

Sugar Creek Lake



Site 1



2011 DATA

Randolph County
Latitude: 39.4740

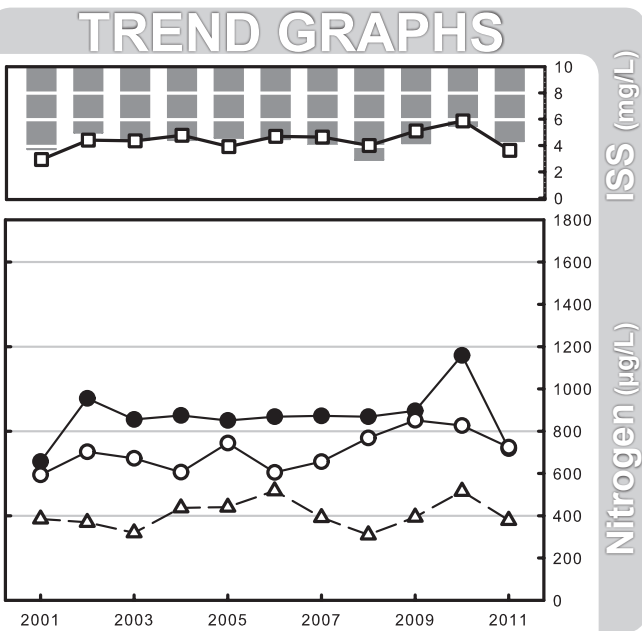
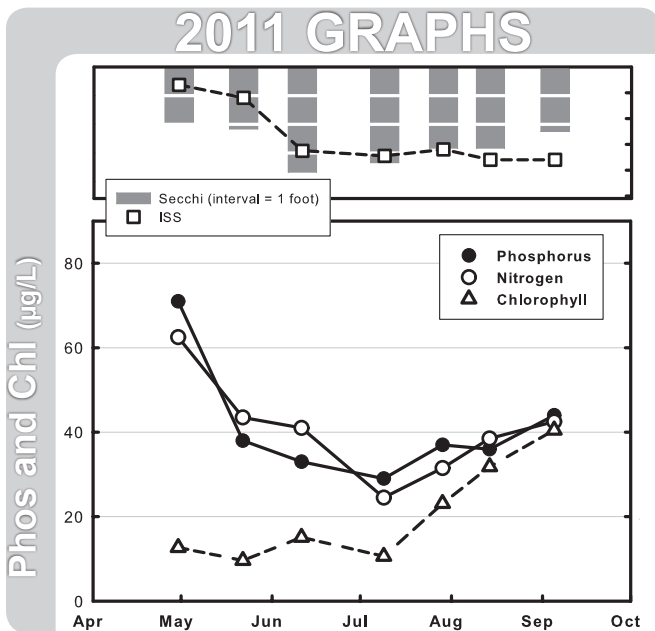
Longitude: -92.4783

Date	4/30	5/22	6/11	7/9	7/29	8/14	9/5	X	Mean
Secchi (inches)	24	26	44	40	34	34	27		32
TP (µg/L)	71	38	33	29	37	36	44		40
TN (µg/L)	1250	870	820	490	630	770	850		783
CHL (µg/L)	12.7	9.6	15.1	10.6	23.1	31.8	40.5		17.9
ISS (mg/L)	8.6	7.6	3.5	3.1	3.6	2.8	2.8		4.1

The two sites in Sugar Creek Lake displayed the same general seasonal trends: maximum nutrient levels early in the season with decreasing concentrations into summer and a slight increase moving into fall. Inorganic suspended sediment levels were also high on the first sample date followed by decreases, while algal chlorophyll was generally low early in the season and increased across the summer and into the fall. Water quality at the two sites differed on July 9th; with phosphorus, chlorophyll and suspended sediment values at Site 2 being 80%, 100% and 248% higher than at Site 1, respectively. Increased algal levels and suspended sediment concentrations lead to Site 2 having a Secchi transparency depth that was half of that measured at Site 1 on the same

day. By the next sampling event on July 29th water quality at the two sites was for all nearly identical.

Long-term data for the two sites on Sugar Creek Lake display a normal amount of year-to-year variation. While none of the parameters show an obvious trend of increasing or decreasing concentrations, the three highest nitrogen values at both sites have been measured during the last four summers. Average nitrogen levels during 2008-2011 have been about 130µg/L higher than the averages for 2001-2007. Continued sampling will determine if there is truly a trend of increasing nitrogen concentrations in Sugar Lake.



See page 3 for help interpreting graphs

Sugar Creek Lake



Site 2



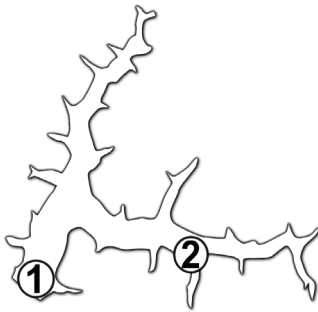
2011 DATA

Randolph County
Latitude: 39.4766

Longitude: -92.4619

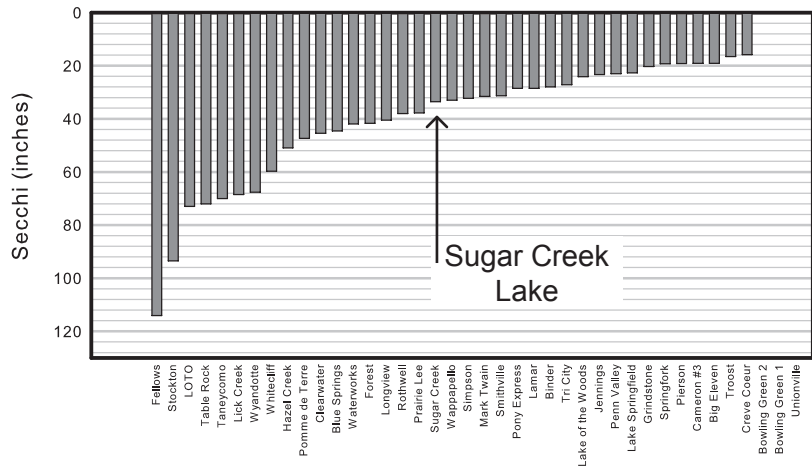
Date	4/30	5/22	6/11	7/9	7/29	8/14	9/5	X	Mean
Secchi (inches)	20	28	34	21	34	29	26		27
TP (µg/L)	82	45	43	52	38	53	63		52
TN (µg/L)	1400	930	850	620	680	960	820		867
CHL (µg/L)	15.1	13.2	22.4	21.1	25.4	37.9	53.9		24.2
ISS (mg/L)	11.2	7.7	5.2	10.8	3.5	6.2	7.1		6.9

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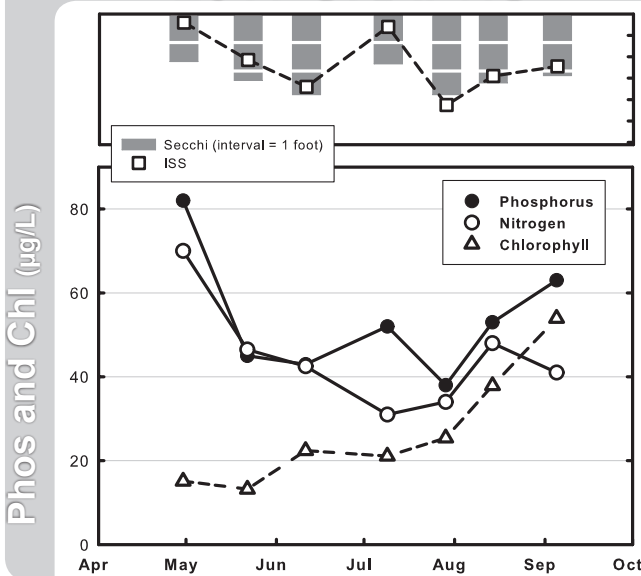


Sampling sites at Sugar Creek Lake

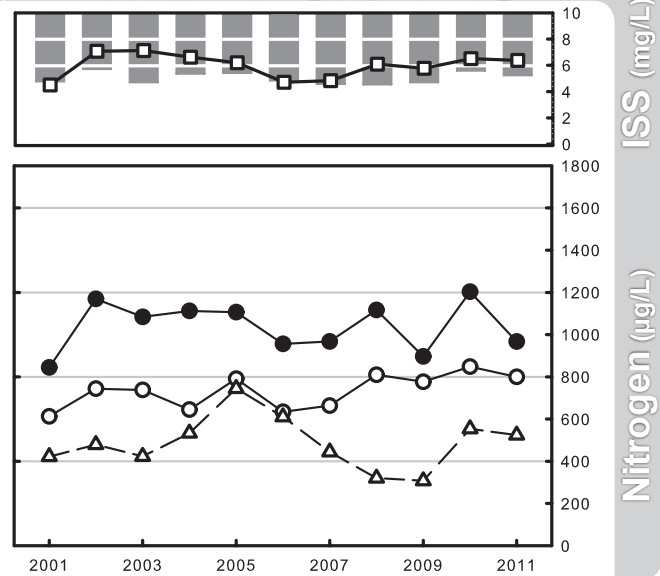
2011 Summer Mean Secchi Values



2011 GRAPHS



TREND GRAPHS



See page 3 for help interpreting graphs