

Pike River at lakeshore adj. to Carthage College

Road Salt Monitoring Data Summary September 2011 –December 2012



Photo courtesy of Jim Beecher

Volunteers: Katie Jones, Christine Blaine, Rachel Martin, Tom Baran, and Jordan Burknolder

Specific conductance summary:

- 10 measurements taken
- Minimum: 305 $\mu\text{S}/\text{cm}$ on 10/16/2012
- Maximum: 555 $\mu\text{S}/\text{cm}$ on 3/7/2012
- Mean: 379 $\mu\text{S}/\text{cm}$

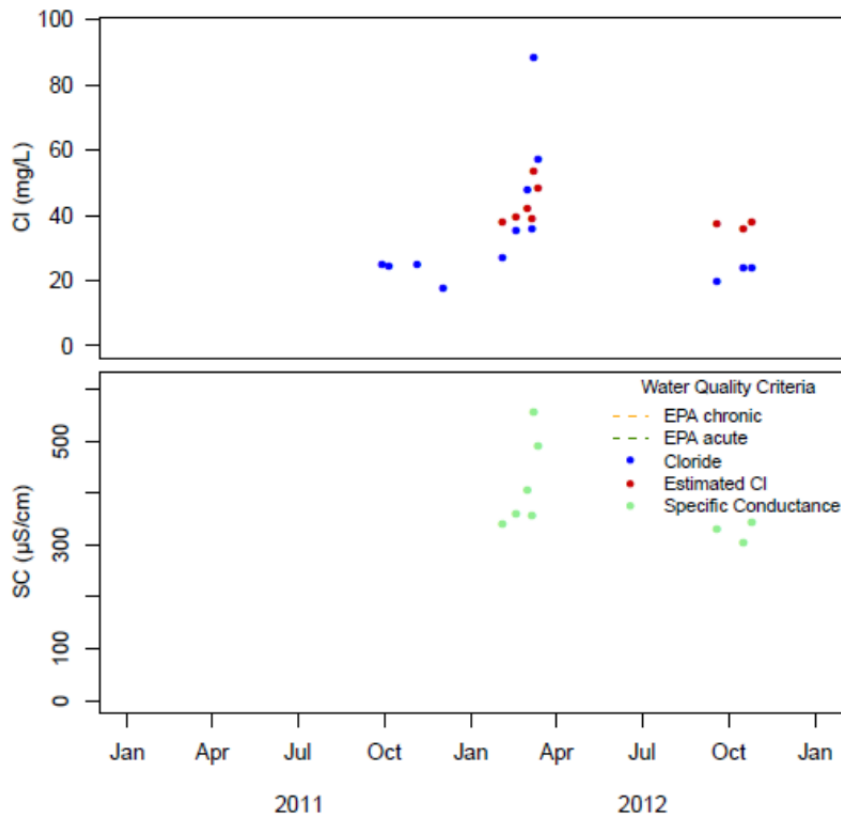
Chloride (Cl^-) summary:

- 14 samples collected
- Minimum: 17.7 mg/L on 12/2/2011
- Maximum: 88.2 mg/L on 3/7/2012
- Mean: 34 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 2011 or in 2012.

Results Over Time²:



¹ Acute standard: The one-hour average should not exceed 860 mg/L more than once every three years. Chronic standard: The four day average should not exceed 230 mg/L more than once every three years. 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 $\text{Cl} = 0.3441 * \text{SC} - 291$, $\text{adjR}^2 = 0.98$; when SC was $\leq 1540 \mu\text{S}/\text{cm}$ was $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$, $\text{adj R}^2 = 0.65$. Equations based on data from both Madison and Milwaukee.