



# A Low-Salt Diet for Lakes & Streams

Many streams and lakes in the metro area have elevated chloride concentrations in their waters, and state and federal agencies now recognize that chloride contamination of waters is a major issue throughout the “Snow Belt.”

The source of this chloride? Most of it comes from road salt. Road authorities such as cities, counties, and state transportation departments apply road salt throughout the winter season to control ice buildup on roads.

## Where does the chloride come from?

We have high expectations for snow and ice control in Minnesota. Our snowplow operators take pride in clearing streets and highways as quickly and efficiently as possible. We expect our roadways and parking lots to be cleared to pavement and ice-free within a very short time after a snowstorm concludes. To accomplish this, snowplow operators use a lot of salt. The most common form of road salt is sodium chloride. All that salt has to go somewhere and where it goes is into our lakes, streams, and wetlands.

## How much is too much?

Excessive chloride in our lakes and streams stresses fish and other aquatic life. Prolonged exposure to chloride concentrations as low as 230 mg/L can harm aquatic organisms. Using too much road salt has other impacts. The corrosive salt causes cars and other metals to rust and bridges to deteriorate. Salt spray damages lawns, trees, and other vegetation. Eventually the salt works its way into our groundwater, where it can contaminate our drinking water.

## How does deicing salt work?

Salt lowers the freezing point of water, prohibiting the molecular bond of H<sub>2</sub>O from occurring. Sprinkling salt on an icy road or sidewalk turns snow and ice into brine (salty water).

## What can I do?

There are a growing number of alternatives that are chloride-free or that work faster so less can be used. If you only need to keep a small area clear these might be good options. During winter thaws and in the spring-time, sweep up any salt and sand residue and dispose of it in the trash.

Everyone who adds chloride to the environment needs to rethink their practices. The best thing you can do is to use salt smarter. Don't use salt routinely—use it only when necessary. Learn how salt works, and you will use less salt to control ice.

## When should I use salt, and how much?

Use deicers to make snow and ice removal easier, not to melt them away. Remove as much snow and ice using other means first, then use salt (or an alternative deicer) to break down remaining ice buildup.

Use just enough deicer to melt through the snow and ice and leave a “honeycomb” pattern of melt holes. This will break the bond between the ice and the pavement so a plow, shovel or flat hoe can slide underneath.

If you need traction in an icy spot, use sand instead of salt, or mix a small amount of salt into a larger amount of sand.