

Hamilton Lake

Glacial Plains Region

Hamilton City Lake provides drinking water for the City of Hamilton. This 80 acre lake has a 1300 acre watershed that is comprised of 5% forest, 35% grassland (including pasture), and 52% cropland. Lake construction was completed in 1954.

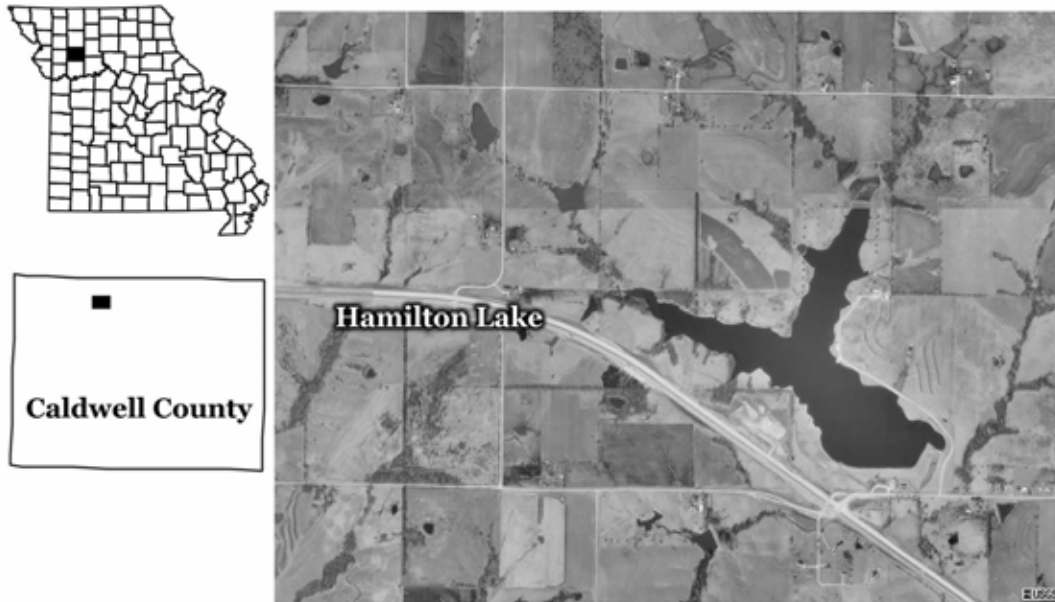


Figure 32. Location of Hamilton Lake.

2003 Results

Figure 33 shows how the parameters phosphorus, nitrogen, algal chlorophyll, and Secchi transparency varied in Hamilton Lake during the 2003 sampling season. The descriptive statistics appear in Table 16. A brief description of these results:

- 7 samples were collected from May 12 to October 3
- Nitrogen, phosphorus and inorganic suspended solids concentrations decreased throughout the season while Secchi transparencies increased
- Hamilton City Lake was eutrophic based on nitrogen, phosphorus and chlorophyll concentrations in 2003
- Overall, chlorophyll concentrations were low given the nutrient levels in the lake
- 2003 was the first year that Hamilton City Lake was involved in the LMVP

Table 16. Descriptive statistics for Hamilton Lake - 2003.

	Secchi (inches)	TP ($\mu\text{g/L}$)	TN ($\mu\text{g/L}$)	CHL ($\mu\text{g/L}$)	ISS (mg/L)
# of Samples	7	7	7	7	7
Median	46	41	730	8.2	7.2
Minimum	15	24	480	3.5	2.0
Maximum	58	71	1350	15.3	17.6
Geometric Mean	39	40	727	8.3	6.8

Samples were collected between May 12 and October 3

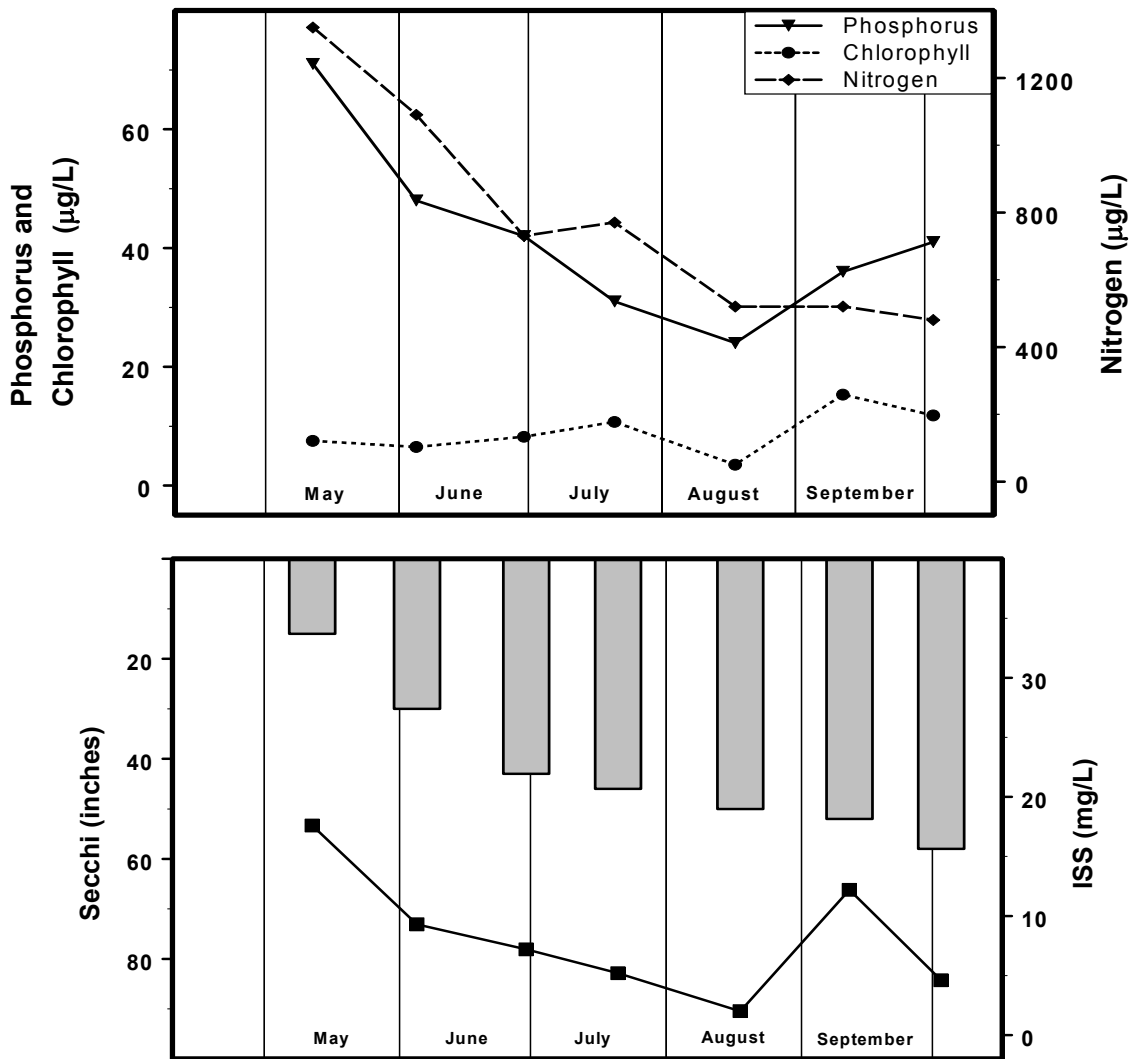


Figure 33. Seasonal fluctuations of parameters for Hamilton Lake – 2003. Bars represent Secchi, line represents ISS.