Galloway at Red Cedar River

Road Salt Monitoring Data Summary

November 2012 –June 2013

Photo by Lisa Ludwig

Volunteers: Chelsey Baranczyk, Adam Cameron, Jonathan Dahlen, Brett Eliason, Katelyn Hain, Megen Hines, Krista James, Alexa Levie, Tim Logan, Ted Ludwig, Evan Petska, Lindesy Provost, Caitlin Sandin, Amanda Smith, Kamron Stalsberg, Nathan Stobb, and Youzhu Wang

Specific conductance summary:

- 40 measurements taken
- Minimum: 210 µS/cm on 4/10/2013
- Maximum: 6400 µS/cm on 2/11/2013
- Mean: 1112 µS/cm

Chloride (Cl^-) summary:

- 5 samples collected
- Minimum: 19.4 mg/L on 4/10/2013
- Maximum: 1550 mg/L on 1/29/2013
- Mean: 554 mg/L

EPA Acute and Chronic Exceedences for Chloride[1]:

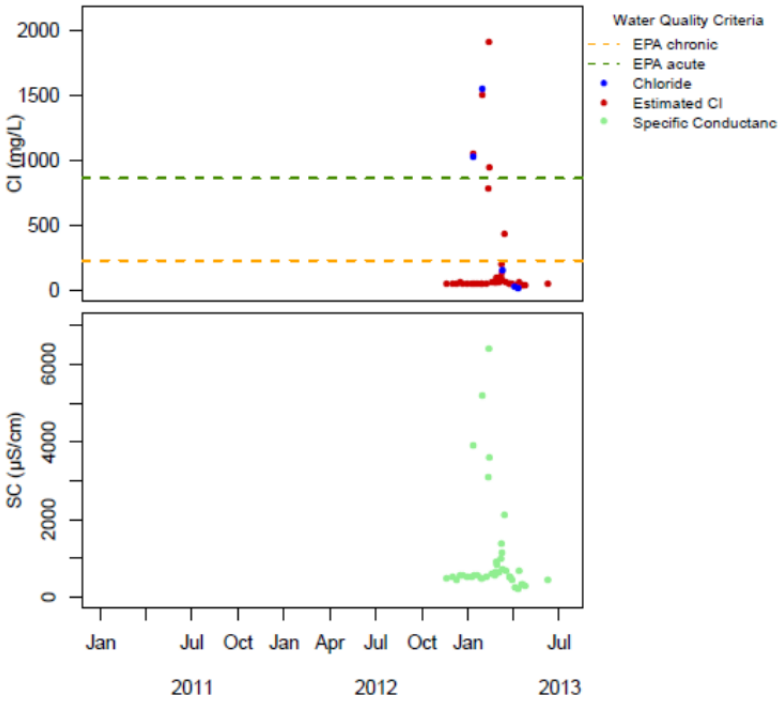
The EPA acute chloride standard of 860 mg/L was exceeded four times at this site:

- 1020 mg/L on 1/11/2013 (measured)
- 1911 mg/L on 2/11/2013 (calculated)
- 1550 mg/L on 1/29/2013 (measured)
- 948 mg/L on 2/12/2013 (calculated)

In addition, the EPA chronic chloride standard of 230 mg/L was exceeded twice at this site:

- 432 mg/L on 3/14/2013 (calculated)
- 776 mg/L on 2/10/2013 (calculated)

Results Over Time[2]:



[1] Source: EPA. 1988. Ambient Water Quality Criteria for Chloride. EPA 440/6-88-001.

[2] Calculated chloride: When SC >1540 µS/cm was Cl = 0.3441 * SC – 291, adjR^2 = 0.98; when SC was ≤ 1540 µS/cm was Cl = 1.044 * (exp(0.001609 * SC + 3.046)), adj R^2 = 0.65. Equations based on data from both Madison and Milwaukee.