

## **Sensible Salting for a Healthy Chagrin**

It's been a mild winter so far, but here are some tips for sensible salting to keep roads and driveways safe, community costs down and the Chagrin River healthy when winter storms hit.

Road salt is a source of pollution in the Chagrin River watershed. Tests in the headwaters of the Chagrin River have detected unnatural levels of calcium, potassium, and chloride, likely from road salt contamination. Gully Brook (also known as Deer Creek) is dramatically affected by salt-laden urban stormwater runoff. About 10% of the land cover in Gully Brook/Deer Creek is major roadway, including portions of I-90 and I-271, so road salt application is a significant contributor to water pollution in this area.

While salt is a necessary part of winter safety, it does have its drawbacks. Road salt enters groundwater and surface water from snowmelt, runoff or wind-borne spray. The accumulation and persistence of salt damages vehicles and corrodes roads, bridges, and other infrastructure. It can be toxic to plants and stream life. At higher salt levels, water can become unusable for drinking, agriculture and manufacturing.

Once in a waterway, excess salt is very difficult to remove. Preventing salt from entering water in the first place is the best management strategy. Many communities in the Chagrin River watershed have adopted sensible salt strategies to reduce salt usage while ensuring safe conditions. These strategies include using salt additives or substitutes, focusing on major roads, hills, and intersections, and timing plowing and salt usage to coincide with weather and traffic patterns. Some communities reduce their salt usage by mixing salt with brined water or beet juice, which enhance the salt's ability to work at lower temperatures and for a longer time. Beet juice is an attractive option because it is much less corrosive on bridges and vehicles. Using a brine or beet juice mix also helps the salt stick to the road surface more readily.

When salt is not being applied, it must be stored appropriately. Uncovered salt piles have contaminated public and private water supplies in Ohio communities. Salt should be stored in covered structures at least 300 feet away from streams, lakes, ponds, wetland, water wells and dry wells, and at least 100 feet from floodplains, storm drains, ditches, and other water conveyances. If mixing, loading, and unloading will be done outside the structure, public drinking water source areas should be avoided. Good housekeeping practices should be followed and spills swept up promptly. Snow storage yards should be located away from water resources and surrounded with vegetated buffers and berms to promote infiltration and retention.

Residents can help by using sensible salting procedures at home. Be aware that the effectiveness of pure salt decreases dramatically below 15 degrees Fahrenheit, and consider using salt alternatives like potassium acetate, calcium magnesium acetate, or sand to de-ice a front walkway or driveway. Before applying any salt, shovel away as much snow as possible and chip away ice. If you do apply salt, shovel first and use as little as possible. Using less salt causes less damage to your landscaping and nearby streams.

Sensible salting helps protect property, infrastructure and the valuable natural resources of the Chagrin River watershed.