

Blue Springs Lake

Osage Plains Region

Blue Springs Lake, located in Fleming Park, is managed by the Jackson County Parks and Recreation Department. This 727 acre lake has a watershed that is approximately 20,659 acres in size, 50% of which is urban. Another 6% of Blue Springs Lake's watershed consists of water (Lake Jacomo and Prairie Lee Lake), the remaining area is divided among forest, grassland and row crops. Being the third lake in a series of three, Blue Springs Lake is buffered from a large portion of its watershed.

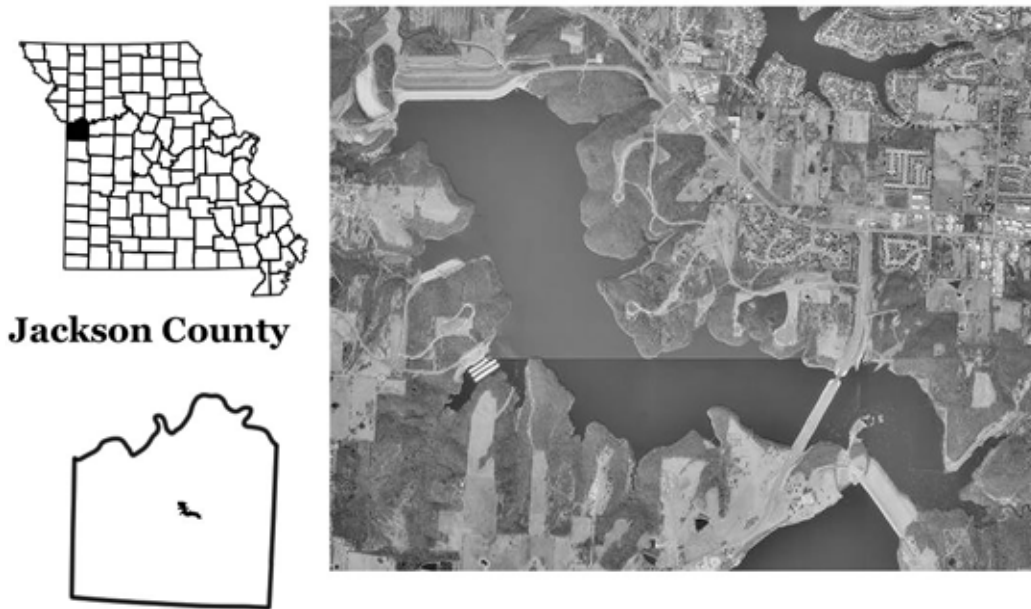


Figure 14. Location of Blue Springs Lake

2003 Results

Figure 15 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Blue Springs Lake during the 2003 sampling season. The descriptive statistics appear in Table 6. A brief description of these results:

- 8 samples (and 9 Secchi observations) were collected between April 27 and October 7
- Chlorophyll concentrations varied more than tenfold during the sampling season
- Decreases in Secchi transparency are noted when chlorophyll concentrations exceed 30 ug/L
- Blue Springs Lake was eutrophic in 2003, based on phosphorus, nitrogen and chlorophyll concentrations
- Geometric means for all parameters are similar to last year

Table 6. Descriptive statistics for Blue Springs Lake – 2003

Parameters	Secchi (inches)	TP ($\mu\text{g/L}$)	TN ($\mu\text{g/L}$)	CHL ($\mu\text{g/L}$)	ISS (mg/L)
# of Samples	9	8	8	8	8
Median	55	29	575	11.8	2.6
Minimum	34	21	330	3.4	1.1
Maximum	68	37	830	38.0	4.9
Geometric Mean	47	29	559	12.1	2.5

Samples were collected between April 27 and October 7

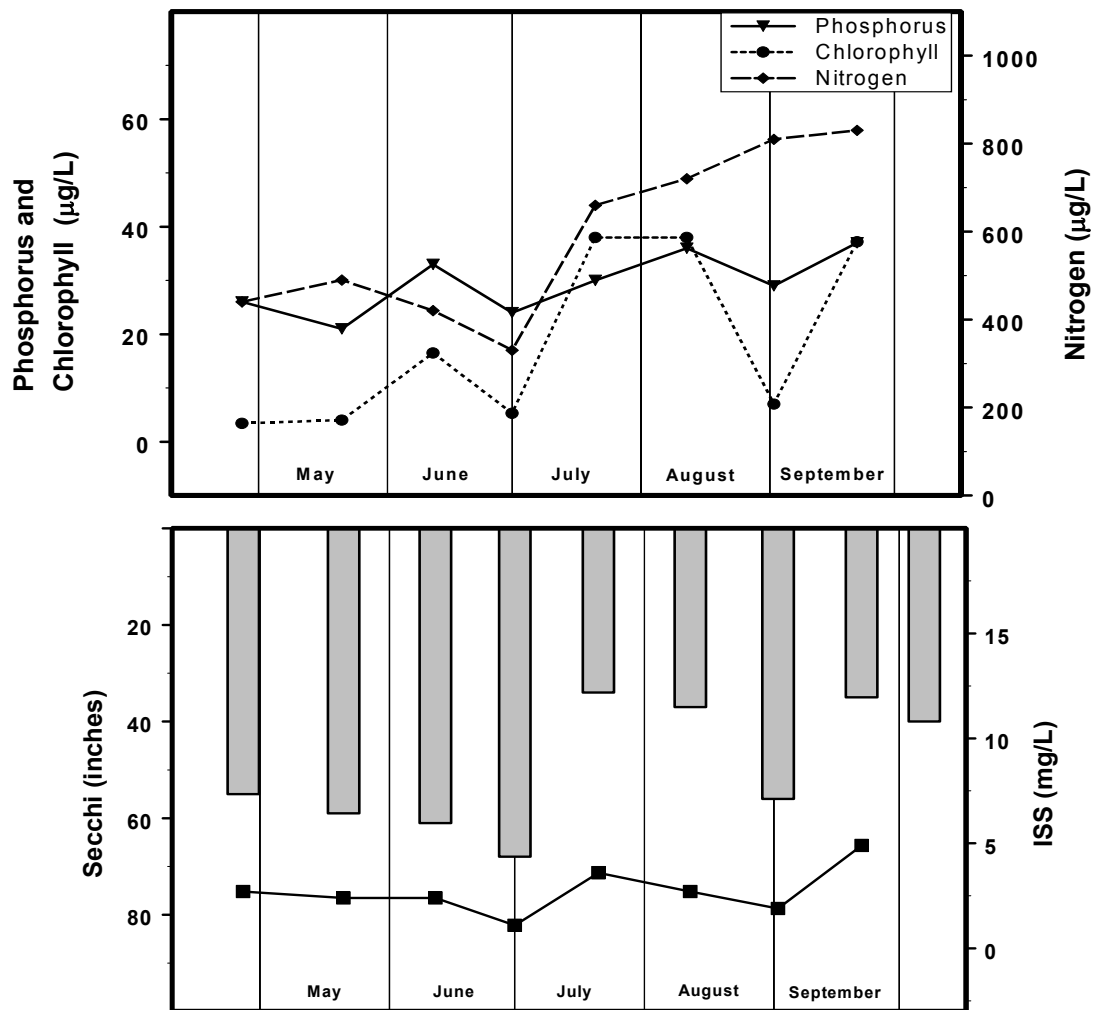


Figure 15. Seasonal fluctuations of parameters for Blue Springs Lake – 2003. Bars represent Secchi, line represents ISS.