

Creve Coeur Lake



2010 DATA

Saint Louis County
 Latitude: 38.7222 Longitude: -90.4911

Date	5/2	X	6/8	6/29	7/18	8/12	9/3	9/25	Mean
Secchi (inches)	17		16	22	16	23	13	19	18
TP (µg/L)	99		105	93	94	68	113	83	92
TN (µg/L)	680		710	570	730	660	760	750	691
CHL (µg/L)	57.8		25.4	26.6	27.1	25.6	83.8	50.7	38.0
ISS (mg/L)	26.0		24.4	9.6	16.4	7.0	17.4	6.4	13.4

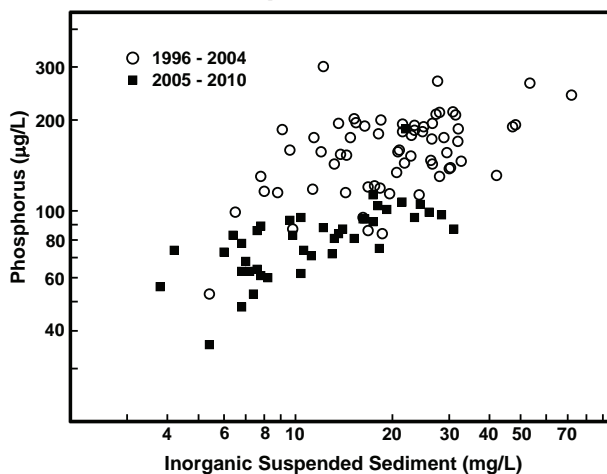
Water quality in Creve Coeur Lake did not show any seasonal patterns during the 2010 season. Both nutrients fluctuated slightly, with only minimal variation. Phosphorus concentrations did seem to track the inorganic suspended sediment levels, especially during the second half of the season. Given the high levels of inorganic suspended sediment in Creve Coeur Lake, algal chlorophyll concentrations were notably high. On three sample occasions the ratio of chlorophyll to phosphorus was >0.5, indicating the algae were fairly efficient at using available nutrients (generally high suspended sediment levels limit light and reduce the chlorophyll-phosphorus ratio).

As noted in previous data reports, there has been a substantial change in water quality in Creve Coeur Lake since implementation of

lake management (including dredging and creation of another lake up-stream of Creve Coeur). Review of the data shows that while there is some overlap in inorganic suspended sediment levels, there has been a notable decrease in concentrations (median value for pre- and post-dredge are 21 and 11mg/L, respectively). Along with lower levels of suspended sediment, we find a substantial decline in phosphorus concentrations (median 159 vs 83µg/L).

The decrease in nutrients (including nitrogen) has led to a reduction in the amount of algal chlorophyll measured in Creve Coeur Lake. While we still have some high chlorophyll readings measured in the lake, the overall chlorophyll concentrations have dropped from a median of 66µg/L to 33µg/L.

Pre and Post Dredging Phosphorus and ISS



Pre and Post Dredging Chlorophyll and Phosphorus

