

DRINKING WATER THREATS FACTSHEET

Storage of Road Salt and Snow



Snow storage is closely linked to the application of road salt. Snow removed (plowed) from roads and parking lots may be contaminated with salt, oil, grease and heavy metals from vehicles, litter, and airborne pollutants. Large snow banks along roads and in parking areas can create traffic hazards, and can result in localized flooding when the snow melts, especially on major roadways and in urban areas. In these situations, the excess snow must be melted on-site or transported to a location where it is either melted or stockpiled and allowed to melt. The disposal of snow in one location concentrates the potential contaminants; however, they are diluted by the larger volume of snow. Since the snow is contaminated, it must be handled and stored in ways that protect water sources. This drinking water threat includes:

- Snow that is pushed into large piles on a property (e.g. stored in parking lots);
- Snow transported to a central site from other locations (e.g. snow disposal sites); and,
- Large snow banks along roads that are close to municipal wellheads or surface water intakes (if accumulation meets area circumstances identified below).



What is the Threat?

The elimination or reduction of sodium and chloride entering surface water and/or groundwater is the main reason for addressing these threats.

Road salt as a drinking water threat refers to any product that contains sodium and/or chloride and is used to maintain roads and pedestrian areas. The most commonly used products are sodium chloride and calcium chloride because they are effective and inexpensive. Road salt can be used in road maintenance as a dust suppressant or a deicer/ice prevention agent.

The application of road salt (resulting in sodium or chloride in groundwater or surface water) is divided into four circumstances based on the percent of impervious surface in a vulnerable area. Impervious surfaces may include paved roads, concrete surfaces and parking areas.

The four circumstances are impervious surface that is:

- less than or equal to 1%;
- greater than 1% but less than or equal to 8%;
- greater than 8% but less than or equal to 80%; and
- greater than 80%.

Significant threats related to road salt application can occur where the percent impervious surface area is greater than 8%.



On-site snow storage, where it would be a Significant Drinking Water Threat, is managed through a Risk Management Plan (RMO). The RMO, however, shall prohibit the transport of snow to such a storage area from off-site (policy 2.36).

Existing and future storage of snow at aggregate operations is prohibited through the Aggregate Resources Act (policy 2.37).

By the nature of the activity, there is widespread use and storage of road salt. The majority of the material is handled by road authorities such as municipalities and the Ontario Ministry of Transportation. However, private businesses, commercial operations and residential areas also store and use a limited quantity. There are no potential significant threats associated with the application and storage of road salt, and the storage of snow in the Thames-Sydenham Source Protection Region.

Where is this Activity a Threat?

The percent impervious surface is too low in any of the Wellhead Protection Areas (WHPA) or Intake Protection Zones (IPZ) to constitute a Significant Drinking Water Threat for the application of road

salt. The storage of road salt and snow, however, can both be Significant Drinking Water Threats in WHPA-A and B and in IPZ 1.

How are these Threats Being Managed?

Since there are no existing salt storage facilities located where they would constitute a Significant Drinking Water Threat, the Source Protection Committee decided to prohibit both future and existing salt storages where they would be a Significant Drinking Water Threat both through Section 57 of the Clean Water Act and through the Aggregate Resources Act (policy 2.35).

For More Information

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