

Chloride Usage Education and Reduction Program

PUBLIC WORKS DIRECTORS/STAFF

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 chloride, 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.

Salt Reduction is an Environmental Concern Attracting Regulators

The Environmental Protection Agency (EPA) has set total maximum daily loads (TMDL) for chloride in the Upper DuPage River and Salt Creek. These TMDLs state that the legal level of chloride in the rivers is being exceeded, and require that the loads 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. Based on a survey of 39 communities and eight private companies in the watersheds, 117,000 tons of chloride are used annually. This figure does not include residential use, meaning actual usage rates are much



Some communities are switching from routine salt application to alternative forms of deicing. This protects the environment while potentially saving communities thousands of dollars. (Photo courtesy Bureau Resource Team of DuPage County and City of Naperville)



higher. Local municipalities may consider adopting practices that will allow them to maintain service levels but use less road salt.

Alternatives to Salt Can Save Public Agencies Considerable Funds

The DRSCW is not recommending that salting stop. Road salting and resulting chlorides play a huge role in public safety. However, using less salt in general can



Small mouth bass are found at 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)