

Mille Lacs Lake Watershed  
Management Group

[www.millelacswatershed.org](http://www.millelacswatershed.org)

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## TOPIC OF THE MONTH - DECEMBER 2016

### 10 smart salting tips that protect Minnesota waters

As Minnesota endures heavy snowfall and bitter cold temperatures, most of us will rely on a crucial tool to clear the roads and sidewalks: salt. It is estimated that we toss more than 350,000 tons of salt on the metro area roads alone annually.

The Minnesota Pollution Control Agency (MPCA) recommends a low-salt diet for our lakes, streams, and rivers. Rock salt, which contains chloride, is the most commonly used de-icer. But, much like table salt, rock salt's benefits are peppered with danger. Salt helps keep our roads free from ice and safe for drivers, but can have the opposite effect on the nearby environment. Its public safety benefits come with environmental drawbacks like polluted waters and poisoned aquatic wildlife. Governor Mark Dayton has declared a Year of Water Action in Minnesota, which makes this winter an ideal time to learn more about the impact of salt on Minnesota's lakes and streams.

#### How does salt get into the water?

The primary source of chloride, particularly in urban areas, is salt applied in the winter months to roads, parking lots and sidewalks. A secondary source of chloride, particularly in more rural areas, is water softeners.

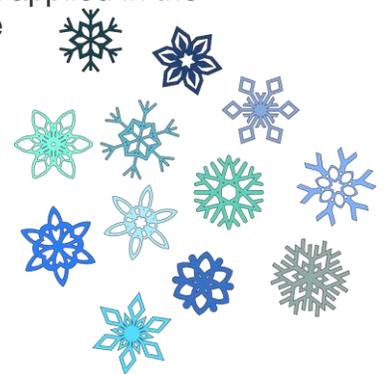
The state of Minnesota has thousands of miles of roads to maintain and managing ice and snow is necessary to the safety of residents. The use of salt, primarily sodium chloride, is currently the common method for ice control during the winter. However, when snow and ice melt, the salt goes with it, washing into our lakes, streams, rivers, wetlands and groundwater.

#### Why does it matter?

High levels of salt can be harmful to fish and other freshwater aquatic life and can also negatively affect infrastructure, vehicles, plants, soil, pets, wildlife as well as groundwater and drinking water supplies.

Roughly 75% of Minnesotans rely on groundwater for their drinking water. The MPCA has found 30% of the shallow monitoring wells, often in urban areas, have exceeded the state standard for salt levels. As water moves from shallow to deeper aquifers, the salt contamination could penetrate our sources of drinking water.

Once in the water, chloride becomes a permanent pollutant and continues to accumulate in the environment over time. The only known method of removing chloride in groundwater and wastewater is through reverse osmosis, which can be a costly and challenging large scale treatment process.



## What is happening with salt in the water?

There are currently 47 waterbodies in Minnesota that tested above the water quality standard for chloride, with 39 in the metro. An additional 39 surface waters in the metro are near the chloride standard and many others are unknown. The data show that salt concentrations are continuing to increase in both surface waters and groundwater across the state.

## How can you make a difference?

How can we protect our waters, maintain safe roads in the winter and have desirable water in our homes? Currently, there are not environmentally safe, effective and inexpensive alternatives to salt. However, we can reduce salt at the source through smart salting application strategies. Smart salting will also save money as well as reduce damage to infrastructure, vehicles, plants and water supplies.

Each person contributes to the attitudes and practices that have created a high and steadily growing volume of salt to be used each year. Shifting public attitude toward more sustainable salt application is required to meet demands. You can do your part to prevent chloride pollution by following these simple tips.

## Winter Safety – a few ideas to reduce salt use

- Support local and state winter maintenance crews in their efforts to reduce their salt use.
- Work together with local government, businesses, schools, churches and non-profits to find ways to reduce salt use in your community. Shovel. The more snow and ice you remove manually, the less salt you will have to use and the more effective it will be.
- 15 degrees F is too cold for salt. Most salts stop working at this temperature. Use sand instead for traction, but remember that sand does not melt ice.
- Slow down. Drive for the conditions and make sure to give plow drivers plenty of space to do their work. Consider purchasing winter (snow) tires.
- Be patient. Just because you don't see salt on the road doesn't mean it hasn't been applied. These products take time to work.
- Apply less. More salt does not mean more melting. Use less than 4 pounds of salt per 1,000 square feet. One pound of salt is approximately a heaping 12-ounce coffee mug. Leave about a 3-inch space between granules. Consider purchasing a hand-held spreader to help you apply a consistent amount.
- Sweep up extra. If salt or sand is visible on dry pavement it is no longer doing any work and will be washed away. Use this salt or sand somewhere else or throw it away.
- Watch a video. This video, produced by the Mississippi Watershed Management Organization, provides tips to homeowners about more environmentally friendly snow and ice removal: [Improved Winter Maintenance: Good Choices for Clean Water](#)
- For more information about Governor Dayton's Year of Water Action, visit [mn.gov/governor](http://mn.gov/governor).

