

## Blue Springs Lake - 2001 Data

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.

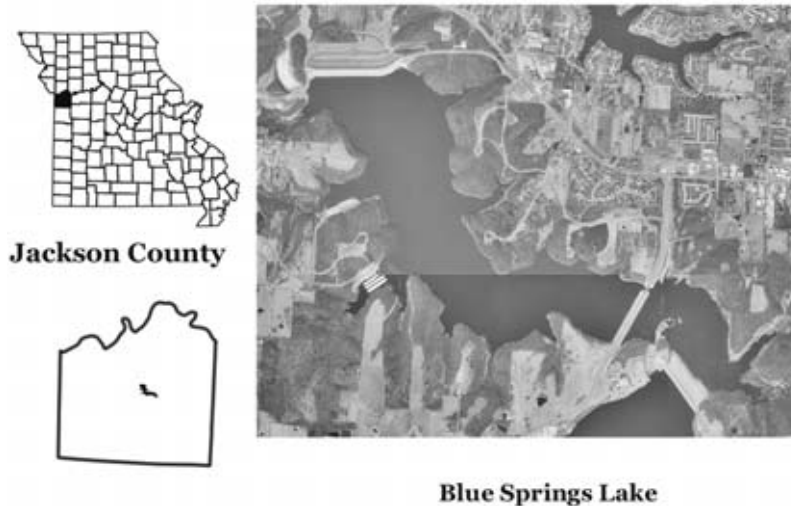


Figure 16. Location of Blue Springs Lake

### 2001 Results

Figure 17 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Blue Springs Lake during the 2001 sampling season. The descriptive statistics appear in Table 7. A brief description of these results:

- A total of eight samples were collected from April 24 to September 25.
- There was a slight decrease in Secchi value and a slight increase in all other values on the June 4 (Julian Day 154) collection. Heavy rains (as indicated by the volunteer's data sheet) were probably responsible.
- Chlorophyll to phosphorus ratios increased for the last 3 samples, reaching a high of 1.2 on August 29 (Julian Day 241), implying bloom conditions. See page 7 for information about ratios.
- Geometric mean values for phosphorus and chlorophyll were in the eutrophic range, and the geometric mean nitrogen value was in the mesotrophic range.

Table 7. Descriptive statistics for Blue Springs Lake – 2001

Parameters	# of Samples	Geometric Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	8	41	32	64	38
Phosphorus ( $\mu\text{g/L}$ )	8	27	20	40	27
Nitrogen ( $\mu\text{g/L}$ )	8	422	290	560	445
Chlorophyll ( $\mu\text{g/L}$ )	8	12.5	2.3	32.3	13.8
ISS (mg/L)	8	2.6	1.0	4.8	3.1

ISS=Inorganic Suspended Solids

Samples were collected between April 24 and September 25

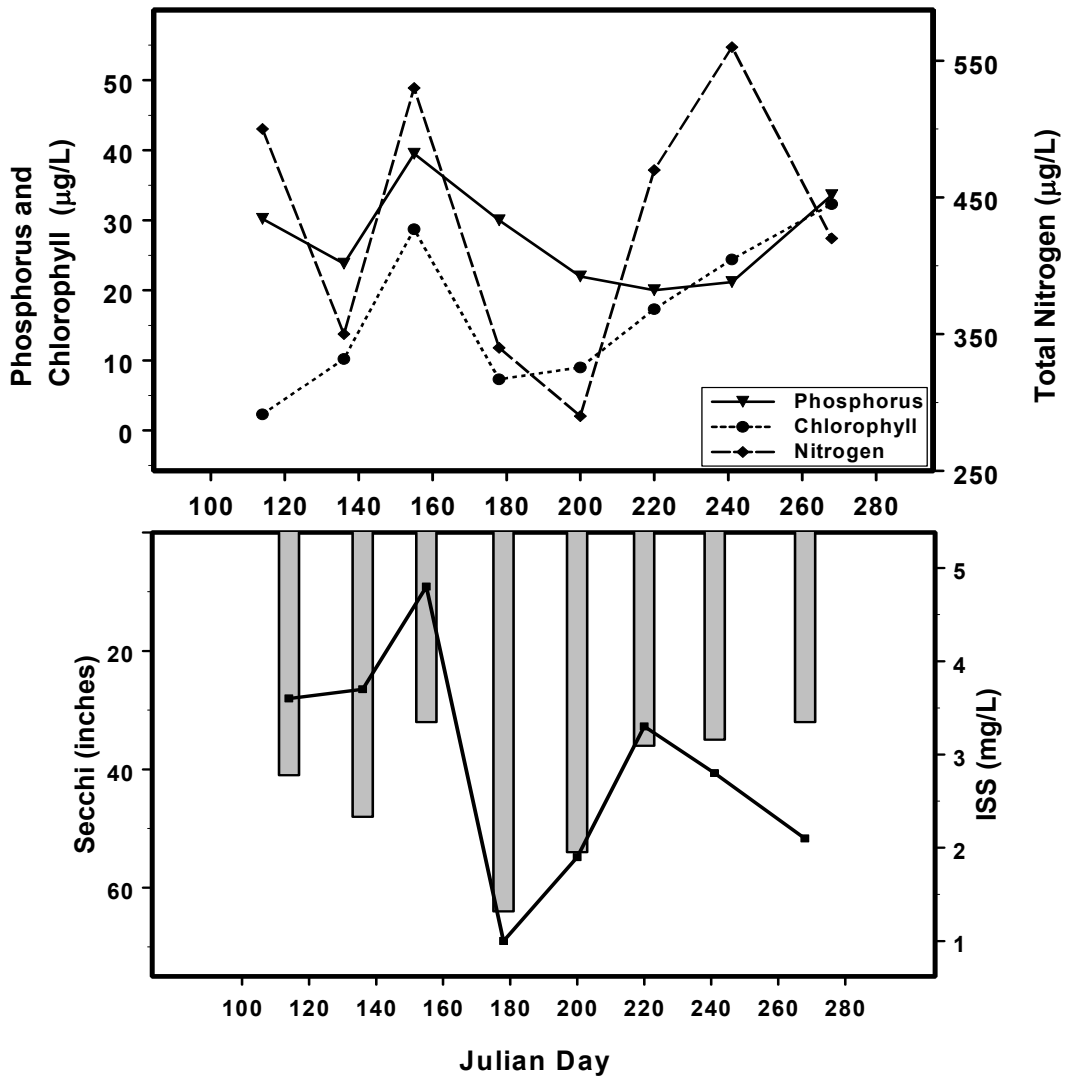


Figure 17. Seasonal fluctuations of parameters for Blue Springs Lake – 2001. Bars represent Secchi, line represents ISS.