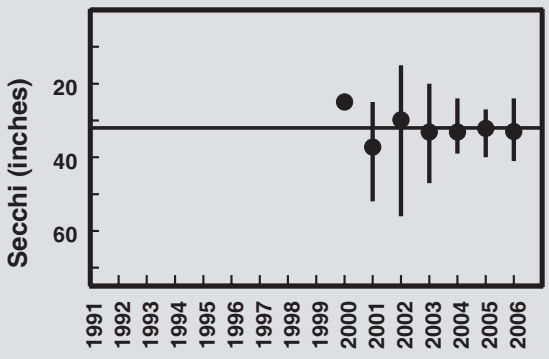


Relative Rank Graph
See page 11 for details

TRENDS

Summer mean phosphorus concentrations have not varied significantly since 2001, typically falling near the 45 µg/L overall mean. Only the within season phosphorus variability has changed in the last five years. Mean Secchi transparency values have also been consistent, generally falling within 5 inches of the overall mean of 32 inches. The 2000 value is derived from a single sample and thus does not represent a true mean.

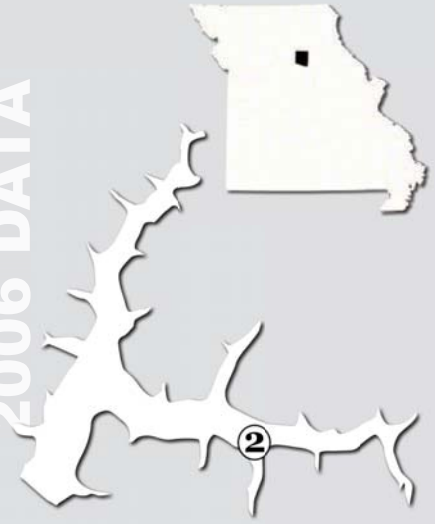




Sugar Creek Lake, Site 2

Randolph County

2006 DATA

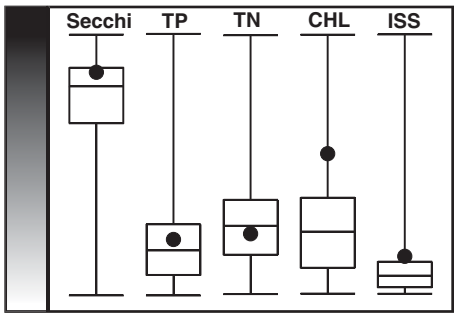


Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/23	29	45	760	26.2	6.8
5/7	32	42	700	30.0	5.7
5/28	23	56	680	32.7	9.0
6/18	30	55	620	28.8	6.5
7/9	42	35	550	17.8	3.1
8/6	31	42	660	36.4	2.4
8/27	30	55	670	43.5	5.3
9/16	28	55	610	38.2	6.6
10/8	24	48	770	31.3	10.5
Mean	**29**	**48**	**666**	**30.8**	**5.7**

2006 SUMMARY

Conditions at site 2 were nearly identical to those at the dam. The mean ISS value at site 2 was slightly higher than at the dam. This small increase was enough to push site 2 suspended sediment concentrations to the upper 25th percentile of Missouri lakes.

As seen with site 1, the mean chlorophyll concentration was higher than more than 75% of Missouri lakes, while nutrient concentrations were closer to the state median values.



Relative Rank Graph
See page 11 for details

TRENDS

If the 2000 sample is discarded, there appears to be a trend of increasing mean chlorophyll concentrations. Suspended sediment concentrations on the other hand appear to be declining, though the range of values observed is still rather high. There is no change in the overall phosphorus concentrations (see site 1 graph), so the increase in the amount of algae is likely due to a reduction of the shading by sediments.