

## Little Dixie Lake

Ozark Border Region

Little Dixie Lake, located in Callaway County, is owned and managed by the Missouri Department of Conservation. This 200-acre lake has a watershed of 2,315 acres in size that is approximately 15% forest, 35% grassland and 35% row crop.

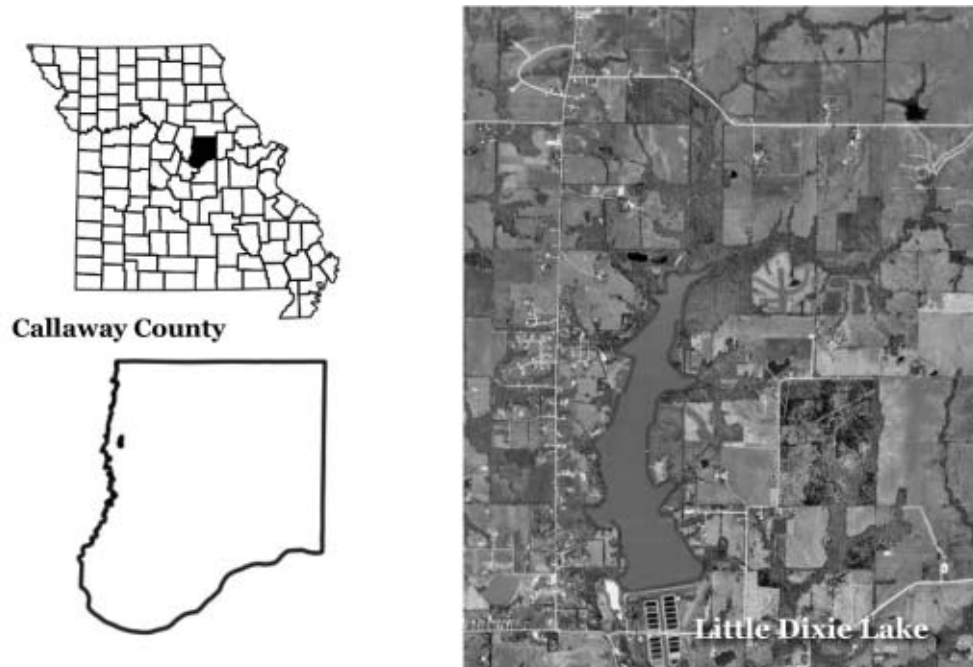


Figure 33. Location of Little Dixie Lake.

### 2002 Results

Figure 34 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Little Dixie Lake during the 2002 sampling season. The descriptive statistics appear in Table 13. A brief description of these results:

- 4 samples were collected between May 2 and August 22.
- Nitrogen and phosphorus show the same pattern throughout the season.
- ISS decreases during the season.
- Secchi only varies by 14 inches from maximum to minimum.
- Chlorophyll increases as ISS decreases and probably accounts for the lack of variability in the Secchi values.
- 2002 geometric means for all parameters were very similar to 2001 geometric means.
- Little Dixie lake was eutrophic based on geometric mean chlorophyll, nitrogen and phosphorus values.

Table 13. Descriptive statistics for Little Dixie Lake - 2002.

Parameters	# of Samples	Geometric Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	4	29	24	38	28
Phosphorus ( $\mu\text{g/L}$ )	4	49	39	75	45
Nitrogen ( $\mu\text{g/L}$ )	4	846	570	1170	905
Chlorophyll ( $\mu\text{g/L}$ )	4	17.8	13.7	24.7	17.3
ISS (mg/L)	4	2.6	1.2	4.3	3.0

ISS=Inorganic Suspended Solids

Samples were collected between May 2 and August 22

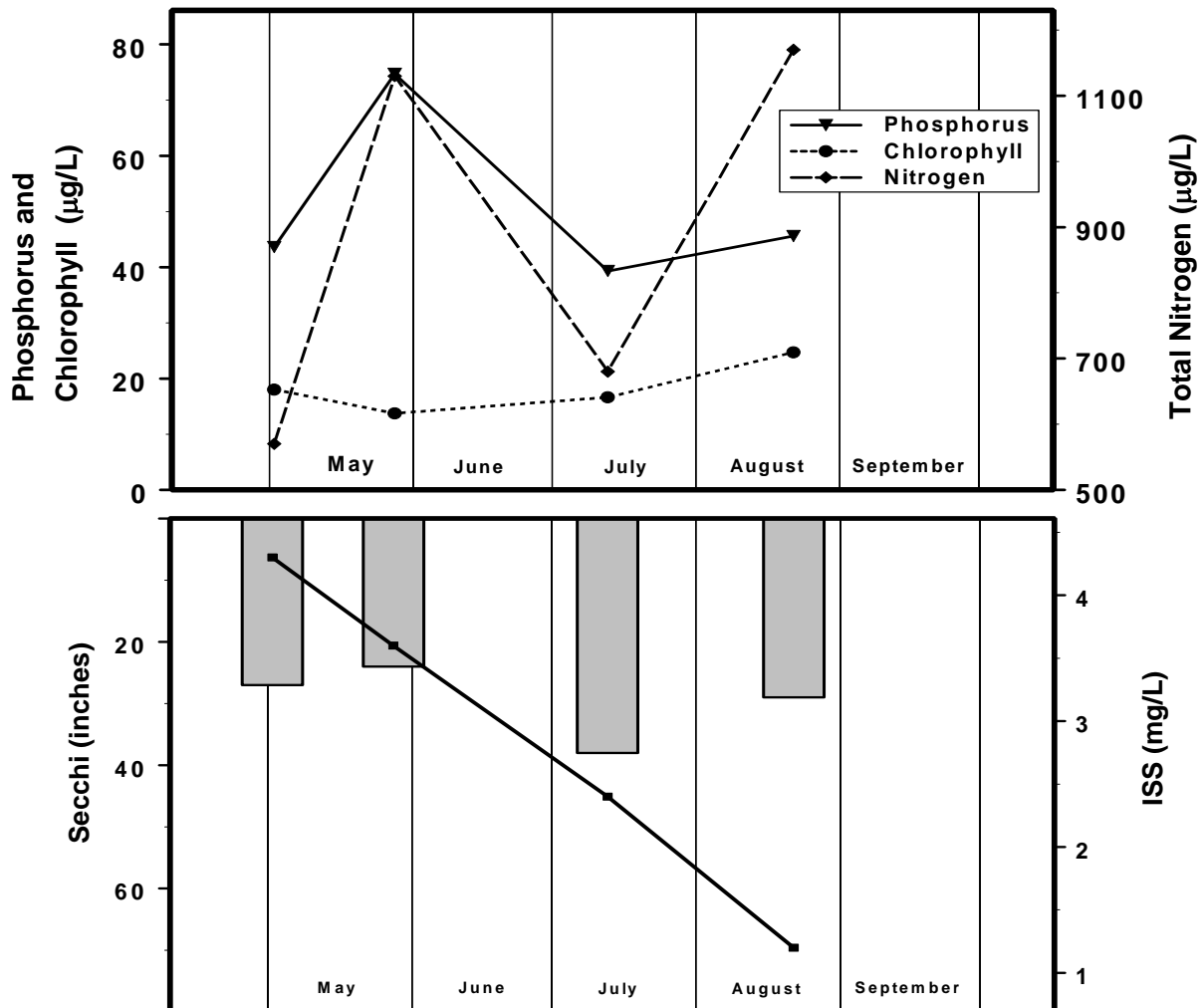


Figure 34. Seasonal fluctuations of parameters in Little Dixie Lake – 2002. Bars represent Secchi, line represents ISS.