

# Fox River at River Rd, Sussex

## Road Salt Monitoring Data Summary

February –December 2011



Photo courtesy of Jim Beecher

**Volunteer:** Nick Lafave

### Specific conductance summary:

- 11 measurements taken
- Minimum: 490  $\mu\text{S}/\text{cm}$  on 3/24/2011
- Maximum: 1230  $\mu\text{S}/\text{cm}$  on 2/27/2011
- Mean: 919  $\mu\text{S}/\text{cm}$

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

- 6 samples collected
- Minimum: 69.3 mg/L 4/4/2011
- Maximum: 149 mg/L 3/1/2011
- Mean: 118 mg/L

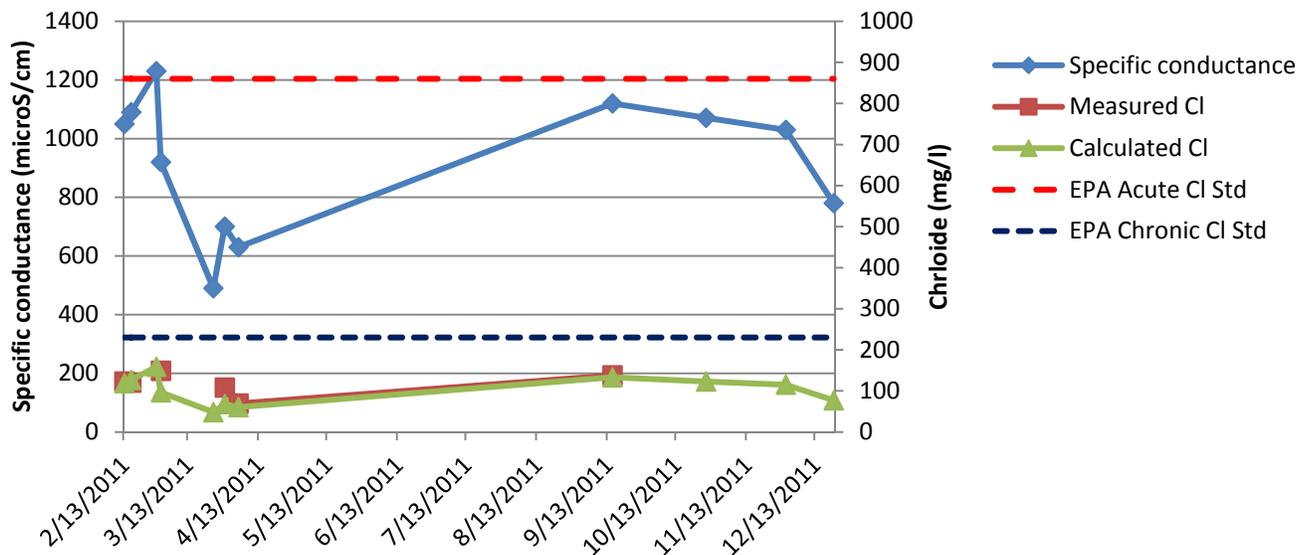
### Specific conductance ranges at which to collect grab samples in 2012 for this site:

- Mid-level: 900-1100  $\mu\text{S}/\text{cm}$
- High-level: >1100  $\mu\text{S}/\text{cm}$

### 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.

### 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.