Wingra Creek at Olin Ave
Road Salt Monitoring Data Summary
February – December 2011

Volunteers: Christina and Ian Anderson

Specific conductance summary:
- 7 measurements taken
- Maximum: 1200 μS/cm on 2/18/2011
- Mean: 863 μS/cm

Chloride (Cl⁻) summary:
- 6 samples collected
- Maximum: 253 mg/L 2/18/2011
- Mean: 158 mg/L

Specific conductance ranges at which to collect grab samples in 2012 for this site:
- Mid-level: 900-1000 μS/cm
- High-level: >1000 μS/cm

EPA Acute and Chronic Exceedences for Chloride¹:
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 once:
- 253 mg/L on 2/18/2011 (measured)

Results Over Time²:

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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 μS/cm was \( Cl = 0.3441 \times SC - 291, \) adj\( R^2 \) = 0.98; and when specific conductance ≤1540 μS/cm was \( Cl = 1.044 \times (exp(0.001609 \times SC + 3.046)), \) adj \( R^2 \) = 0.65.