

SMART SALTING

For Clean Water

WHY PRACTICE SMART SALTING?

One teaspoon of salt permanently pollutes **5 gallons** of water. Salt runs off of paved surfaces and settles in lakes, wetlands, and soil. This disturbs fish habitat and raises risk for surface and groundwater impairments now and in the future. Slow down and observe site needs to keep our surfaces safe while avoiding excess.

Help make careful application a norm.

SHOVEL AND SCRAPE:

- Shovel and scrape first to reduce the need for de-icer.
- Clear walkways and other areas before compacted snow turns into ice.
- Keep a variety of shovels and scrapers in a convenient location.



Photo: WCCO

TEMPERATURE:

- Rock salt loses effectiveness when temperature drops below 15° F.
- Use sand or grit for traction in colder temperatures and sweep up when no longer needed.
- Buy the right product. 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 → Dry salt is ineffective. Risk for blowing or getting kicked off surface.
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

Sand and abrasives provide traction but don't melt. Clean-up required.

WORKING WITH CONTRACTORS:

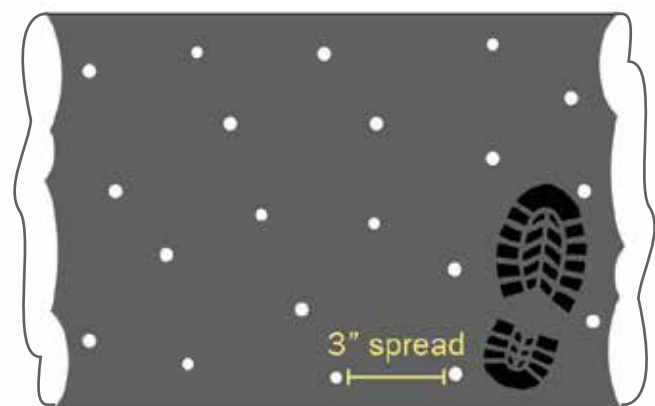
- Discuss expectations early on or before winter.
- Seek contractors who are certified in winter maintenance with the MPCA: <https://www.pca.state.mn.us/water/training> If your current provider isn't certified, encourage them to obtain it and adapt smart salting practices.
- Ensure there is a plan for equipment use and calibration.
- Use mechanical methods first. Understand how various de-icer products work at different temperatures and conditions.
- Alert your contractor when too much salt has been applied.

DE-ICING DON'Ts:

- Don't apply more assuming it will work faster. The chemical reaction takes the same amount of time.
- Don't apply on a warm day - melting ice can get diluted with water and become ineffective.
- Don't apply salt to loose snow.
- Don't apply dry salt to dry pavement.
- Don't leave salt on the ground after ice has melted.

DE-ICING DOs:

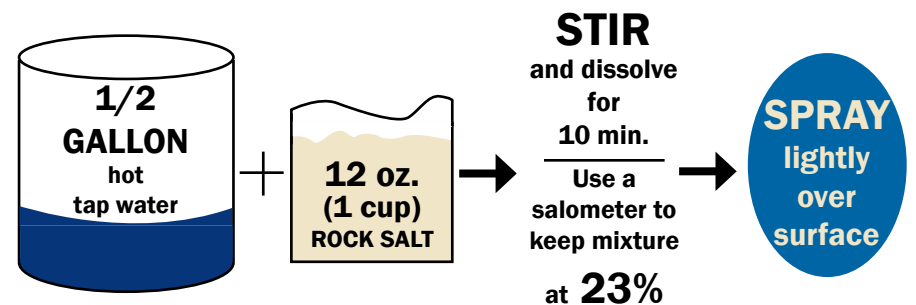
- Practice spot treatment for high use areas.
- Use a proper application rate then adjust if needed. A **12 oz coffee mug** holds ~1 lb. of salt. **1/2 - 2/3 of a coffee mug covers 1 parking space.**
- Store de-icer products in an airtight container to maintain effectiveness.
- Use salt as a tool to break-up ice and break the bond to pavement. This makes shoveling and scraping easier.
- Sweep up, store, and re-use salt that remains after ice has melted.
- Spread salt crystals to land with a 3" spread.
- Create a plan before winter with a variety of tools and products. Use sand or grit for quick, reliable traction.



Disperse salt evenly without piles

PRE-TREATMENT:

Applying a pre-treatment brine (salt + water) before a storm can prevent ice from bonding to a surface. To pre-treat, dissolve salt in hot water and apply it with a watering can or pump sprayer in high traffic areas or sloped walkways high risk for falls. Strive for 50-70% coverage. Apply carefully, liquid salt can't be swept up like dry salt.



Thank you for keeping our lakes on a "low-salt" diet.

