



Approved by Policy Committee on 12/08/2017
Approved by Clean Water Council on 12/18/2017

Clean Water Council

De-icing Chloride Reduction Policy

Policy Statement

The Clean Water Council recommends that the State establish the following to reduce chloride in Minnesota surface and ground water:

Winter de-icing:

- Fully fund the **Smart Salting** applicator training and certification program, and technical support aimed at reducing salt use.
- Provide liability protection for the **Smart Salting** program certified private winter de-icing applicators for reduced salt applications.
- Provide research funds to develop new technology and alternatives to chloride-containing de-icing chemicals, and best management practices.

Problem

Chloride is a naturally occurring ion found in low levels in Minnesota surface and ground water. Salt used for winter de-icing and water softening - contain chloride. Chloride is not toxic in small concentrations. However, above 230 mg per liter (about one teaspoon in 5 gallons of water), chloride becomes toxic to freshwater fish and other aquatic life under long-term exposure. Once chloride enters our surface water (lakes, streams, and wetlands) and groundwater, it is not feasible and extremely expensive to remove it.

Two primary sources of chloride in Minnesota waters are:

- winter de-icing salts and
- salt used for residential water softening systems.

Winter de-icing salts

In the Twin Cities Metro Area (TCMA) winter maintenance activities use approximately 365,000 tons of road salt per year. The de-icing salts eventually wash into nearby lakes, streams and wetlands. Recent monitoring shows increasing chloride concentrations in surface water and shallow groundwater. Since it is very difficult and expensive to remove chloride from our surface and groundwater once it gets into water, reducing chloride at the source is necessary.

Solution

Reducing chloride use during winter De-icing:

1. Continue the **Smart Salting** applicator training and certification program:

The MPCA has a training program for private and public salt applicators, such as snow removal contractors and snowplow drivers. This has been a very successful program and has assisted winter maintenance programs in reducing salt application rates by 30% to 70%, without compromising public safety. The [TCMA Chloride Management Plan](#) includes the **Smart Salting** training program as the top implementation strategy to reduce salt use in the winter. In the past, MPCA conducted this

training with federal funds, but those funds are temporary. The estimated operating cost for the training program is \$228,000/year. To qualify for the liability protection to private salt applicators, the applicator must complete *Smart Salting* training program to be certified.

2. **Provide liability protection to certified private salt applicators against slip and fall lawsuits:** The notion here is that private applicators certified through the *Smart Salting* program would be able to apply for liability protection. The private applicator industry and local stakeholders strongly support this proposal. Various groups introduced bills to this effect in the last two legislative sessions; however, none was enacted into law.
3. **Research funding.** Make research funds available to develop new technology and alternatives to chloride-containing de-icing chemicals. Research on new technologies and alternative de-icing solutions may allow for a shift in snow and ice management that protect water resources while maintaining public safety. A full list of needed research areas can be found in Section 5 of the [TCMA Chloride Management Plan](#).