

Getting Familiar With Drinking Water Threats

The goal of the *Clean Water Act, 2006* is to protect the sources of municipal drinking water from pollution and overuse. There are many activities that are potential threats to drinking water in our urban and rural areas, and the level of risk they pose depends on the nature of the activity and its location. Source Protection Assessment Reports are Ministry approved technical reports that identify the number and type of potential drinking water threats in the Lake Erie Region’s [vulnerable areas](#).

Drinking Water Threat

The Ontario *Clean Water Act, 2006* defines this as an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulation as a drinking water threat.

Identifying a Drinking Water Threat

The Ministry of the Environment and Climate Change’s Technical Rules list five ways in which to identify a drinking water threat:

- a) through an activity prescribed by the *Clean Water Act, 2006* as a Prescribed Drinking Water Threat;
- b) through an activity identified by the Source Water Protection Committee as an activity that may be a threat and (in the opinion of the Director) a hazard assessment confirms that the activity is a threat;
- c) through a condition that has resulted from past activities that could affect the quality of drinking water;
- d) through an activity associated with [drinking water Issue](#); and
- e) through an activity identified through the [events based approach](#).

Am I involved in an activity that may impact municipal drinking water?



Municipal staff are studying the areas around municipal wells and intakes to identify the human activities that could impact municipal water supplies. Individual property owners may be contacted during activity verification work if municipal staff believe an activity is occurring on their property that could impact municipal drinking water.

Activities that are identified as potentially impacting drinking water can be separated into 3 categories:

Table 1: Overview of the types of activities that may impact drinking water, their parameters of concern, and examples of each.

Parameters that can Impact a Drinking Water Supply	Drinking Water Threat Activities	Examples
Chemical	Activities that cause chemical substances to impact drinking water sources.	The application of commercial pesticide to land.
Pathogen	Activities that cause dangerous micro-organisms (e.g. bacteria or virus) from human and/or animal waste to impact drinking water sources.	The application of agricultural source materials like manure used as a fertilizer.
Water Quantity	Activities that reduce the ability of water to move from the surface to an aquifer and activities that contributes to the overuse of water in an area.	The creation of large impervious surfaces that reduce recharge to an aquifer.

However, the potential categories of activities listed in the pre-screening tool are not necessarily the same as the 3 activity categories in **Table 1**. For example, Dense Non-Aqueous Liquids (DNAPLs) are considered chemicals, but are possible in larger areas and are considered their own category.

The Ministry of the Environment and Climate Change prescribed 21 drinking water threat activities listed in **Table 2** that are covered by the [Clean Water Act, 2006](#) which apply to 1 of the 3 categories listed in **Table 1**.

Table 2: The 21 prescribed drinking water threat activities covered by the Clean Water Act, 2006 grouped into 12 categories.

 <p>Commercial fertilizer and Pesticide applied to land, handled or stored</p>	 <p>Livestock grazing, pasturing, outdoor confinement areas and farm-animal yards</p>	 <p>Agricultural (ASM) and non-agricultural source material (NASM) applied to land, stored, handled or managed</p>
 <p>Waste disposal sites</p>	 <p>Road salt applied, handled or stored</p>	 <p>Storage of Snow</p>
 <p>Chemicals used in the De-icing of an aircraft</p>	 <p>Fuel handled or stored</p>	<p>Handling and storage of Dense Non Aqueous Phase Liquids (DNAPL) and Organic Solvents</p> 
 <p>Activities taking water from an aquifer (groundwater) or surface water body (lake or river)</p>	 <p>Activities reducing recharge of an aquifer's underground water sources (e.g., pavement)</p>	 <p>Sewage systems (including septic)</p>