

Lake Wingra Arboretum Big Spring

Road Salt Monitoring Data Summary February–December 2012



Photo by Eric Bannerman

Volunteers: Roger Bannerman and Rex Merrill

Specific conductance summary:

- 5 measurements taken
- Minimum: 570 $\mu\text{S}/\text{cm}$ on 2/24/2012
- Maximum: 1110 $\mu\text{S}/\text{cm}$ on 5/17/2012
- Mean: 990 $\mu\text{S}/\text{cm}$

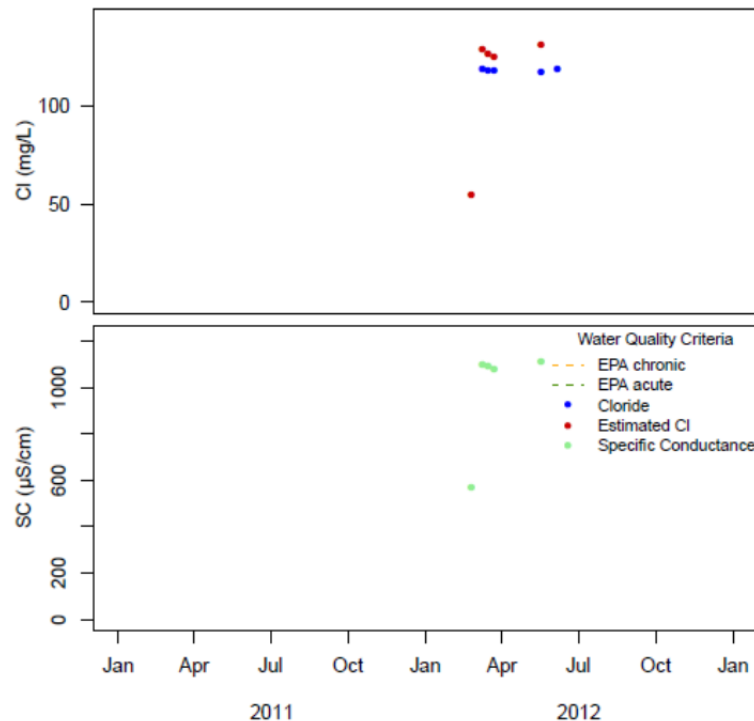
Chloride (Cl^-) summary:

- 5 samples collected
- Minimum: 117 mg/L on 5/17/2012
- Maximum: 119 mg/L on 3/8/2012 and 6/6/2012
- Mean: 118 mg/L

EPA Acute and Chronic Exceedences for Chloride¹:

Neither the EPA acute chloride standard of 860 mg/L nor the chronic chloride standard of 230 mg/L was exceeded at this site based on volunteer monitoring in 2012.

Results Over Time²:



¹ EPA acute chloride standard: The one-hour average concentration should not exceed 860 mg/L more than once every three years. EPA chronic chloride standard: The four day average concentration should not exceed 230 mg/L more than once every three years on average. Source: EPA. 1988. Ambient Water Quality Criteria for Chloride. EPA 440/6-88-001.

² Calculated chloride: When $\text{SC} > 1540 \mu\text{S}/\text{cm}$ was $\text{Cl} = 0.3441 * \text{SC} - 291$, $\text{adj}R^2 = 0.98$; when $\text{SC} \leq 1540 \mu\text{S}/\text{cm}$ was $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$, $\text{adj}R^2 = 0.65$. Equations based on data from both Madison and Milwaukee.