

Pike River at Pike River Pathway Walk Bridge

Road Salt Monitoring Data Summary September 2011 – December 2012



Photo courtesy of Jim Beecher

Volunteers: Rachel Martin, Tom Baran, and Jordan Burkholder

Specific conductance summary:

- 3 measurements taken
- Minimum: 1620 $\mu\text{S}/\text{cm}$ on 2/29/2012
- Maximum: 1745 $\mu\text{S}/\text{cm}$ on 3/7/2012
- Mean: 1687 $\mu\text{S}/\text{cm}$

Chloride (Cl⁻) summary:

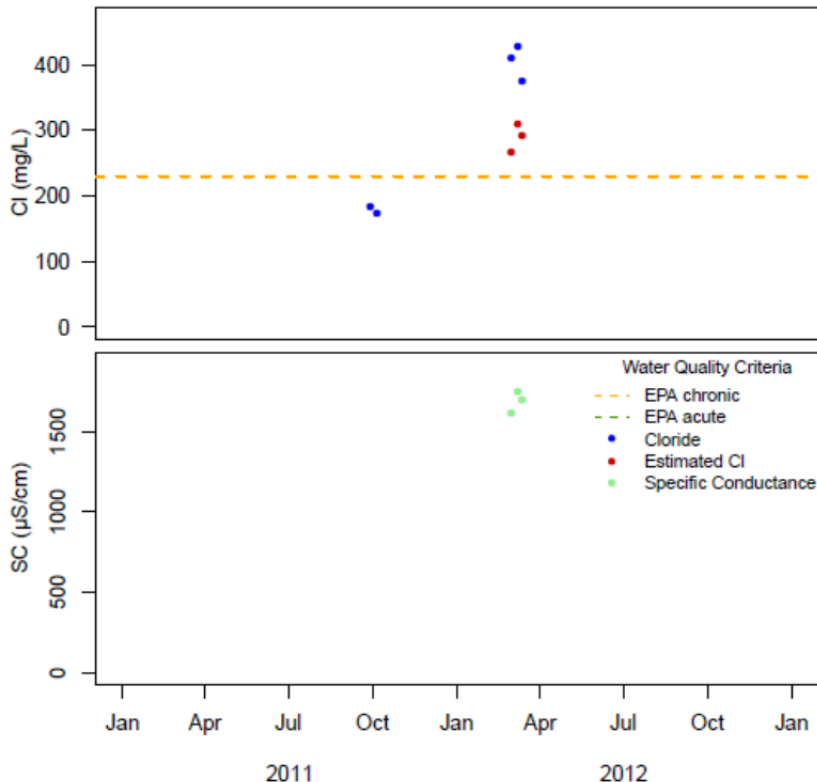
- 5 samples collected
- Minimum: 174.2 mg/L on 10/5/2011
- Maximum: 426.7 mg/L on 3/7/2012
- Mean: 314 mg/L

EPA Acute and Chronic Exceedences for Chloride¹:

The EPA acute chloride standard of 860 mg/L was not exceeded at this site in 2011 or in 2012. However, the EPA chronic chloride standard of 230 mg/L was met or exceeded at this site zero times in 2011 and three times in 2012:

- 375 mg/L on 3/12/2012 (measured)
- 427 mg/L on 3/7/2012 (measured)
- 411 mg/L on 2/29/2012 (measured)

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 $\text{SC} \leq 1540 \mu\text{S}/\text{cm}$ 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.