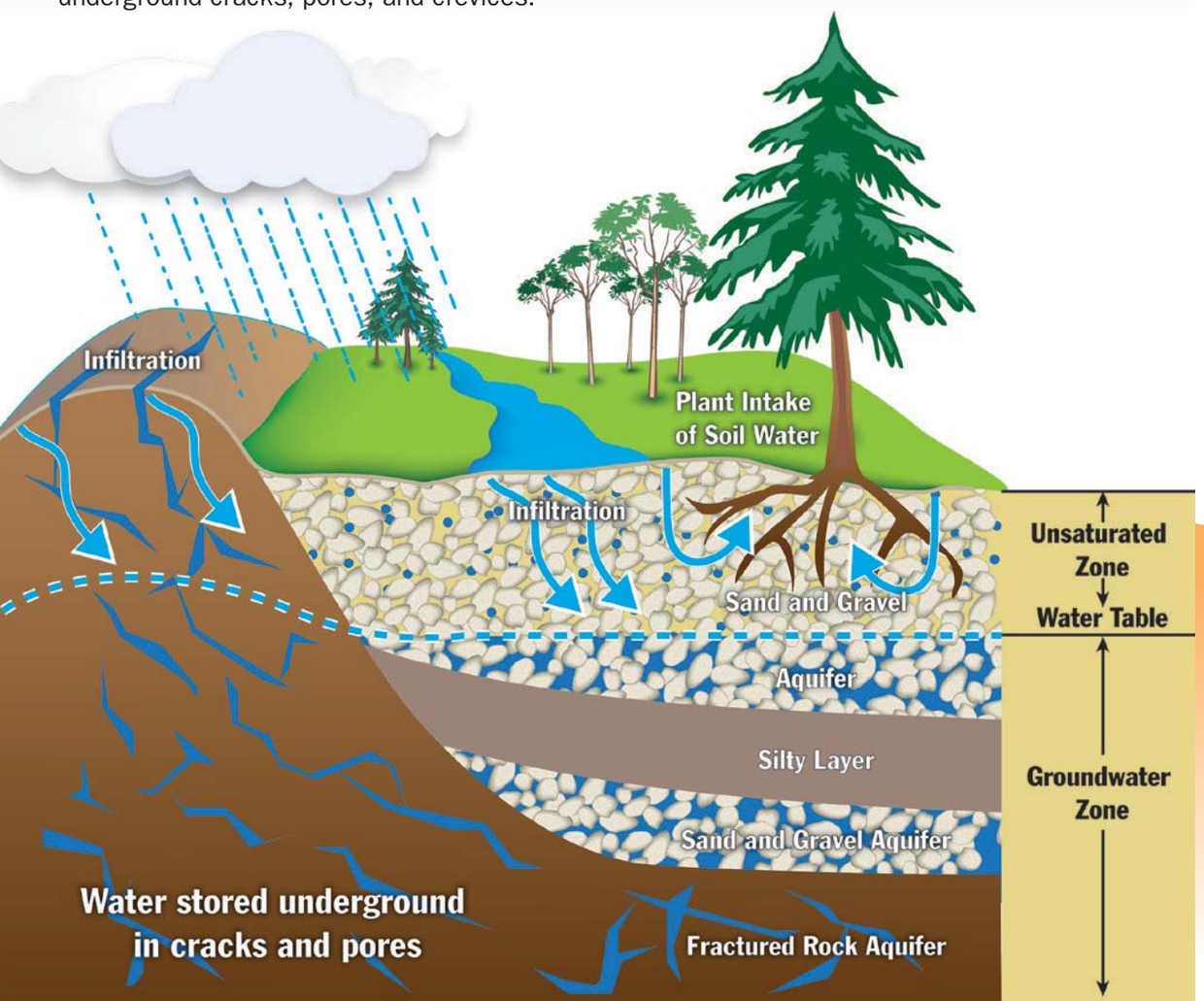
Groundwater basics

A well is supplied with water from an underground water source known as groundwater. Groundwater is stored below the surface of the earth in aquifers, often between sediments and in bedrock fractures. It accumulates from surface water and precipitation – including rain and snow melt – infiltrating the earth and filling underground cracks, pores, and crevices.

There are good sources of information on groundwater in your area, such as water well records on file with the Department of Environment and Conservation, Water Resources Management Division. Before purchasing a rural property, you should always check surrounding water well records and ask for water quality results.



"We promote the protection and conservation of our water."

Department of Environment and Conservation Offices

St. John's Headquarters
4th Floor Confederation Building
West Block • Phone: 709.729.2563

Grand Falls - Windsor Regional Office
Provincial Building
3 Cromer Avenue • Phone: 709.292.4997

Corner Brook Regional Office
9th Floor Sir Richard Squires Building
84 Mount Bernard Ave • Phone: 709.637.2431

Happy Valley - Goose Bay Regional Office
2 Tenth Street • Phone: 709.896.5542

email: water@gov.nl.ca
Web: www.gov.nl.ca/env/waterres

Newfoundland Labrador
Environment and Conservation

WHAT YOU NEED TO KNOW

groundwater WELLS

Monitoring, Maintenance, and Retrofitting

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Monitoring your well

As the owner of a private water well, you are responsible for monitoring your well and keeping it maintained. You must ensure that nothing gets into your well that could contaminate groundwater resources, as groundwater is a shared resource that crosses property lines. Contamination from one well can put other water wells at risk.

Monitoring your well on a regular basis is the best way to protect your drinking water from contaminants and pathogens. Keep potential sources of contamination away from your well. The most immediate threats to the safety of your well water are usually found nearby – on your own property.

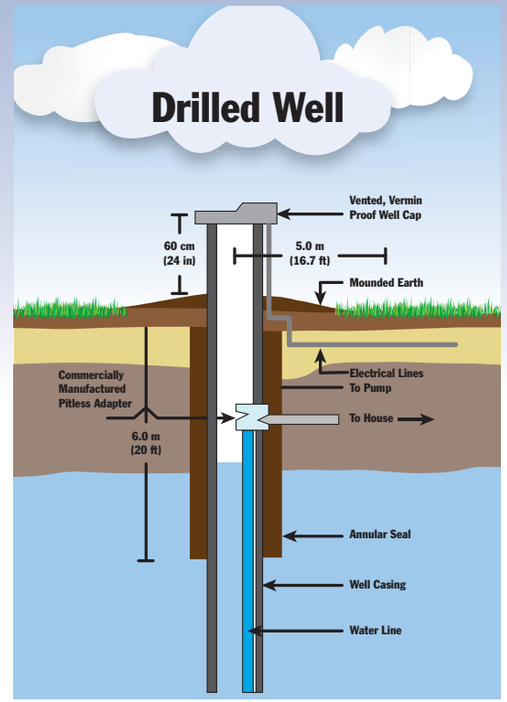
Water testing

Testing for bacteria in well water samples is free and offered as a service to owners and users of private wells. Sample bottles can be obtained from Service NL public health laboratories located across the province.

For a list of accredited laboratories that can carry out routine physical and chemical analyses on drinking water, visit:
www.gov.nl.ca/env/waterres/quality/labs.html

Get into the habit of water testing. Watch for changes in water taste, odour, and colour, as water quality can change over time. Routinely inspect your well at least once a year to see what repairs may be needed. Have a sample of your well water tested at least twice a year for bacteria (with one sample taken in the spring after snowmelt), and at least once every two years for chemical parameters.

If your well tests positive for bacteria, stop using the well water and disinfect your well and entire household plumbing system. If you want to continue to use your well water, bring it to a rolling boil for at least one minute before using it for drinking. If your drinking water continues to test positive on repeated submissions, contact the Department of Environment and Conservation, Water Resources Management Division (WRMD), for advice on what measures you can take to disinfect and protect your drinking water.



Well maintenance

As part of your maintenance routine, keep your well clear of brush, debris, snow, and other obstructions. Check the well cap for signs of cracking or damage, and get it fixed or replaced immediately if there is a problem. Also look for problems with the sealant used to fill the annular space between the dug or drilled hole and the well casing.

- A faulty annular seal needs to be repaired, as cracking and gaps allow run-off and surface water to move down the outside of the well casing and contaminate your drinking water.
- Talk over your options with a well driller licensed by the Department or an employee of the WRMD who is experienced with upgrades and familiar with conditions in your area.
- If your well doesn't meet minimum construction standards, but the casing is in good condition and located properly, it can be retrofitted (i.e., upgraded) to improve the safety of the water supply.
- When retrofitting an existing well, check for watertight casing (to 6 metres (m) below the ground surface) and make sure joints are sealed with material suitable for drinking water use (i.e., a non-toxic, expandable material).
- Make sure there are no potential contamination sources within a minimum of 30m of the well, and that the top of the casing extends at least 0.4m above the ground surface.
- A vermin-proof cover must cap the well, and the area immediately surrounding the wellhead must be graded (i.e., sloped) away from the well casing.