

Bowling Green Lake 1

Pike County

2007 DATA

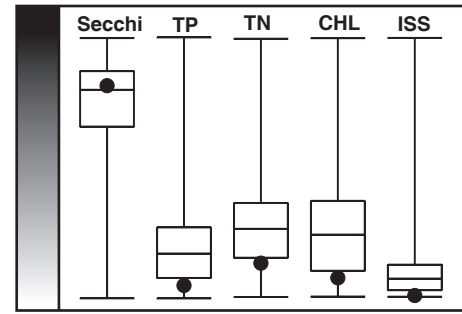


Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/27	36	22	1000	8.5	1.5
5/16	36	13	680	8.7	0.9
6/6	34	19	710	8.4	0.8
6/26	30	13	470	2.3	0.8
7/19	39	16	340	4.3	0.1
8/6	40	13	320	2.8	1.0
8/30	36	18	310	4.2	1.3
9/18	36	14	270	6.2	0.8
Mean	36	16	460	5.1	0.7

2007 SUMMARY

All parameters, with the exception of nitrogen, displayed low variability during the 2007 sampling season. Nitrogen started the season at 1000 µg/L and steadily decreased to a low of 270 µg/L in September. This trend of decreasing nitrogen across the summer is not unusual in Missouri reservoirs, though the decrease seen in Bowling Green Lake 1 may have been larger than normal.

The 2007 mean nutrient, chlorophyll and inorganic suspended solids values in Bowling Green Lake 1 were lower than the long-term means of a majority of Missouri lakes.

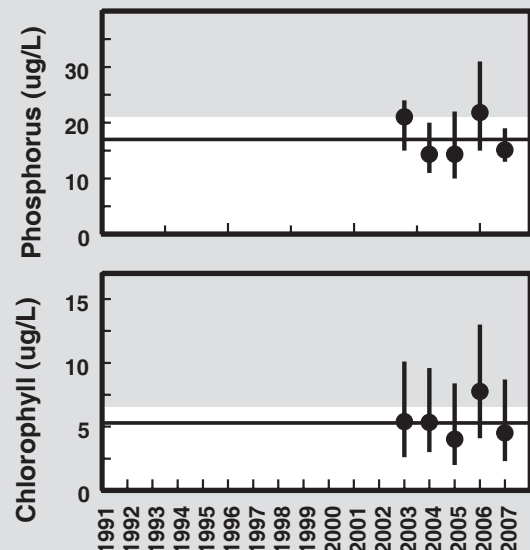


Relative Rank Graph
See page 11 for details

TRENDS

There are currently no discernable water quality trends in Bowling Green Lake 1.

Proposed nutrient and chlorophyll criteria for Bowling Green Lake 1 would be set at current long-term mean values in order to protect the lake from nutrient enrichment. These values are indicated by the top of the white background and differ slightly from the long-term mean lines (horizontal lines in graphic) because other data were used along with LMVP data to set criteria.



Bowling Green Lake 2

Pike County

2007 DATA

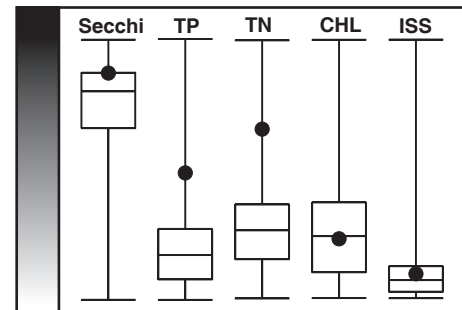
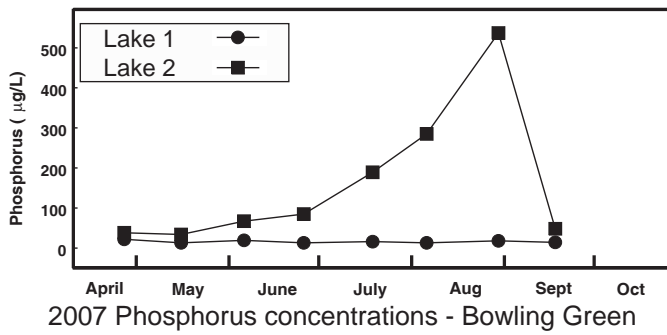


Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/27	36	38	1410	4.9	3.6
5/16	28	34	1450	7.2	1.5
6/6	30	67	1080	14.5	5.7
6/26	24	85	1260	15.2	5.2
7/19	24	189	1320	21.8	4.6
8/6	24	285	1760	15.5	3.9
8/30	28	537	2450	34.4	2.5
9/18	24	48	1710	13.8	7.6
Mean	27	100	1510	13.7	3.9

2007 SUMMARY

Bowling Green Lake 2 was sampled on 8 occasions in 2007, with water quality parameters showing high variability. The wide range of nutrient values were likely a response to water being drained from Lake 2 into Lake 1 during the summer. Field sheets indicate that by July, Bowling Green Lake 2 was 16 feet lower than normal. The decrease in water level corresponds to increases in both phosphorus and nitrogen concentrations.

Because of the elevated nutrient levels associated with the draining of the lake, 2007 mean nutrient values were in the upper quartile for the state. Chlorophyll and inorganic suspended solids were near the statewide median.



Relative Rank Graph
See page 11 for details

TRENDS

Water removal during the last two summers has led to higher phosphorus values compared to those measured in the 2003-2005 period. These values pull the long-term mean above the proposed phosphorus criteria (top of white box). Including these high values for criteria purposes is of questionable value. Long-term chlorophyll is right at the chlorophyll criterion, even though some extreme values were measured since 2003.

