

Are You Salt Wise?

By Catherine Harris, Pollution Prevention Specialist, Madison Metropolitan Sewerage District

As winter comes to an end and we welcome spring, you might wonder what happened to all the salt that had been applied. The WI Salt Wise Partnership (WI SaltWise) is reaching out to help people across Dane County to answer this question. Attending community events, hosting road salt application trainings, water softener optimization trainings, offering grant funding, working with local governments and getting involved in local media, since the group's formation in 2014, WI Salt Wise is hoping to get the word out about salt and its impacts so that everyone can start to make small changes to help protect water quality.

Salt is not something that readily comes to mind when thinking about water quality, often forgotten as it seemingly invisibly disappears when it dissolves into its components (sodium and chloride) in water. Increasing concentrations and corresponding impacts on area surface and ground waters have been well documented by WI Salt Wise partner, Dane County Department of Public Health in their Annual Road Salt Reports, dating back to their first publication in 2009.

Rising levels of chloride (a component of salt) are of concern for streams and lakes in that high concentration of chloride interferes with fish species reproduction and plant growth. High concentrations can also impact drinking water wells adversely.

**Salt is not just a problem in winter:
New water softeners use 25 - 50% less salt!**

Primary sources of chloride to local fresh waters are from winter road salt use and from home water softeners (via discharge at the wastewater treatment plant and septic systems).

It is estimated that 669,807 tons (equivalent to over 121,000 elephants!) of salt was used on WI roadways last year. As rains wash pavements and snow melts, dissolved salt is carried to rivers lakes streams and groundwater either directly or via storm and sanitary sewers.

In addition to road salt runoff and infiltration, salt used in industrial processes and in individual homes for water softening gets passed back to the environment via wastewater discharge, since wastewater treatment plants are not designed to treat for chloride. It is estimated that over 80 million pounds of salt annually makes its way into the Rock River via the Madison Metropolitan Sewerage District's discharges into Badfish Creek and Badger Mill Creek alone.

As with many water quality challenges, sources of salt pollution are numerous and diffuse; these challenges require broad solutions involving many different approaches and partners to come together for the common interests of water quality and public health. The Salt Wise Partnership is just that. Including the Public Health & Land and Water Resources Departments of Dane County, the Madison Water Utility, the Madison Metropolitan Sewerage District, the Wisconsin DOT, the City of Madison and the Capital Area Regional Planning Commission, Ripple Effects, and UW-Madison, and a variety of local watershed friends' groups; the Wis. Salt Wise Partnership is encouraging improved salt use. The key message from the Salt Wise Partnership is to be more efficient with salt – to be saltwise, not necessarily to eliminate salt use entirely, but to increase efficiency. Salt is relatively cheap, therefore overuse can often go undetected.

As a result of Salt Wise conversations, some municipalities are already leading the way in increasing their salt efficiency with improved, scientific winter maintenance best practices, like using anti-icing (lines on pavement in winter), appropriate salt/sand mixing practices, calibrating applicators and switching to a different deicer (besides rock salt) when it the temperature is below fifteen degrees (and NaCl chemically won't be effective). Some industries are showing they are salt wise too by making changes to their operations which have prevented thousands of pounds of salt from reaching water, while also making significant monetary savings too.



Individuals can take actions too, in both reducing their winter salt use and year round indoor use with their water softeners to protect water quality: in the home, calling a water quality professional to optimize a home or businesses water softener or replacing a 15 year old (or older) softener with a newer, more efficient model can reduce the amount of salt going down the drain daily by 25-50%. Outdoors, 'walking

like a penguin' to take it slow in winter conditions and shoveling early to prevent the need for putting salt down, can make big changes when everyone contributes.

To learn more and keep up to date with the Salt Wise Partnership, you can visit www.wisaltwise.com, follow the Salt Wise page on Facebook, Twitter, YouTube, or visit <http://www.madsewer.org/Programs-Initiatives/Chloride-Reduction> to learn more about what you can do.

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