Winter Maintenance: Thinking ahead to bypass the headache

Winter maintenance is an important topic because a variety of contractors, homeowners, and building staff do it out of necessity. With all of this representation, a shared understanding of the methods is key. Across the Twin Cities, many communities are striving to provide safe surfaces while also protecting freshwater. Here’s what you need to know to do your part on small sites such as driveways, sidewalks, and parking lots.

**The outline:**

* Remove snow and ice first
* Select materials and products based on conditions
* Apply de-icer at the proper amounts and using the proper spread pattern
* Understand how over application affects infrastructure and the environment

**Remove snow and ice first:** A cleared surface allows us to use de-icers at a much lower volume.

* Why not just throw a de-icer on snowy steps or sidewalks, especially if you’re in a hurry? This will actually create an icy, slushy situation that will risk re-freezing and call for more clean-up later.
* Early removal of snow reduces the chances of an icy, compacted surface.
* Ongoing sweeping and shoveling during a storm is also a great way to reduce layers of slush and compaction, and reduces the strenuousness of the shoveling after a storm. Do not apply de-icer during a storm.

**Select materials and products based on conditions:**

* If the temperature goes below 15°F, regular rock salt will be ineffective and risk getting lost into the environment. At temperatures below 15°F, use magnesium chloride, calcium chloride (check directions on package), or use sand for traction. After the storm, temperature often drops. Planning ahead by knowing what strategy you’ll take helps to avoid a desperate situation of over application.
* More de-icer doesn’t melt ice any faster.
* When salt, sand, or grit is on bare pavement, it should always be swept up. Used sand will have lost its traction, and should be thrown in the trash.
* If it’s a warm day and surfaces look wet, it is best to not use de-icers. This will only contribute to run-off and wasted product. If traction is needed in these situations, use sand or grit.

**Measure and apply the proper amounts:**

* 1 heaping coffee mug holds about 1 lb of de-icer. Get into the habit of estimating the size of the area you’ll treat before its urgent. Gather and organize tools so that smart choices are easy in the moment.
* An average parking space is about 150 sq ft, which would need about 1/2 of a coffee mug.
* A typical sidewalk curb-cut is about 60 sq ft, which would require about ¼ of a coffee mug.
* If you don’t know the size of an area, strive for the proper spread pattern of no overlapping granules, 3” between granules, and even distribution. A hand spreader device works great to spread product evenly, and avoids using extra material.
* Place hand spreader devices, shovels, and an ice chip at the doorways for maintenance staff to conveniently practice the proper method and save time and money.

**How over application impacts infrastructure and the environment:**

* Everything that occurs on land affects water quality in lakes, streams, and even wetlands.
* Chloride (salt) pollution is permanent in freshwater, with no economical way to remove it.
* Chloride pollution may flush out of some waterbodies, and may stick in others. Chlorides impact nutrient cycling in lakes and harms the freshwater ecosystem, and can even gather in soil and shorelines. This is known as “legacy salt” and can seep out of soil and wetlands decades later.
* 1 less teaspoon of salt protects 5 gallons of water, and 50 lbs less salt protects 10,000 gallons of water.
* Impaired lakes and groundwater contamination is a real risk. Everyone who participates in winter maintenance has a part to play.

Smart Salting is an ongoing pursuit of learning and communicating, and it takes practice. With your help, the long-term future of our freshwater resources Look for contractors and service providers certified in Smart Salting, or kindly confront excessive de-icer use by directing the user to the MPCA Smart Salting website or to your local watershed.