

## 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 between forest, grassland and row cropping. Being the third lake in a series of three, Blue Springs Lake is buffered from a large portion of its watershed

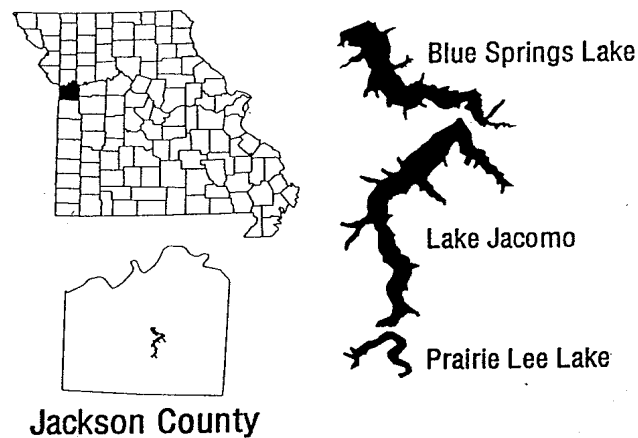


Figure 11. Location of Blue Springs Lake.

### 1999 Results

Figure 12 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids, and Secchi transparency varied in Blue Springs Lake during the 1999 sampling season. A brief description of these results are:

- ▶ The sample season was abbreviated with a late start and early end which is why there are no observable seasonal patterns.
- ▶ All parameters displayed notable variability given the abbreviated sample season and the fact that Blue Springs is last in a chain of three lakes.
- ▶ Maximum Secchi reading correlated to minimum chlorophyll and inorganic suspended solid values.
- ▶ The last chlorophyll reading may have represented bloom conditions as chlorophyll:phosphorus ratio was  $>1$ . (See page 7 for further explanation of ratio.)
- ▶ Average values measured for phosphorus, nitrogen and chlorophyll were in the eutrophic range.

Table 4. Descriptive statistics for Blue Springs Lake - 1999.

Parameters	Average	Median	Minimum	Maximum
Chlorophyll ( $\mu\text{g/L}$ )	15.9	15.1	5.7	32.1
Nitrogen ( $\mu\text{g/L}$ )	552	570	380	710
Phosphorus ( $\mu\text{g/L}$ )	28	31	18	32
ISS (mg/L)	3.5	3.1	1.6	7.1
Secchi Transparency (inches)	51	45	32	84

ISS= Inorganic Suspended Solids

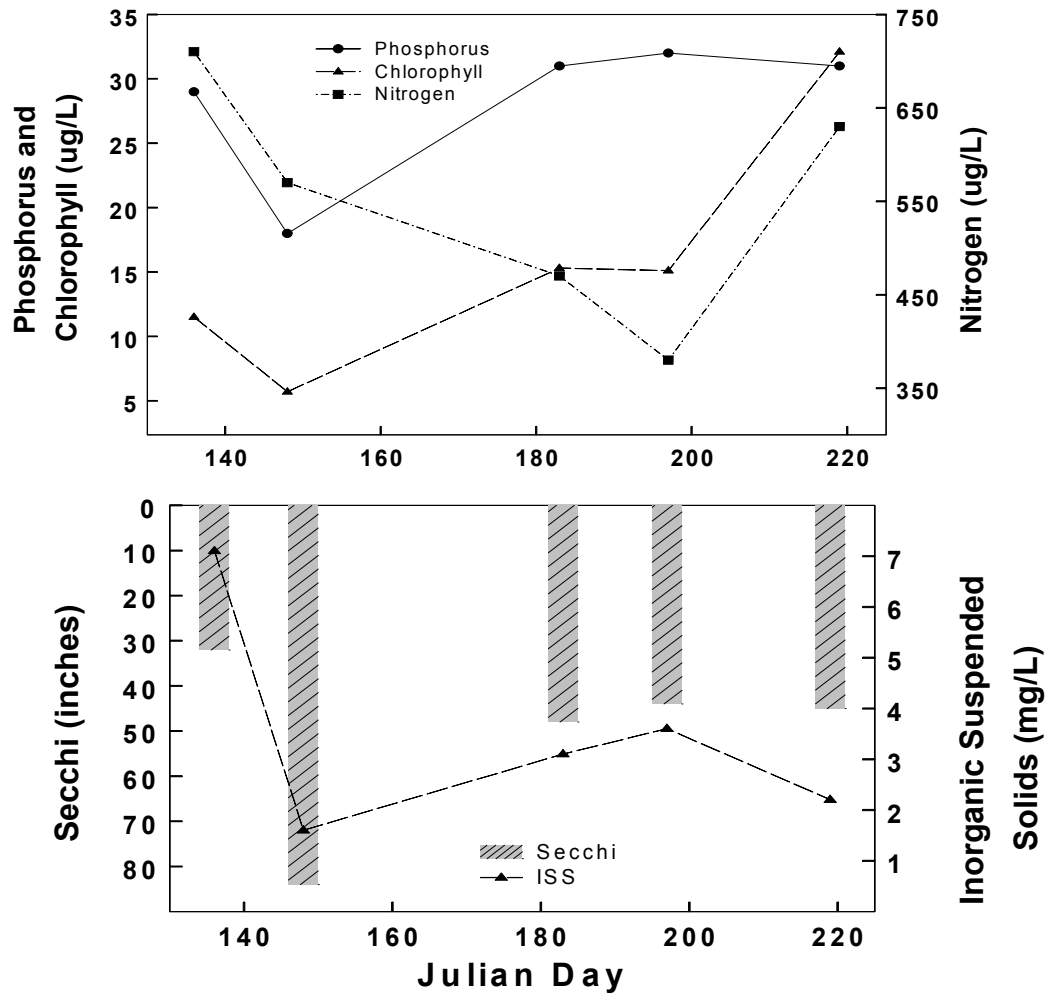


Figure 12.

Seasonal fluctuations of parameters for Blue Springs Lake - 1999.