Sources of Salt to Lake Wingra

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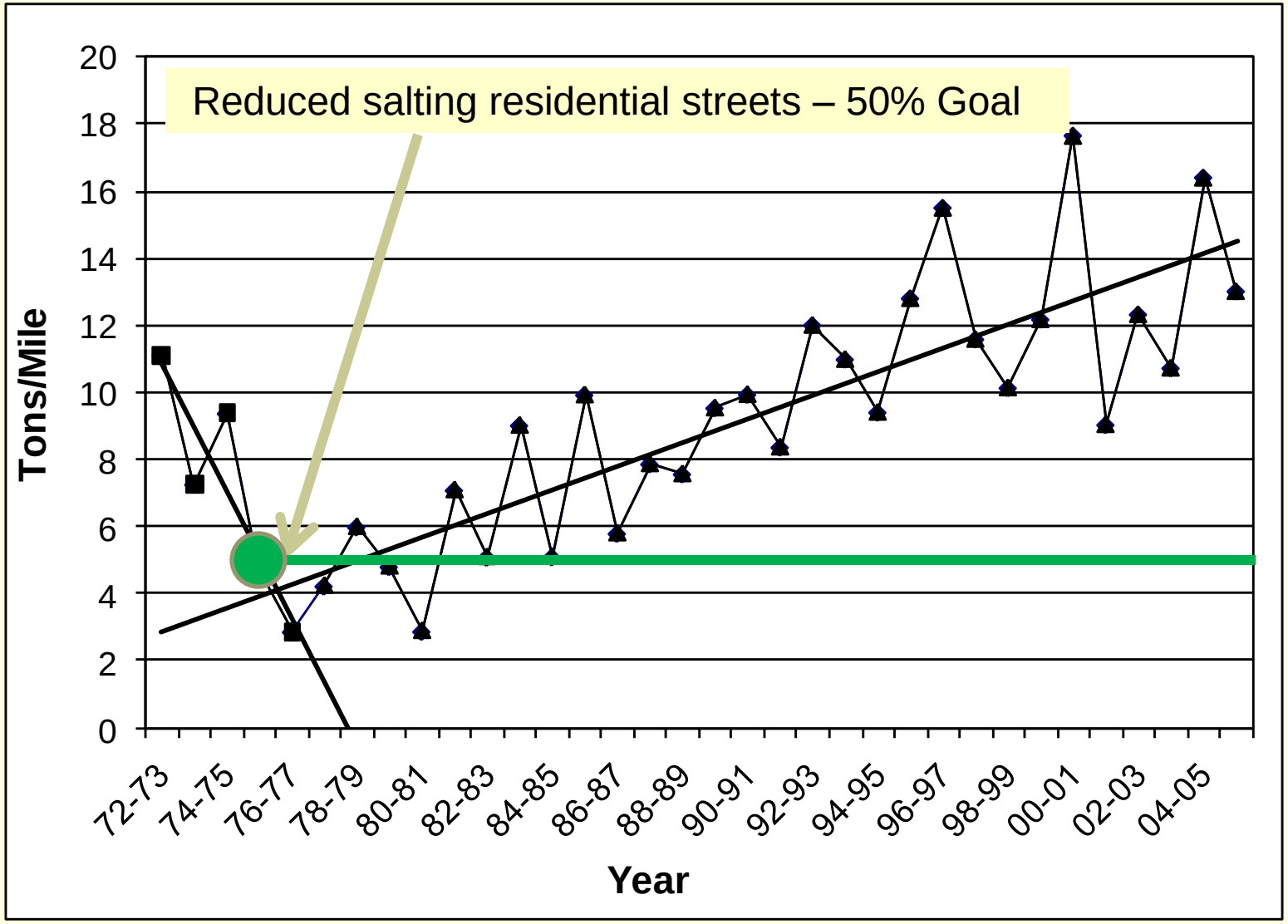
November 19, 2012

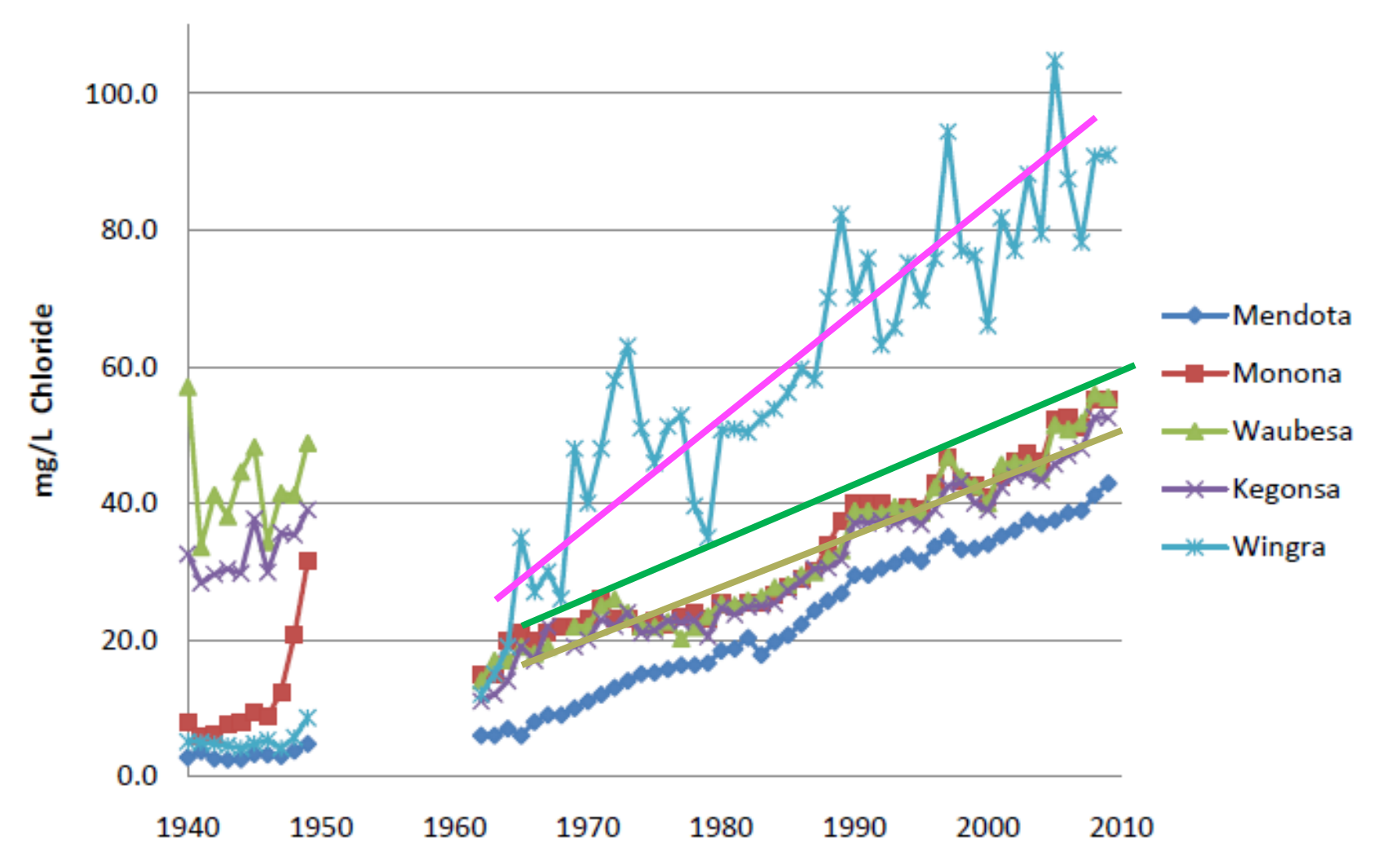
Reduce Salt Use By 50% - Limited Salt on Residential Streets. Extend to Entire City in 1977

Lake Wingra – 6 sq. mi. Watershed

Salt Use Per Mile of Maintained Street in Madison, Wisconsin



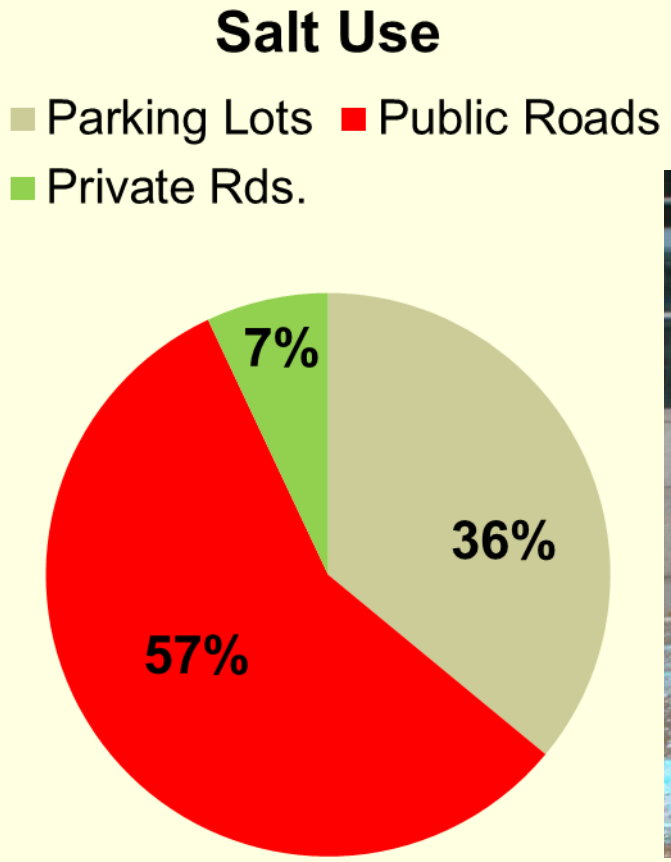
Chloride in the Madison-Area Lakes: The Yahara Chain – WDNR Chronic = 395 mg/l and Acute = 757 mg/l Chloride



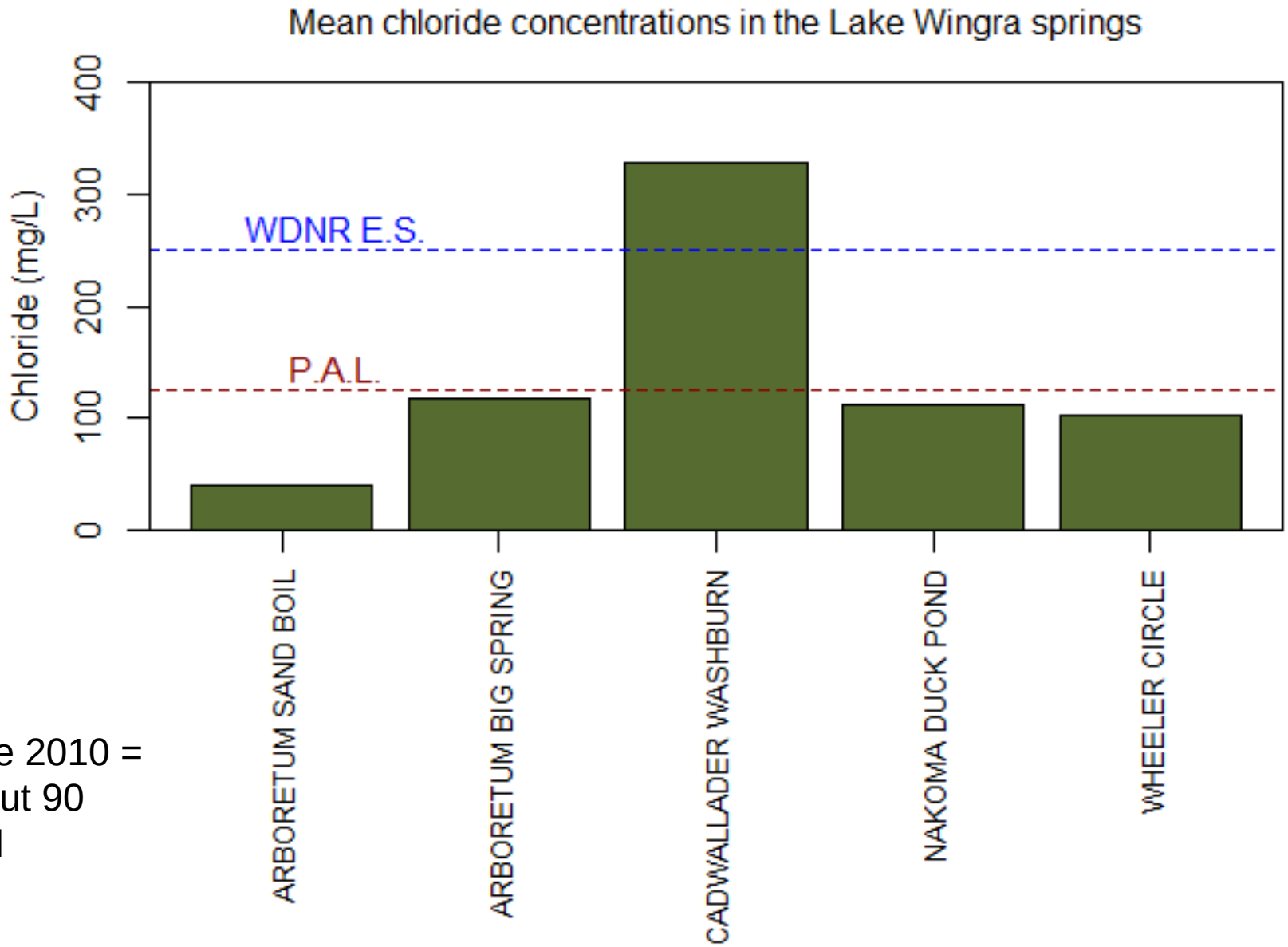
Private Applicators Use Almost the Same Amount of Salt on Parking Lots as the City uses on City Streets

Assumptions: 0.14 tons\acre x 3200 acres x 20 events = 9000 tons

Salt Use Breakdown in New Hamshire Study




• Arboretum Big Spring
• Nakoma Duck Pond Spring
• Arboretum Sand Boil
• Wheeler Circle Spring
• Cadwallder Washburn Spring



Lake 2010 = About 90 mg/l

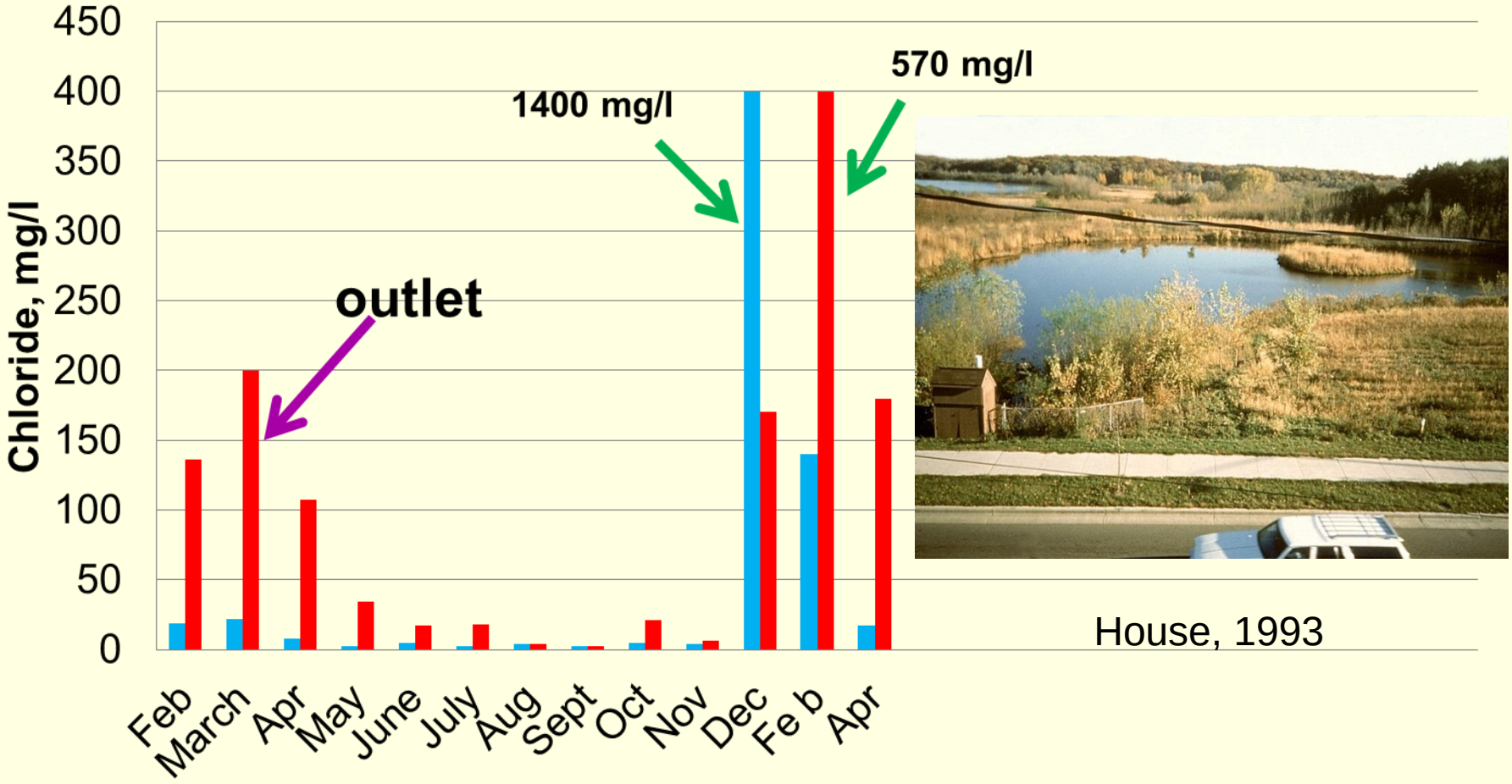
What is Next?

- Keep monitoring springs
- Monitor Lake in Spring
- Monitor Rural Spring
- Demonstrate Managment

Annual Chloride Load to Lake Wingra from Storm Sewers and Springs

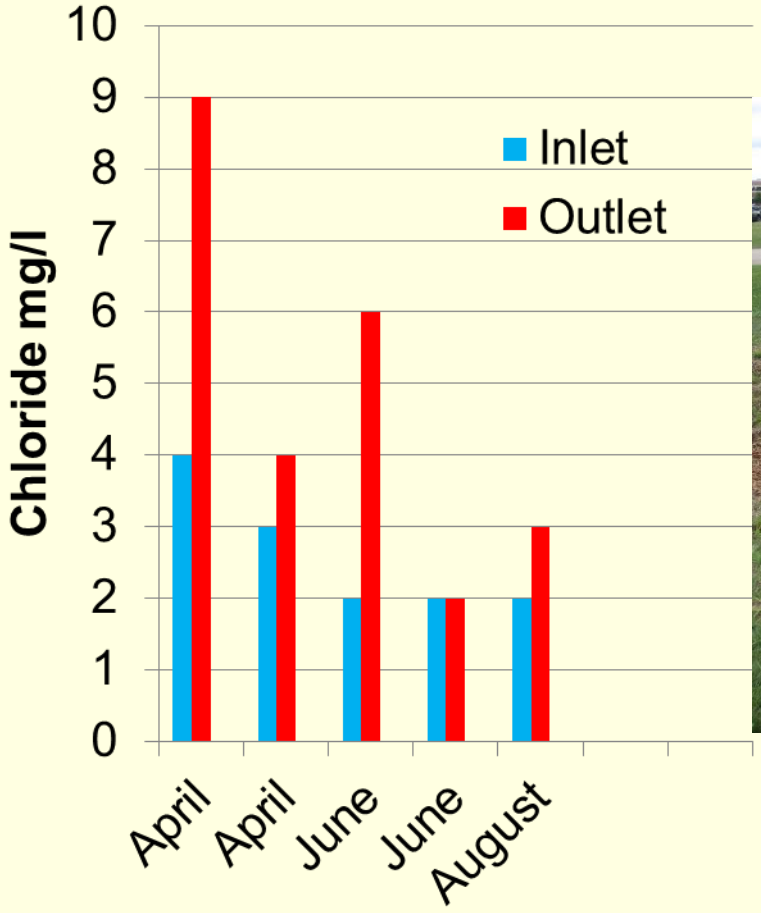
Source	Annual Volume, CF	Median Conc., mg/l	Average Conc., mg/l	Annual Load, lbs.	
				Median	Average
Storms Sewers	65,000,000	10	65	40,000	264,000
Springs	8,000,000	100	100	50,000	50,000
Springs as % of Total				55%	16%

Inlet and Outlet Chloride Concentrations- Monroe St. Wet Pond Feb 1987 to April 1988



House, 1993

Bioretention Inlet and Outlet Chloride Concentrations – Neenah 2011



We Can Buy Some Time - But in the Longterm Need to Find Alternatives and Adjust Public Expectations

Beet Juice Added to Brine