Conservation Matters

A monthly column focused on conservation education, as the result of collaboration among several area conservation commissions and organizations. If your town's commission or conservation organization would like to contribute articles, please contact Jessica Tabolt Halm jess_tabolt@hotmail.com

Title: Protecting ecosystem health while maintaining safe roadways this winter

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As the temperature drops and snow threatens on the weather forecast, it is an important time to think about road salt application. The very thing that is engineered to keep us safe during hazardous winter driving conditions poses a serious and lasting threat to our ground and surface water. The impacts of salt applied to winter roads, parking lots, and sidewalks already has a noticeable effect on aquatic life, and, in some areas of the country, chloride levels (from sodium chloride application in de-icing) in drinking water exceed quality standards.

Within New Hampshire, the problem is more pronounced in the southern part of the state where several watersheds face such serious impacts from road salt that the state is mandated to reduce the impacts. This is a problem locally, too. Water quality measurements in the town of Plymouth's drinking water and in more urban streams indicate impact from road salt. Though it's not just the more developed areas that experience impact. Tributaries to Squam Lake also exhibit elevated levels of sodium and chloride.

It is an important balance: how can we both protect the health of our aquatic ecosystems, while allowing for safe travel during the winter months? There are several things municipalities, homeowners, and business owners can do to help alleviate salt impacts to water while safely maintaining roads, parking lots and sidewalks.

We can be more efficient with our salt application. Private residents and business owners can reduce salt use on their properties by understanding how to be efficient and effective with application. According to the state of Minnesota, it takes just about four pounds (one pound is enough to fill a coffee cup) of rock salt to properly de-ice a 1000 square foot section of driveway, parking lot or sidewalk. Salt as a de-icing agent works best at temperatures above 15 degrees Fahrenheit.

For snow removal professionals, New Hampshire Department of Environmental Services and University of New Hampshire Cooperative Extension offers a Green Snow Pro certification. This program is designed to provide both municipal and private operators with skills and understanding necessary to reduce the quantity of salt added to roadways and parking lots, while maintaining the highest level of safety. Upon completion of the program, participants can obtain liability protection from slip and falls.

There are alternatives for road salt. Sand is commonly used, but can also impact water quality. Other innovative de-icers are under development such beet juice, molasses and cheese byproduct. There are more infrastructure-based solutions too. Permeable pavement allows for water to flow through the pavement, reducing the need for a de-icer. But by simply ensuring we are using salt efficiently and effectively can reduce the harmful impacts to the environment, and save money.

There are a number of things individuals at home and business owners can do to help maintain safe winter travel. Learn more about how to safely maintain your property and protect the environment. Ask if your town's plow drivers are certified in the Green Snow Pro Program. If you hire private winter maintenance professionals, make sure they are certified too. More information on the salt use in New Hampshire, including the Green Snow Pro program, can be found here: http://t2.unh.edu/road-salt-reduction.

Photo caption: Winter is just around the corner! There are a number of resources to help property owners, business owners, and towns to maintain safe roads, driveways and parking lots while protect the health of our surface and ground water. Photo credit: Squam Lakes Association