



Well Protection and Ground Water Stewardship

Well Protection Steps...

1 Location, Location, Location

- Locate well on high ground to protect from flooding
- Locate 30 m / 100 ft or more from potential contamination sources (this includes yours and your neighbours)

2 Excellent Construction and Setup

- Constructed by a provincially registered qualified well driller
- Casing seal or grouted to a minimum depth of 5m / 15 ft below ground is needed to prevent contaminants from entering the well
- Pump installed by a provincially registered qualified pump installer

3 Choose the Best Well Type

- A drilled well into a confined aquifer at a minimum depth of 15 m / 50 ft is the safest source of water
- A dug well is least safe and is more susceptible to surface contamination

4 Good Maintenance

- Have septic tank pumped every 2 to 3 years and ensure it is not failing
- Have water quality tested on a regular basis to ensure safety
- Control flowing wells so that water does not flow to waste
- Keep potential contaminants a safe distance away from well (a minimum 30 m / 100 ft from well head)

5 Abandon Properly

- Close and seal abandoned wells
- Use a provincially registered qualified well driller to complete the work

Hydrologic Cycle:

The continuous movement of water from the earth's surface into the atmosphere through evaporation, then returning again as precipitation.

Wetlands:

This area acts as a catch basin for contaminants on surface and as a filter at the subsurface levels

Abandoned Well:

Closed and sealed properly, this well will not allow contamination to enter the aquifer. If it is not sealed properly it could allow contaminants to enter adjacent wells

Shallow Well:

Receives water from unconfined aquifer with greater chance of contamination

Contaminants:

Contaminants can get into groundwater via surface run-off or percolation through the soil. Soil cleans and filters some contaminants but needs space and time to do so. To protect well water keep possible sources of contamination away from wells and surface water.

Runoff **Contaminated Runoff** **Ground Water** **Contaminated Groundwater**



Properly Constructed and Located Deep Well:

Does not allow contaminants to enter the well and receives water from confined aquifer where water has greater protection from contamination

Poor Constructed and Located Shallow Well:

Too close to sources of contamination, this well receives contaminated water and allows contaminants to enter the well and aquifer

Infiltration/Recharge:

Water from precipitation or surface water seeps into the ground to become ground water

Unconfined Aquifer:

Saturation permeable soil (sand and gravel) not capped by an impermeable layer

Impermeable Layer:

A layer of clay and silt that caps a lower aquifer

Confined Aquifer:

Saturated permeable soil (sand and gravel) capped by an impermeable layer

