

## Blue Springs Lake

Region - Osage Plains

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.

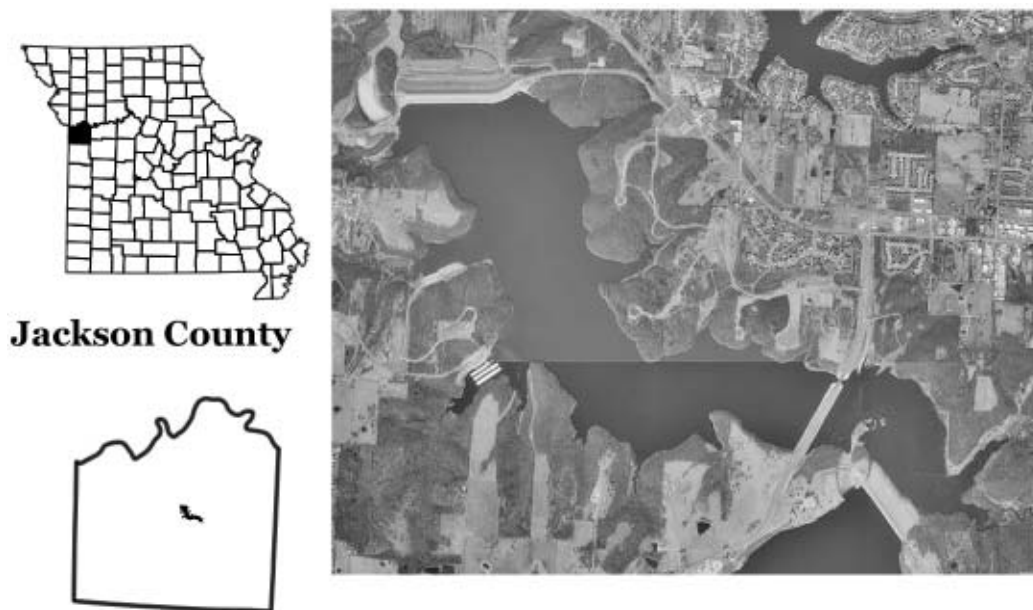


Figure 14. Location of Blue Springs Lake

### 2002 Results

Figure 15 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Blue Springs Lake during the 2002 sampling season. The descriptive statistics appear in Table 6. A brief description of these results:

- 8 samples were collected between April 29 and September 20.
- Low chlorophyll values early in season can probably be attributed to suspended sediments. High concentrations of suspended sediments (ISS greater than ~5mg/L) can inhibit algal growth by blocking sunlight.
- Nitrogen, phosphorus and ISS follow similar patterns throughout the sampling season. Phosphorus values were stable, varying by only 13  $\mu\text{g/L}$ .
- Blue Springs Lake was eutrophic based on phosphorus and chlorophyll geometric means, and mesotrophic based on the nitrogen geometric mean.
- See the *Trends* section (pg. 79) for long-term analyses of Blue Springs data.

Table 6. Descriptive statistics for Blue Springs Lake – 2002

Parameters	# of Samples	Geometric Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	8	46	36	71	43
Phosphorus ( $\mu\text{g/L}$ )	8	26	22	35	25
Nitrogen ( $\mu\text{g/L}$ )	8	473	340	650	490
Chlorophyll ( $\mu\text{g/L}$ )	8	10.8	3.6	33.8	10.6
ISS (mg/L)	8	1.3	0.0	6.2	2.5

ISS=Inorganic Suspended Solids

Samples were collected between April 29 and September 20

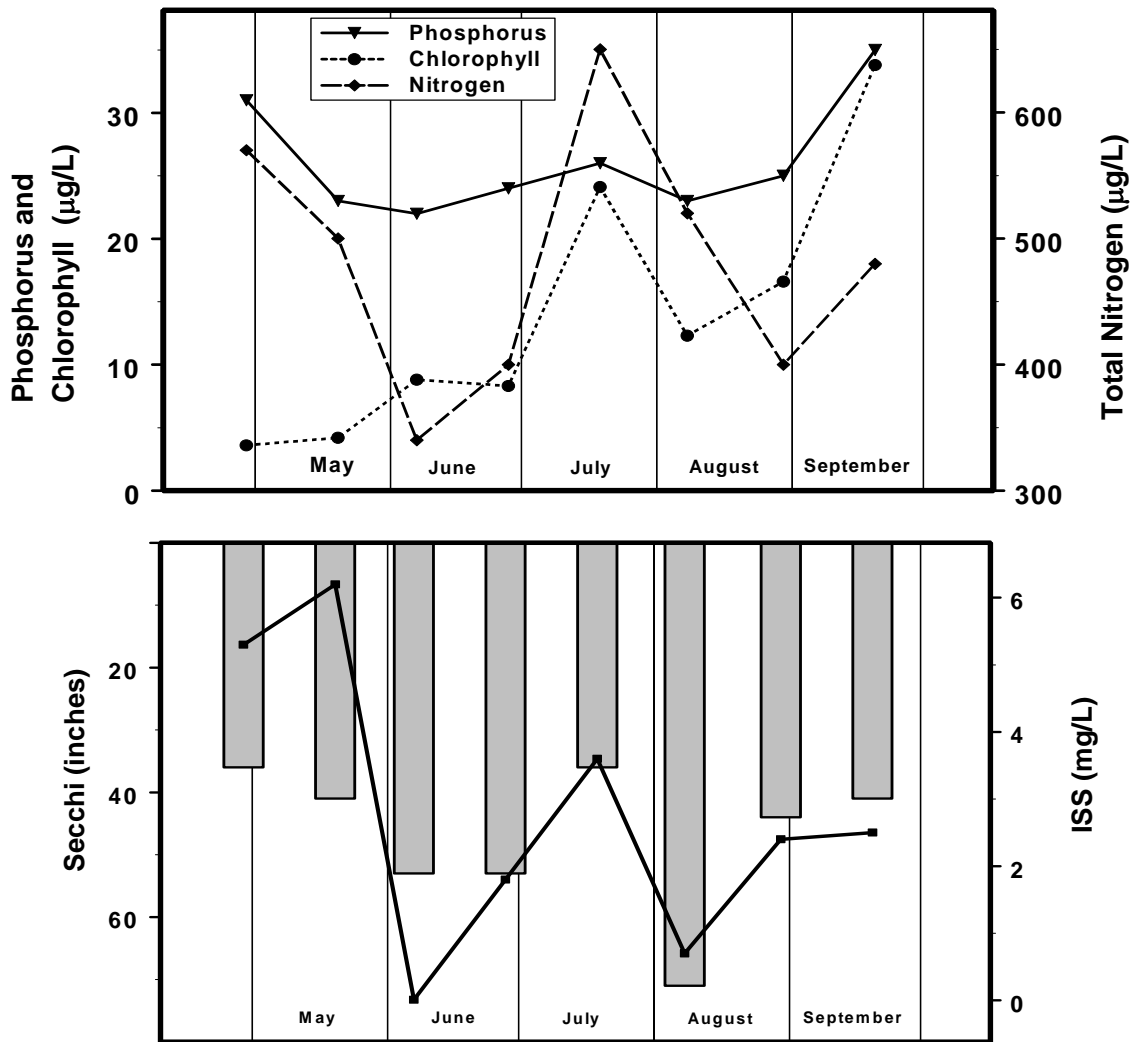


Figure 15. Seasonal fluctuations of parameters for Blue Springs Lake – 2002. Bars represent Secchi, line represents ISS.