SALT AND DEICER COMPARISON

Salt and deicing chemicals only work in certain temperature ranges. For example, salt (sodium chloride) will not melt ice below 15°F.

Below is a chart comparing some common deicers. Remember: All of these are harmful to the environment.

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 (MgCl2)	-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 (CaCl2)	-20°F	Corrosive to metal; leaves slimy residue; less harmful to concrete
Sand	No melting	Provides traction only; potential pollutant; can be swept up and re-used

**Refers to pavement temperature, which may differ from air temperature.*

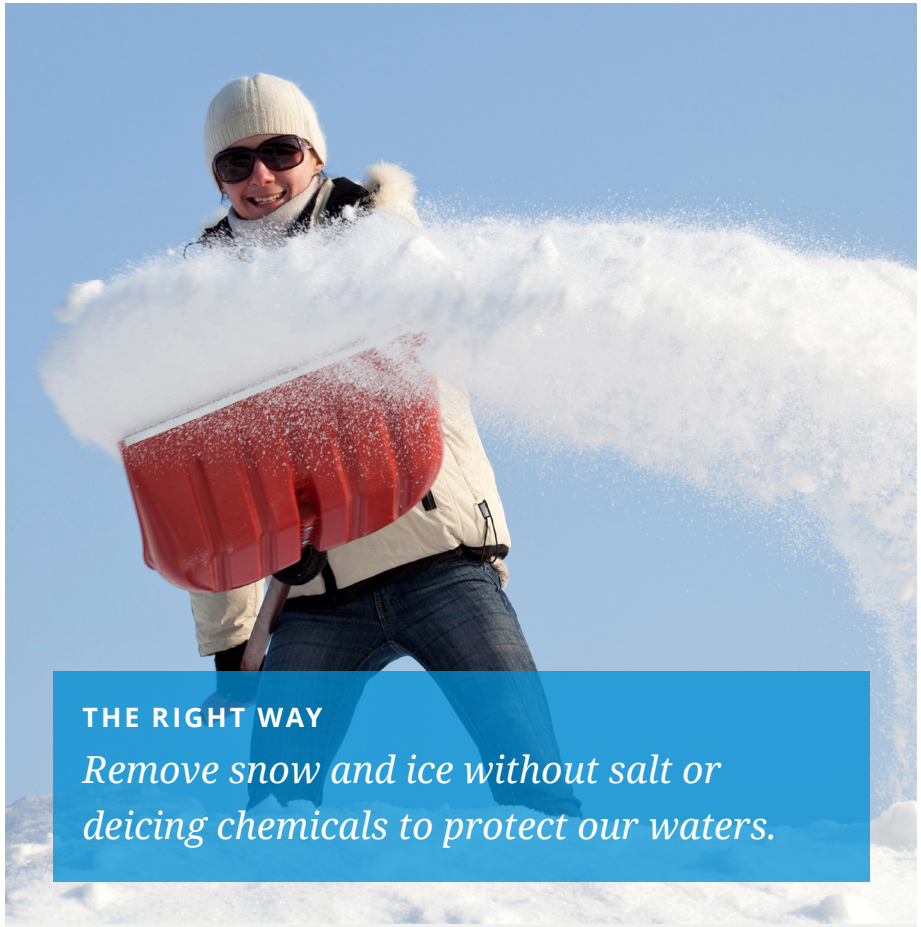
CONNECT WITH US

Mississippi Watershed Management Organization
2522 Marshall Street NE, Minneapolis, MN 55418-3329
612-746-4970 / mwmo.org

Protect it. Pass it on.
MISSISSIPPI WATERSHED MANAGEMENT ORGANIZATION

Fight Snow and Ice, Pollution-Free

A guide for keeping sidewalks, parking lots, and driveways ice-free without harming water quality



THE RIGHT WAY

Remove snow and ice without salt or deicing chemicals to protect our waters.

DID YOU KNOW that many Minnesota waterbodies are contaminated with chloride? This toxic chemical comes from the salt and deicers we use to keep ice off roads and other surfaces in winter. We can reduce this dangerous pollution and save money by using less salt and other chemical deicers.

A SALTY MESS

Just one teaspoon of salt is enough to pollute five gallons of water — forever.

Salt and deicers contain chloride, which is toxic to fish and plants. When the snow and ice melt, the chloride travels through stormdrains into our rivers and lakes. Once there, it's nearly impossible to remove.

Photo: Minnesota Pollution Control Agency

SHOVEL, SCRAPE, REPEAT

The best way to remove snow and ice is the old-fashioned way: clear the snow and scrape or chisel away the ice. Avoid ice buildup by shoveling early and often and redirecting downspouts away from hard surfaces.

DON'T LET SNOW GET COMPACTED

Don't wait until the storm is over: Try to get out and shovel once or twice before the snow piles up and becomes compacted. Compacted snow is heavy, slippery and hard to separate from the pavement.

CHOOSE THE RIGHT TOOL

There are many kinds of snow and ice, so don't limit yourself to just one tool for removing them. Your local hardware store likely carries a variety of push shovels, scoop shovels, ice chisels and ice scrapers.

THE TRUTH ABOUT SALT

There is no such thing as an environmentally friendly salt or deicer. All such chemicals cause damage to our waterbodies, plants, wildlife and infrastructure. You should avoid using them as much as possible.

WHEN TO USE SALT

If you must apply salt or deicer, do it after the storm is finished. Clear off any loose and/or compacted snow first. Apply the product on ice only; do not apply it on dry pavement.

Temperatures often drop after a snowstorm, so double-check the label on your salt or deicer product to make sure it will work before you apply it. Rock salt doesn't work below 15°F.

Photo: MPCA

HOW MUCH SALT TO USE

More salt does not equal faster melting — just more pollution and wasted money.

Shoot for a 3-inch spread between salt granules. For $10–$20, a hand spreader can make the job easier and more accurate. To be more exact, try to apply no more than 1 pound per 250 square feet of pavement. (*Tip: A regular-size coffee mug typically holds about 1 pound of salt.*)

WHAT ABOUT SAND?

Use sand when it's too cold for salt to work. Sprinkle just enough to provide traction on walkways. Sweep up any excess after the ice melts so that it doesn't get carried into stormdrains. (Sand pollutes too.)

Don't bother mixing sand and salt together. They serve two completely different purposes. Sand is useless in wet, melting snow and slush.