

# DRINKING WATER SOURCE PROTECTION

ACT FOR CLEAN WATER



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## Drinking Water Threats from Snow Storage

The storage of snow is considered a drinking water threat under Ontario's *Clean Water Act, 2006*. Snow ploughed from roads and parking lots can be contaminated with road salt, oil, grease and heavy metals from vehicles, litter, and airborne pollutants. When the snow melts, these contaminants are released and can enter nearby surface water and groundwater creating a threat to drinking water sources. Snow, therefore, must be stored and disposed

of in an appropriate manner. Storing large quantities of snow in one location concentrates the contaminants in melt water, which results in a greater impact on the surrounding environment. If the storage area is large, a significant release of chemicals to groundwater or surface water can occur. These include sodium and chloride from road salt.

### Where are the threats from snow storage in the Quinte Region?

Snow storage is considered to be a significant drinking water threat in many vulnerable areas surrounding municipal wells (WHPAs) and intakes (IPZs). No existing significant threats from snow storage were identified in the Updated Assessment Report, 2011.

The following identifies where significant threats for snow storage would occur if the activities were engaged in:

Where the storage area is larger than 0.01 hectares:

- WHPA A & B for Deloro, Madoc, Peats Point, Pointe Anne, Tweed
- IPZ 1 for Ameliasburgh, Picton and Point Anne

Where the storage area is larger than 1 hectare:

- IPZ 1 and 2 for Ameliasburgh, Picton, Belleville, Deseronto, Napanee and Point Anne

The four storage area sizes considered in the assessment of the threat were:

- 1) 0.01 hectares (ha) to 0.5 ha;
- 2) 0.5 ha to 1 ha;
- 3) 1 ha to 5 ha; and
- 4) greater than 5 ha.

### Types of threats to our drinking water sources:

**Waste Disposal Sites**

**On-site Sewage Systems** (septic systems)

**Sewage Works** (sewage treatment plants, municipal sewers)

**Fuel Oil** (residential heating oil)

**Liquid Fuel**

**Nutrients** (manure, bio-solids, outdoor livestock areas)

**Commercial Fertilizer**

**Pesticides**

**Road Salt and Snow Storage**

**Chemicals** (DNAPLs (toxic chemicals) and Organic Solvents)

**Aquaculture**

## *How are threats from snow storage being addressed ?*

Two policies in the Source Protection Plan address both existing and future activities related to snow storage that are or would be significant drinking water threats in the specific vulnerable areas. Maps showing the vulnerable areas (wellhead protection areas or WHPAs and intake protection zones or IPZs) surrounding municipal water sources in the Quinte Region are available at [www.quintesourcewater.ca](http://www.quintesourcewater.ca). Policies in the Source Protection Plan are available at the same website and call for the following:

**Risk Management Plans:** Risk management plans will be required where the storage of snow would be a significant drinking water threat (in the WHPAs A, B and IPZs 1 and 2 of those water sources specified in the Source Protection Plan). The risk management plans will establish acceptable means of managing snow storage related threats. This may include requirements such as appropriate training of personnel handling and removing snow. A Risk Management Official will be in touch with municipalities requiring a risk management plan.

**Restricted Land Use:** This allows the municipality to identify areas where the storage of snow requires a risk management plan (in the WHPAs A, B and IPZs 1 and 2 of those water sources specified in the Source Protection Plan). This will assist the municipalities to create their own internal process to ensure compliance with the source protection plan.