

Creve Coeur Lake

Ozark Border Region

Creve Coeur is a 320-acre lake located in the Missouri River floodplain, where the nutrient-rich soil is easily eroded. Even though the lake is part of a 1,141-acre park, the area adjacent to the lake is urban. Creve Coeur Lake differs from all of the other lakes in the program in that it is not a reservoir, but an oxbow lake. Having once been part of the Missouri River, this lake is now about two miles from the present channel, separated over time by the natural meandering of the river.

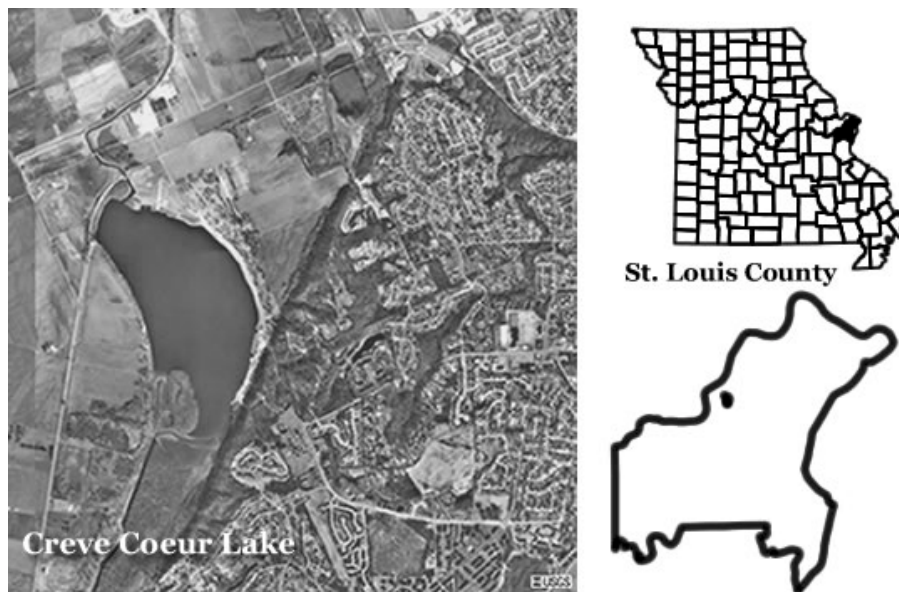


Figure 21. Location of Creve Coeur Lake.

2002 Results

Figure 22 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Creve Coeur Lake during the 2002 sampling season. The descriptive statistics appear in Table 10. A brief description of these results:

- A total of 7 samples were taken between May 22 and October 27.
- Nutrients and ISS display similar patterns, implying that nutrient levels are related to the quantity of suspended sediment.
- Creve Coeur Lake was hypereutrophic based on the geometric mean phosphorus and chlorophyll concentrations, and eutrophic based on the geometric mean nitrogen concentration.
- See the *Trends* section (pg. 80) for long-term analyses of Creve Coeur data.

Table 10. Descriptive statistics for Creve Coeur Lake – 2002.

Parameters	# of Samples	Geometric Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	7	14	10	18	15
Phosphorus ($\mu\text{g/L}$)	6	154	87	269	158
Nitrogen ($\mu\text{g/L}$)	6	848	700	1170	805
Chlorophyll ($\mu\text{g/L}$)	6	46.5	26.7	66.2	51.8
ISS (mg/L)	6	15.6	8.0	27.6	18.1

ISS=Inorganic Suspended Solids

Samples were collected between May 11 and October 27

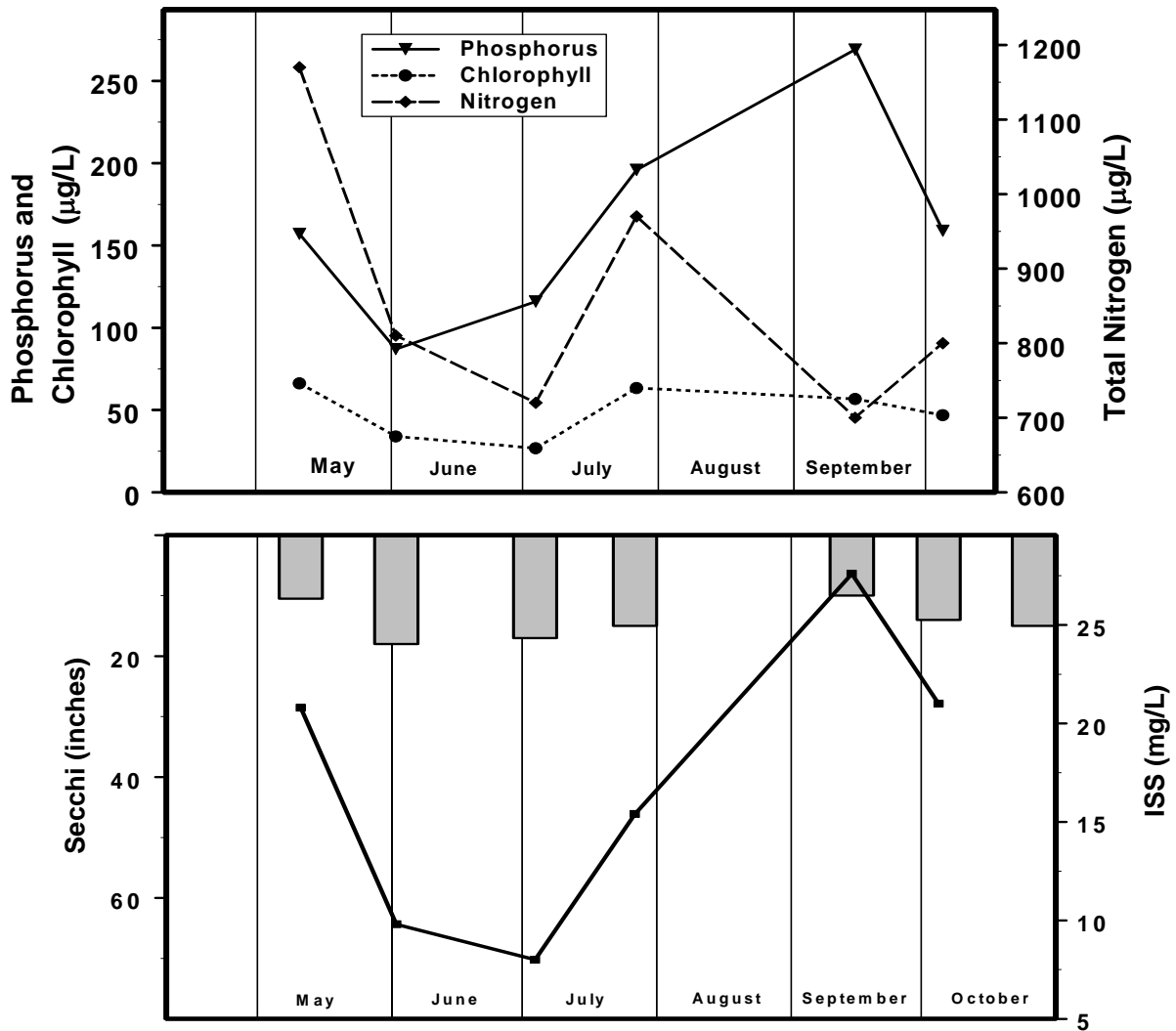


Figure 22. Seasonal fluctuations of parameters in Creve Coeur Lake – 2002. Bars represent Secchi, line represents ISS.