

Binder Lake is a 155-acre lake located within a 650-acre park. The lake is jointly managed by the Missouri Department of Conservation and the city of Jefferson City. Overall, 26% of Binder Lake's 3900-acre watershed is cropland and 18% is urban.

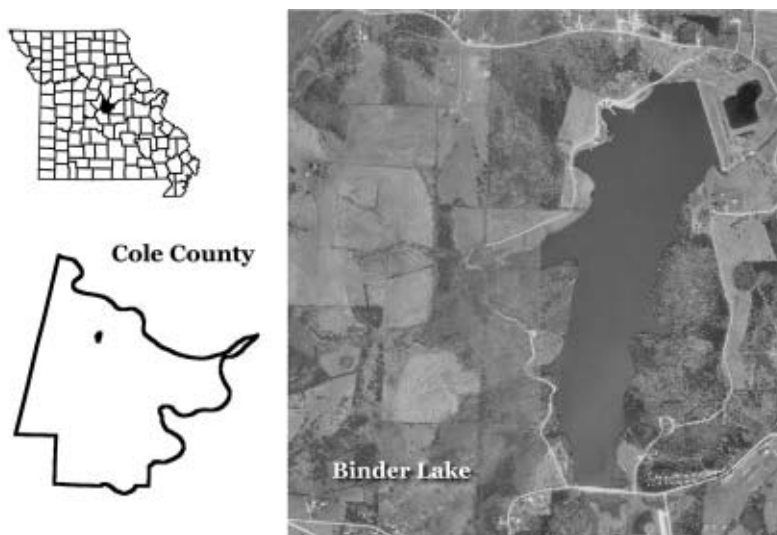


Figure 12. Location of Binder Lake.

2002 Results

Figure 13 shows how the parameters nitrogen, phosphorus, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Binder Lake during 2002. The descriptive statistics appear in Table 5. A brief description of the results:

- Six samples were collected between May 31 and October 13.
- Chlorophyll values vary with nutrient values (especially phosphorus), indicating a strong relationship.
- 2002 median values for Secchi, nitrogen and phosphorus varied from 2001 values by less than 4%, indicating no real difference between the years.
- Phosphorus concentrations were stable throughout the season, varying by only 23 $\mu\text{g/L}$.
- Binder lake is eutrophic based on chlorophyll, nitrogen and phosphorus geometric means.

Table 5. Descriptive statistics for Binder Lake - 2002.

Parameters	# of Samples	Geometric Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	6	30	22	37	33
Phosphorus ($\mu\text{g/L}$)	6	53	44	67	56
Nitrogen ($\mu\text{g/L}$)	6	823	620	970	855
Chlorophyll ($\mu\text{g/L}$)	6	27.6	14.3	44.8	31.9
ISS (mg/L)	6	2.3	1.5	3.4	2.2

ISS=Inorganic Suspended Solids

Samples were collected between May 31 and October 13

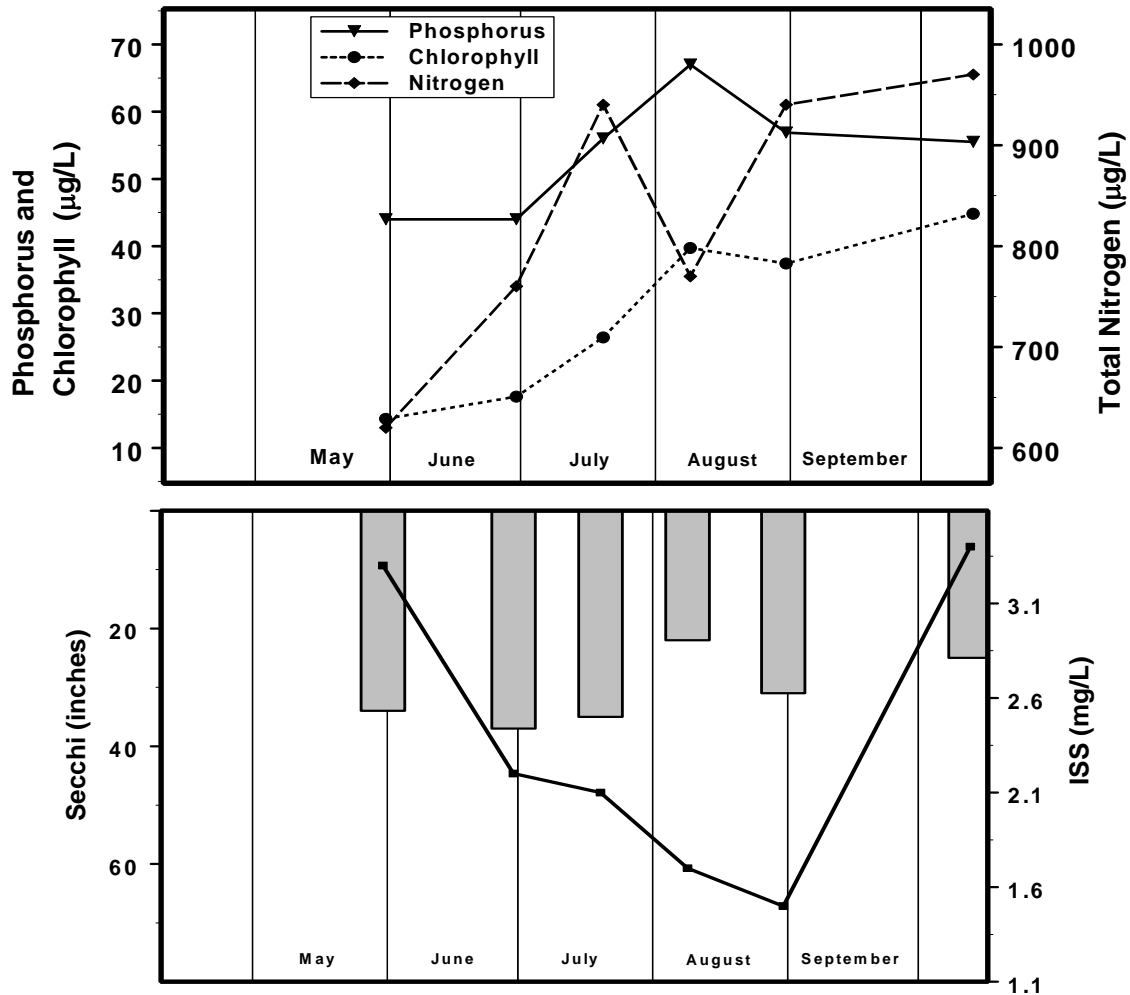


Figure 13. Seasonal Fluctuations of parameters for Binder Lake – 2002. Bars represent Secchi, line represents ISS.