Conservation ONTARIO
Natural Champions

PRIVATE WELLS

How do I care for My Private Well?


Photo Credit: Quinte Conservation

Most rural Ontarians rely on groundwater from dug or drilled wells for their private water supply. If you own your own well, you are responsible for it. You must make sure it is constructed to provincial standards. You must also arrange to have your water tested regularly. Your health, and the health of your family, is dependent on clean, safe water.


Photo Credit: Warren Lusk

There are different types of wells: dug, bored, drilled, sand point, and below grade. The local soil and geological characteristics in the surrounding area will influence the type of well constructed, the depth and diameter of the well, the water quality, and the amount of water that can be regularly withdrawn. An ideal location for a well is uphill and upgradient from any potential contaminant source. Like most homeowners, you probably were not directly involved in the construction of your well. However, it helps to know what type of well you have because its design, construction, and maintenance have a direct effect on the quality and quantity of water you draw from it.


Do you know if your water well is being properly maintained?


Photo Credit: Eileen Lewington

Regardless of well type, nothing but water should enter your well, and it should only enter from underground. The sides and top of your well should be watertight and free of leaks and seepage. No contaminants or foreign materials should ever have access to your well. Otherwise, the groundwater your well draws from and the water your family uses from the well could become contaminated

It is always advisable to have a licensed well contractor do any work in or around your well.

PRIVATE WELLS

Inside Your Well

1. **Make sure that a commercially manufactured well cap, cover, or sanitary seal is securely in place.**
   - The new covers prevent bugs and animals from entering. Inspect the cover or sanitary seal for cracks and holes.
2. **Inspect inside the well with a flashlight once every year.**
   - Early spring after snow melt is a good time.
3. **Look and listen for signs of surface water seeping or running freely into the well.**
4. **Look for seepage through cracks or stains below joints on the inside of the well casing.**
5. **Remove any debris floating in the well and prevent any more debris from entering.**
6. **Have the well and plumbing disinfected with a chlorine solution by a licensed well technician after any work is done inside the well, or on pumping equipment.**
7. **Check the condition of well vents.**
   - Look for flaws such as cracks or weakness in the vent tubing. Make sure that the fine-mesh screen is in place.

Do you have a well that needs decommissioning?

When should I Test the Water in My Well?

Private wells should be monitored regularly. Watch for changes in water taste, odour and colour. Have a sample of your well water tested through your local health unit for indicator bacteria:

- At least three times per year, with one of those samples done in the spring.
- More frequently than three times per year if you know of problems.
- More frequently than three times per year if you have a highly vulnerable water supply, or if you are in a critical recharge area, which tends to be very sandy or full of gravel.
- After major plumbing or septic work.

In addition, you should test for nitrates once every year, or more often if you have livestock or lands with high fertilizer application. Nitrate is a form of nitrogen that is stable in groundwater but levels greater than 10mg per litre can lead to health problems, particularly in young children. Nitrate tests have an associated cost, check the Yellow Pages for a registered laboratory.

Why must I abandon Unused Wells on My Property?

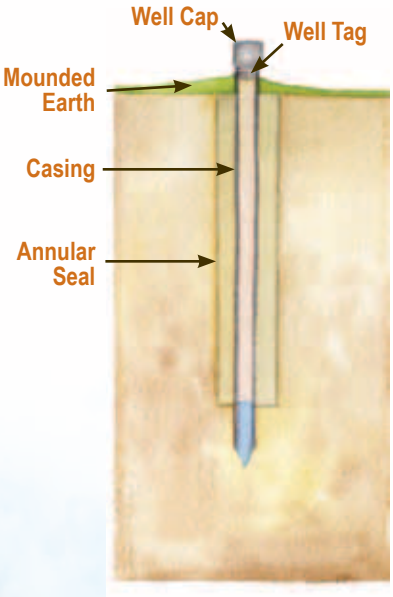
Wells that are older and wells that have not been maintained properly are direct pathways to groundwater, or aquifers, and pose a direct risk to your drinking water supply. Improperly abandoned wells can also increase the risk of contamination entering nearby wells and provide a shortcut for contaminants to reach deeper aquifers. Unused wells also pose a physical hazard to people and animals on your property.

In Ontario, if a well is not being used or maintained for future use as a well, then the owner is legally required under the Wells Regulation of the Ontario Water Resources Act to plug and seal the well. In addition, a new well must be abandoned if it is dry or if construction is not completed. If using your well for drinking water, you must abandon your well if it:

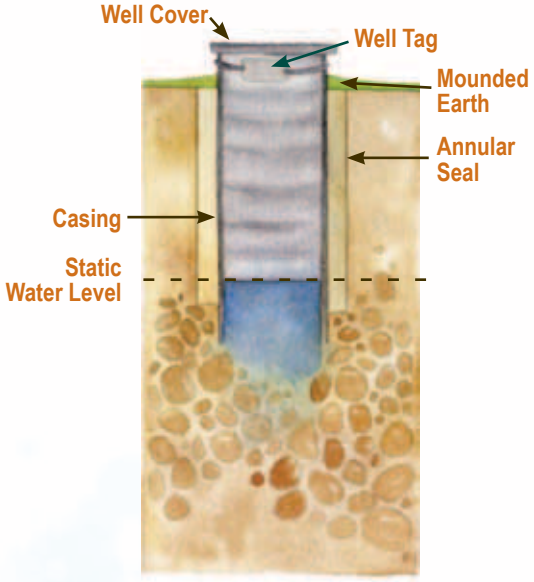
- produces mineralized water
- produces water that is not potable
- contains gas and you do not take steps to prevent a hazard
- permits any movement of gas, contaminants, or other materials that may harm water sources and you do not take steps to correct the problem
- is not constructed according to the Wells Regulation and you do not take steps to fix the problem or those steps have failed

There are many dangers to consider when working on abandoned wells and the equipment, materials and expertise needed to correctly abandon a well often exceed a well owner's abilities. It is strongly recommended that you hire a licensed well contractor who uses licensed well technicians.

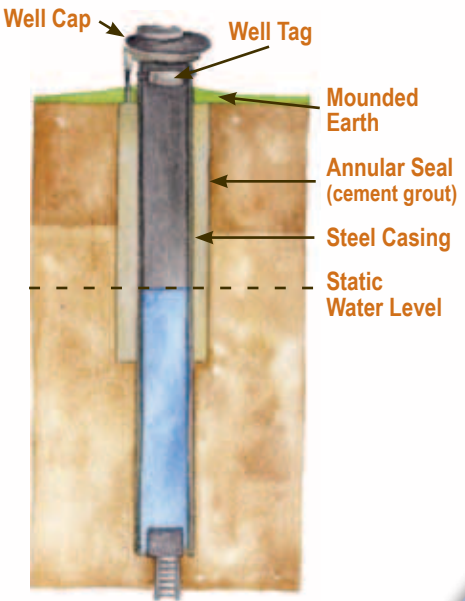
What type of Well Do I Have?



SAND POINT WELL



DUG OR BORED WELL



DRILLED WELL

The most common types of wells constructed in Ontario are the Sand point (Jetted), Dug or Bored, and Drilled. A properly constructed well is tightly sealed to prevent anything but groundwater from entering it. It's critical to seal the well from surface runoff as a single gram of fecal matter can have up to 1 billion bacteria.

(Diagram used with permission from: Well Wise: A comprehensive consumer's guide for private water wells. Page 37)

How will I recognize an Unused Well on My Property?

Sometimes unused wells are not easy to identify. To determine if you have an unused well on your property, look for these clues:

- Pipe sticking out of the ground.
- Small building that may have been a former well house.
- Depressions in the ground.
- Presence of a concrete pit covered by lumber or metal.
- Presence of old windmills and windpumps.
- Additions to a home that may be constructed over a well to protect it from freezing.

What should I do if I Have a Problem with My Well?

If you suspect you have a problem with your well water or your well water test results shows unacceptable levels of bacteria, **stop using the water and contact your local public health office.**

For more information, or to find out if your property is within a vulnerable area, contact your local Source Protection Region or Area. You can find out which Source Protection Region or Area you live in at **www.conservationontario.ca**

For more Information

- **To receive information on water testing and to locate your local public health unit, go to :**
  http://www.health.gov.on.ca/en/public/publications/pub_watersafe.aspx

For more information on best Practices for Protecting Your Well

Your local Conservation Authority :
www.conservationontario.ca

The Ontario Groundwater Association :
www.ogwa.ca

How can I Protect My Well?

It is important to properly maintain your well to ensure a clean and healthy supply of water for you and your family.

Outside Your Well

1 Know exactly where your well is located and keep potential contamination sources and activities away from your well.

- Take care when using any chemicals on your property, especially near your well. Never mix or use pesticides, fertilizers, herbicides, degreasers, fuels, and other pollutants near your well. Better still, consider alternatives to harmful or dangerous pesticides or fertilizers.
- Watch that lawn mowers and snow blowers are not leaking fuels near your well.
- Keep sources of *E. coli* bacteria away from your well. Animal and kitchen waste can contain *E. coli* bacteria. Do not allow liquids or wastes from contaminant sources such as garbage or manure piles to drain towards your well. These could lead to bacteria leaching into your water supply, especially during spring thaw.
- Keep other sources of bacteria away from your well. Do not bury brush piles, stumps, or other such debris near or uphill from your well.
- Do not use bark mulch or wood chips near your well. These organic materials are breeding grounds for insects such as earwigs, which can cause bacteria in your well if it is not properly sealed.
- Keep your septic system in good working order.

2 Mound up the ground around the well casing.

- The ground should slope away from your well. Make sure that your well's casing extends at least 40 cm (16 in.) above the mounded earth.

3 Keep a permanent grass buffer at least 3 metres (10 ft.) around the well.

4 Watch for ground settling or water pooling around the outside of the well casing.

- This could indicate that surface water could be accessing your well.

Additional Information

- Information relating to Regulation 903 is available: **www.e-laws.gov.on.ca**
- Information on well contractors is available at the Ministry of the Environment and Climate Change's website.

  Directory of Licensed Well Contractors in Ontario: **http://209.47.226.245**

  and/or contact the Water Well Help Desk: **1-888-396-WELL (9355)**

  to locate a licensed well contractor
- Contact the Ministry of the Environment and Climate Change's Public Information Centre at **1-800-565-4923**

  and/or email **picemail.moe@ontario.ca** for additional inquiries

For More Information on How to Care for Your Private Well

Please contact your local Source Protection Region or Area:

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DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Ontario

www.conservationontario.ca

For more information on the Source Protection Program, please visit the Ministry of the Environment and Climate Change's website:
www.ontario.ca/cleanwater

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