

## Best Maintenance Practices for Clear Pavement & Clean Water

1. **Get to know your site.** Before it snows, mark any hazards, identify your snow storage site (not in ponds or wetlands or stormwater treatment basins), and measure your treatment area so you can estimate deicer needs. If possible, repair drainage problems that result in excess ice.
2. **Focus on mechanical removal rather than chemical melting.** Always plow, shovel or blow or brush off snow before applying deicers. It will require a lot less chemical. Get out there as soon as possible before car or foot traffic compacts the snow and it bonds to the pavement.
3. **Match your deicers to the conditions.** Road salt (NaCl) has a working temperature of 15° F. When pavement temperatures are colder, choose a chemical with a lower working temperature such as magnesium or calcium chloride or a blend. Check pavement temperatures before applying deicers to help you decide the appropriate deicer. Infrared temperature sensors can be purchased from auto parts stores. When it is really cold, use sand to provide temporary traction.
4. **Calibrate your equipment.** You won't know how much you are applying unless you calibrate your equipment. Calibration allows you to determine how much salt is applied at each setting. You should calibrate each piece of equipment annually or when there is some repairs. You can calibrate all types of equipment including sanders, tailgate spreaders, push spreaders and sprayers.
5. **Use just the right amount of deicer.** Don't apply more salt than is needed. Use application rate guidelines such as those listed on the MPCA web site in the Winter Parking Lot and Sidewalk Maintenance Manual to help you determine how much chemical is needed. Excess salt wastes money, harms our surface and groundwater, damages infrastructure and automobiles, will be tracked into buildings and damage flooring, and can be a slipping hazard.
6. **Keep deicers on target.** Measure the spread width of your spreader and match the equipment to your site. Use guards along sidewalks to avoid spreading on turfgrass or plantings. Plug gaps or use shields on equipment to prevent salt leakage. Don't overfill, and cover your load when travelling. Clean up spills. Your customers, the plants, and the lakes will be happier.
7. **Be proactive and anti-ice.** Applying liquid deicers before the storm (known as anti-icing) will prevent a bond from forming between the pavement and ice so that it can easily be removed mechanically. Think about a greased pan. When you cook an egg in

a greased pan it will slide right out. It will stick to an ungreased pan.

- 8. Store salt and winter sand under cover and on an impervious surface.** Salt storage sites can contaminate ground and surface water. It is very important that you store your salt in a shed, in a portable storage container, or carefully tarped as well as on a concrete or asphalt surface. Make sure your snow storage area is not uphill from your salt storage area. Store liquids in double-walled containers or with secondary containment in case of spills.
- 9. Get the salt wet.** Wet salt will jump start the melting process and will stick on the surface where it is applied rather than bouncing off to the side. You can either buy pre-treated salt or add tanks to your equipment and spray liquid on the granular material as it is being spread.
- 10. Consider non-chemical options.** Non-chemical options such as heated pavement, porous pavement, narrower streets, solar roads, conductive pavement and many more become feasible when one considers the real cost of infrastructure, environmental and other damage caused by salt.
- 11. Get certified in winter best management practices.** Take a ½ day class, test and become certified in Level I Smart Salting which will help you improve your winter maintenance program and protect our waters. The class covers the practices listed above and more. Level II certification is the next step. Evaluate your organization's winter maintenance program using the Winter Maintenance Assessment tool found on the Minnesota Pollution Control Agency (MPCA) website and use the tool to help you identify what practices could be improved.

For more information on these tips and the certification programs, visit [www.pca.state.mn.us/roadsalt](http://www.pca.state.mn.us/roadsalt) and download the Winter Parking Lot and Sidewalk Maintenance Manual, and watch the videos. Check the training schedule for upcoming certification classes on winter maintenance. These classes are ½ to ¾ day long and will arm you with loads of information to help you improve your maintenance practices, reduce your salt use, protect water, and possibly save you money.

**Try implementing some of these practices this winter. You will use less salt, complete your work more efficiently and effectively, and protect Minnesota waters.**