

Clean Water Winter Practices

WHY DOES IT MATTER?

One teaspoon of salt permanently pollutes **5 gallons** of water. There is no such thing as “environmentally safe” de-icer; every method has a drawback. Proper application and attentiveness is the best way to keep our surfaces safe while keeping our lakes on a “**low-salt**” diet.

SHOVEL AND SCRAPE

- Clear walkways and other areas before the snow turns to ice. Salt is not an effective strategy for fresh snow.
- A well-equipped winter arsenal includes a variety of shovels and scrapers. New tools are increasingly available, including propane ice torches.



TEMPERATURE

- When pavement temperature is below 15 degrees, salt loses much of its effectiveness.
- At colder temperatures, consider using a brine (salt+water mix) or sand for traction.
- Buy the right product for your needs. Check labels for specific ingredients and temperature ranges.

Pavement temp. °F	Rock salt (NaCl) melt times
30°	5 min.
25°	10 min.
20°	20 min.
15°	1 hour
10°	N/A
Chemical: Check package	Lowest practical melting temp.
CaCl ₂ (Calcium Chloride)	- 20 °F
KAC (Potassium Acetate)	- 15 °F
MgCl ₂ (Magnesium Chloride)	- 10 °F
NaCl (Sodium Chloride/rock salt)	15 °F
CMA (Calcium Magnesium Acetate)	20 °F
Blends	Check with manufacturer

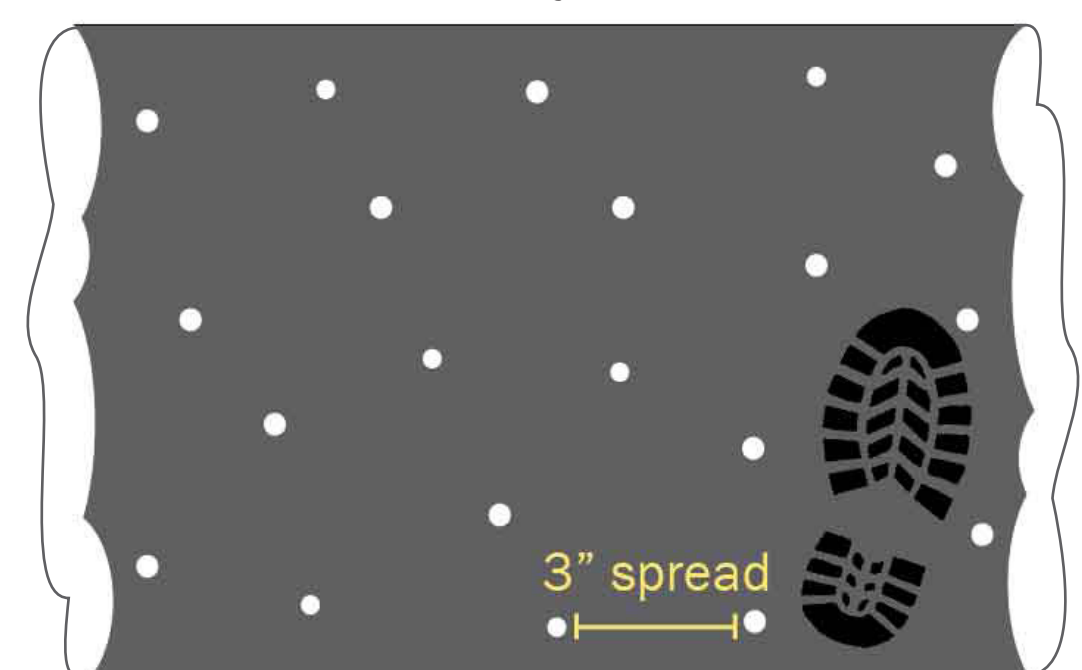
Dry salt is ineffective and will blow away before it melts ice. Sand and abrasives provide traction but don't melt. Clean-up required.

CLEAN-UP

- Sweep up extra salt or sand when pavement is dry.
- Store de-icer products in airtight containers to maintain maximum effectiveness.
- Wipe pet's paws when they come in from outside to prevent salt from irritating their skin.

APPLYING DE-ICER

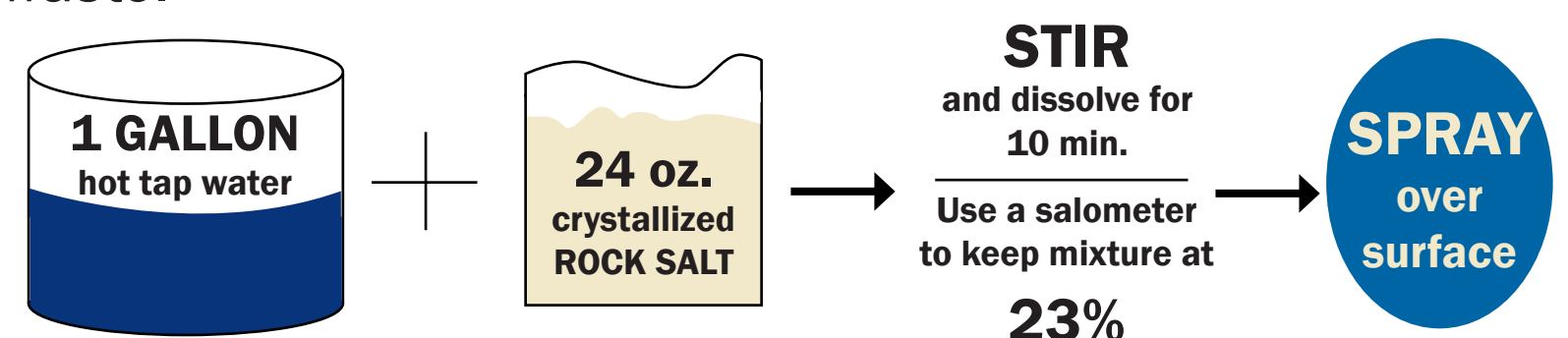
- More salt doesn't make a surface safer - the chemical reaction is the same when properly applied.
- 1 pound of salt fits in a **12 ounce coffee mug**, and is enough to cover **2 parking spaces**.
- Spot-treat in critical areas, and use the least amount necessary.
- Use less than **4 pounds** of salt per **1,000 square feet**. An average parking space is about 150 square feet - an average driveway is about 4 parking spaces (600 sq ft). Just over two cups should cover an average driveway, but with spot-treatment, less may be needed.



Disperse salt evenly without piles

PRE-TREATMENT

Applying a pre-treatment before a storm hits prevents ice from building up. To pre-treat with a brine, dissolve salt in hot water and apply it with a watering can. Brines also work as post-treatment, work quicker, and result in less waste.



WORKING WITH CONTRACTORS

- Discuss expectations with contractors and service providers.
- Seek contractors who are certified in winter maintenance with the MPCA: <https://www.pca.state.mn.us/water/training>. If your current provider doesn't have this certification, encourage them to obtain it.
- Ensure there is a plan for what equipment is used and how it will be calibrated.
- Ensure that mechanical methods are used first, with an understanding of how various de-icer products work at different temperatures and conditions.
- Alert your contractor when too much salt has been applied.

Thank you for protecting our water!

