

Bowling Green Lake #1



2010 DATA

Pike County
 Latitude: 39.3417 Longitude: -91.1532

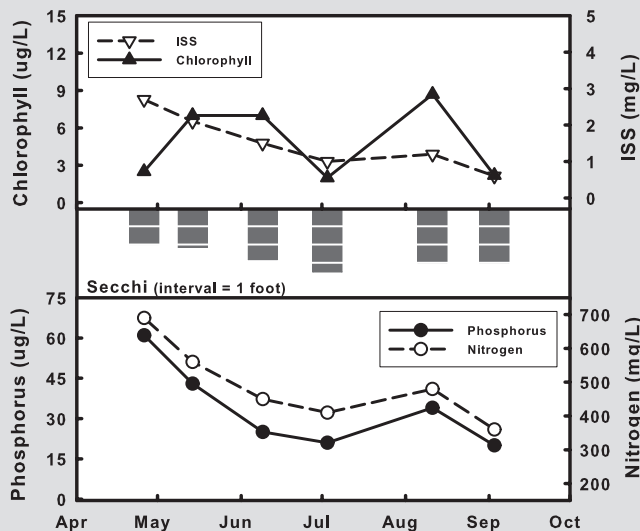
Date	4/26	5/14	6/9	7/3	X	8/11	9/3	X	Mean
Secchi (inches)									
TP (µg/L)	61	43	25	21		34	20		31
TN (µg/L)	690	560	450	410		480	360		481
CHL (µg/L)	2.5	7.0	7.0	2.0		8.7	2.2		4.1
ISS (mg/L)	2.7	2.1	1.5	1.0		1.2	0.6		1.4

Water quality in Bowling Green Lake 1 followed a predictable pattern of higher nutrient and inorganic suspended sediment values early in the season, with a general decline in concentrations as the season progressed. This pattern reflects the influence of watershed runoff during spring, and the subsequent settling of sediment and nutrients over the course of summer (summertime inputs have a tendency to plunge into deeper water in the lake and not influence surface water quality). Algal chlorophyll showed moderate variability during the sample season, with no obvious pattern.

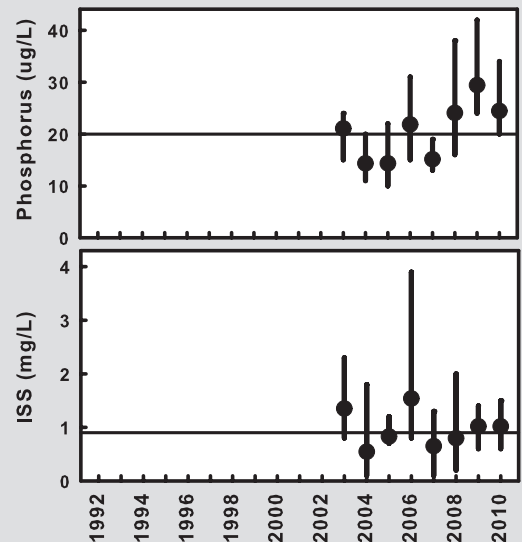
higher inorganic suspended sediment levels, as the last three summers have had values right at the long-term average. Other than the slightly higher phosphorus levels, none of the other parameters display any real trends.

For a third summer in a row, phosphorus levels have been slightly higher than the long-term average. This increase in phosphorus does not seem to be a result of

2010 GRAPHS



TREND GRAPHS



See pages 10-11 for help interpreting graphs

Bowling Green Lake #2



2010 DATA

Pike County
 Latitude: 39.3436 Longitude: -91.1615

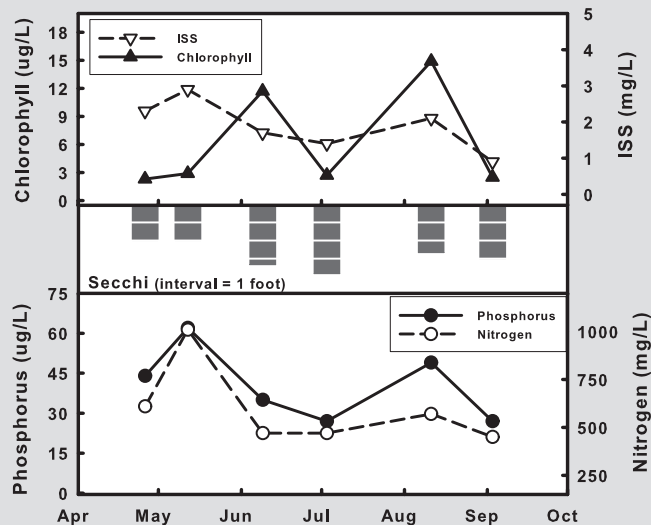
Date	4/26	5/12	6/9	7/3	X	8/11	9/3	X	Mean
Secchi (inches)									
TP (µg/L)	44	62	35	27		49	27		39
TN (µg/L)	610	1010	470	470		570	450		572
CHL (µg/L)	2.3	2.9	11.7	2.7		14.9	2.5		4.5
ISS (mg/L)	2.3	2.9	1.7	1.4		2.1	0.9		1.8

The highest nutrient and suspended sediment values were measured in the May sample, which is a common pattern for Missouri lakes. Phosphorus, nitrogen and suspended sediment generally followed the same pattern through the season, while algal chlorophyll concentrations fluctuated with no real pattern. Even when chlorophyll levels peaked above 10µg/L, the ratio of chlorophyll to phosphorus remained below the Missouri average, suggesting the algae in Bowling Green Lake 2 were never efficient at using the available nutrients.

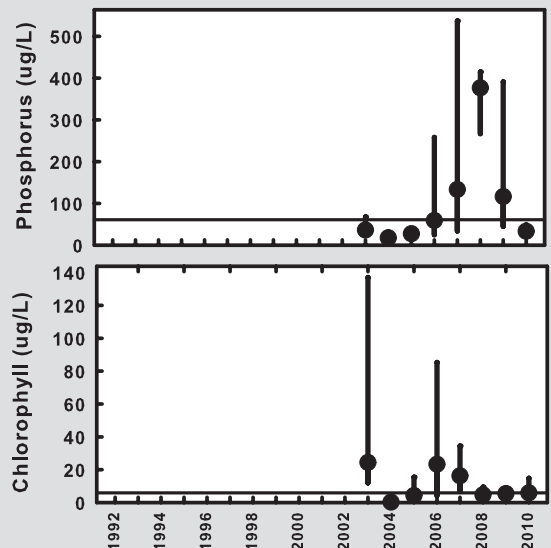
year period of 2007-09 were related to water removal from the surface layer of the lake. Water was pumped from lake #2 into lake #1 to maintain the volume in lake #1. Chlorophyll levels were low during the summer of 2010, and comparable to values from previous years. While year-to-year fluctuations occur in water quality, there are no obvious trends in Bowling Green Lake 2.

Phosphorus concentrations during the summer of 2010 were similar to levels measured during the period 2003-06. The higher values measured during the three

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