

North Lake

Osage Plains Region

North Lake is located just north of the City of Harrisonville. This lake is 51 acres and has a 1264 acre watershed. North Lake's watershed is 9% forest, 52% cropland, and 34% grassland.

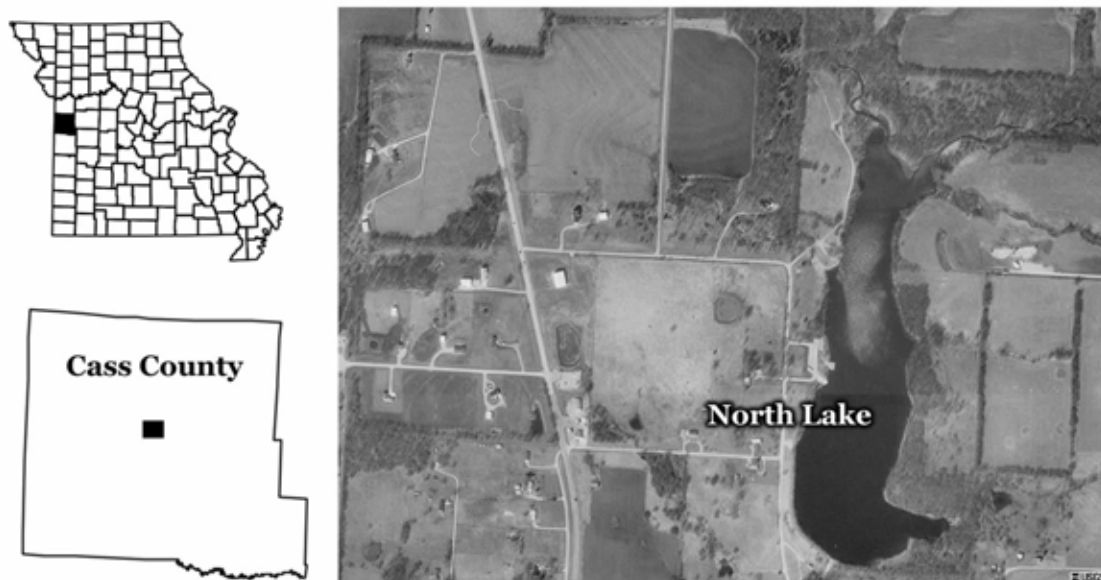


Figure 55. Location of North Lake

2003 Results

Figure 27 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in North Lake during the 2003 sampling season. Descriptive statistics precede the figures. A brief description of these results:

- North Lake was sampled 6 times between May 17 and August 10
- Minimum Secchi transparency of 3 inches on May 17 was due to high concentrations of inorganic suspended sediments
- Secchi and inorganic suspended solids each varied ten-fold during the 2003 sampling season
- Nutrients and chlorophyll track one another, with low concentrations occurring on June 18
- Nutrient concentrations increased in late July and early August, though inorganic suspended solids concentrations remained low
- North Lake was hypereutrophic in 2003, based on the geometric mean concentrations of chlorophyll, nitrogen and phosphorus

Table 27. Descriptive statistics for North Lake – 2003

	Secchi (inches)	TP ($\mu\text{g/L}$)	TN ($\mu\text{g/L}$)	CHL ($\mu\text{g/L}$)	ISS (mg/L)
# of Samples	6	6	6	6	6
Median	24	113	1430	60.4	4.2
Minimum	3	75	1090	22.1	2.0
Maximum	30	149	1610	74.4	23.0
Geometric Mean	18	107	1360	47.0	5.0

Samples were collected between May 17 and August 10

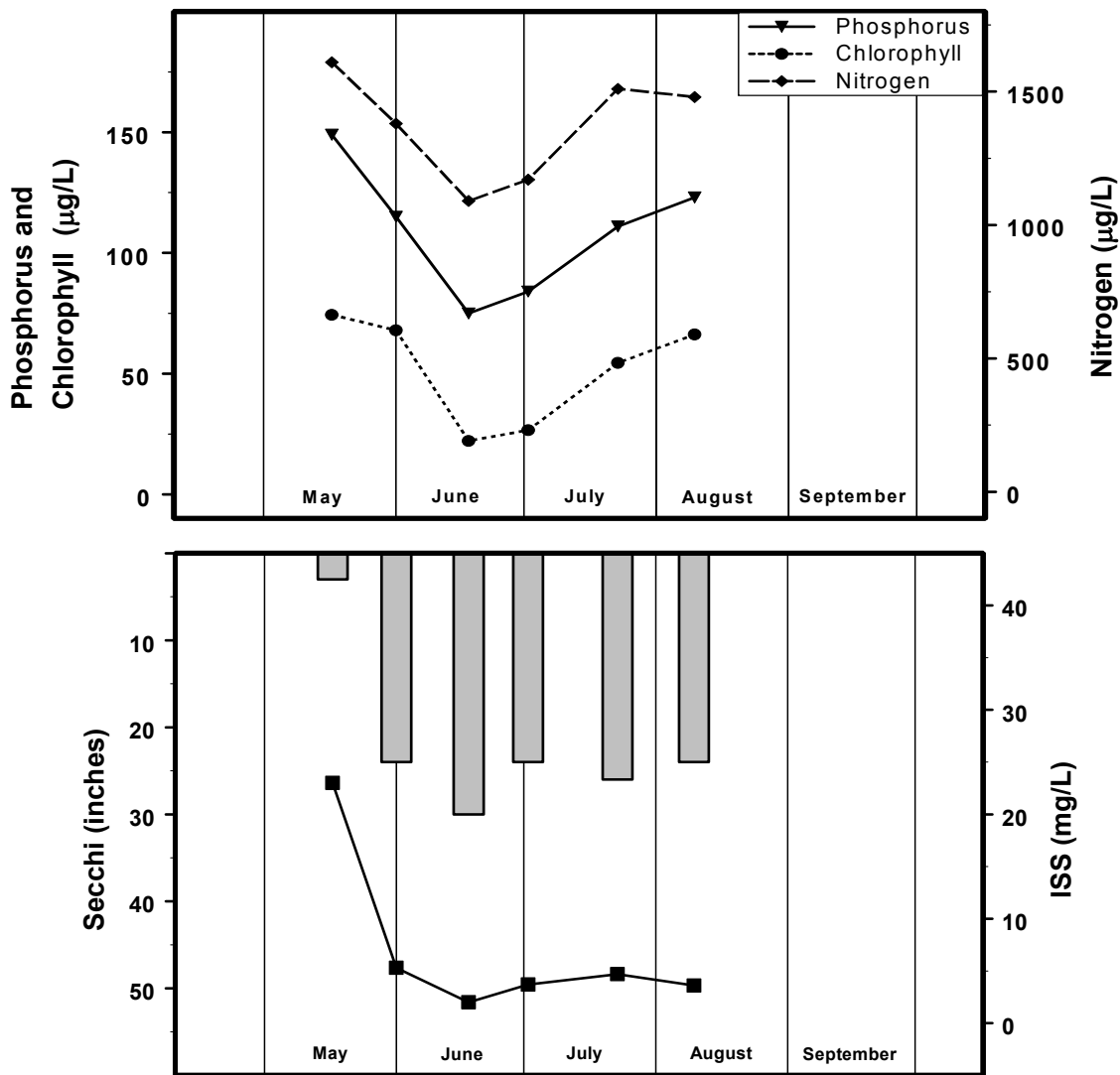


Figure 56. Seasonal fluctuations of parameters in North Lake – 2003. Bars represent Secchi, line represents ISS.