



**KEEPING  
IT SAFE**

**IS YOUR PRIVATE  
WATER SUPPLY  
SAFE?**



SCOTTISH EXECUTIVE

**Making it work together**

## **WHY ISSUE THIS LEAFLET?**

**The purpose of this leaflet is to alert the owners and users of private water supplies to the risks of contamination of your water. You have private water if your water is not supplied by a public water authority. Although most private water supplies are probably safe to drink most of the time, this leaflet gives details of the risks and what you can do to protect your supply.**

**You can contract a number of serious illnesses from contaminated water. Infections like those caused by bacteria\* such as *E.coli* 0157 and *Cryptosporidium* can be transmitted through untreated private water supplies, although contaminated food is the most common route for *E.coli* infections. Untreated water can also carry other dangerous contamination.**

***\*In this leaflet 'bacteria' is used generally and also includes protozoa, parasites and viruses.***

## WHAT IS THE PROBLEM?

Safe drinking water is essential to good health. All private water supplies can pose a threat to health unless they are properly protected and treated. They may become contaminated with bacteria or other substances. Many of these are harmless, but some may cause serious illness or even death in vulnerable people such as elderly, very young, or sick people.

You may not be able to tell whether your water is safe as contamination may not change the smell, taste, or colour of the water. Unlike public supplies, most private supplies are not treated to remove contamination.



This leaflet explains a number of things you can do to protect your supply and reduce the risk of contamination. It also gives you information about different types of private water supply, and things which may contaminate them.

# WHAT SHOULD I DO?

## Find Out About Your Supply

- who is responsible for the upkeep and maintenance (if this is not clear, consider reaching an agreement with the other users)?
- where is the source?
- where does it go to get to your property?
- is it treated in any way?
- is the treatment equipment in good order and serviced regularly?

## Keep Your Supply Safe

Make sure you inspect all parts of your supply regularly, including the catchment area, to check it is in good order and has not been interfered with or damaged.

### *Supplies from Springs, Wells or Boreholes*

- check that the source is adequately protected to stop surface water getting into your supply, particularly at times of heavy rain.

### *Supplies from Burns, Rivers or Lochs*

- the collection arrangement should include a settlement pond to allow larger particles to settle out before the water flows into your supply.
- the collection arrangement should include a sand or gravel filter to remove organic material and small animals – but these filters will not remove all bacteria or chemical contamination.
- ensure that the water being collected is not contaminated by discharges further upstream from a septic tank, or by sewage.

## **Supplies from Farmland/Land where Animals Graze or Manure is Spread**

- divert rain water run-off so it does not flow into your supply (for example, with a small ditch leading away from your supply).
- check that the farmer is aware of the drinking water supply and the need to avoid contaminating it by farming activity.
- fencing may be necessary to stop farm and other animals from interfering with the water.

## **If Your Supply has Water Collection Chambers and/or Storage Tanks**

- these should have watertight walls and lids.
- tops of chambers or tanks should be above ground level to prevent water from surrounding land flowing onto them.
- any overflow pipes or vents in chambers and tanks should be designed to stop animals and debris from entering.
- the collection chamber should not be close to any soakaway or drain.

## **If You Supply Water to Others**

If you supply water to other people in the course of a business, for example by renting out holiday accommodation or using water for food production, you have a duty of care towards customers for the safety of water you supply. If you think your water may be unsafe, you might for example:

- advise boiling all water for drinking or food preparation;
- use or suggest others use bottled water.

## Should I Get My Supply Checked?

- Local councils monitor all private supplies that serve more than one property, although depending on how many people use the supply, this may not happen very often. If you want to know the results of previous tests of your supply contact your local council.

You can also contact the council if:

- you would like an additional test done;
- you would like to have your water tested for the first time.

The council is likely to charge you for this service. Alternatively, you can arrange for your own test using a private laboratory. Remember that a water test can only tell you about the quality of the water at the time of the test. The quality of your water may change at different times. Your local council can advise you what the result of your test means.



## **Should I Get My Supply Treated?**

You can get your private water supply treated to remove contamination. If it serves more than one household it is better (and probably more economical) to install treatment for the supply as a whole rather than in each household. Your choice of the type of treatment must suit your particular supply. Your local council will be able to give advice about treatment methods or other improvements. The council may be able to offer you a grant towards the cost of any work.

## **What Else Can I Do?**

If you no longer want to use your private supply, ask your local water authority about the possibility of connecting to the public supply ('mains'). You will probably have to pay part of the costs. Contact the water authority for further information.



# SOURCES OF CONTAMINATION

## *Bacteria*

The most likely source of contamination of the water with bacteria will be animal droppings. Water supplies drawn from farmed land where animals graze or where manure is spread are at most risk, particularly where rainwater may run directly off farmland and carry bacteria into private water supplies.

People who do not drink the water regularly and are not used to it, such as visitors and guests, may be at greatest risk of infection from bacteria in private water supplies.

## *Chemicals*

Private water supplies may be affected by chemicals used in:

- farming or forestry (for example, nitrates, pesticides and sheep-dip);
- old industrial premises or workshops.

Nitrates are only a problem in a few parts of Scotland. Water containing high levels of nitrates may not be suitable for:

- young children;
- bottle-fed infants;
- pregnant women.

If you are not sure whether your water is affected, ask your local council for advice about the level of nitrates or other chemicals in your water supply.

## *Lead*

Many private water supplies in Scotland are naturally acidic and may dissolve lead. If your supply passes through a lead tank or pipes, either outside or inside the home, there may be a significant amount of dissolved lead in your water. Lead can be particularly harmful to very young children. Your local council will advise whether you need to replace your tank or pipes, and if they can offer you a grant for this work.

## ***Other Materials***

Some water contains naturally occurring materials picked up from the ground such as iron or manganese. These may affect the appearance, taste or smell of the water. On the whole, these are not dangerous to health.

Many Scottish water supplies are also coloured by peat: this is normally harmless.

## **TYPES OF PRIVATE SUPPLY**

### ***Springs, Boreholes and Wells***

Springs, boreholes and deep wells that draw water from deep underground sources are less likely to be contaminated than other supplies but water may get contaminated where:

- the spring emerges;
- the water collects in the borehole or well.

In farmland, underground water can pick up nitrates or pesticides which may be harmful to health. Water from shallow wells, or springs which draw water from close to the surface, is more likely to be contaminated.

### ***Burns, Rivers and Lochs***

The quality of water from burns, rivers and lochs will generally not be as good as water from springs, boreholes and deep wells. The quality will also vary depending on the weather conditions. It is most likely to be contaminated, particularly with bacteria, at times of high rainfall or warm weather.

Water that runs across the land into burns, rivers and lochs picks up contamination from various sources, including from the soil and from the droppings of farm animals, wild animals and birds.

**If you have any questions or  
want any advice about your  
private water supply,  
contact the Environmental  
Health Department of your  
local council.**



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