

DRINKING WATER SOURCE PROTECTION

ACT FOR CLEAN WATER



Quinte
CONSERVATION

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Drinking Water Threats from Airplane De-icing

The management of runoff that contains chemicals used in the de-icing of aircraft is listed as a drinking water threat under Ontario's *Clean Water Act, 2006*. The main chemical currently used to de-ice planes is ethylene glycol. The risk with the practice of airplane de-icing is that runoff which is not properly managed can contaminate surface water or groundwater. This can pose a threat to the drinking water supply. There

are no large airports within the Quinte Region that require the use of de-icing fluids. In the future if an airport with de-icing facilities is proposed close to a municipal well or intake it will be considered a significant threat. While it is unlikely that such an airport will ever be established near a municipal water source, a policy is still required to address this potential threat in the Source Protection Plan.

How are airplane de-icing threats being addressed?

The Source Protection Committee considered various approaches to address this threat. Airplane de-icing is an important safety activity and is currently regulated under Canadian Aviation Regulations. Airplane de-icing fluid management plans are used to mitigate the risk of aircraft de-icing.

The approach chosen was for the municipality to be involved in the development of the Airplane De-icing Fluid Management Plan. This approach will ensure that the operators of the de-icing facility are aware of the vulnerable areas and that proper emergency measures are in place in the event of a spill or containment breach.

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

Aircraft De-icing Runoff