

# Water Works Lake

Waterworks Lake is located in Rothwell Park in Moberly. At 21 acres, this lake is smaller than the nearby Rothwell Lake. The watershed of Waterworks Lake is 418 acres, and has little urban land cover, though some agriculture is present.

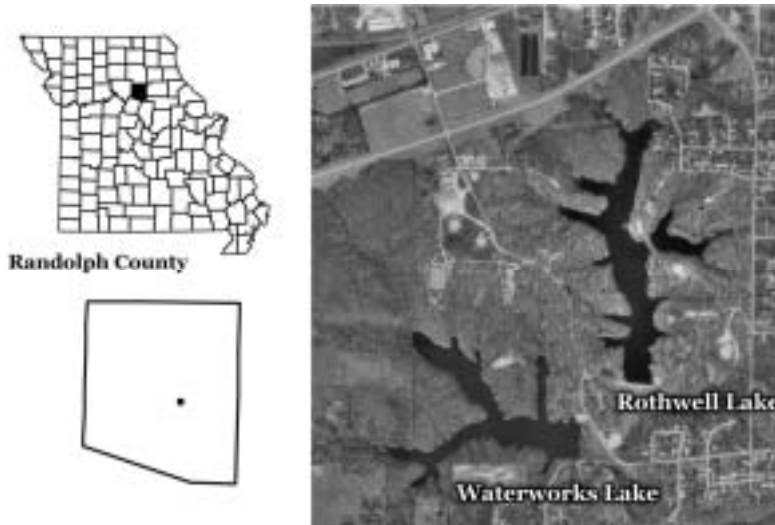


Figure 142. Location of Water Works Lake.

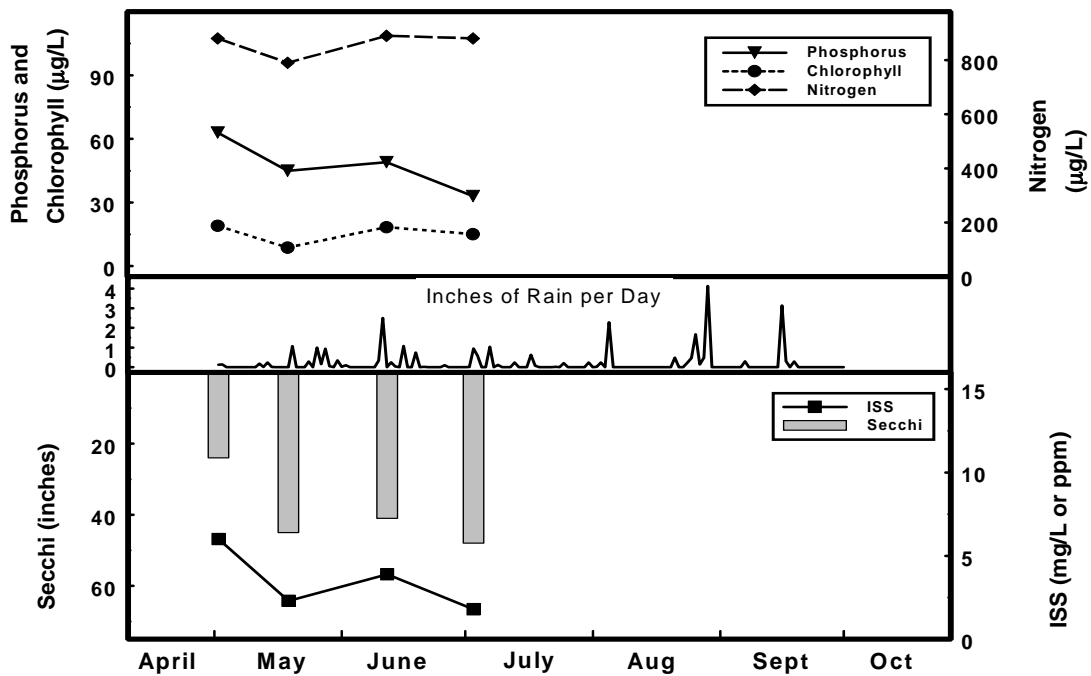


Figure 143. Seasonal fluctuations of parameters for Water Works Lake – 2004

Table 53. Descriptive statistics for Water Works Lake – 2004

	<b>Secchi (inches)</b>	<b>TP (ug/L)</b>	<b>TN (ug/L)</b>	<b>CHL (ug/L)</b>	<b>ISS (mg/L)</b>
<b>Geometric Mean</b>	38	46	859	14.6	3.1
<b>Minimum</b>	24	33	790	8.7	1.8
<b>Maximum</b>	48	63	890	18.9	6.0
<b>Number of Samples</b>	4	4	4	4	4

2004 Results

Figure 143 shows how the parameters nitrogen, phosphorus, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Water Works Lake during 2004. The descriptive statistics appear in Table 53.

A brief description of the results:

- Water Works was only sampled during the first half of the season, and yet the concentrations of nutrients, chlorophyll and ISS vary as much as would be expected from a full season of sampling.
- Sediments in the water (measured as ISS) can reduce available light for algae. The amount of algae relative to phosphorus was at its peak when ISS concentrations were lowest. More available light allowed the algae to efficiently use the available nutrients.
- The phosphorus concentrations closely follow the concentrations of ISS from late April to early July. This in turn influenced both the chlorophyll concentrations and the Secchi transparency values.

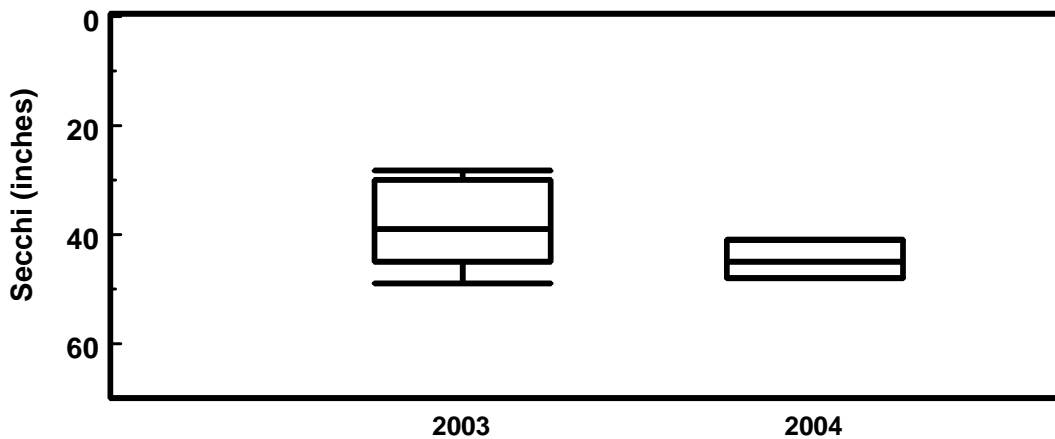


Figure 144. Secchi trends in Water Works Lake. With only 2 years of data at this site, it is too early to speculate on trends. 2004 plot represents only 3 data points.