

# Starkweather, E. Br. at Milwaukee

## Road Salt Monitoring Data Summary

### February 2011–March 2014<sup>1</sup>



Jake and Erin Vennie-Vollrath

**Volunteers:** Erin and Jake Vennie-Vollrath

**Specific conductance summary:**

- 39 measurements taken
- Minimum: 300  $\mu\text{S}/\text{cm}$  on 9/3/2011
- Maximum: 8500  $\mu\text{S}/\text{cm}$  on 1/28/2013
- Mean: 2164  $\mu\text{S}/\text{cm}$

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

- 7 samples collected
- Minimum: 35.5 mg/L 9/3/2011
- Maximum: 2570 mg/L 1/28/2013
- Mean: 788 mg/L

**EPA Acute and Chronic Exceedences for Chloride<sup>2</sup>:**

The EPA acute chloride standard of 860 mg/L was exceeded seven times at this site:

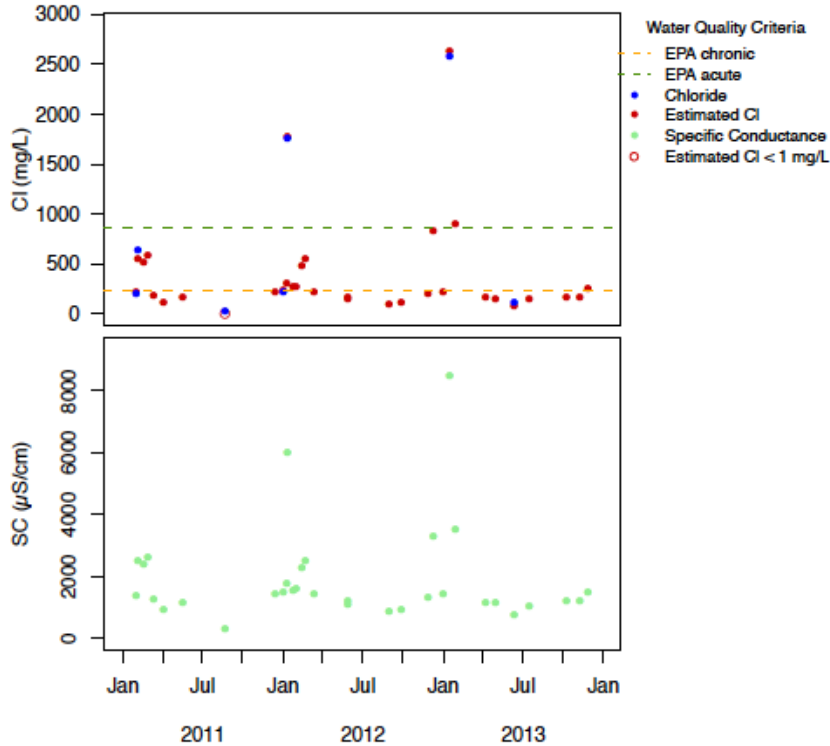
- 1750 mg/L on 1/24/2012 (measured)
- 901 mg/L on 2/10/2013 (calculated)<sup>3</sup>
- 1074 mg/L on 1/20/2014 (calculated)
- 1420 mg/L on 2/20/2014 (calculated)
- 2570 mg/L on 1/28/2013 (measured)
- 936 mg/L on 1/9/2014 (calculated)
- 1109 mg/L on 2/6/2014 (calculated)

In addition, the EPA chronic chloride standard of 230 mg/L was exceeded on multiple occasions.

In addition to exceedences shown on the graph below, the following were predicted:

- 659 mg/L on 12/26/2013 (calculated)
- 417 mg/L on 3/11/2014 (calculated)

**Results Through December 2013<sup>3</sup>:**



<sup>1</sup> All data in SWIMS as of 8/26/2014 were downloaded

<sup>2</sup> Source: EPA. 1988. Ambient Water Quality Criteria for Chloride. EPA 440/6-88-001.

<sup>3</sup> Calculated chloride:  $\text{Cl} = 0.242 \times \text{SC} - 115.2$   $\text{adjR}^2 = 0.8$ , except when  $\text{SC} > 2250$ , then  $\text{Cl} = 0.346 \times \text{SC} - 309.8$ ,  $\text{adjR}^2 = 0.97$