

# Badger Mill Creek at Bruce Street

## Road Salt Monitoring Data Summary

December 2011 – December 2012



Photo courtesy of Jim Beecher

**Volunteer:** Bill Keen

### Specific conductance summary:

- 6 measurements taken
- Minimum: 968  $\mu\text{S}/\text{cm}$  on 2/29/2012
- Maximum: 1530  $\mu\text{S}/\text{cm}$  on 6/7/2012
- Mean: 1260  $\mu\text{S}/\text{cm}$

### Chloride ( $\text{Cl}^-$ ) summary:

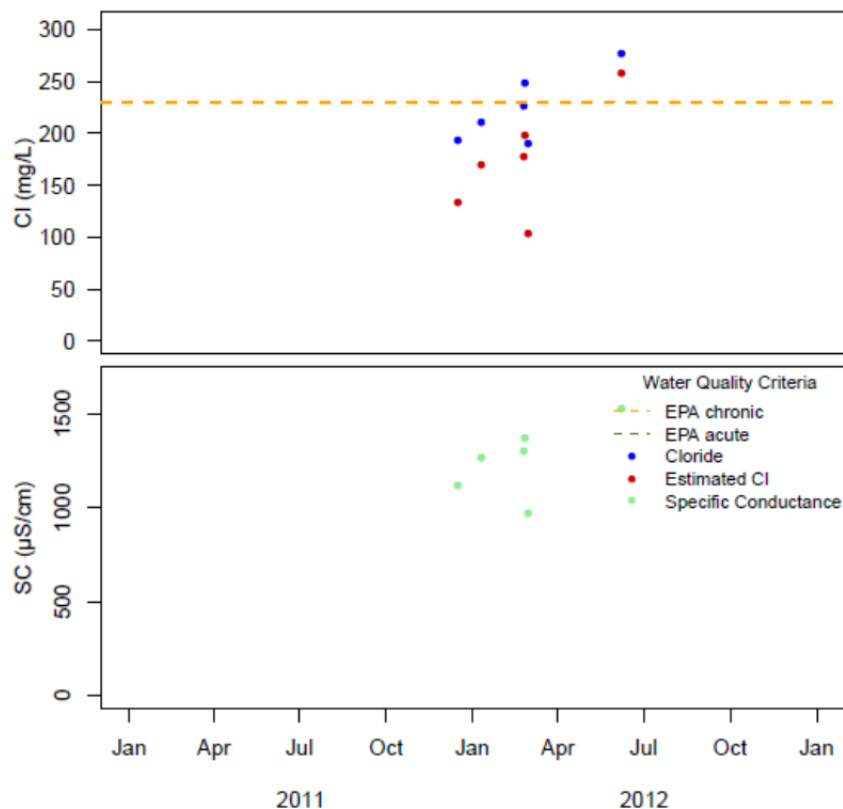
- 6 samples collected
- Minimum: 190 mg/L on 2/29/2012
- Maximum: 277 mg/L on 6/7/2012
- Mean: 225 mg/L

### EPA Acute and Chronic Exceedences for Chloride<sup>1</sup>:

The EPA acute chloride standard of 860 mg/L was not exceeded at this site in 2011 or in 2012. However, this monitoring revealed that the EPA chronic chloride standard of 230 mg/L was exceeded at this site twice in 2012:

- 249 mg/L on 2/25/2012 (measured)
- 277 mg/L on 6/7/2012 (measured)

### Results Over Time<sup>2</sup>:



<sup>1</sup> 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.

<sup>2</sup> 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.