

Long Branch Lake

Region - Glacial Plains

Long Branch 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 and a drinking water reservoir.

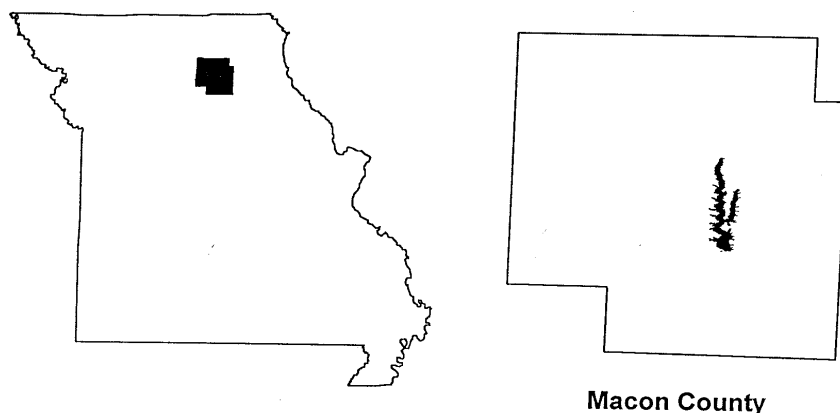


Figure 38. Location of Long Branch Lake.

1999 Results

Figure 39 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids, and Secchi transparency varied in Long Branch Lake during the 1999 sampling season. A brief description of these results are:

- ▶ Pattern of decreasing nutrient and inorganic suspended solid concentration is normal.
- ▶ Water clarity shows a strong relation to the amount of inorganic suspended solids.
- ▶ Early season Secchi readings were quite low with the first three readings <17 inches.
- ▶ Chlorophyll concentrations were stable, all other parameters displayed high variability.
- ▶ It is possible that some very fine inorganic suspended solids may not get caught on the filter and not be reflected in values measured.
- ▶ Average values measured for phosphorus and chlorophyll were in the eutrophic range. Average values for nitrogen were in the hypereutrophic range.

Table 19. Descriptive statistics for Long Branch Lake - 1999.

Parameters	Average	Median	Minimum	Maximum
Chlorophyll ($\mu\text{g/L}$)	9.3	9.2	7.5	11.7
Nitrogen ($\mu\text{g/L}$)	1283	1395	730	1700
Phosphorus ($\mu\text{g/L}$)	61	65	21	101
ISS (mg/L)	8.6	6.9	2.8	18.5
Secchi (inches)	22	17	10	40

ISS = Inorganic Suspended Solids

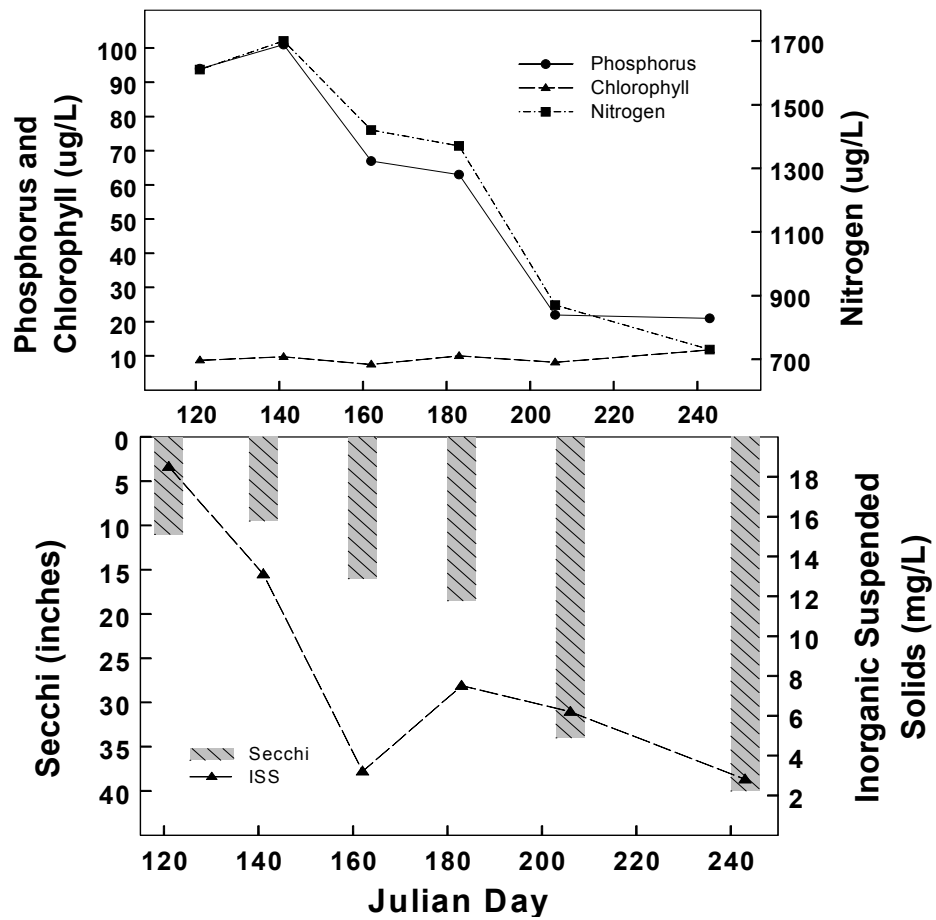


Figure 39. Seasonal fluctuations of parameters for Long Branch Lake - 1999.