

# DRINKING WATER SOURCE PROTECTION

ACT FOR CLEAN WATER



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## Drinking Water Threats from Commercial Fertilizer

The application, handling and storage of commercial fertilizers are considered drinking water threats under Ontario's *Clean Water Act, 2006*. These activities are associated with a number of land uses including agricultural, recreational, institutional, industrial, commercial and residential.

Commercial fertilizer is a material containing one or more plant nutrients. Plants need sufficient nutrients for proper growth. If soil does not contain adequate nutrient levels then commercial fertilizers may be added. Most commercial fertilizers contain nitrogen, phosphorus and potassium and may also include supplements

like lime and gypsum. Nitrogen and total phosphorus are chemicals that could affect drinking water sources under certain circumstances. These nutrients could threaten the safety of drinking water sources due to runoff, leaching, leaks or spills resulting from improper handling, storage or application. Increased nitrate concentrations in groundwater sources may lead to Blue Baby Syndrome in infants, and other adverse health effects like hypertension. Runoff rich in nutrients can lead to algae blooms in surface water that can produce toxins that are harmful to humans and animals.

### Where do the policies for commercial fertilizer apply in Quinte?

The application, storage and handling of commercial fertilizers are or could be significant threats in the vulnerable areas closest to the municipal wells in Deloro, Madoc, Peats Point, Point Anne and Tweed and the municipal intakes of Belleville, Picton, Deseronto, Ameliasburgh, Napanee, and Point Anne. Exact applicable areas are noted in each policy in the Source Protection Plan.

About a dozen parcels of land with existing significant threats from the agricultural and non-agricultural application, handling and storage of commercial fertilizer were identified. Policies in the Source Protection Plan also apply to future activities.

### 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**

## How are threats from commercial fertilizers being addressed ?

Policies in the Source Protection Plan address both existing and future activities related to **agricultural** (three policies) and **non-agricultural uses\*** (six policies) of commercial fertilizer that are or would be significant drinking water threats in the specific vulnerable areas. Maps showing the vulnerable areas surrounding municipal water sources in Quinte are available at [www.quintesourcewater.ca](http://www.quintesourcewater.ca). Policies in the Source Protection Plan, which may be seen at the same website, call for the following:

### **Education and Outreach:**

A general education policy calls for a program to raise awareness in the vulnerable areas surrounding municipal water sources regarding the importance of protecting drinking water from contamination from commercial fertilizers. It will encourage and promote, through voluntary action, the proper storage and handling and application of commercial fertilizers.

### **Prohibition:**

**Application:** The application of commercial fertilizers, now and in the future, will be prohibited in the area immediately surrounding the municipal wells in Deloro, Madoc, Tweed, Peats Point and Point Anne. This area is the 100 metre radius surrounding the wells and is known as the WHPA A.

### **Prohibition:**

**Storage and Handling:** The future storage and handling of commercial fertilizer, in certain specific quantities will be prohibited in the areas immediately surrounding municipal wells and/or surface water intakes (WHPA A and IPZ1) in Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh.

\* Non-agricultural commercial fertilizer policies apply to parks, sports fields, golf courses etc. but not to residential properties. The threat from non-agricultural commercial fertilizer use by private residential households, where it is a significant threat, will be addressed through education and outreach.

### **Risk Management Plans:**

The risk management official will work with the property owner to develop a plan to ensure the safe application, handling and storage of commercial fertilizer. The risk management plan will consider each property on a case-by-case basis and incorporate other relevant existing measures already in place. A Risk Management Official will be in touch with anyone requiring a risk management plan.

**Application:** Risk management plans will be required for the application of commercial fertilizers in certain specific applicable areas (as per policies) near the municipal wells and/or surface water intakes in Deloro, Madoc, Tweed, Peats Point, Point Anne, Belleville, Picton, Deseronto, Ameliasburgh and Napanee.

**Storage and Handling:** Risk management plans will be required for the existing storage and handling of commercial fertilizer in certain specific applicable areas (as per policies) near the municipal wells and/or surface water intakes in Madoc, Tweed, Deloro, Peats Point, Point Anne, Picton and Ameliasburgh. For future handling and storage of commercial fertilizer risk management plans will be required in the applicable vulnerable areas as per policies in the plan. Future storage is prohibited in zones (where it would be a significant threat) immediately surrounding the wells and intakes.

### **Restricted Land Use:**

**Application and/or Storage and Handling:** This allows the municipality to identify the areas where the application and or storage and handling of commercial fertilizers are either prohibited or require a risk management plan. This will allow the municipalities to create their own internal process to ensure compliance with the Source Protection Plan.