

## Long Branch Lake

Glacial Plains Region

Long Branch Lake is a large lake (2,435 acres) located in Macon County. Grassland/pasture, crop land and forest make up 37%, 34% and 22% of the watershed, respectively. The lake is an important recreational resource as well as a drinking water reservoir.

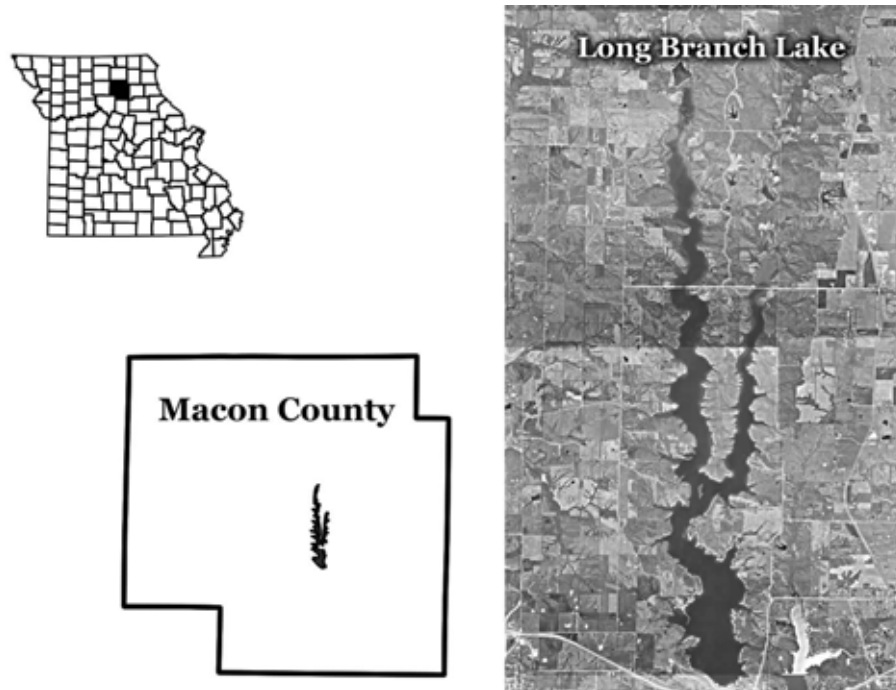


Figure 47. Location of Long Branch Lake.

### 2003 Results

Figure 48 shows how the parameters phosphorus, nitrogen, inorganic suspended solids and Secchi transparency varied in Long Branch Lake during the 2003 sampling season. The descriptive statistics appear in Table 22. A brief description of these results:

- 7 samples were collected between April 12 and September 23
- Secchi transparency and phosphorus concentrations closely follow the concentrations of inorganic suspended sediments
- Long Branch Lake was eutrophic in 2003, based on geometric mean concentrations of chlorophyll, nitrogen and phosphorus

Table 22. Descriptive statistics for Long Branch Lake - 2003.

	Secchi (inches)	TP ( $\mu\text{g/L}$ )	TN ( $\mu\text{g/L}$ )	CHL ( $\mu\text{g/L}$ )	ISS (mg/L)
# of Samples	7	7	7	7	7
Median	25	32	560	9.8	7.5
Minimum	18	23	530	6.7	4.5
Maximum	36	42	900	14.9	14.6
Geometric Mean	26	32	602	10.6	8.1

Samples were collected between April 12 and September 23

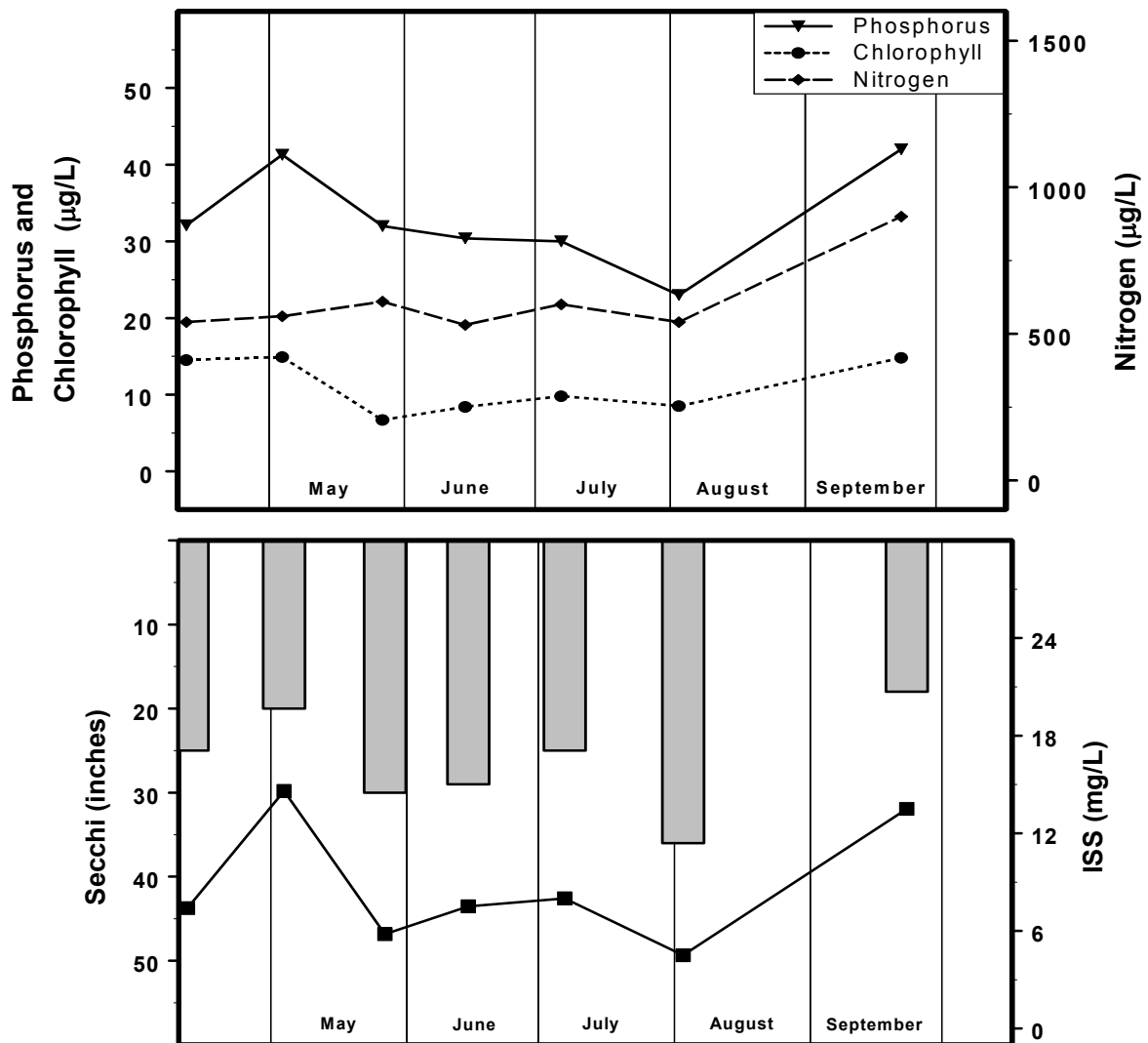


Figure 48. Seasonal fluctuations of parameters for Long Branch Lake - 2003. Bars represent Secchi, line represents ISS.