

Little Niagara Creek-UWEC Campus

Road Salt Monitoring Data Summary

January –December 2012



Photo courtesy of Jim Beecher

Volunteers: Katy Grant, Tim Molitor, Keilor Eggan, and Travis Bender

Specific conductance summary:

- 15 measurements taken
- Minimum: 330 $\mu\text{S}/\text{cm}$ on 6/13/2012
- Maximum: 1840 $\mu\text{S}/\text{cm}$ on 1/6/2012
- Mean: 683 $\mu\text{S}/\text{cm}$

Chloride (Cl^-) summary:

- 9 samples collected
- Minimum: 60 mg/L on 1/11/2012
- Maximum: 610 mg/L on 1/6/2012
- Mean: 342 mg/L

EPA Acute and Chronic Exceedences for Chloride¹:

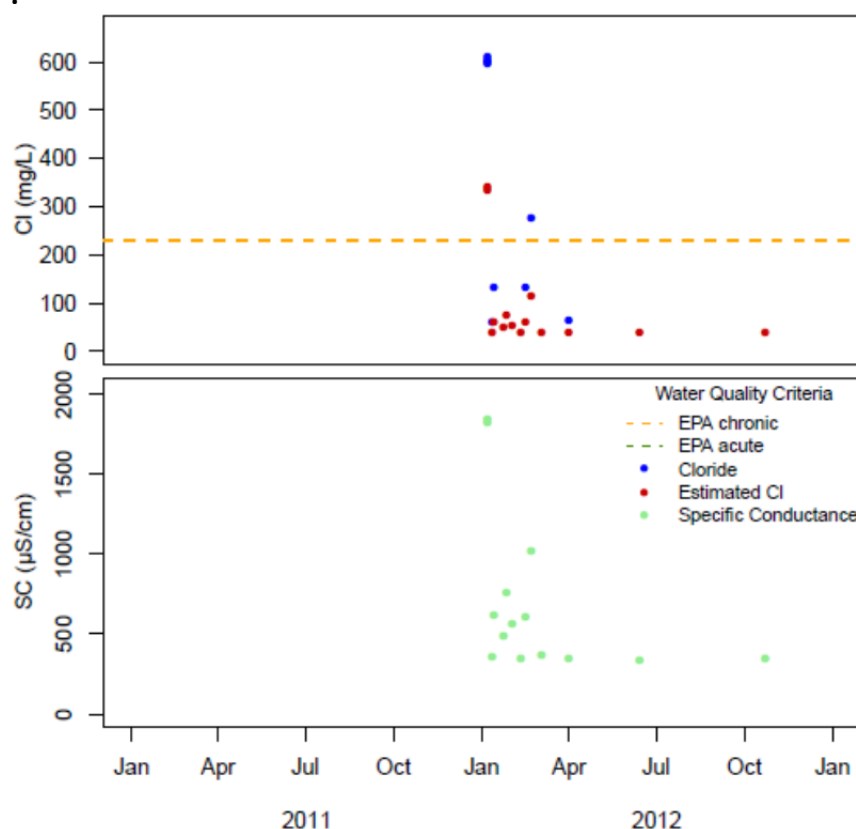
The EPA acute chloride standard of 860 mg/L was not exceeded at this site in 2012.

The EPA chronic chloride standard of 230 mg/L was exceeded two times at this site in 2012:

- 275 mg/L on 2/21/2012 (measured)
- 610 mg/L on 1/6/2012 (measured)

* Note: four samples were collected on 1/6/2012 (610 mg/L was highest result).

Results Over Time²:



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 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.