

Sugar Creek Lake



Site 1

2009 DATA

Randolph County
Latitude: 39.4740

Longitude: -92.4783

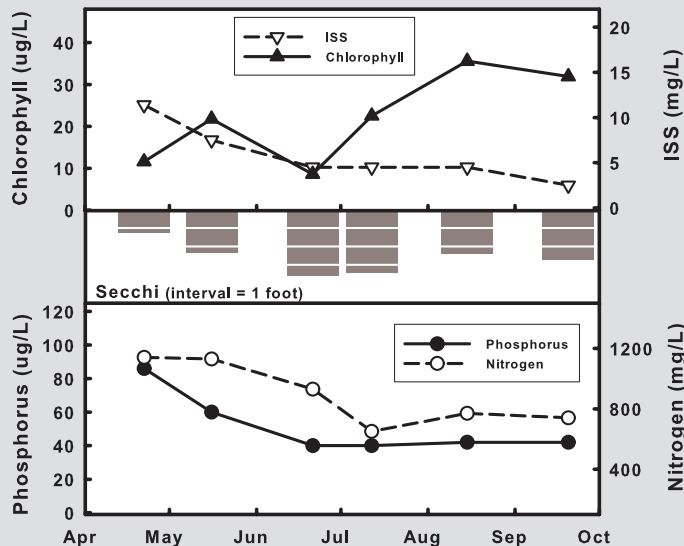
Date	4/22	5/16	X	6/21	7/12	X	8/15	9/20	Mean
Secchi (inches)	15	28		43	41		29	33	30
TP (µg/L)	86	60		40	40		42	42	49
TN (µg/L)	1140	1130		930	650		770	740	873
CHL (µg/L)	11.6	21.8		8.6	22.5		35.6	31.9	19.5
ISS (mg/L)	11.4	7.5		4.5	4.5		4.5	2.5	5.2

Water clarity ranged from a low of 15 to a high of 43 inches, averaging under the statewide mean at 30 inches for the season. The greatest clarity occurred mid-season, during June. This date coincides with the 2009 minimum values of both chlorophyll and phosphorus. Chlorophyll concentrations were highest at the end of the season in contrast to nutrient concentrations, which were highest in the first sample of the season. Both nitrogen and phosphorus values decreased through July and remained rather stable for the remainder of the season.

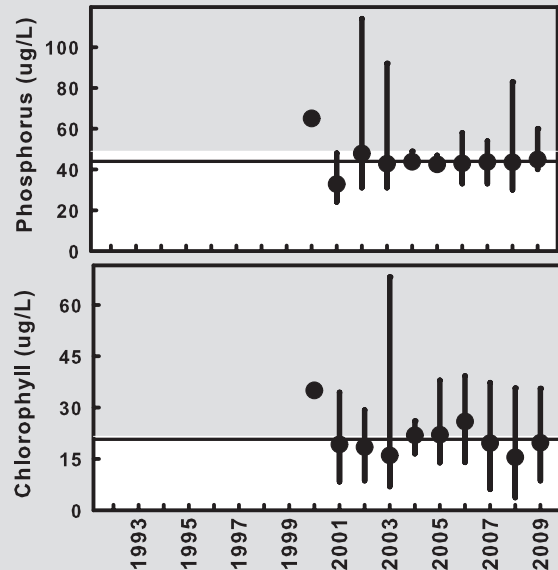
ied from year-to-year, but seasonal means have remained near 45 µg/L, just below the nutrient criteria value of 49 µg/L. Nitrogen concentrations (not shown) have varied more, increasing somewhat in the last two years while remaining below the nutrient criteria value. While seasonal chlorophyll means have varied 2-fold in the 10 years of monitoring Sugar Creek Lake, in-season values show similar ranges for the past 5 years.

Seasonal mean phosphorus concentrations at Sugar Creek Lake's dam have been remarkably consistent since 2001. Maximum and minimum values have var-

2009 GRAPHS



TREND GRAPHS



See pages 10-11 for help interpreting graphs

Sugar Creek Lake



Site 2

2009 DATA

Randolph County
Latitude: 39.4766

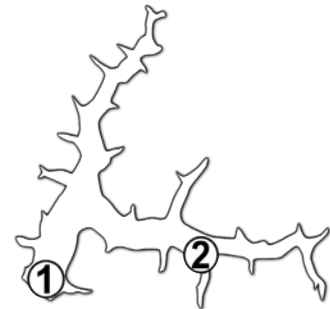
Longitude: -92.4619

Date	4/22	5/16	X	6/21	7/12	X	8/15	9/20	Mean
Secchi (inches)	14	24		38	38		28	35	28
TP (µg/L)	90	62		38	39		44	36	49
TN (µg/L)	1180	1180		710	620		700	570	791
CHL (µg/L)	21.9	19.6		10.1	14.2		19.9	17.9	16.7
ISS (mg/L)	17.0	9.9		4.0	4.7		6.0	3.8	6.5

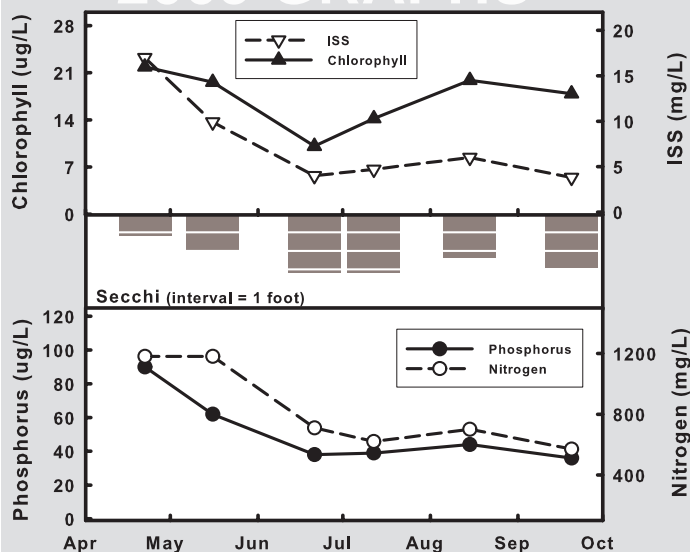
Water quality conditions at Sugar Creek Lake Site 2 are very similar to conditions at the dam. Mean 2009 Secchi transparency at Site 1 differs from Site 2 by only 2 inches, total phosphorus means are identical, and the remaining parameters' means differ by less than 20%. Interestingly, concentrations of nitrogen and chlorophyll were slightly higher at the dam for much of the season.

Mean chlorophyll concentrations at Site 2 may be similar to Site 1, but year-to-year variability is slightly higher. Seasonal mean Secchi transparency at Site 2 has remained consistently in the 2 and a half foot range since 2001 and clarity has exceeded the long-term mean for the last 4 years.

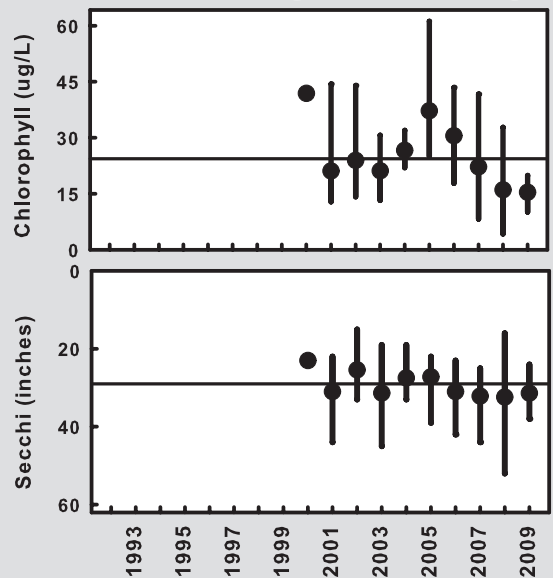
Sampling sites at Sugar Creek Lake



2009 GRAPHS



TREND GRAPHS



See pages 10-11 for help interpreting graphs