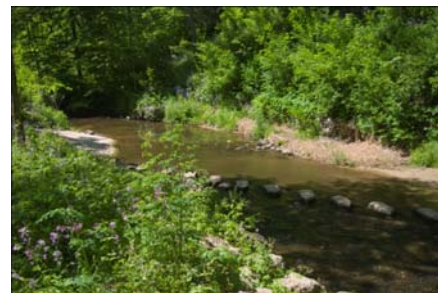


# Pheasant Branch at Century Ave

## Road Salt Monitoring Data Summary

February – December 2011



Photos courtesy of Jim Beecher

**Volunteers:** Eric Grazia and Jim Beecher

### Specific conductance summary:

- 14 measurements taken
- Minimum: 550  $\mu\text{S}/\text{cm}$  on 8/8/2011
- Maximum: 2300  $\mu\text{S}/\text{cm}$  on 2/14/2011
- Mean: 1143  $\mu\text{S}/\text{cm}$

### Chloride (Cl<sup>-</sup>) summary:

- 4 samples collected
- Minimum: 114 mg/L 9/11/2011
- Maximum: 137 mg/L 5/9/2011
- Mean: 129 mg/L

### Specific conductance ranges at which to collect grab samples in 2012 for this site:

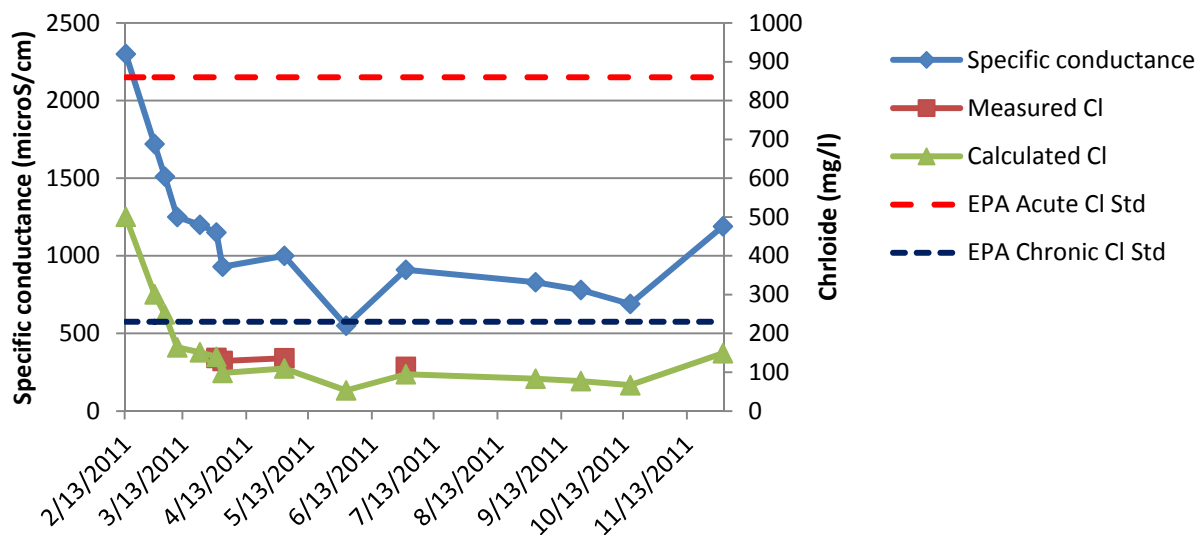
- Mid-level: 1000-1500  $\mu\text{S}/\text{cm}$
- High-level: >1500  $\mu\text{S}/\text{cm}$

### 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. The EPA chronic chloride standard of 230 mg/L was exceeded three times:

- 249 mg/L on 3/10/2011 (calculated)<sup>2</sup>
- 500 mg/L on 2/14/2011 (calculated)
- 301 mg/L on 2/1/2011 (calculated)

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



<sup>1</sup> 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.

<sup>2</sup> 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  $\text{Cl} = 1.044 * (\exp(0.001609 * \text{SC} + 3.046))$ ,  $\text{adjR}^2 = 0.65$ .