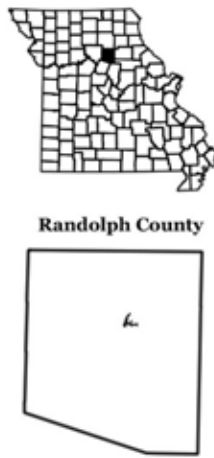


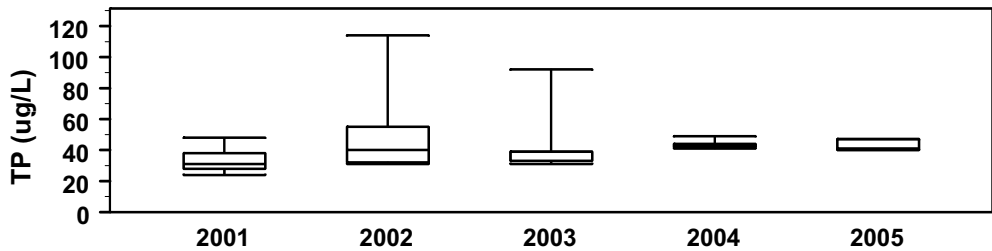
Sugar Creek Lake

Sugar Creek Lake is a 346-acre lake located in Randolph County. Owned by the City of Moberly, it is used as the city's drinking water reservoir. Sugar Creek's watershed is approximately 6,700 acres.



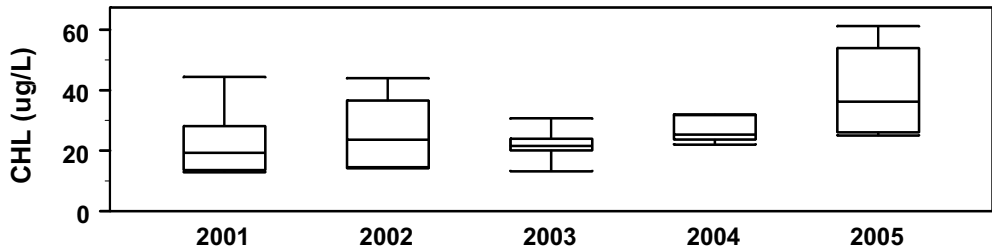
Location of Sugar Creek Lake and its sample sites

Phosphorus trends at Sugar Creek Lake, Site 1



Phosphorus concentrations at Sugar Creek Lake, Site 1 have been very consistent, especially in the last two years.

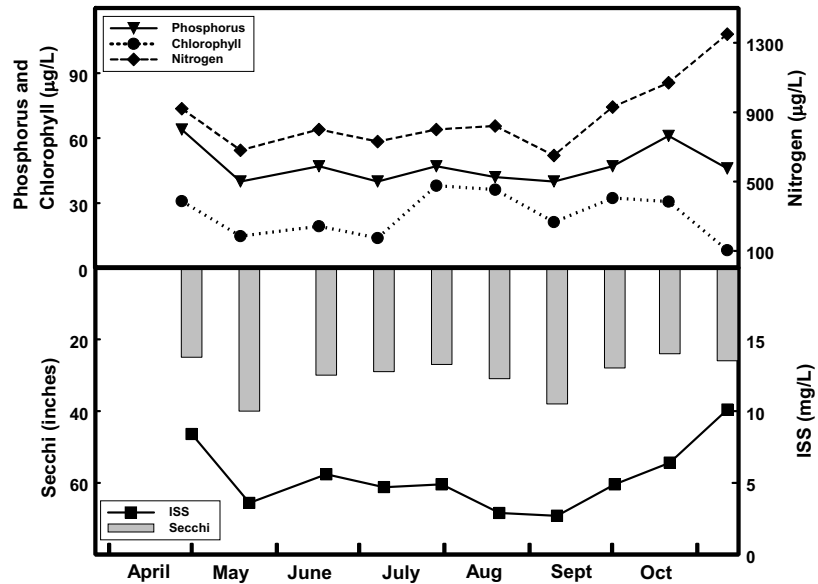
Chlorophyll trends at Sugar Creek Lake, Site 2



Chlorophyll concentrations at Sugar Creek Lake, Site 2 were higher in 2005 than previously observed.

Sugar Creek Lake, Site 1

Seasonal fluctuations of parameters at Sugar Creek Lake, Site 1 – 2005

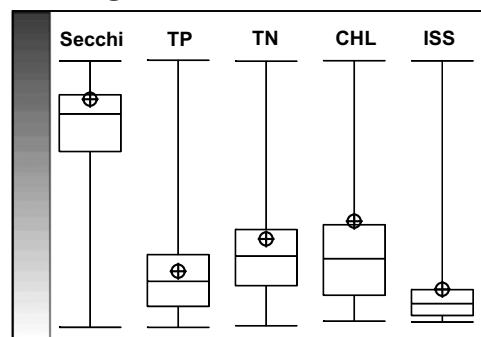


Descriptive statistics for Sugar Creek Lake, Site 1 – 2005

	Secchi (inches)	TP (ug/L)	TN (ug/L)	CHL (ug/L)	ISS (mg/L)
Geometric Mean	29	47	855	22.2	5.0
Minimum	24	40	650	8.2	2.7
Maximum	40	64	1350	38.0	10.1
Number of Samples	10	10	10	10	10

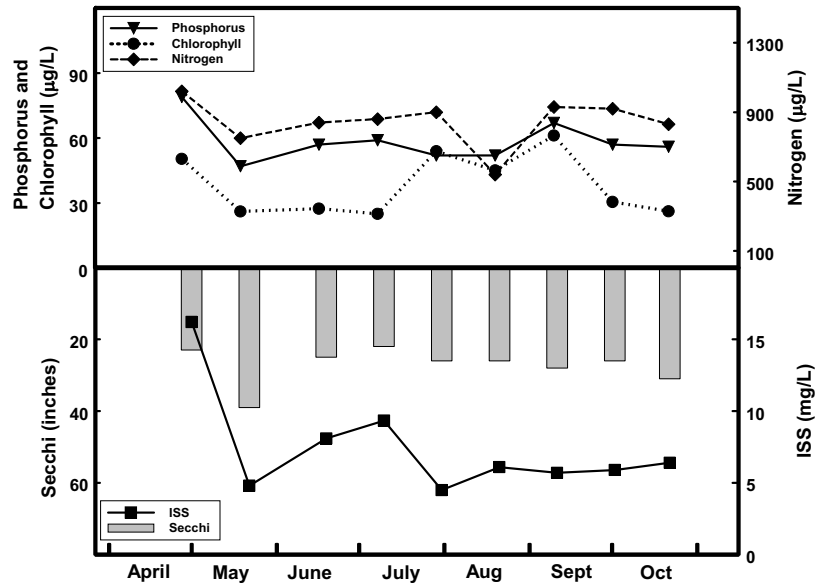
The mean concentrations of nutrients in Sugar Creek Lake were slightly higher in 2005 than observed in most Missouri lakes. The 2005 mean chlorophyll concentration and ISS concentration were higher than seen in 75% of Missouri lakes. Likewise, the Secchi transparency is lower than most Missouri lakes.

Relative Rank for Sugar Creek Lake, Site 1



Sugar Creek Lake, Site 2

Seasonal fluctuations of parameters at Sugar Creek Lake, Site 2—2005



Descriptive statistics for Sugar Creek Lake, Site 2 – 2005

	Secchi (inches)	TP (ug/L)	TN (ug/L)	CHL (ug/L)	ISS (mg/L)
Geometric Mean	27	58	832	36.2	6.9
Minimum	22	47	540	25.0	4.5
Maximum	39	79	1020	61.2	16.2
Number of Samples	9	9	9	9	9

While there is roughly 50% more chlorophyll at Site 2 than Site 1, the two sites are otherwise very similar.

Site 2 appears to have had bloom or near-bloom conditions from late July to early September.

Relative Rank for Sugar Creek Lake, Site 2

