Have you checked your well water supply?

Make sure the water from your well is clean and uncontaminated to protect your family's health.

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Private well protection & maintenance

Private wells

Do you get your water from an individual private well?

If you do, you need to make sure the water from your well is clean and uncontaminated.

About 720,000 or almost two out of every 10 people in Ireland get their water from a private supply. Many people assume that their private well water is safe to drink and don't treat it or get it tested. They shouldn't because a recent study found that E. coli, which can cause serious illness, is present in almost a third (29%) of Irish private wells.

You can reduce the risk of your drinking water being contaminated by making sure your well is properly:
- situated on your land;
- built; and
- maintained.

Serious illness

Did you know that drinking contaminated water can cause serious illnesses? These include:
- harmful parasites – organisms that can cause disease in humans – such as *Cryptosporidium*; and
- E. coli bacteria that can cause serious illness, such as VTEC.

What is VTEC?

Verocytotoxigenic Escherichia coli (VTEC) is a particular group of the bacterium Escherichia coli (E.coli). Although most strains of E.coli are harmless and live in the intestines of healthy humans and animals, VTEC strains produce a powerful toxin and can cause severe illness.

How do I make sure my well water is safe?

A well should generally be located upslope and as far away as possible from potential sources of pollution such as septic tanks and farmyards.

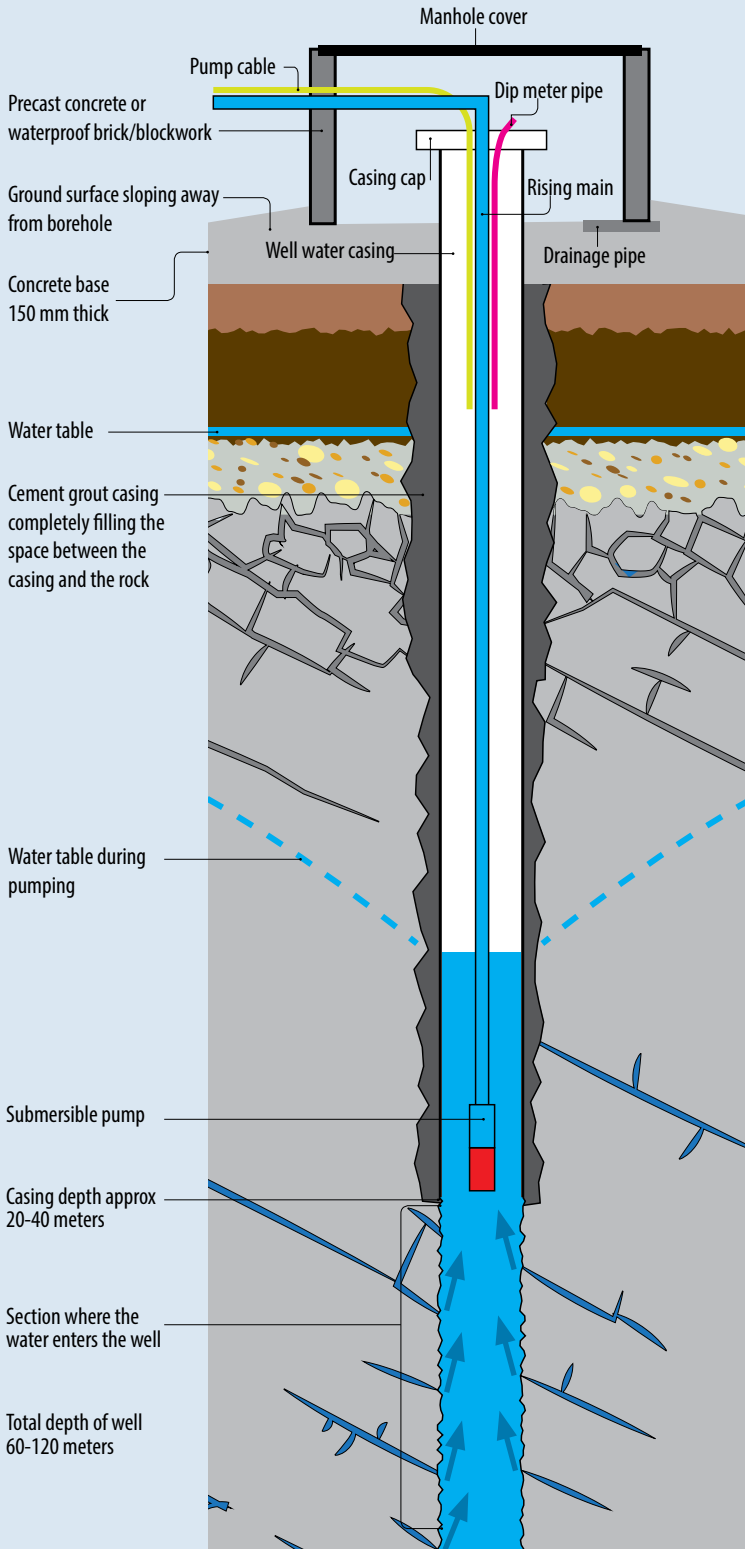
Use the 'Protect your Well' Application on erc.epa.ie/water/wells to assess the risks posed by your water supply. It will provide individual advice.

1. Check your well structure

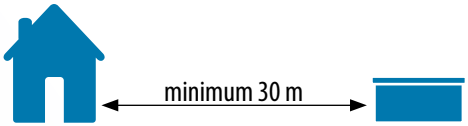
Make sure your well head is protected and that there are no gaps around the top of the well water casing where contamination can get in. Any gaps should be filled with cement (or grouted up). The space between the casing and the rock needs to be filled so that shallow contaminated groundwater does not contaminate the deeper cleaner groundwater that is pumped into the house from your well. In the diagram, you can see how a well has been properly constructed and sealed.

Well construction

1. The well must be constructed in line with EPA's guidance or IGI (Institute of Geologists of Ireland) Guidelines – guidelines for drilling wells for private water suppliers.
2. Generally water wells are 60-120 meters (197-394 feet) deep. Deeper groundwater is cleaner than shallow groundwater.
3. The water well casing should be installed deep into the bedrock somewhere between 20-40 meters (about 65-131 feet).
4. The space around the well water casing should be filled with cement grout to prevent shallow contamination getting into the well.
5. The pump should be inside the well water casing, if possible, to protect it.
6. Clean groundwater from deeper in the rock then flows up to the pump and into the house.



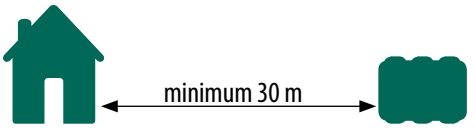
2. Check for any sources of pollution



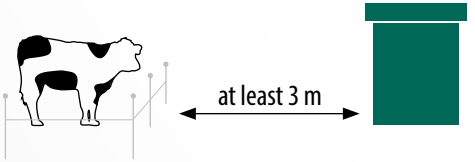
- Check that a wastewater system including septic tank is not located within a minimum of 30 m (almost 100 feet) of your well. This distance should be increased if your well is downslope of the system. Make sure the system is properly operated and maintained – see advice at www.maintainyourseptictank.ie

- Check that slurry is not being spread on land too close to your well or on bare rock where it may contaminate the groundwater. Landspreading should not be carried out within 25 m (or about 80 feet) of your well.

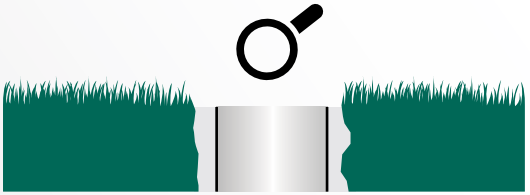
- Check that household or farm chemicals such as pesticides, oils, paints are not being stored within 5 m (16 feet) of the well head and in a way that they could leak or spill into the top of your well.



- Check that fuel storage tanks are not located within a minimum of 30 m (almost 100 feet) of your well. If they are, you should consider getting a special tank so that any leaks or spills are collected. You can get advice on these tanks from your local home heating providers.



- Check if animals have access to the well head. Animals should be fenced off at least 3 metres (about 10 feet) away from the well head.



- Check for any wells or boreholes (drill holes in the earth) that are no longer in use. All unused wells or boreholes should be sealed or filled in so that contamination cannot flow directly into the groundwater. If you need advice about this, please contact your local well driller.

3. Test your well water at least once a year

Ideally you should test your well water after heavy rain as contamination is likely to be high at this time. If your results are clear, this does not mean that the well water will not be contaminated at a different time. This is why it is important to regularly test the well water, particularly for microbiological contamination. Contact your local authority or HSE environmental health officer for advice on water testing.

You can expect to pay about €65 for microbiological testing and about €130 for a full drinking water test – see www.protectyourwell.ie for a list of laboratories.

If your water is contaminated, you will need to:

- get rid of the sources of contamination by moving them further away or protecting your well head – see www.protectyourwell.ie for further advice;
- disinfect the well, supply pipe and the internal plumbing of the house - see www.protectyourwell.ie on how to do this;
- install treatment – the type will depend on what the problem is but in most cases it will be a form of disinfection such as ultraviolet light (UV); or
- connect to a public or group water supply if one is available nearby. A group water supply is a community owned and managed supply. Check with your local authority to see what is available locally.

Estimated Costs

Drilling a properly constructed well and installing a pump can cost between €6,000-€9,000, but it is a good investment to protect your health.

Water Treatment System costs vary from €600-€3,000 to install and have annual maintenance costs of €260-€340.

Water testing costs €60-€130 a year to check if your water is clean and uncontaminated.

Grant Information

Existing well owners may be eligible for a grant to drill a new well or for other improvements such as essential pumping or treatment equipment.

A grant of up to three quarters of the cost, up to a maximum of €2,031.58, is available from your local authority, subject to conditions. The conditions are:

- There cannot be an alternative group or public supply available.
- The house must be more than seven years old and not connected to either a public supply or group scheme.
- Only one grant per house will be allowed in any seven year period.
- The proposed work must cost more than €635.

Please contact your local authority for more information about this grant and the full conditions.

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To get more information,visit:

- your local authority website;
- www.protectyourwell.ie;
- and ‘Protect your well’ application on erc.epa.ie/water/wells.

If you are concerned about your health, please contact your local General Practitioner. The local authority and/or your local HSE Environmental Health Officer can provide advice if concerned about your well water.