

Nine Springs at Syene Rd

Road Salt Monitoring Data Summary

February –December 2011



Photo by Kris Stepenuck

Volunteers: Kris Stepenuck and Christophe Stoelinga

Specific conductance summary:

- 12 measurements taken
- Minimum: 790 $\mu\text{S}/\text{cm}$ on 10/16/2011
- Maximum: 1030 $\mu\text{S}/\text{cm}$ on 3/10/2011
- Mean: 836 $\mu\text{S}/\text{cm}$

Chloride (Cl^-) summary:

- 7 samples collected
- Minimum: 60 mg/L 6/29/2011
- Maximum: 137 mg/L 3/10/2011
- Mean: 79 mg/L

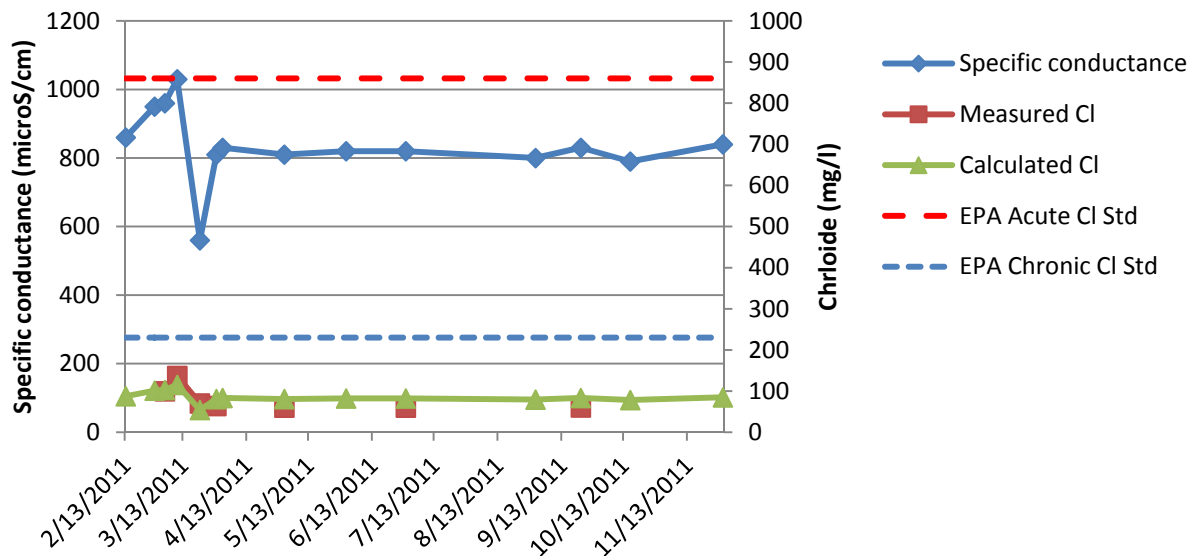
Specific conductance ranges at which to collect grab samples in 2012 for this site:

- Mid-level: 800-900 $\mu\text{S}/\text{cm}$
- High-level: >900 $\mu\text{S}/\text{cm}$

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 2011.

Results Over Time:



¹ EPA acute chloride standard: The one-hour average concentration should not exceed 860 mg/L more than once every three years on average. 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 Two regression equations calculated based on specific conductance and chloride data collected from the Madison and Milwaukee areas collectively. The equation used when specific conductance >1540 $\mu\text{S}/\text{cm}$ was $\text{Cl} = 0.3441 * \text{SC} - 291$, $\text{adj}R^2 = 0.98$; and when specific conductance ≤ 1540 $\mu\text{S}/\text{cm}$ was $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$, $\text{adj}R^2 = 0.65$.