

Wellhead Protection Area WHPA

What is a wellhead protection area ?



Your local drinking water source protection committee has created policies to protect municipal drinking water sources.

Those policies are focused on vulnerable areas around municipal wells.

This diagram shows a sample **wellhead protection area**.

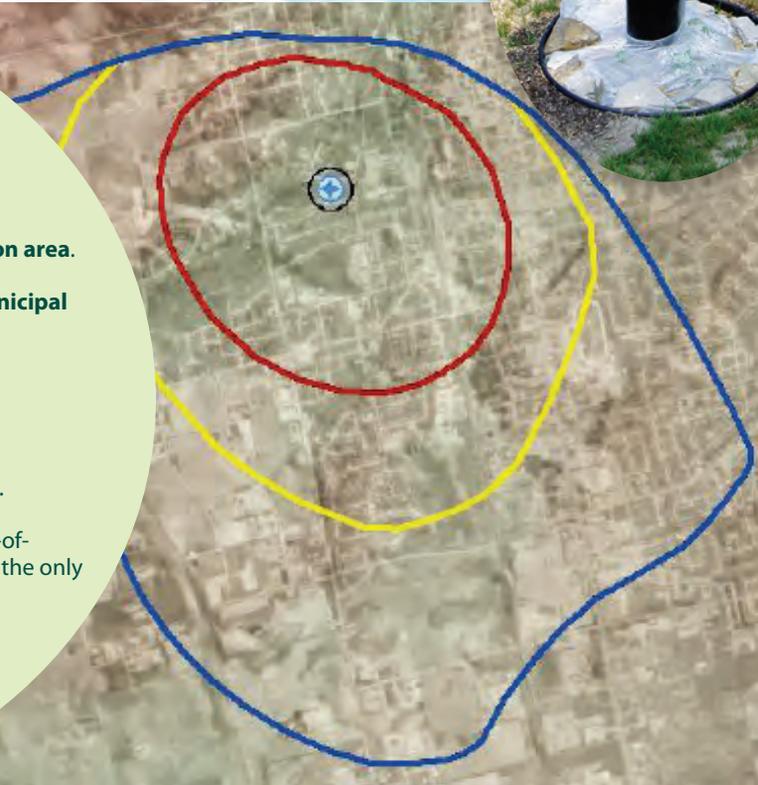
The star at the centre shows the location of a **municipal well**.

The black ring is the 100-metre radius of the well. This is **Area A**.

The red ring is **Area B**. (Two-year time of travel)
Surface water can reach the well within two years.

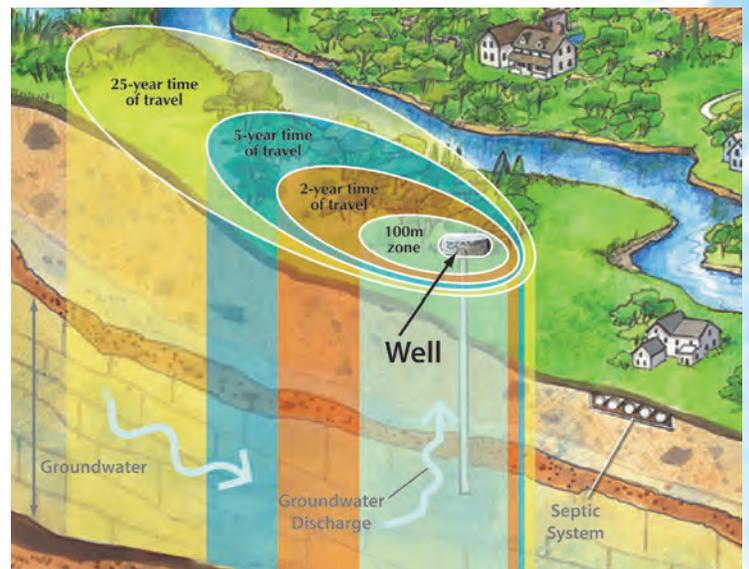
The yellow ring is **Area C**. This is the five-year time-of-travel area. Dense non-aqueous phase liquids are the only significant threat activities outside the red circle.

The blue ring is **Area D**.
It is a 25-year time-of-travel area.
Policies such as prohibition or risk management plans do not apply here.



A wellhead is the physical structure of the well above ground. A wellhead protection area is the area around the wellhead where land use activities have the potential to affect the quality of water that flows into the well.

The amount of land involved in a *wellhead protection area* is determined by a variety of factors such as the way the land rises or falls, the amount of water being pumped, the type of aquifer, the type of soil surrounding the well, and the direction and speed that groundwater travels. All of these factors help to determine how long it takes water to move underground to the well itself and how much land around the wellhead should be protected.



WELLHEAD PROTECTION AREAS

What can

you do to protect water in local wellhead areas ?

To find out if you live near a *wellhead protection area*, contact your local source protection authority. You can find out which conservation authority area you live in at www.conservation-ontario.on.ca or visit sourcewaterinfo.on.ca in Maitland Valley and Ausable Bayfield source protection areas.

Even if you don't live in or near a *wellhead protection area* it is important to take steps to protect groundwater. Everything is connected through the water cycle and it is important to remember everyone lives downstream. What you do today can affect local water quality. These are some of the things you can do to protect your groundwater from contamination:

1

Conserve water. Not only is conserving water helpful to maintaining a constant supply of drinking water, too little water in a source can mean contaminants are more concentrated and, therefore, may be above acceptable levels.

2

Be an avid recycler. Recycling paper products, glass, metals and plastics cuts down on pollution and also reduces the amount of water we use. Manufacturing recycled paper uses 58 per cent less water than making paper from virgin wood pulp. Making glass from recycled materials cuts related air pollution 20 per cent and water pollution 50 per cent.

3

Dispose of hazardous waste properly. Take unused paints, cleaners, pesticides, and medical prescriptions to your local hazardous waste facility. Take used engine oil to recycling facilities. Use drop cloths or tarps when working with hazardous materials such as paints, driveway sealers or wood stain to prevent spills from leaking into the ground. If a spill occurs, clean it up with an absorbent material such as kitty litter or sawdust and scoop the contaminant into a container.

4

Use non-toxic products for cleaning and environmentally-friendly soaps, shampoos and personal care products. Remember that what you use in your house goes back down your drain.

5

Clean up pet waste which contains nutrients and pathogens that can run into storm sewers during a rain storm.

6

Prevent pollutants from entering into runoff by reducing or eliminating the use of pesticides, fertilizers, sidewalk salts and by not over-watering your lawn. If you run a farm operation consider a Nutrient Management Plan and/or Environmental Farm Plan.

7

Take care when refueling gas tanks for cars, lawn mowers, chainsaws, weed trimmers, tractors or other machinery to avoid spilling fuel on the ground. Also take care when changing engine oil. One litre of gas or oil can contaminate a million litres of groundwater.

8

Take your car to commercial car washes designed to prevent pollutant runoff from entering storm sewers. Use commercial car washes that use water efficient sprays, reducing their water consumption.

9

Stay informed and get involved in your local source protection process. To find a drinking water source protection planning region or area near you go to www.conservation-ontario.on.ca. In the Maitland Valley and Ausable Bayfield areas visit sourcewaterinfo.on.ca or phone 1-888-286-2610.



WELLHEAD PROTECTION AREAS

Why do wellhead areas need protection ?

Pollutants can sometimes seep into the ground and contaminate the water in a well. *Wellhead protection* is a good way to prevent municipal drinking water from becoming polluted because it requires landowners to manage activities that could become potential sources of contamination in the area supplying water to a public well.

Much can be done to prevent groundwater contamination. Under the *Clean Water Act, 2006*, local source protection committees

have developed plans that are adding protection to your municipal well water. They have looked at potential sources of *groundwater* contamination in the area, ranked them based on their potential to contaminate groundwater, and have determined, with the help of your comments, practical and effective ways to manage existing and future land and water uses that pose a significant threat to drinking water. Protecting the area around a well, helps protect a healthy supply of water now and in the future.



What are potential sources of contamination in wellhead protection areas ?

Pollutants from a variety of activities on the land can seep into the ground and move toward a well. Examples of activities that could negatively affect groundwater if not managed properly include:

Septic systems

Private and abandoned wells

Chemical storage

Oil storage tanks

Spreading of sewage treatment sludge

Accidental spills of hazardous materials

Visit **sourcewaterinfo.on.ca** for information on the 21 threats which can, if not properly managed, threaten municipal drinking water sources.

Also: Visit this site for approved assessment reports listing threats.

What are the benefits of protecting wellhead areas ?

A very clear benefit of drinking water source protection in *wellhead protection areas* is protecting public health. In addition, preventing drinking water contamination in the first place costs a lot less than cleaning it up after it has been contaminated. There are a number of ways *wellhead protection* impacts our day-to-day lives and reduces the costs to maintain good water supplies:

- Not having to drill new wells when old ones become contaminated
- Avoiding the need to clean up contaminated groundwater
- Reducing the cost of water treatment

- Ensuring a long-term supply of clean water
- Ensuring a positive climate for economic growth

More than 20 per cent of Ontarians use groundwater to meet their daily water needs.



WELLHEAD PROTECTION AREAS

Protect water through well and septic upgrades, and stewardship at your home, business, farm, or other property



- 1** **Keep your septic system in proper working order** and empty the tank regularly.
- 2** **Protect and maintain your private well.** Wells provide pathways for contaminants to enter the groundwater. If you have a well, be sure it is sealed properly and if you own a well you no longer use, have it properly decommissioned by a licensed well technician. Test your well water regularly to ensure the water is safe to drink.
- 3** **Ask about tools that can help you protect water.** There is local expertise available and funding programs that may help you start projects to protect water. Contact your local conservation authority. There are stewardship guides for shoreline, rural non-farm, and farm residents. Use one of those guides to see how you can reduce impacts on water. Visit www.mvca.on.ca or abca.on.ca for information or phone numbers below.
- 4** **Implement best management practices.** You can protect your community's drinking water sources by projects at your business, home, or farm, to keep contaminants out of water sources. Consider well or septic upgrade projects, runoff and erosion control projects, or other projects to keep pathogens (including *E. coli* bacteria) and chemicals out of water. If you're a rural landowner, protect the vegetation along the banks of ponds, streams and lakes to help control erosion and keep soil and nutrients on the land and out of water. If you operate a farm, consider developing an Environmental Farm Plan.
- 5** **Properly dispose of hazardous wastes.** Don't dispose of batteries, paints, electronics, chemicals, or other hazardous waste with your regular garbage. Visit dowhatyoucan.ca or contact your local municipality to find out the location of a municipal site or local business or hazardous waste day where you can dispose of these the right way.

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

c/o 71108 Morrison Line, RR 3 Exeter, ON N0M 1S5

1-888-286-2610

sourcewaterinfo.on.ca

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