

# How can you help reduce risks to drinking water ?

Drinking water source protection is adding more protection to your community's supply of drinking water.

You can help reduce risk to municipal drinking water sources, especially if you have a property near a municipal well.

You can help protect your community's drinking water sources by taking positive actions such as best management practices:

- Best practices at your home, farm, business, municipal, or other property
- Risk management plans, if required, for your property under source protection plans.

Risk management plans apply to some existing land-use activities that could be significant threats to municipal drinking water sources, in the most vulnerable areas, if not properly managed.

## Risk Management Plans

### What do plans require?

Source protection plans have been approved. These local plans may require you to work with a risk management official to complete a risk management plan (RMP) if you undertake an activity that is assessed as a significant threat to municipal drinking water sources.

Feel free to contact source protection staff or your risk management official to find out if you require an RMP.

Continue reading this brochure and you will find out more about risk management plans.

### What is a drinking water threat activity?

A drinking water threat is one of 21 conditions or activities (such as storing home heating oil or operating a septic system) that could pose harm to a municipal drinking water source, if not properly managed.

The list of threats is available at [ontario.ca](http://ontario.ca) and we have also provided that list as part of this brochure.

### When can activities be significant threats to water?

A land-use activity, if not properly managed or addressed, can become a significant threat to municipal sources of drinking water:

- In certain circumstances, such as large quantities stored or applied, or below ground.
- In some wellhead protection areas (WHPAs), the most vulnerable areas of your region, such as within 100 metres of a municipal well, or the two-year time-of-travel zone leading to that well where the vulnerability score is 10.
- Dense non-aqueous phase liquids (DNAPLs) are toxic chemicals which can be significant threats to municipal drinking water sources in the five-year time-of-travel zone when stored in quantities of 25 litres or more.

# Management to reduce risk to drinking water sources

## What is a risk management plan?

A risk management plan regulates activities that pose a significant drinking water threat to municipal drinking water sources.

The risk management plan (RMP) includes best management practices designed to ensure that risks to the municipal drinking water source are reduced or eliminated. The plan is generally negotiated between the person doing the activity and a risk management official.

For example, if fuel stored at a service station was a significant threat to drinking water, a risk management official would work with the gas station owner. Together, they would develop a risk management plan to reduce the chance of spills from an underground tank.

The risk management plan may be simple and straightforward in cases where best management practices are already in place. The plans can be amended as activities and operations change over time.

## What is a risk management official?

A risk management official is appointed by the municipality and trained to standards set by provincial regulation. Their training includes biosecurity, health and safety, and more.

In this region, many of the municipalities have delegated their authority to Ausable Bayfield Conservation Authority to provide risk management services on their behalf.

The risk management official (RMO) negotiates risk management plans with persons engaged in a land-use activity.

The official also issues notices in certain areas regarding changes in land uses, new building construction, or changes in building construction.

Call our region to find out if you require a risk management plan and who your official is.



## What is a risk management inspector?

A risk management inspector (RMI) inspects activities to ensure compliance with the risk management plan.

## Your good management can help protect drinking water from these threats:

### Pathogens

A pathogen means a microscopic organism capable of producing infection or infectious disease in humans.

A pathogen is a bacteria or virus that is dangerous to human health. It can be found in human or animal waste. Human pathogens can be found in septic tanks. Manure contains animal pathogens. A pathogen is an organism capable of producing disease. *E. coli* O157:H7 is an example of a harmful pathogen.

### Chemicals

Chemical threats include things like solvents, fuels, fertilizers, pesticides and similar products.

These substances have the potential to adversely affect water quality in this region.

Drinking water source protection is an especially important barrier to prevent chemicals from reaching water treatment and distribution systems.

### Dense Non-Aqueous Phase Liquids (DNAPLs)

A dense non-aqueous phase liquid (DNAPL) is an organic chemical denser than water.

DNAPLs include some adhesives, cleaning chemicals, paint removers and other liquids. They are often carcinogenic (cancer-causing), and can sink below the water table where they might not be detected by monitoring wells. They are toxic extremely expensive to remove, and almost impossible to remove.

# Twenty-one activities that need to be addressed to reduce risk

A drinking water threat is an activity (such as storing heating oil at your home or maintaining a septic system) 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.

– For full list see *Ontario Regulation 287/07*, General Regulation; and *Ontario Clean Water Act, 2006*.

A land-use activity could threaten drinking water if:

- It is located near a municipal well – for instance,
  - 1) Within 100 metres of that well, or;
  - 2) Within the two-year time-of-travel area leading to that well.
- The activity has not been prohibited
- The activity is not properly managed
- The activity is taking place in certain quantities or circumstances

Here are the 21 activities which could threaten municipal drinking water sources in certain areas and circumstances:

## Prescribed Drinking Water Threats:

1. The establishment, operation or maintenance of a waste disposal site
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. (This includes septic systems)
3. The application of agricultural source material to land

## What are Tables of Circumstances?

The Ontario Ministry of the Environment and Climate Change has made tables showing when a land-use activity or condition can be a significant, moderate, or low threat to drinking water. The tables show levels of risk posed by hundreds of combinations of threats, vulnerability scores, and circumstances (such as quantities) under *Ontario Regulation 287/07*. For full table visit: [ontario.ca](http://ontario.ca)

Hazard ratings were calculated from a database from such components as:

- The toxicity, environmental fate, quantity, and method of release for chemical parameters, and;
- The frequency of presence of pathogens, and the method of release for pathogens.

4. The storage of agricultural source material
5. The management of agricultural source material
6. The application of non-agricultural source material to land
7. The handling and storage of non-agricultural source material
8. The application of commercial fertilizer to land
9. The handling and storage of commercial fertilizer
10. The application of pesticide to land
11. The handling and storage of pesticide
12. The application of road salt
13. The handling and storage of road salt
14. The storage of snow
15. The handling and storage of fuel
16. The handling and storage of a dense non-aqueous phase liquid (DNAPL)
17. The handling and storage of an organic solvent
18. The management of runoff that contains chemicals used in the de-icing of aircraft
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body
20. An activity that reduces the recharge of an aquifer
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard

## Why include livestock grazing?

Without treatment, manure can be a significant source of pathogens (e.g., protozoa, such as *Cryptosporidium*, as well as smaller sized bacteria such as *E. coli O157:H7*).

Activities such as spreading manure or animal grazing result in the direct release of pathogens to land. As a result of the frequency of pathogen association with manure and the method of release, these land-use activities have a higher pathogen hazard rating. This hazard rating does not, however, indicate that this land-use activity is a higher risk. This hazard rating, in combination with the vulnerability scoring of the groundwater zone, will determine the level of risk posed by this activity. **Depending on the vulnerability score assigned to the local area, these land-use activities may be significant, moderate, or low risk.** Talk to staff to find out more.

## What are source protection plans?

Community members from municipalities, industry, commerce, agriculture, property-owner associations, the environmental sector, and the public-at-large, have been working on a 15-member committee since 2007 on the first three phases of source protection planning.

The Ausable Bayfield Maitland Valley Drinking Water Source Protection Committee (SPC) has been working since 2007 to develop:

- Terms of reference
- Assessment reports
- Source protection plans

After in-depth consultation with the public, and changes and updates, these documents are complete and approved by the Province of Ontario.

A source protection plan creates policies to protect your community's drinking water sources, such as municipal wells and intakes, from contamination or depletion.

## Who developed the plans?

The Ausable Bayfield Maitland Valley Drinking Water Source Protection Committee is made up of the following representatives:

- Municipal representatives (5)
- Agricultural representatives (3)
- Public-at-large representatives (2)
  - Maitland Valley and Ausable Bayfield areas
- Environmental representatives (2)
- Industrial representative (1)
- Commercial representative (1)
- Property owner association representative (1)

There are also non-voting liaison members:

- Public health
- Source protection authorities
- Ontario Ministry of the Environment and Climate Change



The local source protection committee uses tools, ranging from research to prohibition, to help protect drinking water. Risk management plans are one tool to deal with existing potential significant drinking water threats.

## Where do plan policies apply?

Mandatory plan policies, the ones with must-conform-to legal effect, apply in this region only to some activities, in some circumstances, in three zones around municipal wells:

- 1) 100-metre wellhead protection area
- 2) Parts of two-year time-of-travel area
- 3) In the case of dense non-aqueous phase liquids, within the five-year time-of-travel area.

Policies such as prohibition, or risk management plans, would only apply to significant threats. Those activities are only assessed in the three most vulnerable wellhead protection areas (WHPAs).

**For more information we invite you to contact your local source protection region or area**



Ausable Bayfield  
Maitland Valley  
Source Protection  
Region



**Ausable Bayfield Maitland Valley Drinking Water Source Protection Region**

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**1-888-286-2610 • [sourcewaterinfo.on.ca](http://sourcewaterinfo.on.ca)**

**Maitland Valley Source Protection Area: 519-335-3557 • Ausable Bayfield Source Protection Area: 519-235-2610**

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