

Chloride Usage Education and Reduction Program

COMMERCIAL OPERATORS

Salt Improves Winter Road Conditions but Harms Ecosystems

Keeping roads and parking areas free of ice and snow is an essential part of modern life. However, road salt – one of the main tools used to achieve this task – contains chloride as its principal ingredient. Chloride does more than melt snow and ice; it negatively impacts local lakes and rivers. Other minor ingredients of commercial road salt include arsenic and cyanide.

As snow and ice melt, they drain into landscaped areas or storm sewers, and then to natural bodies of water. Waters from a deiced area contain high levels of chlorides, which do not degrade, and there is no cost-effective way to remove it. Excessive levels of chlorides can severely impair the ability of plants to absorb water and nutrients. These negative effects are common to both aquatic and terrestrial plants in residential gardens, landscaped areas, and rivers. Fish and other aquatic organisms are then impacted by the decline in habitat.

More Than Just a Good Idea

The Environmental Protection Agency (EPA) has set total maximum daily loads (TMDL) for chloride in the DuPage River and Salt Creek. These TMDLs state that the legal level of chloride in the rivers is being exceeded, and require that the levels be reduced. In order to investigate current usage of chlorides and possible reduction strategies, the DuPage River Salt Creek Workgroup (DRSCW) conducted a Chloride Usage Education and Reduction Program Study. The study gave a conservative estimate of the annual



Reduction in salt usage will reduce costs and improve water quality while maintaining public safety. (Photo courtesy City of Naperville)

chloride use in the watersheds of the upper DuPage and Salt Creek, which exceeded 117,000 tons annually. This figure does not include residential use, meaning actual usage rates are much higher. Local municipalities are considering adopting practices that will allow them to maintain service levels but use less road salt.

Alternatives to Salt Can Save Companies Money

The DRSCW is not recommending that salt use should stop. Road salting and resulting chlorides play a huge public safety role. However, using less salt can help reduce chloride levels and help your



Small mouth bass are found in both branches of the DuPage River and Salt Creek. Chlorides from road salt damage river vegetation, reducing the numbers and species of fish that can survive there. (Photo courtesy Forest Preserve District of DuPage County)

business financially. During two winters, the City of Toronto educated staff on proper salting techniques, and reduced its use by 25% with an annual savings of approximately \$1.8 million. Private companies can realize savings while maintaining their businesses.

Reducing Impact While Using Salt

- Plow first. Never apply road salt over snow.
- Consider removing snow piles from premises. Large snow piles can inhibit additional plowing.
- Adopt the “Just Enough” principle, avoiding over application and unnecessary salting.
- Improve storage. Road salt stockpiles should be protected from the elements and be stored on an impervious pad. Road salt is highly soluble, and poor storage is like putting money and chlorides down the drain.



Some communities are switching from routine salt application to alternative forms of deicing. This protects the environment while saving communities thousands of dollars. (Photo courtesy Forest Preserve District of DuPage County)



By implementing some of these best management practices for deicing, you'll take an active part in protecting your customers' property and the DuPage River and Salt Creek. Along with anticipated efforts from municipal public works and residents, your company will take an active part in improving the water quality of our rivers.

The DuPage River Salt Creek Workgroup

The DuPage River Salt Creek Workgroup is a coalition of communities, sanitary districts, environmental organizations, and professionals working to improve the ecological health of Salt Creek and the Upper DuPage River. For more information go to www.DRSCW.org

For More Information ...

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