

GREENWorks

Ideas for a Cleaner Environment

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“Keeping Our Roads Safe on a Low Salt Diet”

Lately, there has been a lot of pressure on New Hampshire municipalities and the Department of Transportation to keep snow and ice off our roadways so we can safely go where we want, when we want, and sometimes as fast as we want. Although safety is our primary concern with snow and ice removal, the use of salt (sodium chloride) and other de-icing products have a hidden cost of contaminating our waters.

Testing over the last 25 years has indicated that chloride levels have increased steadily and substantially in New Hampshire freshwater streams, rivers, lakes, ponds, wetlands and groundwater. The amount of chloride in New Hampshire fresh waters today is 100 times more than it was 50 years ago – before we regularly used salt to melt ice on our roadways. In many small streams in southern and coastal New Hampshire, elevated chloride levels are so high that they threaten the health of sensitive fish species and smaller organisms that serve as their food source. In addition, elevated chloride levels in drinking water supplies pose a health risk to people in need of restricting their sodium intake.

Our water resources are being inundated with chloride from many sources but deicing is the largest one by far. Water runoff from local roadways, driveways, parking areas, walkways, and salt storage areas contribute the most to the problem with parking lots contributing as much as 50 percent in some areas of the state. When salt is spread on pavement some runs directly to our surface waters when it rains or the snow melts and the remainder moves through the natural system and eventually reaches our groundwater. Then, the polluted groundwater slowly seeps into streams and other waterbodies contaminating them year-round. And once in our water, salt is here to stay. Unlike other pollutants, salt cannot be treated or removed from runoff. This creates quite a challenge for reducing salt and protecting water quality in New Hampshire.

Low Salt Diet

Our only option to restore our water quality is to reduce our salt use. The New Hampshire departments of Environmental Services and Transportation are working with the EPA to further study chloride levels in certain regions and identify needed reductions to improve water quality. These organizations will be taking appropriate actions themselves and working with area communities to reduce salt use.

Each of us at home and at work, should try to use salt only when necessary, and then use only enough for safe passage. If you can see salt crystals on the walkway or driveway after the ice is gone, sweep it up and store it to be re-used during the next storm. Don't use salt to melt snow. Be sure to shovel snow thoroughly before applying salt. Moving snow piles away from walkways helps avoid ice caused by melting and refreezing during late winter months. Using more salt is

not necessarily safer. The warmer it is, the less salt it takes to melt the ice. Learn to gauge how much salt is enough and use it only when necessary.

Parking lot owners should keep track of how much salt is applied to see if there are opportunities to reduce salt application by following published best management practices while maintaining safe conditions.

Stored salt should never be left exposed to rain or snow. Store salt under a roof or in a sealed container. If this is not possible, then outside piles should be placed on concrete pads and completely covered with temporary waterproof materials, such as a tarp. Keep salt piles away from storm grates; these can drain directly to rivers and ponds.

Sand can also be a pollutant. If using sand or other abrasives for winter maintenance, be sure to sweep up any left over material. The particles can clog storm water inlets and sewers. They may wash downstream and end up in streams and lakes smothering aquatic plant and fish habitat. In addition, sand use can contribute to increased air pollution if the particles become airborne from wind or vehicles.

Using less salt and sand on your driveway will also benefit the plants and grass in your yard. Most plants are sensitive to salinity. Accumulation of sand in gardens and lawns can smother plants.

Research continues on the effectiveness and safety of alternative deicing chemicals. If using alternative deicers near waterways or drainage to waterways, consider that some products deemed safe may contain ingredients similar to fertilizers. Once in our waters, these products cause additional water quality damage by depleting the oxygen that sustains fish and other aquatic organisms.

The biggest barriers to reducing salt use on New Hampshire roads and parking lots are the real concerns about safety and liability. The more we take responsibility for our own safety by watching where we walk, wearing footwear with traction, driving slower in storms, using snow tires, or even staying home when possible, the more we reduce the need for salt and protect our water quality.

For more information on salt, water quality and ways to reduce salt, contact Environmental Services at (603) 271-7889.