

## KEEPING YOUR PRIVATE WATER SUPPLY SAFE

### Information for Unregulated Private Water Supplies



#### What is an unregulated private water supply?

An unregulated private water supply is any supply that is not provided by or regulated by a Sanitary Authority i.e. County or City Council. It is any private supply that provides less than 10 cubic meters a day of water or serves less than 50 people and does **not** have a public or commercial activity. Examples of public or commercial activities include - restaurant or bed and breakfast.

#### Why is this leaflet needed?

Although the majority of private water supplies are safe to drink most of the time, they can be at risk from contamination. A number of serious illnesses caused by pathogens, such as *E. coli* O157 and *Cryptosporidium* can be transmitted through contaminated drinking water supplies. It is essential that you keep your private water supply safe from contamination to protect your health, and your family's health.

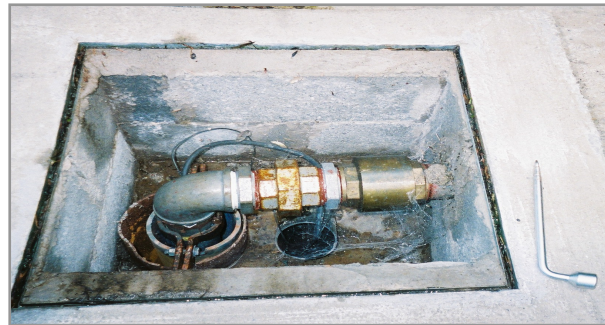
#### Legal Background

County and City Councils are required (by the European Communities (Drinking Water) Regulations (No. 2) 2007 (S.I. No. 278 of 2007)) to provide owners and users of unregulated private water supplies with information about the risks of contamination and with advice about what they can do to protect their supplies and keep them safe. This leaflet is intended to fulfill this obligation.

#### What is the problem?

Safe drinking water is essential to good health. Unregulated private water supplies can pose a risk to health unless they are properly protected and treated. They may become contaminated with microbes, such as bacteria, or chemicals. Some of these are harmless, but others may cause serious illness, particularly in vulnerable people such as the elderly, the very young, pregnant women and sick people. You may not be able to tell without sampling and analysis whether your water supply is safe because the contamination may not change the taste, smell or colour of your water.

This leaflet explains how you can protect your supply and reduce the risk of contamination. It also describes the different types of unregulated private water supplies, and potential causes of contamination.



#### How do water supplies become contaminated?

##### Springs, wells and boreholes

Springs, wells and boreholes may get contaminated at the point where -

- ❖ the spring emerges from the ground
- ❖ the water collects in the borehole or well

Springs and shallow wells that draw water from close to the surface are more likely to be contaminated than springs, wells and boreholes that draw water from deep underground. In farmland, underground water can pick up nitrates or pesticides from their use on crops. It can also pick up pathogens from faeces of grazing animals or the spreading of manure or slurry.

#### Streams, rivers, ponds and lakes

The quality of water from streams, rivers, ponds and lakes will generally not be as good as that from springs, wells and boreholes. The quality will also vary depending on weather conditions and activities in the catchment area. These waters are more likely to be contaminated, particularly from bacteria, at times of high rainfall and warm weather. Water that runs across the land into the streams, rivers, ponds or lakes can be contaminated from various sources such as soil, crops and faeces of farm animals, wild animals and birds.

#### WHAT SHOULD YOU DO?

##### 1 - Find out about your supply

- ❖ Who is responsible for its maintenance – if not clear, consider reaching agreement with other users?
- ❖ Where is the source of the water and what type of source – spring, well, borehole, stream/river, pond or lake?
- ❖ What route does it take to get to your property?
- ❖ Is it treated in any way – and if so is the treatment equipment in good order and serviced regularly?

##### 2 - Keep your supply safe

Inspect all parts of your supply regularly to check that it is in good condition and has not been interfered with or damaged. This means looking at the source of the supply, including the catchment area of the source, at any collection chamber and treatment plant, and the pipe work to your property.

##### For supplies from springs, wells and boreholes

- ❖ Check that the source is adequately protected to stop surface water getting into your supply, particularly at times of heavy rain. There should be no ponding of water near the source.
- ❖ Ensure that the well head is clean and animals cannot get close.
- ❖ Ensure the integrity of any slurry and silage storage in the areas.
- ❖ Oil, fertilizer, pesticides or other chemicals should not be stored or left in the pump-house or close to the well.

### For supplies from streams, rivers, and lakes

- ❖ The collection system should include a settlement pond or collection chamber to allow larger particles to settle out before water flows into your supply.
- ❖ The collection system should include a sand or gravel filter to remove organic material such as leaves, small particles and small animals before water flows into your supply. These filters will not remove all small organisms or chemical contamination.
- ❖ Ensure that the water source is not contaminated upstream by slurry or other effluent, e.g. septic tanks etc.

### For supplies from farmland

- ❖ Divert rainwater run-off so that it does not flow into or towards your source – for example into a small ditch leading away from your source.
- ❖ Check that the farmer is aware of your water supply and the need to avoid contaminating it by farming activities such as animals grazing, spreading of manure or slurry, or, the use of fertilizers and pesticides.
- ❖ Fencing may be necessary to keep farm and wild animals from your water source.
- ❖ Where appropriate, make sure the source has watertight walls and lid.
- ❖ Ensure that the top of any chamber or tank is above ground level to prevent water from the surrounding land flowing into it.
- ❖ Make sure any overflow pipes or vents are designed to stop small animals and debris from entering the chamber or tank.
- ❖ The source should not be close to any discharge, soak-away or drain.



### If you are a farmer

- ❖ The European Communities (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 788 of 2005) require that you do not spread fertilizer in close proximity to the abstraction point. (A separate handbook on the Regulations is available from the Department of Agriculture and Food).
- ❖ The Rural Environment Protection Scheme (REPS) requires that animals be fenced out of watercourses/waterbodies. (A handbook on REPS is available from the Department of Agriculture and Food).

### 3 - Consider getting your supply checked

It is advisable to have your well tested once a year for bacterial contamination, and once every three years for chemical contamination.

If you are concerned that your supply may be contaminated you should get it checked. Contact your local County or City Council or HSE Environmental Health Officer in the first instance. Alternatively, you can arrange to have a sample tested using a private laboratory. But remember that a test can only tell you about the quality of your supply at the time of the test, and the quality of water may change at different times.

### 4 - Consider treating your supply

If you know or suspect that your supply is contaminated you should consider getting it treated to remove the contamination. If your supply also serves other properties it is better and cheaper to install treatment for the whole supply, provided the other property owners agree, than to install treatment at each property. The choice of treatment must suit your supply and the contamination present.

Note that if your water supply requires continuous disinfection it may be an indication that there's a fundamental issue with your water supply and a proper treatment system may need to be put in place



### 5 - Consider your pipe work

Many unregulated supplies are naturally acidic and may dissolve lead from lead pipes (or lead tanks). If your water supply passes through lead pipes, either inside or outside your property, it may contain high levels of lead. Lead can be particularly harmful to infants and young children. You should consider either adding an alkali to make the water less acidic or replacing the lead pipe work with plastic pipe work.

### 6 - What else can you do?

If you no longer want to use your unregulated private supply because of the cost of treating or improving it, you may be able to connect to a regulated public supply. You should contact this authority (contact details below) to enquire if this is possible. It may not be feasible if the nearest regulated public supply is some distance away.

### Examples of sources and types of contamination

#### Bacteria

One possible source of bacteria is animal faeces. Water supplies drawn from farmland where animals graze or where manure or slurry is spread are most at risk, particularly where rainwater can run directly off farmland into the water source. Malfunctioning or badly sited septic tanks are another possible source of contamination. It is strongly recommended that you know the location and condition of your septic tank or treatment works, and percolation area. Septic tanks and other treatment systems should be properly maintained and serviced. People who do not drink the water regularly, such as visitors and guests, are at the greatest risk of contracting a disease or infection due to pathogens in the water supply.

#### Chemicals

Possible sources of chemicals in a water supply include industrial premises and workshops, mining and quarrying (both operating and abandoned), and road and driveway run-off. Farming and forestry (use of fertilizers, pesticides and sheep-dips ) are also possible sources. Artificial fertilizers and slurry contain nitrogen. Water with high levels of nitrates may not be suitable for pregnant women, bottle-fed infants and young children.

Lead can be picked up if lead pipe work is present. Lead was commonly used as a pipe material up to the 1960's. High lead levels may be harmful. A leaflet with further advice on lead in water is available at [www.sdcc.ie](http://www.sdcc.ie).

Radon may be present in the water source because of the nature of the rocks in the catchment, particularly in granite areas. High levels may be harmful. Advice can be obtained from the Radiological Protection Institute ([www.rpii.ie](http://www.rpii.ie)).

Arsenic is a naturally occurring element in the environment and can be elevated in some areas as a result of dissolution of minerals and ores. If your monitoring returns a result for arsenic in excess of 10µg/l then we recommend that you don't drink the water until you install an appropriate arsenic removal system.

#### Where can you get further advice?

If you have any questions or want further advice about your unregulated private water supply, please contact SDCC Water Services at 01 414 9000 or via [www.sdcc.ie](http://www.sdcc.ie)

You can contact the Environmental Health Officer in your Health Service Executive area ([www.hse.ie](http://www.hse.ie)).

The Environmental Protection Agency website has advice and guidance on Drinking Water quality ([www.epa.ie](http://www.epa.ie)).