

# Pigeon River by Wauwautosa Rd

## Road Salt Monitoring Data Summary

February 2011–December 2012



Photo courtesy of Jim Beecher

**Volunteer:** Phil Strobel (2011) and Joe Rath (2012)

### Specific conductance summary:

- 13 measurements taken
- Minimum: 700  $\mu\text{S}/\text{cm}$  on 9/26/2011
- Maximum: 1060  $\mu\text{S}/\text{cm}$  on 3/11/2011
- Mean: 840  $\mu\text{S}/\text{cm}$

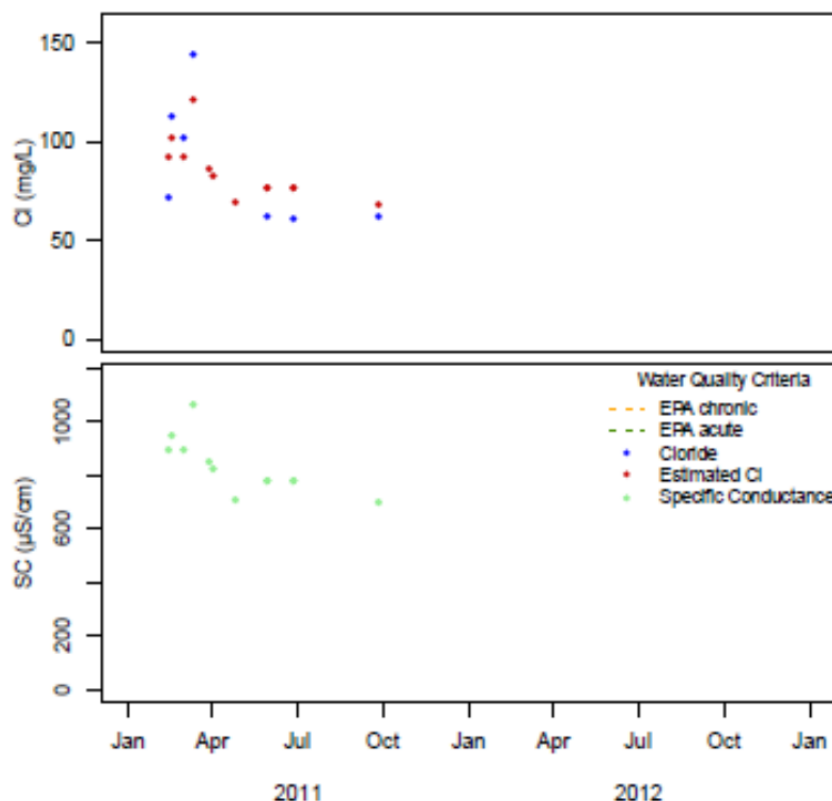
### Chloride ( $\text{Cl}^-$ ) summary:

- 7 samples collected
- Minimum: 61.1 mg/L on 6/27/2011
- Maximum: 144 mg/L on 3/11/2011
- Mean: 88 mg/L

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

Neither the EPA acute chloride standard of 860 mg/L nor the chronic chloride standard of 230 mg/L was exceeded at this site based on volunteer monitoring in 2011<sup>2</sup> or in 2012.

### Results Over Time<sup>3</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> <http://watermonitoring.uwex.edu/level3/UrbanRoadSaltReports.html>

<sup>3</sup> Calculated chloride: When  $\text{SC} > 1540 \mu\text{S}/\text{cm}$  was  $\text{Cl} = 0.3441 * \text{SC} - 291$ ,  $\text{adj}R^2 = 0.98$ ; when  $\text{SC}$  was  $\leq 1540 \mu\text{S}/\text{cm}$  was  $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$ ,  $\text{adj}R^2 = 0.65$ . Equations based on data from both Madison and Milwaukee.