

Other Good Salting Tips

Select the Right Salt Product

Not all products work at all temperatures. Follow this table to decide which deicing products to use when. *Please note the temperatures referenced refer to pavement temperatures.*

Melting Agent	Lowest Melting Temp	Things to Know
Urea	20°F	Promotes algae growth in waterways; over-application can harm plants; slow-acting; relatively pet-safe
Sodium Chloride (NaCl)	15°F	Harmful to plants; harmful to concrete; very corrosive to metal; cheap and abundant
Magnesium Chloride (MgCl ₂)	-10°F	Harmful to plants; corrosive to metal; relatively high-cost
Potassium Acetate (KAc)	-15°F	Can cause surface slickness; lowers oxygen levels in waterways; biodegradable; relatively high-cost
Calcium Chloride (CaCl ₂)	-20°F	Corrosive to metal; leaves slimy residue; less harmful to concrete
Sand	No melting	Provides traction only; potential pollutant; can be swept up & re-used

Table from the Mississippi Watershed Management Organization

Scatter Properly & Sweep Up

There should be a 3-inch spacing between salt granules, as shown in the front cover photo (bottom left). If you use sand or have leftover salt, sweep it up and reuse it.

Smart Salting Conversations

for places of worship & other facilities



Brochure Created By:
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Salt is a pollutant

Chloride salts such as sodium chloride (rock salt), magnesium chloride, and calcium chloride are all used as ice melting products. The problem with using these to melt ice is that salt almost permanently pollutes water. It only takes a teaspoon of salt to pollute 5 gallons of water.

Currently 12 streams in the Twin Cities have chloride levels too high to meet standards designed to protect fish and other aquatic life. A number of other water bodies have chloride levels near the standards.



PC: "Shingle Creek-Centennial Park, Minnesota"- Tony Webster, Flickr
A picture of Shingle Creek in Brooklyn Center. Shingle Creek isn't meeting standards for chlorides.

Salt has also contaminated groundwater in parts of the state; thirty percent of Twin Cities wells exceed chloride standards. This isn't a health issue but does affect taste.

Other issues with salt



Plants near roads can be killed by salt hitting them or getting into water they use, as shown in the photo on the left from Bill Cook, Michigan State University Extension.

Chloride corrodes road surfaces and bridges, increasing maintenance and repair costs. Salt-laden soil can lose its ability to retain water and store nutrients, making it more prone to erosion and sediment runoff (which also harms water quality).

Salt Reduction Success Story

Pax Christi Catholic Community

In order to avoid damaging their new concrete, Pax Christi Catholic Community in Eden Prairie adopted low-salt winter maintenance practices. These practices were so successful that they continued to implement them even after the new concrete was no longer in danger of salt damage.

Broom Sweeper

Pax Christi got a broom sweeper to remove snow from their sidewalks. By keeping up with the snow, they were often able to clear to the pavement without using salt.



Credit: "HB580 Sidewalk Snow Broom" from the Sunset Outdoor Supply website

Moving Salt Bucket

Pax Christi moved their salt buckets out of their entryways. This helped cut down on congregation members accidentally over-applying salt.



Record Keeping

Pax Christi kept careful records of their snow and ice removal practices. This let them optimize their practices & use less salt.

Brochure References

Salt Solutions Workshop 1/8/19: Organized by Nine Mile Creek WD, Riley Purgatory Bluff Creek WD, Minnehaha Creek WD & the City of Minnetonka. Minnesota Pollution Control Agency 2018, *Chloride 101*, accessed 9 April 2019, <<https://www.pca.state.mn.us/water/chloride-101>>.

Front Cover Photos- Top and bottom right: Clean Water MN. Bottom left: Scott Andre.