

Pike River at Lannon Terrace

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 Burkholder

Specific conductance summary:

- 8 measurements taken
- Minimum: 910 $\mu\text{S}/\text{cm}$ on 10/25/2012
- Maximum: 1420 $\mu\text{S}/\text{cm}$ on 10/4/2012
- Mean: 1087 $\mu\text{S}/\text{cm}$

Chloride (Cl^-) summary:

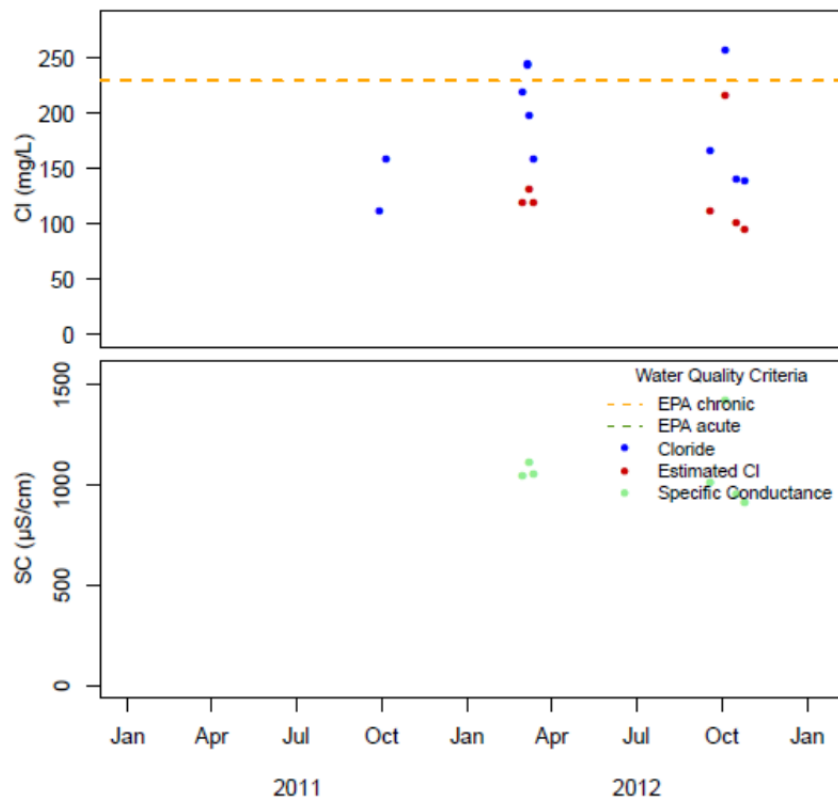
- 12 samples collected
- Minimum: 112.2 mg/L on 9/28/2011
- Maximum: 256.9 mg/L on 10/4/2012
- Mean: 184 mg/L

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 exceeded at this site twice in 2012:

- 245 mg/L on 3/5/2012 (measured)
- 257 mg/L on 10/4/2012 (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 $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$, $\text{adjR}^2 = 0.65$. Equations based on data from both Madison and Milwaukee.