

Cameron City Reservoir #3

Glacial Plains Region

Cameron City Reservoir #3 provides drinking water for the City of Cameron. There are 2 other reservoirs in close proximity (reservoirs #1 and #2). Lake construction was completed in 1961, making this the newest of the 3 reservoirs. This 93 acre lake has a very large watershed of 3300 acres.

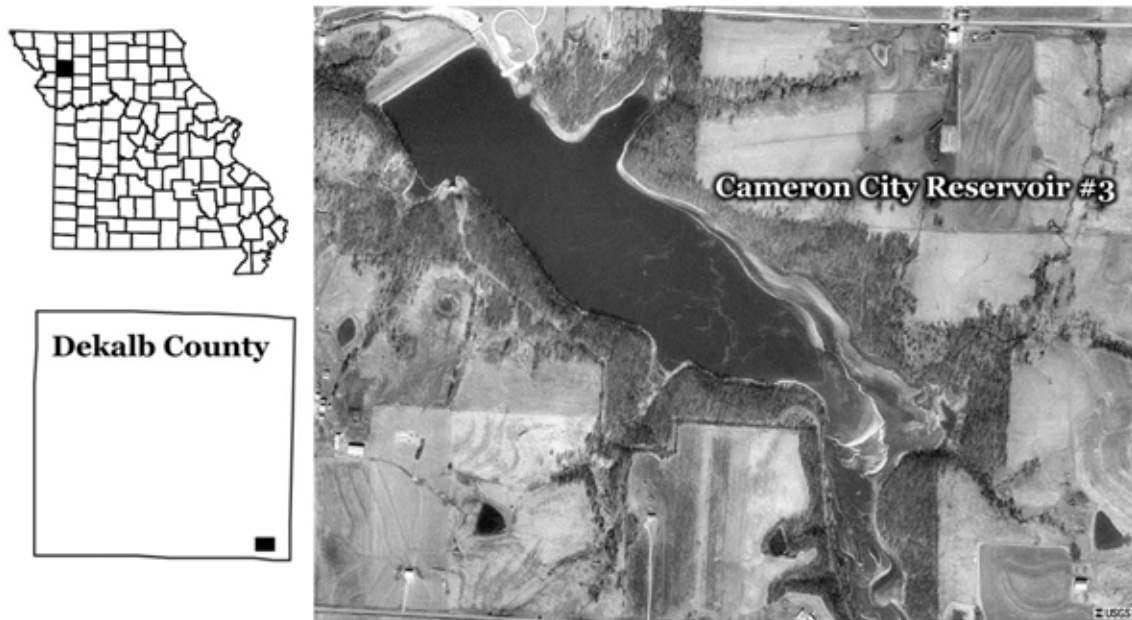


Figure 28. Location of Cameron City Reservoir #3.

2003 Results

Figure 29 shows how the parameters phosphorus, nitrogen, algal chlorophyll, and Secchi transparency varied in Cameron Reservoir #3 during the 2003 sampling season. The descriptive statistics appear in Table 14. A brief description of these results:

- Eight samples were collected from May 7 and September 15
- An aerator is used to de-stratify the lake, it was activated on June 3. Maximum observed concentrations of nitrogen and phosphorus were on the sample date immediately following
- There was an apparent algae bloom on July 28, based on high chlorophyll to nutrient ratios
- Cameron #3 was eutrophic based on geometric means of nitrogen and phosphorus and hypereutrophic based on the geometric mean chlorophyll concentration
- High concentrations of chlorophyll and ISS greatly reduced water clarity
- 2003 was the first year that Cameron #3 was sampled for the LMVP

Table 14. Descriptive statistics for Cameron City Reservoir #3 - 2003.

| | Secchi (inches) | TP ($\mu\text{g/L}$) | TN ($\mu\text{g/L}$) | CHL ($\mu\text{g/L}$) | ISS (mg/L) |
|----------------|--------------------|---------------------------|---------------------------|----------------------------|--------------------------|
| # of Samples | 8 | 8 | 8 | 8 | 8 |
| Median | 18 | 85 | 975 | 54.2 | 12.2 |
| Minimum | 13 | 55 | 810 | 11.7 | 8.1 |
| Maximum | 23 | 119 | 1320 | 94.0 | 18.4 |
| Geometric Mean | 17 | 83 | 967 | 45.9 | 12.2 |

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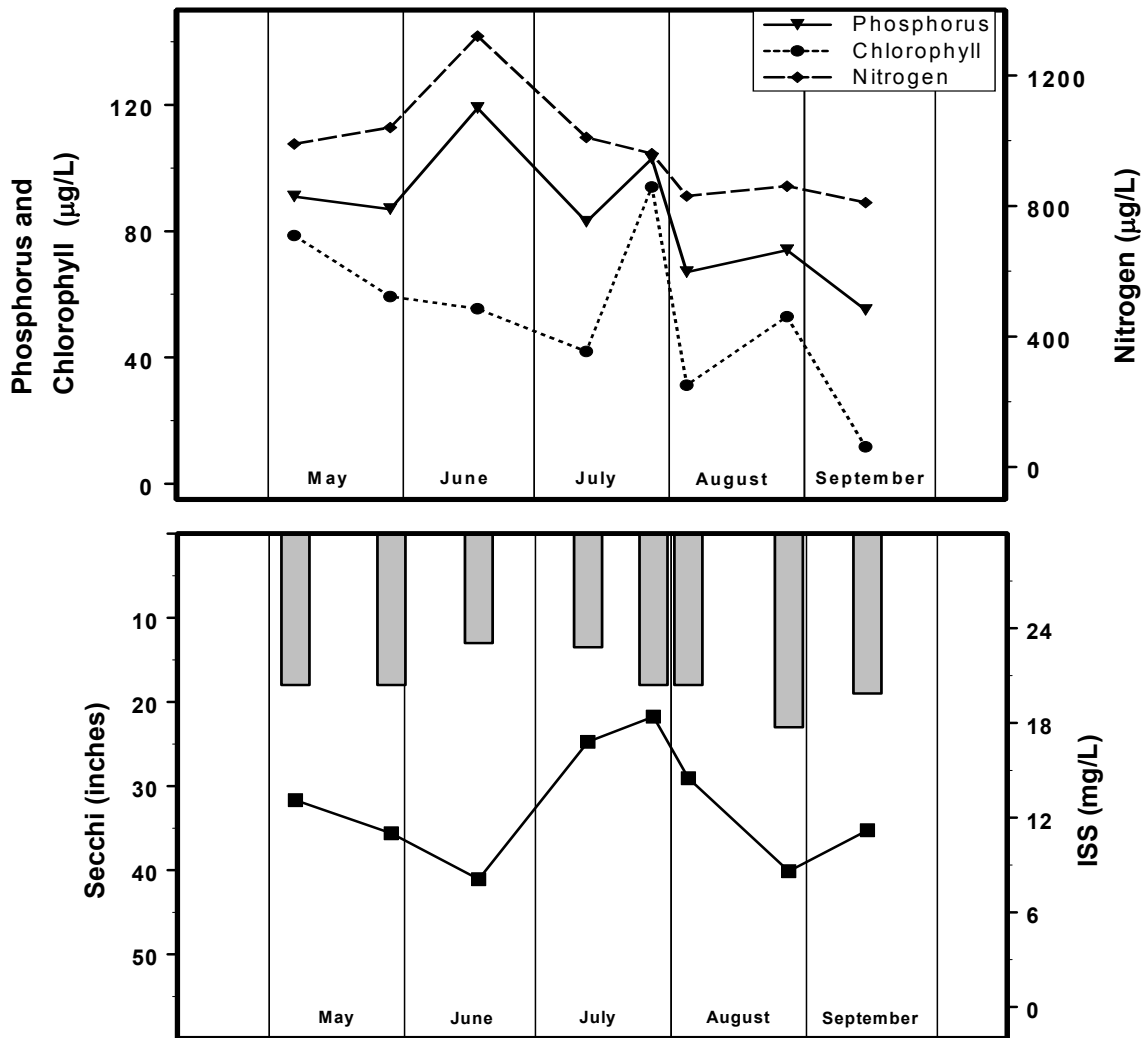


Figure 29. Seasonal fluctuations of parameters for Cameron City Reservoir #3 – 2003. Bars represent Secchi, line represents ISS.