10.8 SNOW

Definition

The storage of snow is a prescribed drinking water threat under O. Reg. 287/07 under the *Clean Water Act, 2006*. Under heavy winter weather conditions, the accumulation of snow inhibits traffic flow on the roads. Snow is able to pick up and hold any contaminants that are on roadways as it is being transferred to another location for storage.

Why is Snow Storage a Threat to Drinking Water Sources?

Snow removed from roads and parking lots can be contaminated with salt, oil, grease and heavy metals from vehicles, litter and airborne pollutants. The activities around snow storage and handling include:

- 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).

To determine if a road side snow bank meets the area circumstances it will be necessary to multiply the length of the roadway and average width of the snow bank to calculate the size of the area. Snow banks on roads and parking areas either melt on site or are transported elsewhere to be melted or stockpiled. Snow that stays on site must be handled and stored in ways that protect water sources. A number of chemicals from the storage of snow could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activity:

- The storage of snow (see circumstances #1445-1532)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals as potential concerns:

- Chloride
- Copper
- Cyanide
- Lead
- Nitrogen
- Petroleum hydrocarbons F1 to F4
- Sodium
- Zinc

This threat is closely linked to the application, handling and storage of road salt, because snow is able to pick up the salt that has been applied to roads. A reduction in the amount of salt applied to roads and parking areas could reduce the amount of road salt that contaminates snow. The main source of sodium, chloride and cyanide in snow is road salt; the other contaminants are generally from vehicle fluids, exhaust, brake linings, and tire and engine wear. The assessment of the threat from a snow storage area is dependent on its specific location (vulnerability score) to drinking water sources, whether the snow is stored above or below grade, and the size of the storage area. In general, the greater the snow storage area (and therefore the volume of snow stored), the greater the risk to drinking water.

See **Table 10-10** for when and where the storage of snow may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for Sodium or Chloride. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Prescribed Drinking Water Threat	Snow Threat Sub-Category	Area and Vulnerability Score (VS)
The storage of snow	The storage of snow	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Sodium or Chloride

Table 10-10: When/where snow may be a significant drinking water threat

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SNO-1	Storage of Snow	RMO	G	**Part IV, s.57, s.58** Where the storage of snow is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The storage of snow is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future)	See Maps 1.1 - 1.21	Future: Immediately (T-5) Existing: 180 days (T-4)	GEN-1	MON-2
			H	2) The storage of snow is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • The remainder of an Issue Contributing Area for Sodium or Chloride (existing, future). Without limiting other requirements, risk management plans shall include appropriate terms and conditions to ensure the storage of snow, and associated runoff, ceases to be a significant drinking water threat. Notwithstanding the above, emergency snow storage may be permitted outside of WHPA-A as determined by the risk management official and the municipality responsible for snow storage in the absence of a Risk Management Plan.		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2