



City of Lakewood Road Salt Reduction Strategy:

Why?

Road salt use in the City of Lakewood is necessary to insure safe travel during and after winter storm events, but all that salt has to go somewhere. After road salt dissolves, it gets carried away via runoff and deposited into both surface water (Lake Erie and the Rocky River) and the groundwater under our feet. Also, the cost of road salt continues to climb.

Consider how easily salt can corrode your car. Unsurprisingly, it's also a problem for the surrounding environment - so much that in 2010, Canada listed road salt as a known toxin and placed new guidelines on its use. The States of Vermont, Massachusetts and New York have followed suit within the past few years. Excessive salt use comes at a significant environmental and economic cost and is getting to be a bigger problem than ever.

Data from long-term studies of watersheds in the State of New York bear this out. A group of scientists that tracked salt levels from 1952 to 1998 and found that concentrations of sodium and chloride increased by 130 and 243 percent in several locations spread across the state with significant annual increases and road salting to blame for an estimated 91 percent of sodium chloride in the watershed.

Nationwide, over 40% of urban lakes, rivers and streams have chloride levels that exceed safe guidelines for aquatic life, largely because of road salt – this includes the Rocky River Watershed.

In addition, there is a correlation between salt use and the damage to trees and vegetation. Salt deposits onto tree lawns can stunt the growth of certain trees, creates poor soil conditions for optimum tree health and can – in extreme cases – advance decay within the root systems of large mature trees, thereby creating a hazard and premature loss of tree canopy. Salt spray on heavy traveled roads can travel as far as 500 feet in concentrations high enough to kill vegetation and create poor soil conditions. Road salt kills certain species of trees and places limitations on what tree species we can plant on certain streets.

How?

How can we avoid polluting our most valuable natural resources – Lake Erie and the Rocky River, killing trees and control costs? The City of Lakewood has a strategy to both reduce the use of road salt and still provide safe passage of vehicle traffic through our city.

We reduce to use of road salt as follows:

- We pre-treat (pre-wet) all salt when loaded on salt trucks with a liquid anti-icing application that lowers the freeze point of our road salt to work at lower temperatures and also increase the melting capacity of that salt – thereby reducing the amount of salt applications applied to road surfaces. Pre-wetting the salt also allows for more controlled application and better sticking power.
- We pre-treat main roads via a tanker truck application with a liquid anti-icing material before a storm will likely arrive to help prevent and break the ice to road bond – thereby requiring less salt needed to get to bare pavement on main roads.
- Limit the use of road salt on residential side streets. Streets with low traffic volumes may remain snow covered longer. Salt is not effective during heavy snow fall on side streets due to the low traffic volume needed to help activate the melting agents in road salt. Salt will be applied on side streets when the snowfall has stopped and when conditions exist that will make it effective or necessary. We will not needlessly apply excessive road salt on side streets with low vehicle traffic and during the course of active snow fall as it will get plowed out of the streets and onto tree lawns, thereby squandering the use of the costly resource. However, salt is always applied within approximately 100 feet of all side street intersections and on all hills when side streets are plowed to unsure safety.