

Yahara River at Tenney

Road Salt Monitoring Data Summary

February –December 2011



Photo courtesy of Jim Beecher

Volunteers: Christina and Ian Anderson

Specific conductance summary:

- 11 measurements taken
- Minimum: 430 $\mu\text{S}/\text{cm}$ on 4/2/2011
- Maximum: 540 $\mu\text{S}/\text{cm}$ on 2/13/2011
- Mean: 487 $\mu\text{S}/\text{cm}$

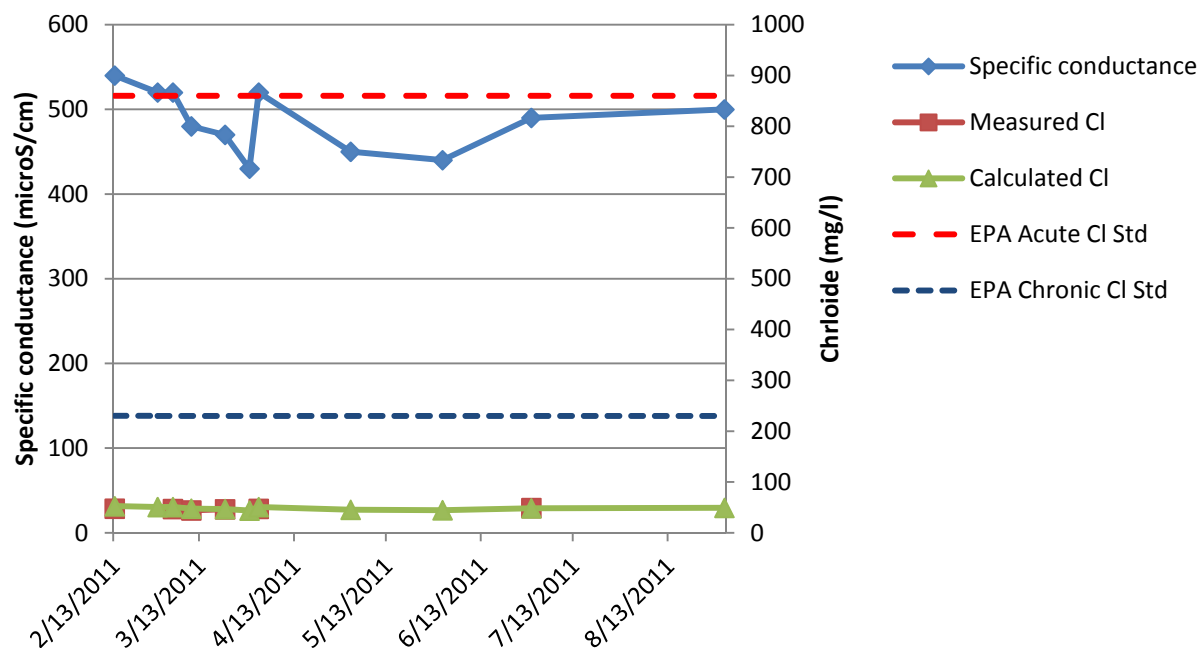
Chloride (Cl^-) summary:

- 6 samples collected
- Minimum: 44.1 mg/L 3/18/2011
- Maximum: 48.8 mg/L 9/30/2011
- Mean: 46.8 mg/L

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 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 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 $\text{Cl} = 0.3441 * \text{SC} - 291$, $\text{adjR}^2 = 0.98$; and when specific conductance $\leq 1540 \mu\text{S}/\text{cm}$ was $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$, $\text{adjR}^2 = 0.65$.