

Rock Creek at Lake St, Lake Mills

Road Salt Monitoring Data Summary

February 2011–December 2012



Photo courtesy of Jim Beecher

Volunteers: Jim Kerler and Ed Grunden

Specific conductance summary:

- 9 measurements taken
- Minimum: 510 $\mu\text{S}/\text{cm}$ on 1/13/2012
- Maximum: 850 $\mu\text{S}/\text{cm}$ on 1/17/2012
- Mean: 611 $\mu\text{S}/\text{cm}$

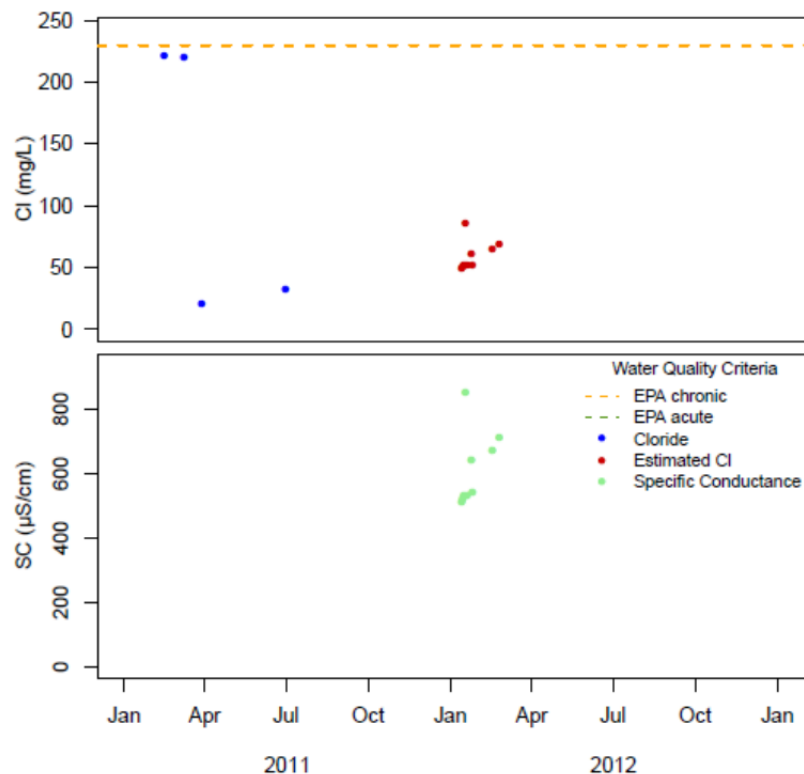
Chloride (Cl^-) summary:

- 5 samples collected
- Minimum: 20.1 mg/L on 4/4/2011
- Maximum: 221 mg/L on 2/14/2011
- Mean: 103 mg/L

EPA Acute and Chronic Exceedences for Chloride¹:

Neither the EPA acute nor chronic chloride standards were exceeded at this site based on volunteer monitoring in 2011² or in 2012.

Results Over Time³:



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 <http://watermonitoring.uwex.edu/level3/UrbanRoadSaltReports.html>

³ Calculated chloride: When $\text{SC} > 1540 \mu\text{S}/\text{cm}$ was $\text{Cl} = 0.3441 * \text{SC} - 291$, $\text{adjR}^2 = 0.98$; when SC was $\leq 1540 \mu\text{S}/\text{cm}$ was $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$, $\text{adjR}^2 = 0.65$. Equations based on data from both Madison and Milwaukee.