

Rothwell Lake

Glacial Plains Region

Rothwell Lake located in Rothwell Park in the City of Moberly. This 25 acre lake has a watershed size of 458 acres and was built in 1902.

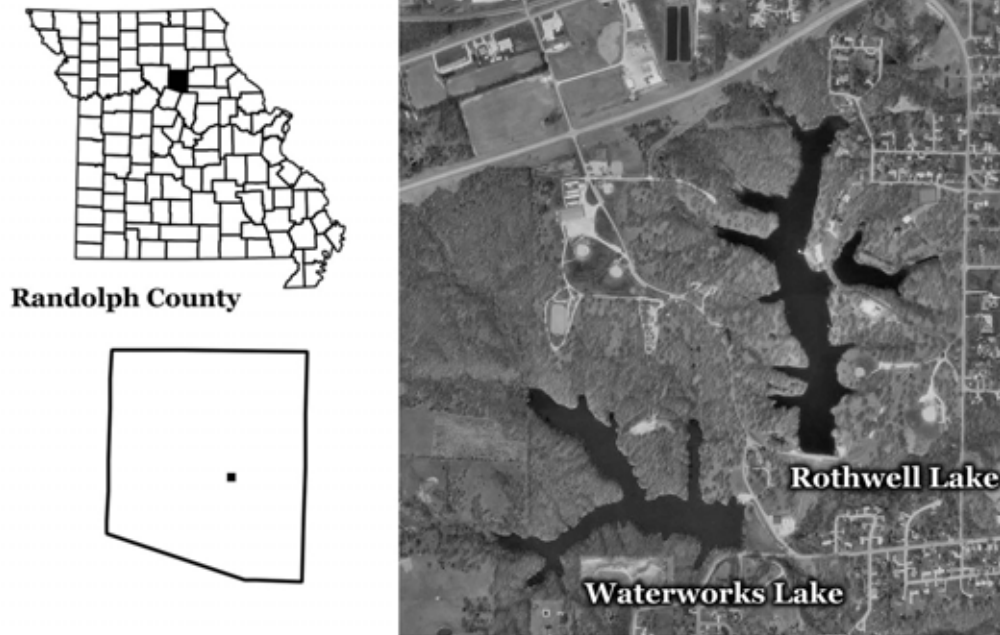


Figure 59. Location of Rothwell Lake.

2003 Results

Figure 60 shows how the parameters phosphorus, nitrogen, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Rothwell Lake during the 2003 sampling season. The descriptive statistics appear in Table 29. A brief description of these results:

- Rothwell Lake was sampled 8 times from May 15 to October 21
- Chlorophyll concentrations exceeded phosphorus concentrations during the August 29 and September 24 samples, indicating a possible algae bloom
- There was a general decrease of nutrients as the season progressed
- Concentrations of inorganic suspended solids were low throughout the sampling season
- Rothwell Lake was eutrophic in 2003, based on concentrations of chlorophyll, nitrogen and phosphorus
- See page 96 for information about nearby Waterworks Lake

Table 29. Descriptive statistics for Rothwell Lake – 2003

	Secchi (inches)	TP ($\mu\text{g/L}$)	TN ($\mu\text{g/L}$)	CHL ($\mu\text{g/L}$)	ISS (mg/L)
# of Samples	6	8	8	8	8
Median	52	36	715	22.4	1.8
Minimum	37	27	480	7.1	0.9
Maximum	64	53	1030	54.6	2.8
Geometric Mean	49	37	726	21.4	1.8

Samples were collected between May 15 and October 21

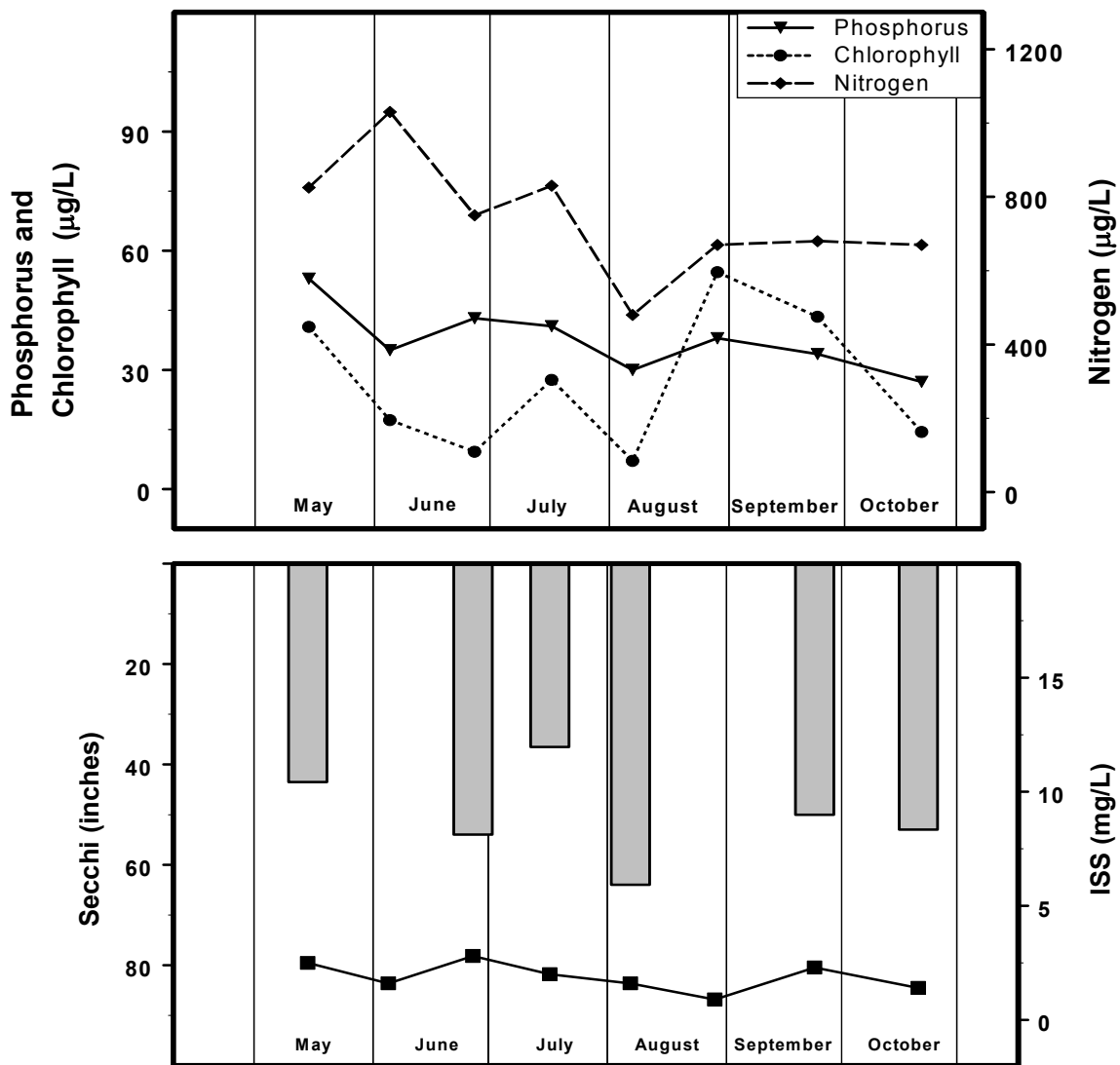


Figure 60. Seasonal fluctuations of parameters in Rothwell Lake – 2003. Bars represent Secchi, line represents ISS.