Focus on Private Water Supplies 2017

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

Advocacy: *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

Our Responsibilities

Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities *(e.g. landfills, incinerators, waste transfer stations)*;
- large scale industrial activities (*e.g. pharmaceutical, cement manufacturing, power plants)*;
- intensive agriculture *(e.g. pigs, poultry)*;
- the contained use and controlled release of Genetically Modified Organisms *(GMOs)*;
- sources of ionising radiation *(e.g. x-ray and radiotherapy equipment, industrial sources)*;
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

National Environmental Enforcement

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by co-ordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

Water Management

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

Monitoring, Analysing and Reporting on the Environment

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government *(e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports)*.

Regulating Ireland's Greenhouse Gas Emissions

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

Environmental Research and Development

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

Strategic Environmental Assessment

- Assessing the impact of proposed plans and programmes on the Irish environment *(e.g. major development plans)*.

Radiological Protection

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

Guidance, Accessible Information and Education

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making *(e.g. My Local Environment, Radon Maps)*.
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

Awareness Raising and Behavioural Change

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

Management and structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

Focus on Private Water Supplies 2017

The authors would like to thank National Federation of Group Water Schemes for their assistance and for providing the cover photo for this report.

Published by the Environmental Protection Agency, Ireland

Environmental Protection Agency

An Ghníomhaireacht um Chaomhnú Comhshaoil

P.O. Box 3000, Johnstown Castle Estate, County Wexford, Ireland

Telephone: +353 53 9160600 Fax: +353 53 9160699

E-mail: info@epa.ie | Website: www.epa.ie

LoCall: 1890 335599

ISBN: 978-1-84095-792-1

Contents

Key findings for 2017 1
1 Introduction to private supplies 2
What is a private supply? 2
The different types of water supply in Ireland 6
Regulated and exempt supplies 8
2 Drinking water quality in regulated private supplies in 2017 10
3 Information for water suppliers 13
Monitor the quality of the water in the supply 13
Identify the risks to the supply 13
Take action to reduce the risks to the supply 14
4 Local authority responsibilities for regulated private supplies 16
Local authority register of all private water supplies 16
Monitoring of regulated private supplies 17
Investigating failures to meet water quality standards 17
Enforcing the drinking water regulations 18
5 Department of Housing, Planning and Local Government 20
Provision of funding for private water supplies 20
Rural Water Review group 20
Remedial action list for group water schemes 20
6 Recent developments in private supplies 22
New information on the risks to household wells 22
The serious threat from VTEC 23
National Federation of Group Water Schemes programmes 24
7 Conclusion 26
Appendices 27

Drinking Water Quality in Private Supplies 2017

Almost **20%** of Ireland's population is supplied by private water supplies, including household wells

Water quality in regulated private water supplies is consistently poorer than public water supplies

2017 E. Coli compliance in

- **99.9%** Public water supplies
- **99.5%** Public group schemes
- **96.7%** Private group schemes
- **95.7%** Small private supplies

Protecting private supplies

Step 1 : Check your source

Step 2 : Check for any sources of pollution

Step 3: Test the supply annually
ideally following wet weather
(treatment may be necessary if contaminated)

Key findings for 2017

Private water supplies

- Private water supplies serve about one fifth of Ireland's population, but can affect far more people
- Private water supplies include group schemes, small supplies and wells, not served by Irish Water

Quality of private water supplies

- The quality of drinking water in private supplies remains poorer than that in public supplies
- Small private supplies have the poorest quality
- No testing was done on 27% of known regulated private supplies

Action required by suppliers

- Suppliers should make sure that their water source is protected from contamination
- Suppliers should take action where contamination is found
- Suppliers should make sure their supply is on the local authority register and is tested at least annually

Action required by local authorities

- Local authorities need to make sure that all regulated private supplies are registered and tested
- Local authorities need to make sure action is taken where contamination is found

1 Introduction to private supplies

What is a private supply?

Private water supplies are supplies that are not run by Irish Water. They are mostly in rural areas and provide drinking water to people who are not connected to the public water mains. The water source for most private supplies is a spring or a well.

Private supplies include group schemes; wells that provide water to public buildings and businesses in rural areas that do not have a public mains supply; and wells that people have drilled for their own homes.

Who operates private supplies?

Private supplies are operated by a group scheme, or the owner of a business that gets its water from a well, or the homeowner who gets their water from a well.

While a group scheme committee may have a lot of experience and knowledge on how to manage the supply, many people who have a well supplying their business or home may not have much knowledge about how to do this.

Why are we concerned about private supplies?

Every year, the Environmental Protection Agency looks at the monitoring results for private supplies. We always find that the quality of the water in private supplies is not as good as the quality of water in public supplies. We also know that we do not have enough information to answer the following questions:

- Do we know where all private supplies are?
- Are they all registered?
- Are they all monitored?
- Do we know the quality of all of them?
- Is the water quality good enough in all of them?

Why does this matter?

Drinking water should always be clean and safe to drink, but drinking contaminated water will make you sick. One fifth of the people of Ireland get their water from private supplies. We currently don't have enough information to be confident that all this water is safe to drink.

What do we mean by contaminated drinking water?

We say drinking water is contaminated if something gets into it that makes it unsafe to drink. A spring or well can get contaminated if it is not properly protected. Contamination can come from badly managed septic tanks, slurry spreading close to the source, or animals being allowed to roam too close to the source. If the water supply gets contaminated, it may contain bacteria, such as *E. coli*, which can cause an upset stomach if the water is consumed. These bacteria can cause more serious illnesses in infants, young children, the elderly, and those who already have an underlying health condition.

I've never had any problem with my supply before, why should I worry?

Just because you haven't had a problem before, it doesn't guarantee that your water is safe. People using a well with low levels of bacteria may become used to it, but a visitor, particularly a child, elderly person, or someone with poor health, may become ill from drinking your water.

Also, something might change in the area surrounding your well, for example, a new house with a septic tank is built, or a farmer starts landspreading in a nearby field.

What's the worst that could happen?

Maybe someone gets sick, but they get better in a day or two. However, there is a very dangerous form of *E. coli* called VTEC. This can cause severe diarrhoea and stomach cramps and it is particularly dangerous for children under five or elderly people. In about 10% of cases[1] it causes haemolytic uraemic syndrome (HUS), the most common cause of kidney failure in children.

If you are responsible for a private supply, you are responsible for making sure it is safe to drink.

I get my water from Irish Water, does this concern me?

The people most likely to be affected by drinking water from private supplies are those whose homes are served by such supplies. However, many of us may drink water from such supplies when we visit friends, family, restaurants, or other premises that get their water from a private supply.

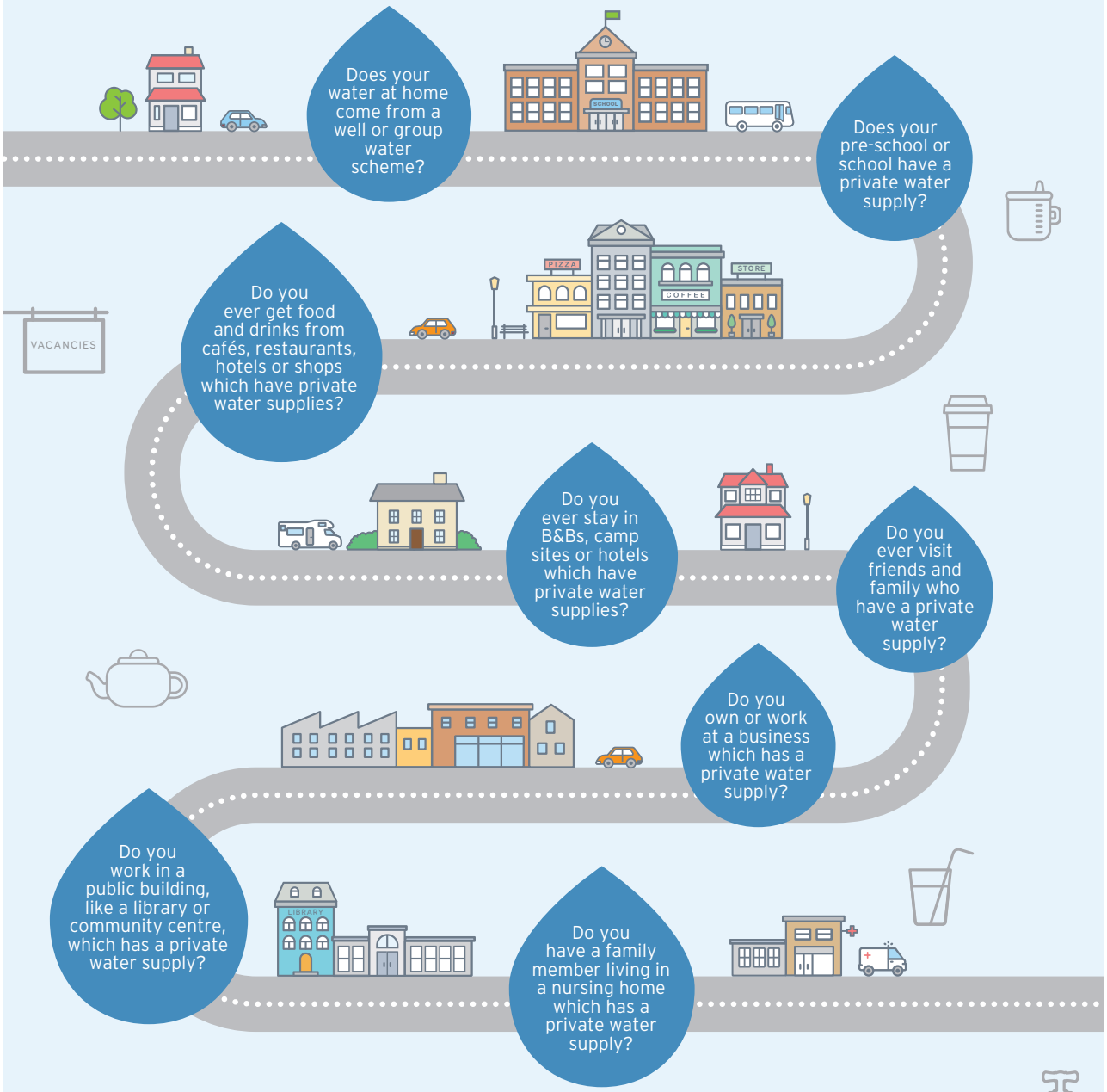
The picture on the next page shows the types of places we might go where the water could be coming from a private supply.

Figure 1: an unprotected spring source

Figure 2: a borehole fully capped and sealed

[1] https://www.hpsc.ie/a-z/gastroenteric/gastroenteritisoriid/guidance/iidpublichealthandclinicalguidancediseasespecificchapters/File,13525,en.pdf

Are you affected by private water supplies?



If you answered 'Yes' or 'I'm not sure' to any of the questions above, you may be affected by the quality of water in private supplies.

If you are the person in charge of the household well or private water supply, then **you are responsible for making sure that the water is safe to drink.**

So, what needs to be done?

Private supplies must be properly protected, monitored, regulated and funded to ensure that they meet the drinking water standards. It is essential that all people and organisations with responsibility for private supplies play their part, to protect public health and to ensure that, no matter where you live, you can be confident that your drinking water is safe.

Who is responsible for private supplies?

The supplier and the local authorities have legal responsibilities under the Drinking Water Regulations[2]. The local authorities have the leading role in regulating private supplies. The Department of Housing, Planning and Local Government also has an important role in policy making and funding. Two other organisations play a part also:

- The **Health Service Executive (HSE)** provides advice to the local authorities if a failure to meet a water quality standard is thought to pose a risk to the health of the users of a private water supply.

- The **Environmental Protection Agency (EPA) has a limited responsibility for private supplies in:**
  - Auditing the local authorities' yearly monitoring plans; and
  - Reporting every year on water quality in private water supplies.

- The EPA also supports the private water supply sector by:
  - Providing guidance to local authorities on investigating water quality failures; and
  - Publishing drinking water treatment advice and guidance.

What information is in this report?

This report is about the quality of drinking water in private water supplies during 2017. Anyone who owns, manages, regulates, or uses water from a private supply will find important information in this report.

- Section 2 discusses the findings of the EPA's assessment of the available information on regulated private supplies in 2017,
- Section 3 discusses the actions a private supplier needs to take to ensure the safety of their supply,
- Section 4 discusses the role of the local authorities,
- Section 5 discusses the role of the Department of Housing, Planning and Local Government,
- Section 6 describes recent developments in research of private wells and in the private supplies sector, and
- Section 7 discusses the EPA's conclusions.

[2] European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014) (as amended)

The different types of water supply in Ireland

There are many different types of water supply in Ireland. They will involve some, or all, of the following steps:

- Abstraction: where the water is taken from a river, spring or well for use in a water supply,
- Treatment: where the water is cleaned up to make it safe to drink, and
- Distribution: where the water is piped into a home or business for use.

The person, group or organisation supplying water is always responsible for ensuring it is safe to drink. Group water schemes and the owners or managers of commercial or public activities supplying water are responsible for making sure private water supplies are safe to drink. Householders are responsible for their own household wells. More information on what suppliers should do to protect their supply is in Section 3 of this report.

Public supplies: these are supplies where Irish Water manage the abstraction, treatment and distribution of treated water. These supplies are covered by the Drinking Water Regulations and regulated by the Environmental Protection Agency. The EPA publishes a separate report on public water supplies that you can find on the EPA website.

Private supplies: there are several different types of private supply.

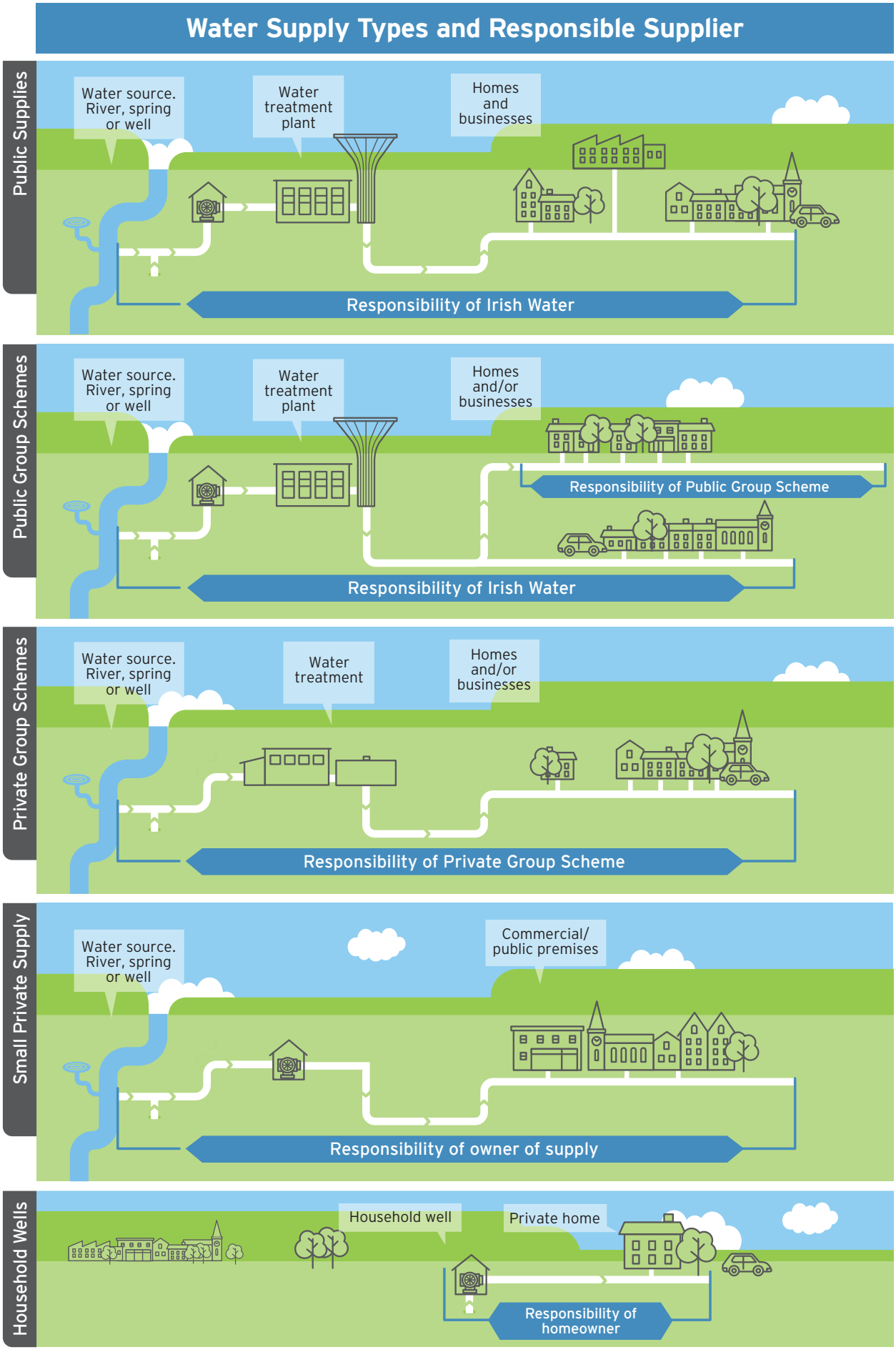
1. **Public Group Schemes** are supplies where a group water scheme, set up by the local community, manages the distribution of treated water to the users. Irish Water manage the abstraction and treatment of the water.

2. **Private Group Schemes** are supplies where a group water scheme, set up by the local community, manages the abstraction, treatment and distribution of treated water.

3. **Small Private Supplies** are supplies serving a commercial or public activity. The owner or manager of the activity manages the abstraction, any treatment and the delivery of the water. Examples of commercial or public activities served by small private supplies include hotels, pubs and restaurants, crèches and national schools.

4. **Household Wells** serve individual private homes, mostly in rural areas. Household wells are often also called private wells. The householder is responsible for managing this type of supply.

The picture on the next page helps to explain the different types of water supplies and who is responsible for them. To find out if your supply is regulated by legislation, see Table 1 on the following page.


Water Supply Types and Responsible Supplier
Public Supplies
Water source. River, spring or well
Water treatment plant
Homes and businesses
Responsibility of Irish Water
Public Group Schemes
Water source. River, spring or well
Water treatment plant
Homes and/or businesses
Responsibility of Public Group Scheme
Responsibility of Irish Water
Private Group Schemes
Water source. River, spring or well
Water treatment
Homes and/or businesses
Responsibility of Private Group Scheme
Small Private Supply
Water source. River, spring or well
Commercial/ public premises
Responsibility of owner of supply
Household Wells
Household well
Private home
Responsibility of homeowner

Regulated and exempt supplies

Some private supplies are overseen by the local authority because they are covered by the Drinking Water Regulations. This makes them **regulated** supplies. Other supplies are not covered by the regulations; these are called **exempt** supplies. The table below shows which supplies are regulated and which are exempt, along with the minimum number of *E. coli* samples required to be taken every year.

Table 1: Regulated and exempt supplies

Type of supply	Number of people served or volume supplied	Regulated or exempt?	Minimum number of *E. coli* samples per year*
Public Group Scheme	>50 people or 10,000 litres per day	Regulated	Two
	<50 people or 10,000 litres per day, not supplying any public/commercial activity	Exempt	One
	<50 people or 10,000 litres per day, but supplying a public/commercial activity	Regulated	Two
Private Group Scheme	>50 people or 10,000 litres per day	Regulated	Two
	<50 people or 10,000 litres per day, not supplying any public/commercial activity	Exempt	One
	<50 people or 10,000 litres per day, but supplying a public/commercial activity	Regulated	Two
Small private supply	Supplying a public or commercial activity regardless of the number of people served or volume supplied.	Regulated	Two
Household well (also called private well)	Single house only	Exempt	One

***Note on the 'Minimum number of *E. coli* samples per year':**

- Where a supply is regulated, this is the minimum number of *E. coli* samples required by law.
- Where a supply is exempt, this is the minimum number of *E. coli* samples recommended by the EPA.

What other testing is required in a regulated private supply?

We have focused here on *E. coli* as it is the most important indicator of whether a water supply is contaminated, but other parameters also need to be monitored every year. The number of samples required every year will depend on the size of the supply. The local authority should also carry out risk assessments for each private supply to determine if additional parameters should be monitored.

Table 2: Parameters to be monitored at all regulated private supplies

Parameter name		
E. coli	Colour	Turbidity
Coliform bacteria	Conductivity	Odour
Colony count 22°C	Taste	pH

Anyone who owns, manages or regulates a supply needs to be aware of the monitoring requirements and will find more information in:

- European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014) (as amended), and
- EPA Handbook for Private Water Supplies.

What testing is required in an exempt private supply?

Exempt supplies, such as household wells, are not covered by the regulations and so there is no legal requirement to test them. However, the EPA recommend that these supplies are tested for *E. coli* at least once a year, to check for contamination. These results do not have to be reported to the local authority or the EPA, but should be used by supply owners to assess their own water quality. If a supply owner finds their supply is contaminated they can find information on what to do next on the webpage www.protectyourwell.ie. More information is also given in Section 3 of this report.

2 Drinking water quality in regulated private supplies in 2017

All water supplies should be monitored to check the quality of the drinking water that is being delivered to users of the supply. This is to make sure that the water is safe to drink.

This section talks about what the EPA found when we assessed the local authorities' monitoring results for 2017. See the full list of results for 2017 in Appendices 1, 2 and 3 (at the back of this report) and at this link: http://erc.epa.ie/safer/resourcelisting.jsp?oID=10206&username=EPA%20Drinking%20Water.

According to the information sent to the EPA by local authorities, there were 2,752 regulated private water supplies registered in Ireland in 2017. The EPA assessed the results of *E. coli* monitoring carried out. If *E. coli* is found in water, it shows that the supply may be contaminated.

The four main conclusions we can draw from this assessment are:

- Water quality in private supplies is not as good as in public supplies,
- Some types of private supply are better than others,
- Not all registered private supplies were monitored in 2017, and
- Not all private supplies are on the local authority register.

Conclusion 1: Water quality in private supplies is not as good as in public supplies

Every year, when the EPA assesses the monitoring information, we find that the quality of drinking water in private water supplies is poorer than that of public water supplies. The graph below highlights the difference in water quality between public and private water supplies.

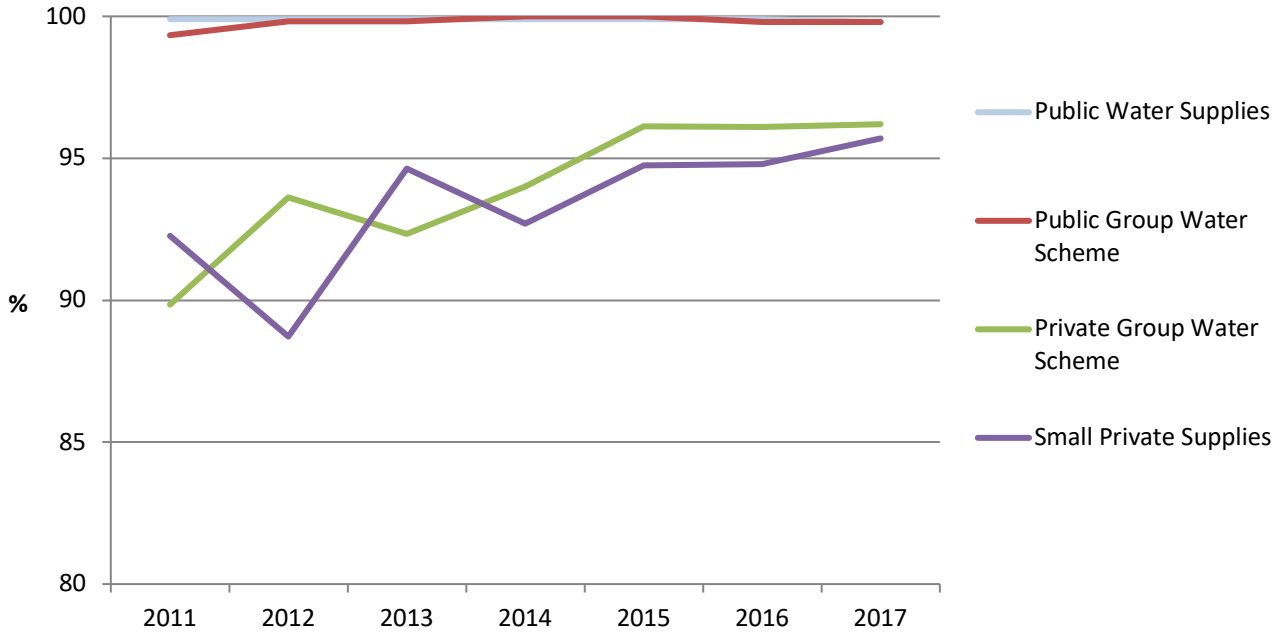


Figure 3: *E. coli* compliance per water supply type, from 2011 to 2017

The graph clearly shows that, while there has been some improvement over the last few years, there is still quite a way to go before private supplies are as good as public supplies. It is very important that more improvements are made, because no matter where you live, or who is responsible for your drinking water supply, you should be confident that your drinking water is safe.

Conclusion 2: Some types of private supply are better than others

Public group water schemes (serving 2% of the population) have the best water quality as the water comes from the public water supply provider, Irish Water. Small private supplies (serving 1% of the population) have the poorest water quality.

Table 3: *E. coli* compliance in each regulated private water supply type in 2017

***E. coli* compliance in regulated private supplies in 2017**	
96.6%	of private supplies monitored met the *E. coli* standard.
99.5%	of public group water supplies met the *E. coli* standard.
96.7%	of private group water supplies met the *E. coli* standard.
95.7%	of small private supplies monitored met the *E. coli* standard.

The National Federation of Group Water Schemes is working hard to improve the quality of the water in group water schemes, and can access funding from the Department of Housing, Planning and Local Government for their work. However, there is no umbrella organisation working on behalf of small private supplies, and there is no funding mechanism in place for them either. This is very worrying as small private supplies include:

- National schools or childcare facilities,
- Nursing homes, and
- Hotels, restaurants or other premises serving food to the public.

These supplies have the potential to cause a huge risk to public health if they are contaminated.

Conclusion 3: Not all registered private supplies were monitored in 2017

Every year, we also find that not all registered supplies were monitored for *E. coli*. Since the publication of the first private supplies report for 2015, there has been an improvement in the number of private supplies being monitored, but the number not monitored remains very high, particularly for small private supplies. Local authorities are responsible for ensuring that all registered private supplies are monitored each year.

Table 4: Number of regulated private supplies not monitored

Year	Public group	Private Group	Small private	% of total
2015	92	30	864	37%
2016	37	20	809	31%
2017	38	0	711	27%

This is unacceptable as we have no water quality information on more than a quarter of registered private supplies. This makes it impossible to be confident that this water is safe to drink.

Appendix 5 shows the number of supplies which were not monitored in 2017 in each county.

Conclusion 4: Not all private supplies are registered

The three points above relate to the information we have on private supplies. But there is a huge gap in our knowledge. Local authorities are legally obliged to keep a register of all regulated private supplies, however, there is no legal obligation for a regulated private supplier to register with the local authority. It can be very difficult for a local authority to know where private supplies exist, and if the local authority doesn't know about a supply, they can't monitor it. Furthermore, although some local authorities are aware that there are unregistered supplies in their areas, they may not be making sure that all such supplies are registered with them. So, there is an unknown number of private supplies in the country that the local authority has no information about. These are most likely to be small private supplies, businesses that have the potential to cause a serious health risk to the public, if their water is contaminated.

What does this information tell us?

To sum up:

- We don't know how many private supplies there are,
- Of the supplies we know about, we don't know the quality of them all,
- Of the ones for which we know the quality, the quality isn't good enough, and
- This all points to there being a serious health risk to the public that we can't quantify.

So, we need to ask, what needs to be done and who needs to do it? The main responsibility rests with:

- Private water suppliers,
- The local authorities, and
- The Department of Housing, Planning and Local Government.

The next sections of the report will go into greater detail on this.

3 Information for water suppliers

The water supplier is responsible for making sure that their water is safe to drink. There are three main steps that a supplier should take, whether the supply is part of a group scheme or a well supplying a public or commercial activity or a home:

- Monitor the supply,
- Identify the risks to the supply, and
- Take action to reduce the risks to the supply.

Monitor the quality of the water in the supply

The local authority must ensure that all regulated private supplies are registered and correctly monitored every year. However, if you are a supplier, you too should make sure that your supply is on the local authority register. You should request a test with the local authority if one has not been done within a year.

For household wells and other exempt supplies the responsibility for monitoring the supply lies with the owners. In this case, the EPA recommends that you monitor your supply at least once a year for *E. coli,* preferably following heavy rain when the supply is most at risk from contamination.

Identify the risks to the supply

The EPA has developed a 'Protect Your Well' web application that provides a step-by-step guide to inspecting your well for contamination or the risk of contamination.

You can find the 'Protect Your Well' application on the EPA website at www.protectyourwell.ie. A video providing a summary of the main risks to your well is available at https://www.youtube.com/watch?v=Vm7R1MMz1D8.

The National Federation of Group Water Schemes (NFGWS) is a representative organisation for group water schemes. They help group water schemes to provide good quality water to their users by giving advice and providing support. The NFGWS Quality Assurance System was developed by the NFGWS. Group water schemes can request training from the NFGWS on how to use the system to carry out a risk assessment of their supply.

Figure 4: Understanding the risks to your well

Take action to reduce the risks to the supply

The 'Protect Your Well' application identifies several actions to help reduce the contamination risks identified for your supply. These may include properly sealing the wellhead, ensuring septic tank effluent or slurry does not enter the well, and disinfecting the well if necessary.

A dedicated EPA webpage, www.protectyourwell.ie provides more information. The webpage includes an information booklet on best practice methods of borehole construction and wellhead protection and step-by-step instructions on how to disinfect your well. The webpage also gives advice on monitoring and treatment of your well water and has a list of frequently asked questions.

The NFGWS Quality Assurance scheme outlines actions that should be taken to reduce risks identified by group water schemes for their supply. The NFGWS have also developed specific programmes to deal with contamination from septic tanks, and from poor source protection. More information on these programmes can be found in Section 6 of this report.

Useful information: Connecting to a public water supply

If you find that the quality of your drinking water is consistently poor and the work or financial cost of cleaning and maintaining your well or supply is too demanding, you may be able to connect to the public water supply. Details of how to connect to the public water supply are on the Irish Water website (https://www.water.ie/connections/).

Recommendations for private water suppliers
If regulated, make sure you are on the Local Authority's register.
Make sure you monitor your supply for *E. coli* at least once a year.
Identify the risks to your supply.
Take action to reduce the risks to your supply.
Protect your water source by: • Constructing wellheads above ground level and sealing and capping the wellhead. See EPA guidance on borehole construction and wellhead protection. • Fencing off around the well and surface water abstraction points to prevent animal access. • Being aware of set-back distances for landspreading close to wells or surface water abstraction points and ensuring that any local landowners are adhering to them. • Not using or storing pesticides or other chemicals around a well or surface water abstraction point. • Visually inspecting abstraction points for contamination on a regular basis.
Manage and maintain your treatment system.
Use the guidance developed by the local authorities, EPA and National Federation of Group Water Schemes.

4 Local authority responsibilities for regulated private supplies

The local authorities have the primary role in overseeing regulated private supplies. This role was given to them under the Drinking Water Regulations.

Local authorities are responsible for ensuring private water supplies meet the requirements of the drinking water regulations by:

- Keeping a register of all private water supplies in their area;
- Monitoring private water supplies twice per year to check the water quality;
- Investigating where water quality standards are not met; and
- Taking enforcement action if suppliers are not taking steps to improve water quality.

We will go through each of these in greater detail.

Local authority register of all private water supplies

Local authorities are responsible for keeping an up-to-date register of all private water supplies in their area. The register should include:

- the name and address of the water supplier,
- the location of the water source, and
- the number of people served by the supply.

The local authorities should also map the location of all the customers on the supply to help produce a yearly monitoring plan.

It can be difficult for local authorities to know who owns or is served by a private water supply unless they go door-to-door to individual properties. Private water suppliers can help local authorities by letting them know that they own a private water supply.

The local authority register is important for two reasons:

- The local authorities need to know which supplies to monitor each year, and
- The Department of Housing, Planning and Local Government needs to know how many supplies could require funding and support to provide good quality water.

Monitoring of regulated private supplies

Section 2 of our report highlights that even if private supplies are on the local authority register not all of them are being monitored at the required minimum frequency of twice per year. More than one quarter of the registered private water supplies were not monitored at all in 2017. Local authorities should prepare a yearly risk-based monitoring plan at the beginning of each year, that includes all private water supplies in their area. The monitoring plan can be used by the local authority themselves, or by any contract samplers, to make sure that all supplies are monitored. More information on preparing and carrying out a monitoring plan can be found in the EPA Handbook for private water supplies.

If local authorities find a water quality failure in a supply, they should notify the supplier as soon as possible, so the cause of the failure can be fixed.

EPA audits of local authority monitoring plans

For the last four years, the EPA has been auditing the local authorities' yearly monitoring plans. The findings of the audits provide guidance for the local authorities on the actions they need to take to make sure their plan is satisfactory. The reports of these audits are published on the EPA website.

In 2017, the EPA carried out audits of the private water supply monitoring plans in three local authorities. The main finding of these audits was that the monitoring plans needed improvement. The table at the end of this section lists typical audit recommendations.

Investigating failures to meet water quality standards

If a local authority finds a water quality failure at a supply as part of their monitoring they should first notify the supplier as soon as possible, so the cause of the failure can be fixed. Local authorities then have a responsibility to fully investigate the failure and request that the water supplier prepare an action plan to fix the cause. Local authorities should review the action plan and amend where necessary to make sure the supply will be properly fixed. They should then oversee the action plan and make sure it is carried out.

Local authorities have several enforcement tools they can use to help them with this process, which we will discuss next.

Enforcing the drinking water regulations

As part of the local authorities' role as regulator they can:

- Audit private drinking water supplies,
- Instruct a water supply owner to act to improve their water supply,
- Issue legal Directions if supply owners do not act, and
- Prosecute water supply owners if necessary.

Local authorities are not legally required to provide any information on their enforcement activities to the EPA. However, for this report, we asked each local authority for this information and 22 local authorities responded to our query. Appendix 4 shows the number of:

- Audits carried out,
- Directions issued (legal instructions to a supplier to fix a problem), and
- Boil Notices issued (where people on a supply are told to boil their water)

in those local authority areas. The EPA assessed the responses and makes the comments below.

Audit private supplies

The EPA found that 11 local authorities had audited a total of 108 private supplies in their respective areas in 2017. An audit is a useful way to see first-hand how a water supply is operating. Where a water failure has occurred, an audit will help identify the root cause of the problems. Otherwise, it is difficult to know what the problems are.

Based on the responses received from the local authorities, we can see that there are some counties where boil water notices or directions were issued, however no audits were undertaken by that local authority.

Local authorities have a responsibility to audit private supplies to check they are operating correctly. At the start of every year, the local authority should create a risk-based audit plan listing the supplies they plan to audit that year. The supplies should be chosen based on the level of risk to the supply. An example of risk would be if the supply has a boil water notice in place or has had several *E. coli* failures. The EPA has produced a handbook for private water supplies which contains advice on creating an audit plan and what to look for during an audit.

Other enforcement activities

Based on the responses, we found that:

- Six local authorities issued a total of eight Directions, and
- 16 local authorities issued 168 boil notices.

While this information does not necessarily represent the full picture, the important point to note is that local authorities should use these enforcement tools when required, particularly if a water quality issue has been found on a private supply.

EPA audit recommendations for local authorities' monitoring plans
Ensure the register of regulated private water supplies is accurate and kept up-to-date
Co-ordinate with the private water supplier when creating the monitoring plan to ensure that the sample properties chosen are served by the private water supply in question
Consult with the HSE when preparing the plan, to avoid sampling at the same property
Ensure there is a communication plan in place with the HSE so that all monitoring results are exchanged
Ensure that the spread of sample days, times and locations within a monitoring plan is as wide as possible. This is to ensure that monitoring samples are representative of water quality throughout the year
Ensure all regulated private supplies are monitored at least twice per year and are risk assessed to determine what monitoring is required. This includes all private schemes serving a commercial and public activity, regardless of size.
Provide the private water supplier with a copy of the monitoring results as soon as possible after the results are available
Investigate all failures to meet water quality standards in private water supplies to ensure the cause of the failure is identified and appropriate corrective action is taken. Focus should be given to parameters that can impact human health, such as *E. coli*.

EPA recommendations for local authorities' enforcement activities
Carry out audits of private water supplies, focusing on those with known water quality problems.
Use the enforcement powers available to drive water quality improvements.
Prioritise supplies that have serious water quality issues or are slow to implement local authority recommendations.

5 Department of Housing, Planning and Local Government

The Department of Housing, Planning and Local Government is responsible for policy making and for providing supports to the private water sector. The aim is to ensure that everyone gets clean water, no matter where they live. This section will describe the work being carried out by the Department.

Provision of funding for private water supplies

The Department of Housing, Planning and Local Government makes funding available to group water schemes and household well owners for improvements to their supplies. Local authorities administer and distribute the funding through the Rural Water Programme. The funding includes:

- Annual subsidies and capital grants to group water schemes, and
- Household well grants to householders who have their own wells.

Other types of private supplies currently receive no funding.

Rural Water Review group

The Department of Housing, Planning and Local Government set up a working group in 2018 to review how private water supplies and private wastewater treatment systems are monitored, maintained and financed. The working group is made up of representatives from the Department of Housing, Planning and Local Government, EPA, HSE, local authorities and the NFGWS. It will look at what resources, support, policies and finance private water supplies need to improve their water quality and protect the people that use these supplies. All private water supply types, including household wells, are included in the review.

We have already highlighted in this report that private supply water quality has been worse than public supply water quality for many years. The overall aim of the working group is to improve water quality in private water supplies and bring it up to the same level as public water supply quality.

Remedial action list for group water schemes

The Department of Housing, Planning and Local Government developed a **Remedial Action List for Group Water Schemes** (RAL_GWS) in 2016. The list, which is modelled on the EPA's Remedial Action List for public water supplies, identifies group water schemes that are at risk of supplying poor quality drinking water because their water treatment systems are inadequate. Group water schemes on the list are prioritised for grants to improve their treatment systems. The list was started in 2016, and further updated in 2017. The 2017 RAL_GWS consists of 106 private group water schemes (nearly 30% of all private group water schemes).

Table 5: Status of schemes on RAL_GWS at end of 2017

Status of schemes on RAL_GWS at end of 2017			
	Number of schemes (total = 106)	% of total schemes on RAL_GWS	% of population on RAL_GWS
Fully completed	19	17.9	29.5
Started but not completed	51	48.1	56.9
Not started	36	34.0	13.6

The RAL_GWS should be a dynamic process and updated at least annually to reflect the improvements achieved and highlight the areas where work is still required.

6 Recent developments in private supplies

New information on the risks to household wells

Household wells are not covered by the drinking water regulations and therefore are not monitored by the local authorities. Responsibility for looking after these wells rests with the householder. There are around **172,000 household wells** (CSO, 2016) in Ireland which supply water to individual private households and we have very little information on the quality of the water in these wells.

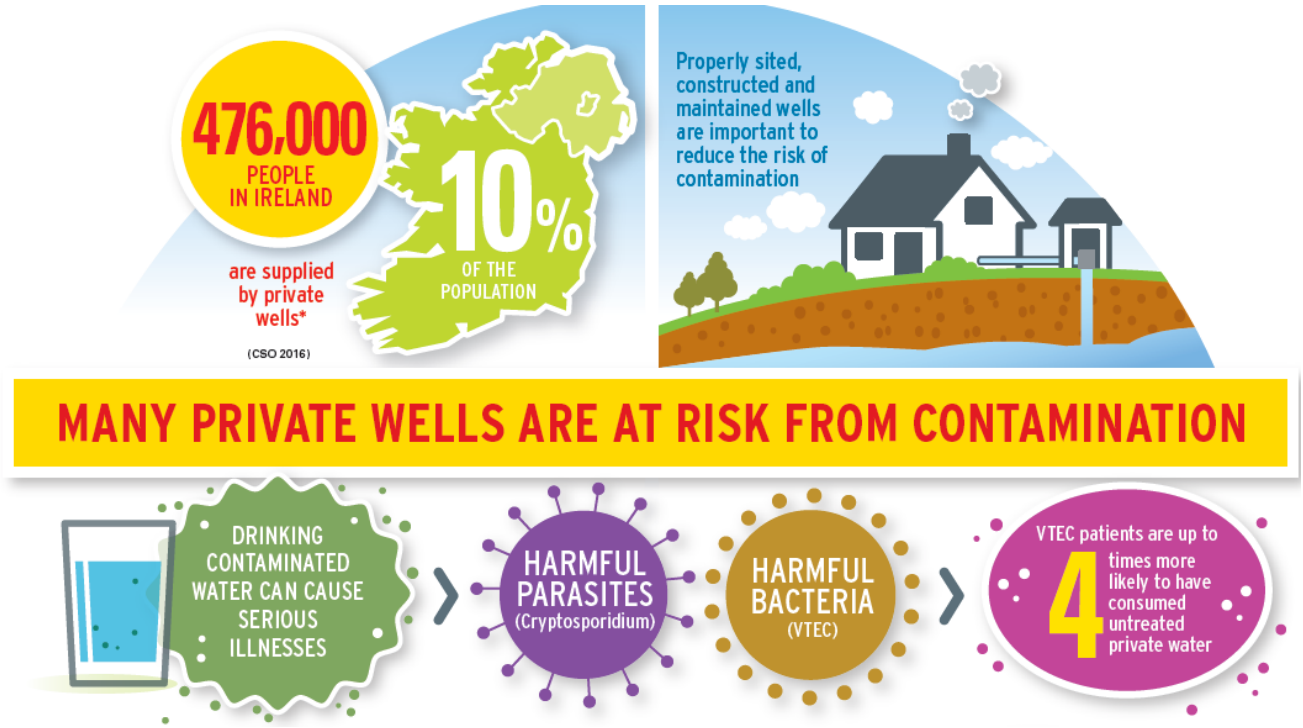


Figure 5: Risks to private wells

It is estimated that between 15%[3] and 30%[4] of all wells are contaminated by *E. coli*. The EPA-funded research project, 'The Impact of On-site Domestic Wastewater Effluent on Rivers and Wells' found:

- when 212 wells were sampled **once** each, 15% had *E. coli* in the water, and
- when 24 of the wells were sampled **once a month** over a 14-month period, 58% had *E .coli* in the water **more than once**.

This shows that taking one sample may not be enough to prove that your well water is clean. The EPA recommends that the best time to take a sample is after heavy rain. This will give you the best idea on how safe your supply is.

The research team also found that only 35% of wells assessed were properly protected against contamination. **This means that nearly two-thirds of wells are at risk of contamination**.

[3] http://www.epa.ie/pubs/reports/research/water/research251.html
[4] 'Water Quality in Ireland 2007-2009', EPA 2010

The serious threat from VTEC[5]

You might never have had a problem with your well before, but that doesn't mean your supply is safe. So, we should ask, why does it matter that your well is protected and your water is clean?

We mentioned earlier in this report that, if your water is contaminated with *E. coli*, it could give you a sick stomach or diarrhoea. There is also a very dangerous form of *E. coli* called VTEC (Verocytotoxigenic *E. coli*). This can cause severe diarrhoea and stomach cramps and it is particularly dangerous for children under five or elderly people. In about 10% of cases[6] it causes haemolytic uraemic syndrome (HUS), the most common cause of kidney failure in children.

The HSE's Health Protection Surveillance Centre (HPSC) has reported[7] an increasing number of cases of VTEC infection in Ireland. In fact, Ireland has the highest incidence of VTEC infection in Europe.

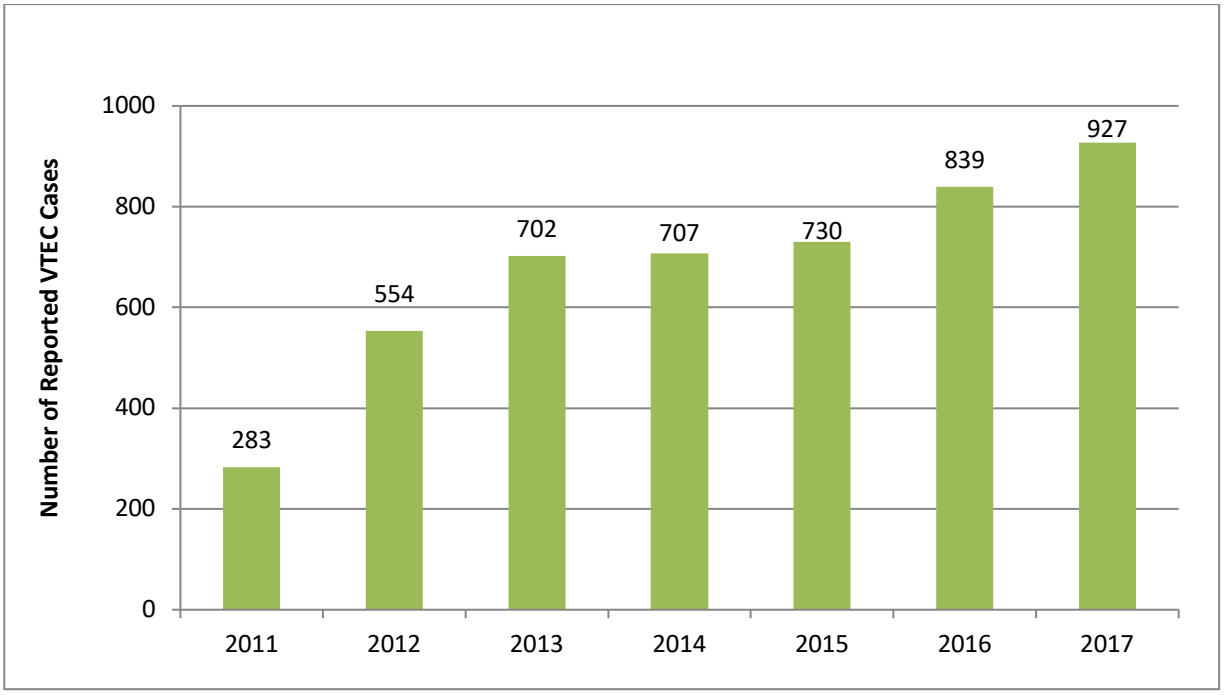


Figure 6: Number of VTEC infection cases reported by the HPSC

Analysis of cases by the HPSC shows that patients suffering from VTEC infection are up to four times more likely to have consumed untreated water from household wells. In Ireland, rural families are most commonly affected and much of this is because of contamination of household wells.

[5] Verocytotoxigenic *E. coli*

[6] https://www.hpsc.ie/a-z/gastroenteric/gastroenteritisoriid/guidance/iidpublichealthandclinicalguidancediseasespecificchapters/File,13525,en.pdf

[7] http://www.hpsc.ie/a-z/gastroenteric/vtec/publications/annualreportsonepidemiologyofverotoxigenicecoli/

Consumers of water from household wells are at a much greater risk of VTEC infection than those who drink water from either public or private mains supplies.

What can you do if you are concerned about your well?

It is vital that a well being used as a water source is properly constructed and protected to prevent contamination by VTEC. Animals, particularly cattle, are the main source of VTEC. If animals can get close to a water source, or if slurry spreading is being carried out nearby, the water can become contaminated. Someone drinking the water can then become infected, and they can spread the infection to other people. See Section 3 of this report for information on what water suppliers can do to protect their well.

National Federation of Group Water Schemes programmes

We mentioned in Section 3 that the NFGWS have developed specific programmes to deal with contamination from septic tanks, and from poor source protection.

Desludging Septic Tanks

The NFGWS started an 'Education & Desludging Initiative' in 2016. This was a Community Group Water Scheme led initiative, funded by the EPA. The project investigated the potential for using the group water scheme structure to actively encourage people to de-sludge their Domestic Waste Water Treatment Systems (DWWTS) in the drinking water catchments of group schemes.

A pilot project was co-ordinated by two senior NFGWS staff members. Fourteen group water schemes took part in the pilot project. The main aims of the project were:

- to increase people's awareness about the potential pollution risks to water sources from poorly managed DWWTS, and
- to build a template that other group water schemes (and wider community groups) could use to improve management of DWWTS within their own communities.

Information booklet/leaflets were developed for householders and farmers, and the project staff visited several primary schools to educate young children about the importance of managing DWWTS.

The final report on the project, including observations and recommendations, is available from the NFGWS website www.nfgws.ie. Template materials have been developed and are available to any scheme that wishes to undertake such a project. The NFGWS are encouraging the schemes taking part in the source protection pilot project to consider a desludging initiative as part of their source protection plans.

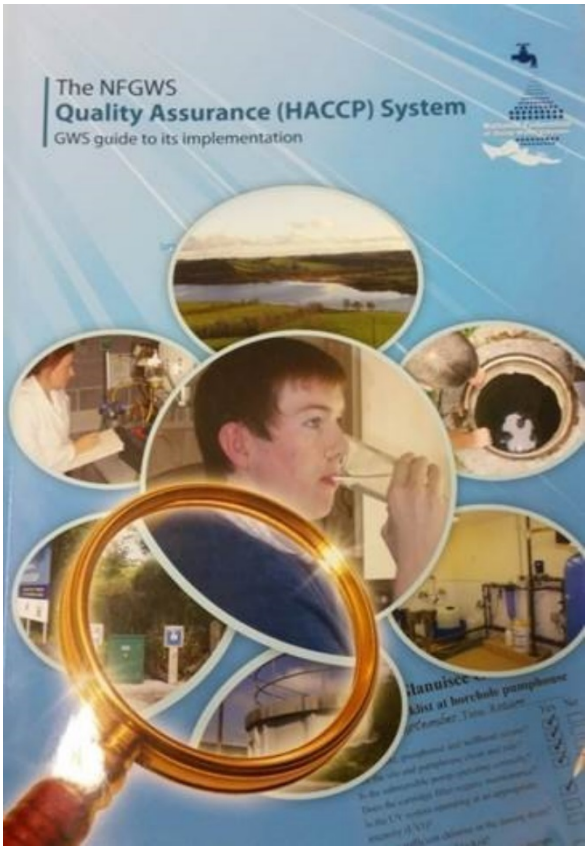


Figure 7: NFGWS Quality Assurance Manual

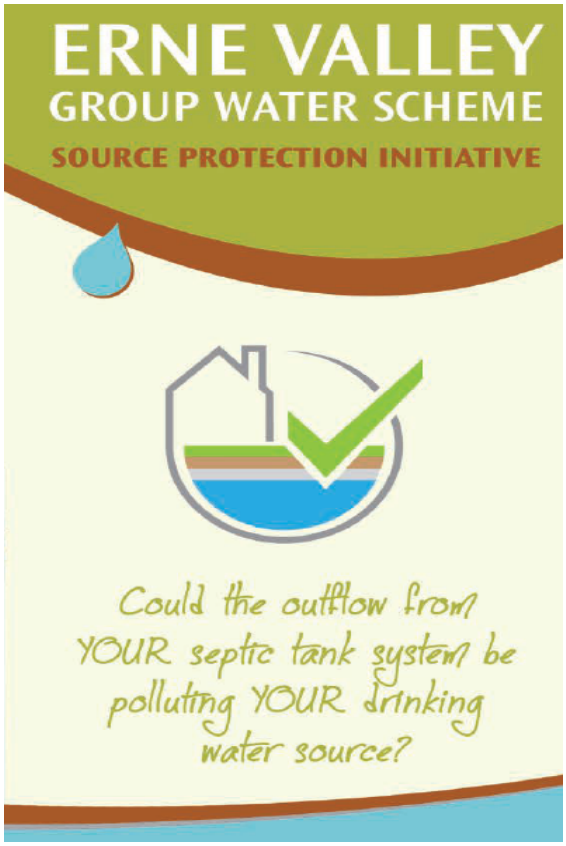


Figure 8: Example of information leaflet from NFGWS desludging initiative

Improving source protection

Over the last few years, the NFGWS have worked with the Geological Survey of Ireland (GSI) and others, to outline and map the catchment areas associated with over 300 group water scheme sources. The mapped areas are called source protection areas. A source protection area is an area around a drinking water source that is connected to the source. If contamination occurs in this area it could affect the water quality of the source.

The NFGWS now plan to develop and implement specific source protection plans for all group water schemes, again with the help of the GSI. The plans will identify specific risks and outline practical protection measures that could be put into action to minimise current or potential pollution risks. Individuals and organisations within communities will be involved in developing the source protection plans.

The NFGWS started a new pilot project in 2018 across a range of group water scheme source types, scheme sizes and levels of abstraction. The pilot projects will help to identify the level of work involved in putting source protection plans in place for all group water schemes. For more information, contact the NFGWS.

7 Conclusion

In the introduction to this report, we asked: why are we concerned about private supplies?

We know that private supplies provide water for about a fifth of the population of Ireland. We also know that many more people can be affected by drinking the water from these supplies, if it is not clean. Being affected by contaminated water can be extremely serious.

Specifically, we asked the following questions:

- Do we know where all private supplies are?
- Are they all registered?
- Are they all monitored?
- Do we know the quality of all of them?
- Is the water quality good enough in all of them?

Based on our assessment of the available information for 2017, we have found that the answer to these questions is 'no'. This is due to a gap in the available information on such supplies.

What we could determine is that:

- Water quality in private supplies is not as good as in public supplies,
- Some types of private supply are better than others,
- Not all registered private supplies were monitored in 2017, and
- Not all private supplies are registered with the local authority.

To sum up, we have found that the quality of your drinking water and, therefore, the chance of you getting ill from it, very much depends on the type of supply you are drinking water from. Public group water schemes show the best water quality, followed by private group water schemes. Small private supplies show poorer water quality than group water schemes, and research indicates that household wells have the poorest water quality of all the water supply types.

The EPA's main message is that private supplies must be properly protected, monitored, regulated and funded to ensure that they meet the drinking water standards.

It is essential that all people and organisations with responsibility for private supplies play their part, to protect public health and to ensure that, no matter where you live, you can be confident that your drinking water is safe.

Appendices

Appendices 1, 2, and 3 list compliance results for three groups of regulated private drinking water supplies:

- Public Group Schemes
- Private Group Schemes
- Small Private Supplies.

Appendix 4 lists, for each county or local authority area, the number of private water supplies and the populations served by each supply type. It also lists the number of boil notices in place and the population affected, and the number of audits and directions taken in 2017.

Appendix 5 lists the number of private water supplies that were not monitored for *E. coli* during 2017.

Appendix 1: Public Group Water Schemes – Zones Monitored and Samples Analysed in 2017

Parameter	No. of Zones Monitored	No of Zones with Exceedances	% of Zones Complying	No. of Samples Analysed	No. of Samples Exceeding	% of Samples Complying
Microbiological						
E. coli	412	2	99.5	985	2	99.9
Enterococci	56	0	100.0	58	0	100.0
Chemical						
1,2-dichloroethane	56	0	100.0	58	0	100.0
Antimony	57	0	100.0	59	0	100.0
Arsenic	57	0	100.0	59	0	100.0
Benzene	57	0	100.0	59	0	100.0
Benzo(a)pyrene	56	0	100.0	58	0	100.0
Boron	57	0	100.0	59	0	100.0
Bromate	56	0	100.0	58	0	100.0
Cadmium	57	0	100.0	59	0	100.0
Chromium	57	0	100.0	59	0	100.0
Copper	57	1	98.2	59	1	98.3
Cyanide	48	0	100.0	49	0	100.0
Fluoride	79	0	100.0	111	0	100.0
Lead	57	0	100.0	59	0	100.0
Mercury	56	0	100.0	58	0	100.0
Nickel	57	1	98.2	59	1	98.3
Nitrate	136	0	100.0	253	0	100.0
Nitrite (at tap)	220	0	100.0	443	0	100.0
PAH	56	0	100.0	58	0	100.0
Pesticides - Total	56	0	100.0	58	0	100.0
Selenium	57	0	100.0	59	0	100.0
Tetrachloroethene & Trichloroethene	56	0	100.0	58	0	100.0
Total Trihalomethanes	56	2	96.4	58	2	96.6
Indicator						
Aluminium	318	5	98.4	709	5	99.3
Ammonium	412	0	100.0	987	0	100.0
Chloride	57	0	100.0	59	0	100.0
Clostridium perfringens	373	2	99.5	894	2	99.8
Coliform Bacteria	412	16	96.1	985	16	98.4
Colony Count @ 22°C	56	1	98.2	58	1	98.3
Colour	272	6	97.8	670	23	96.6
Conductivity	412	0	100.0	997	0	100.0
Iron	328	8	97.6	744	8	98.9
Manganese	121	5	95.9	223	6	97.3
Odour	394	0	100.0	950	0	100.0
pH	412	9	97.8	997	12	98.8
Sodium	57	0	100.0	59	0	100.0
Sulphate	57	0	100.0	59	0	100.0
Taste	393	0	100.0	935	0	100.0
Total Organic Carbon	55	0	100.0	57	0	100.0
Turbidity (at tap)	412	1	99.8	982	1	99.9

Appendix 2: Private Group Water Schemes – Zones Monitored and Samples Analysed in 2017

Parameter	No. of Zones Monitored	No of Zones with Exceedances	% of Zones Complying	No. of Samples Analysed	No. of Samples Exceeding	% of Samples Complying
Microbiological						
E. coli	391	13	96.7	1376	15	98.9
Enterococci	267	3	98.9	292	3	99.0
Chemical						
1,2-dichloroethane	238	0	100.0	251	0	100.0
Antimony	238	0	100.0	251	0	100.0
Arsenic	238	0	100.0	251	0	100.0
Benzene	238	0	100.0	251	0	100.0
Benzo(a)pyrene	238	0	100.0	251	0	100.0
Boron	237	0	100.0	250	0	100.0
Bromate	238	2	99.2	251	2	99.2
Cadmium	255	0	100.0	268	0	100.0
Chromium	255	0	100.0	268	0	100.0
Copper	253	1	99.6	267	1	99.6
Cyanide	235	0	100.0	248	0	100.0
Fluoride	210	1	99.5	225	1	99.6
Lead	255	1	99.6	268	1	99.6
Mercury	236	0	100.0	249	0	100.0
Nickel	255	0	100.0	268	0	100.0
Nitrate	303	0	100.0	517	0	100.0
Nitrite (at tap)	315	0	100.0	708	0	100.0
PAH	239	0	100.0	252	0	100.0
Pesticides - Total	240	0	100.0	253	0	100.0
Selenium	238	0	100.0	251	0	100.0
Tetrachloroethene & Trichloroethene	237	0	100.0	245	0	100.0
Total Trihalomethanes	255	11	95.7	272	11	96.0
Indicator						
Aluminium	335	11	96.7	962	17	98.2
Ammonium	389	3	99.2	1368	7	99.5
Chloride	258	1	99.6	274	1	99.6
Clostridium perfringens	331	12	96.4	1068	13	98.8
Coliform Bacteria	390	53	86.4	1376	60	95.6
Colony Count @ 22°C	238	12	95.0	251	12	95.2
Colour	189	23	87.8	650	29	95.5
Conductivity	390	0	100.0	1369	0	100.0
Iron	349	5	98.6	1043	5	99.5
Manganese	290	6	97.9	492	8	98.4
Odour	377	0	100.0	1328	0	100.0
pH	390	27	93.1	1369	42	96.9
Sodium	256	1	99.6	269	1	99.6
Sulphate	256	1	99.6	271	1	99.6
Taste	367	0	100.0	1294	0	100.0
Total Organic Carbon	255	1	99.6	267	1	99.6
Turbidity (at tap)	390	2	99.5	1369	2	99.9

Appendix 3: Small Private Supplies – Zones Monitored and Samples Analysed in 2017

Parameter	No. of Zones Monitored	No of Zones with Exceedances	% of Zones Complying	No. of Samples Analysed	No. of Samples Exceeding	% of Samples Complying
Microbiological						
E. coli	1186	51	95.7	1896	59	96.9
Enterococci	174	5	97.1	312	7	97.8
Chemical						
1,2-dichloroethane	20	0	100.0	21	0	100.0
Antimony	107	1	99.1	117	1	99.1
Arsenic	119	1	99.2	135	1	99.3
Benzene	22	0	100.0	23	0	100.0
Benzo(a)pyrene	20	0	100.0	21	0	100.0
Boron	107	0	100.0	117	0	100.0
Bromate	20	0	100.0	21	0	100.0
Cadmium	107	0	100.0	117	0	100.0
Chromium	107	0	100.0	117	0	100.0
Copper	137	1	99.3	148	1	99.3
Cyanide	20	0	100.0	21	0	100.0
Fluoride	21	1	95.2	24	1	95.8
Lead	203	0	100.0	239	0	100.0
Mercury	20	0	100.0	21	0	100.0
Nickel	107	1	99.1	117	1	99.1
Nitrate	537	13	97.6	873	14	98.4
Nitrite (at tap)	422	0	100.0	734	0	100.0
PAH	24	0	100.0	25	0	100.0
Pesticides - Total	28	0	100.0	29	0	100.0
Selenium	107	0	100.0	117	0	100.0
Tetrachloroethene & Trichloroethene	20	0	100.0	21	0	100.0
Total Trihalomethanes	22	0	100.0	23	0	100.0
Indicator						
Aluminium	394	3	99.2	610	5	99.2
Ammonium	1186	9	99.2	1895	11	99.4
Chloride	64	2	96.9	80	2	97.5
Clostridium perfringens	463	13	97.2	684	14	98.0
Coliform Bacteria	1186	206	82.6	1896	234	87.7
Colony Count @ 22°C	26	1	96.2	27	1	96.3
Colour	552	52	90.6	830	57	93.1
Conductivity	1185	2	99.8	1895	2	99.9
Iron	860	69	92.0	1374	81	94.1
Manganese	243	40	83.5	340	52	84.7
Odour	1064	1	99.9	1676	2	99.9
pH	1186	254	78.6	1899	388	79.6
Sodium	140	3	97.9	181	3	98.3
Sulphate	37	0	100.0	52	0	100.0
Taste	883	7	99.2	1289	8	99.4
Total Organic Carbon	16	0	100.0	17	0	100.0
Turbidity (at tap)	1182	36	97.0	1892	41	97.8

Appendix 4: Water Quality and Enforcement Information for Private Water Supplies by County/Area in 2017[1]

	Public Group Schemes[2]		Private Group Schemes[2]		Small Private Supplies[2]		Boil Notices		Directions	Audits
County/ Area[3]	Number	Population	Number	Population	Number	Population	Number	Population Affected	Number Issued	Number
Carlow	0	0	4	1851	6	72				
Cavan	1	90	24	26076	85	4165	6	NC[5]	0	0
Clare	93	19339	12	14135	23	1550	6	NC[5]	0	4
Cork	0	0	23	2084	400	2405	34	715	1	10
Cork City	0	0	0	0	4	200				
Dun Laoghaire-Rathdown	0	0	0	0	2	450				
Donegal	7	3140	4	670	30	1552	23	1607	0	0
Dublin City[4]	0	0	0	0	0	0				
Fingal	0	0	0	0	1	300	0	0	0	7
Galway	65	11470	73	28903	138	0	13	736	0	1
Galway City[4]	0	0	0	0	0	0				
Kerry	39	9599	10	1775	126	6217				
Kildare	0	0	5	2110	21	1855	1	20	0	3
Kilkenny	25	2166	25	3497	168	3079				
Laois	27	1452	10	5000	88	3527	2	100	0	4
Leitrim	33	3471	5	1581	0	0	2	172	0	0
Limerick	35	6709	24	7280	21	120	4	268	0	0
Longford	0	0	3	350	17	100				
Louth	0	0	7	3376	9	970	0	0	0	0
Mayo	68	12277	51	33757	31	180	7	2910	1	3
Meath	0	0	3	947	165	9332				
Monaghan	0	0	12	26563	0	0	0	0	3	0
Offaly	11	1035	16	10068	30	1698	1	11	0	0
Roscommon	21	4464	8	5436	15	15	0	0	0	0
Sligo	7	410	13	5973	7	920	4	234	1	0
South Dublin[4]	0	0	0	0	0	0	0	0	0	9
Tipperary	0	0	39	8439	122	3342	1	140	0	38
Waterford	0	0	2	130	16	545	1	25	1	1
Westmeath	18	2173	2	875	60	112	0	0	0	0
Wexford	0	0	7	3400	177	7873	27	2049	0	0
Wicklow	0	0	9	868	134	25705	36	3087	1	28
Totals:	**450**	**77795**	**391**	**195144**	**1896**	**76284**	**168**	**12,074**	**8**	**108**

[1]Where no information was provided, spaces are left blank. [2]Full list of private supplies available at http://www.epa.ie/pubs/advice/drinkingwater/publicdrinkingwatersupplies/; [3]Drinking Water Monitoring results and water supply details for each year since 2000 for each county is available at http://erc.epa.ie/safer/resourcelisting.jsp?oID=10206&username=EPA%20Drinking%20Water.; [4]No private water supply details were submitted for this County/Area for 2017; [5]NC = not calculated as population served by commercial premises could not be determined.

Appendix 5: Number of regulated private supplies not monitored for *E. coli* by county/area in 2017

County/area	Total	Public group schemes	Small private supplies
Cavan	48		48
Clare	5	2	3
Cork County	283	3	280
Donegal	4		4
Galway County	65	8	57
Kerry	39	1	38
Kildare	11		11
Kilkenny	39	1	38
Laois	20	9	11
Limerick	5	3	2
Louth	1		1
Mayo	22	5	17
Meath	21		21
Offaly	1		1
Roscommon	4		4
Sligo	3	3	
Tipperary	76		76
Waterford	12		12
Westmeath	84	3	81
Wicklow	6		6
Totals:	**749**	**38**	**711**

AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL
Tá an Ghníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ó éifeachtaí díobhálacha na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialú: *Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gcloíonn leis na córais sin.*

Eolas: *Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírithe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.*

Tacaíocht: *Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaol atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaol inbhuanaithe.*

Ár bhFreagrachtaí

Ceadúnú
Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:
- saoráidí dramhaíola *(m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola)*;
- gníomhaíochtaí tionsclaíocha ar scála mór *(m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta)*;
- an diantalmhaíocht *(m.sh. muca, éanlaith)*;
- úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe *(OGM)*;
- foinsí radaíochta ianúcháin *(m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha)*;
- áiseanna móra stórála peitril;
- scardadh dramhuisce;
- gníomhaíochtaí dumpála ar farraige.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil
- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdaráis áitiúla agus le gníomhaireachtaí eile chun dul i ngleic le coireanna comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, trí dhíriú ar chiontóirí, agus trí mhaoirsiú a dhéanamh ar leasúchán.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (DTLL), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a ídíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Uisce
- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchriosacha agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

Monatóireacht, Anailís agus Tuairisciú ar an gComhshaol
- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus na n-údarás áitiúil *(m.sh. tuairisciú tréimhsiúil ar staid Chomhshaol na hÉireann agus Tuarascálacha ar Tháscairí)*.

Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn
- Fardail agus réamh-mheastacháin na hÉireann maidir le gáis cheaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

Taighde agus Forbairt Comhshaoil
- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

Measúnacht Straitéiseach Timpeallachta
- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn *(m.sh. mórphleananna forbartha)*.

Cosaint Raideolaíoch
- Monatóireacht a dhéanamh ar leibhéil radaíochta, measúnacht a dhéanamh ar nochtadh mhuintir na hÉireann don radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Faisnéis Inrochtana agus Oideachas
- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Faisnéis thráthúil ar an gcomhshaol ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaol *(m.sh. Timpeall an Tí, léarscáileanna radóin)*.
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

Múscailt Feasachta agus Athrú Iompraíochta
- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil
Tá an ghníomhaíocht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:
- An Oifig um Inmharthanacht Comhshaoil
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Fianaise is Measúnú
- Oifig um Chosaint Radaíochta agus Monatóireachta Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Headquarters
PO Box 3000, Johnstown Castle Estate
County Wexford, Y35 W821, Ireland
Bosca Poist 3000, Eastát Chaisleán Bhaile Sheáin Contae Loch Garman, Y35 W821, Éire

T: +353 53 9160600
F: +353 53 9160699
E: info@epa.ie
W: www.epa.ie
Lo Call: 1890 33 55 99

EPA Regional Inspectorate Dublin
McCumiskey House
Richview
Clonskeagh Road
Dublin 14
D14 YR62
Tel: 01-268 0100
Fax: 01-268 0199

EPA Regional Inspectorate Cork
Inniscarra
Co. Cork
P31 VX59
Tel: 021-4875540
Fax: 021-4875545

EPA Regional Inspectorate Castlebar
John Moore Road
Castlebar
Co. Mayo
F23 KT91
Tel: 094-9048400
Fax: 094-9021934

EPA Regional Inspectorate Kilkenny
Seville Lodge
Callan Road
Kilkenny
R95 ED28
Tel: 056-7796700
Fax: 056-7796798

EPA Regional Inspectorate Monaghan
The Glen
Monaghan
H18 YT02
Tel: 047-77600
Fax: 047-84987

E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

Printed on an environmentally friendly paper stock