

**Less Salt =
Less Money
Clean Water
Safe Conditions**



ROAD SALT IMPACTS

Keeping roads and parking areas safe for travel and free of ice and snow is an essential service. Salt can help accelerate the melting process, allowing for roads and parking lots to be safer for travel quicker. However, road salt contains chloride as its principal ingredient, and has negative effects to both aquatic and terrestrial plants in residential gardens, landscaped areas, and waterbodies.

ENVIRONMENTAL

Road Salt is a sodium chloride deicer that makes its way into storm drains, creeks, and rivers contaminating our waterbodies. To put this chemical pollutant in perspective, one teaspoon of salt can contaminate 5 gallons of water forever! Chloride damages aquatic plant life, which reduces healthy vegetation that animals, fish and other natural organisms depend on for food. Up to 10% of aquatic life is negatively impacted by chloride concentrations **currently** in our lakes/streams.

COST

Water from areas treated with deicing chemicals contains high levels of chloride, which does not degrade, and there is no cost-effective way to remove it. Salt causes significant damage to infrastructure—sidewalks, bridges, roads, and vehicles. One ton of rock salt (\$65-\$70) causes greater than \$1,450 in corrosion damage to bridges (Sohanghpurwala 2008).

An Example:

- * *The communities in the DuPage River Salt Creek Workgroup (DRSCW) watersheds primarily used rock salt for deicing, and most of them use liquid calcium chloride as a pre-wetting agent or an anti-icing agent. The purchase cost of the non-chloride products (approx. \$200 to \$2,000 per ton) is generally higher than the cost of more traditional products (approx. \$40 to \$780 per ton). However, alternative products can lead to cost savings in a variety of ways. Direct cost savings could be realized through reduced labor hours and product usage, while indirect cost savings can be realized through reduced corrosion and infrastructure damage.*



In 2014, Over 22 MILLION TONS of Salt were used in the U.S!

WHAT YOU CAN DO?

- * Plowing—Physically remove as much snow and ice as possible before applying salt.
- * Use the right materials. Different materials work best at different pavement temperatures.
- * Store materials appropriately. Conserve the salt by storing it in a covered facility, prevent materials from being blown and washed away, and keep away from storm sewers and streams and lakes.
- * Follow the “just enough” principal. Road salt and other de-icing products are costly and valuable resources. Apply the right amount to get the job done.
- * Calibrate equipment.



ALTERNATIVES

ANTI-ICING

- * Anti-icing prior to a storm—prevents bond forming between ice and pavement and allows for easier and more complete removal through plowing. One example known as “supermix” is comprised of salt brine, calcium chloride, and beet juice.

It takes 4X More Salt to remove snow and ice than it does to utilize Alternative Measures!

(McHenry Div. of Water Resources)

DE-ICING

- * For areas with frequent pet or child activity, consider alternatives to limit exposure for health risks
- * Pre-wetting products—save money and accelerates de-icing process
- * If possible, choose alternative de-icing products; website: <https://pdf.countyofdane.com/myfairlakes/A3877.pdf>

Resources:

“Chloride Usage Education and Reduction Program Fact Sheet,” DuPage River Salt Creek Workgroup, 2008

“Winter Parking Lot & Sidewalk Maintenance Manual” Minnesota Local Technical Assistance Program Center, Adapted for Lake County II, 2015

“Cost of Winter Maintenance on Infrastructure” [pptx]. Brooklyn Center, MN: Seventh Annual Road Salt Symposium; Sohngpurwala, A. A. (2008, February 5)