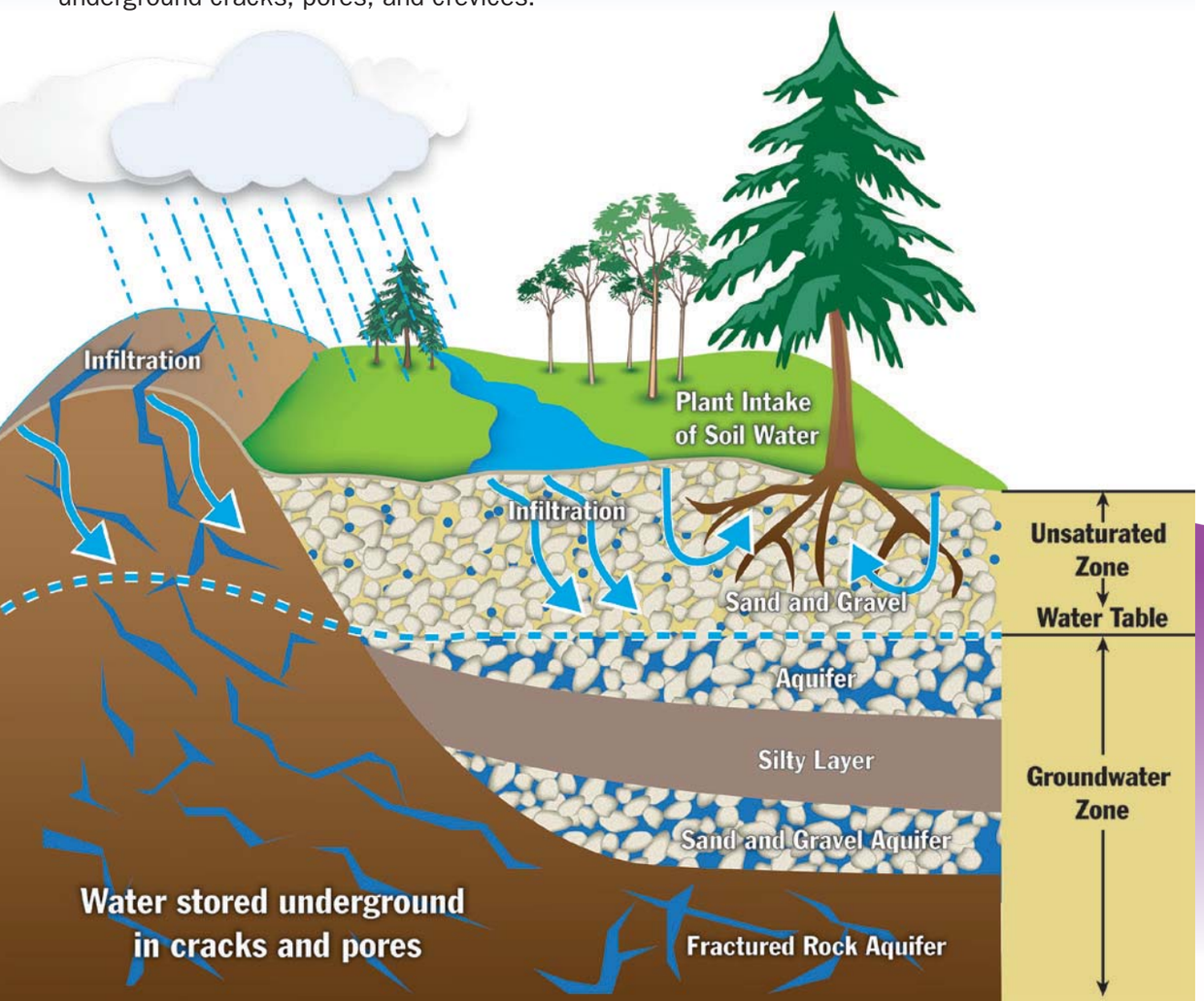
Groundwater basics

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."

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Newfoundland Labrador
Environment and Conservation

WHAT YOU NEED TO KNOW

groundwater WELLS

Decommissioning or Abandoning a Well

Decommissioning or Abandoning a Well
Decommissioning or Abandoning a Well

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How to properly decommission a well

An unused water well, commonly known as an abandoned well, poses one of the greatest threats to groundwater resources as it provides a direct, unhindered route for pollutants to reach an aquifer. If you have an old well on your property that won't be used again, plug and seal it properly as soon as possible.

It is important to plug and seal unused water wells in order to protect groundwater resources from surface contamination and to prevent serious accidents to humans and wildlife. It is the owner's responsibility to properly decommission an unused well. Never use an old well as a garbage dump.

Check the records

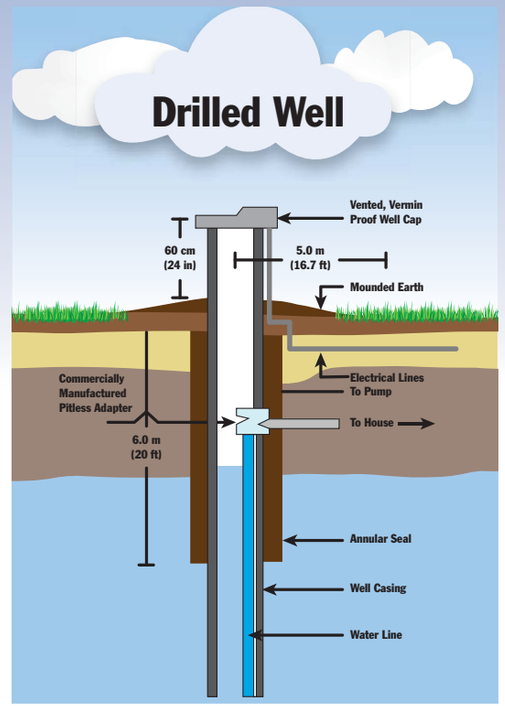
Each well and its surroundings are unique, and the right way to plug a well depends on the well's construction. Before any work on sealing a well can begin, contact the Department of Environment and Conservation, Water Resources Management Division, or a licensed well driller to determine the correct procedure for decommissioning your old well.

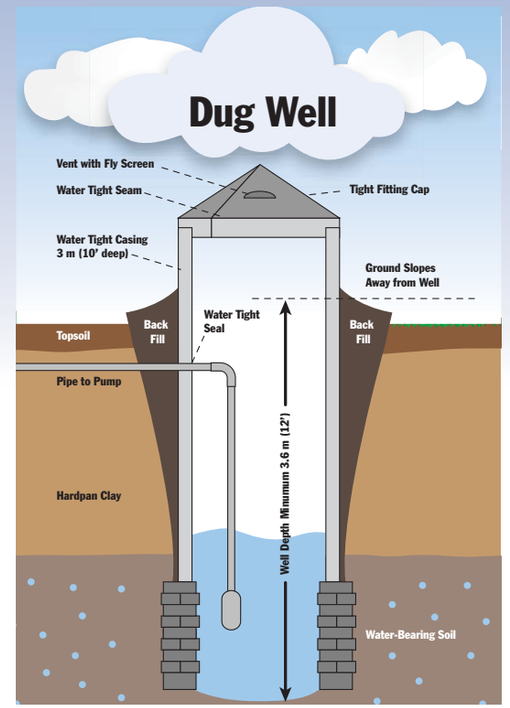
Homeowners have the right to seal their own wells as long as they accept all responsibility for sealing the wells in compliance with provincial guidelines and standards, which can be found on our website. Hiring a qualified well driller is recommended.

A water well record should contain all the information listed below; however, this information may not be available for some older wells, especially dug wells. If the well is shallow, much of this information can be observed directly or measured.

The first step in decommissioning a well is to find out how the well was originally constructed. This includes determining:

- total well depth,
- depth of casing,
- casing diameter and changes in diameter with depth,
- static water level,
- type of aquifer, and
- annular space seals, if present.





- If a newly-drilled well is dry or if the water is not suitable for drinking, the well must be properly decommissioned (i.e., plugged and sealed).
- All material must be removed from the well prior to sealing. Make sure there is no foreign material in the bottom of the well and remove all debris before sealing.
- Disinfect the well for 12 or more hours using the correct amount of chlorine solution, and then pump all water out of the well.
- Place fill material (alternating layers of granular bentonite and clean, coarse sand) from the bottom of the well to within 3 metres (m) of the bottom of the well casing.
- The upper portion of the well (the entire length of well casing plus 3m) must be filled with granular bentonite only.
- Using proper equipment and safety devices, remove at least 1m of well casing, and seal the wellhead with granular bentonite.
- The sealed well may now be covered to the ground surface with suitable material.