Drinking Water 2022

Private water supplies in England

www.dwi.gov.uk

dwi

Published by
Drinking Water Inspectorate
Nobel House
17 Smith Square
London
SW1P 3JR

Tel: 0330 041 6501

Website: **www.dwi.gov.uk**

E02864242

ISBN: 978-1-911087-48-9

Contents

Key headlines

People served by a private water supply in England (1.7% of population)

956,429

Total number of supplies

34,904

Local authorities in England

333

Consumers on large, commercial and public-use supplies

603,436

57,185

People living in single dwellings with a private supply

264

Onward distribution systems (0.8% of supplies)

4,852

Other supplies (including small shared and tenanted) (13.9% of supplies)

SOURCE WATER TYPE

62.6%

Groundwater

30.3%

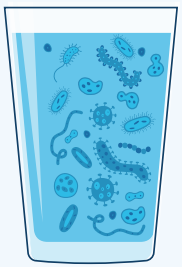
Surface water influenced

4.93%

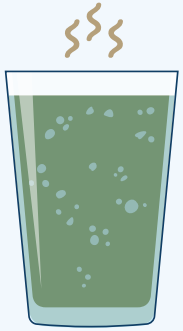
Unknown

0.7%

Mains water

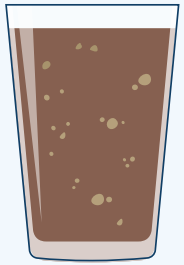


3.8% of samples tested for faecal contamination were positive. These supplies are consumed by 5,577 people.



19% of samples tested for tastes and odours were positive and therefore 'unwholesome'.

0.9% of samples tested for turbidity and colour failed the standards. These also cause discoloured/ cloudy water.



3.9% of samples tested for iron, manganese and aluminium failed the relevant standards. These metals can make water looked discoloured.

Negative health effects

Nickel tests failed in 145 samples with 4,719 consumers affected.

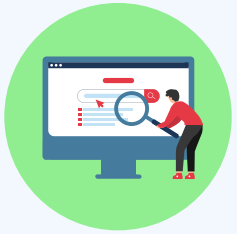
Lead tests failed in 186 samples with 3,029 consumers affected.

0.1% of tests for pesticides failed the total-pesticides standard.

How to reduce the risk of contamination and protect public health

13,040 supplies require a risk assessment, and only 4,930 (37.8%) have one that has not expired.

Take action where there is a risk to health. 291 supplies had one or more detections of faecal contamination, but no notice was served. Over 5,000 people are drinking this water.



Refer to the Inspectorate's website for assistance. New in 2022 – searchable *guidance to the Regulations* and searchable *case studies*.

1. Introduction

1.1 A description of private supplies

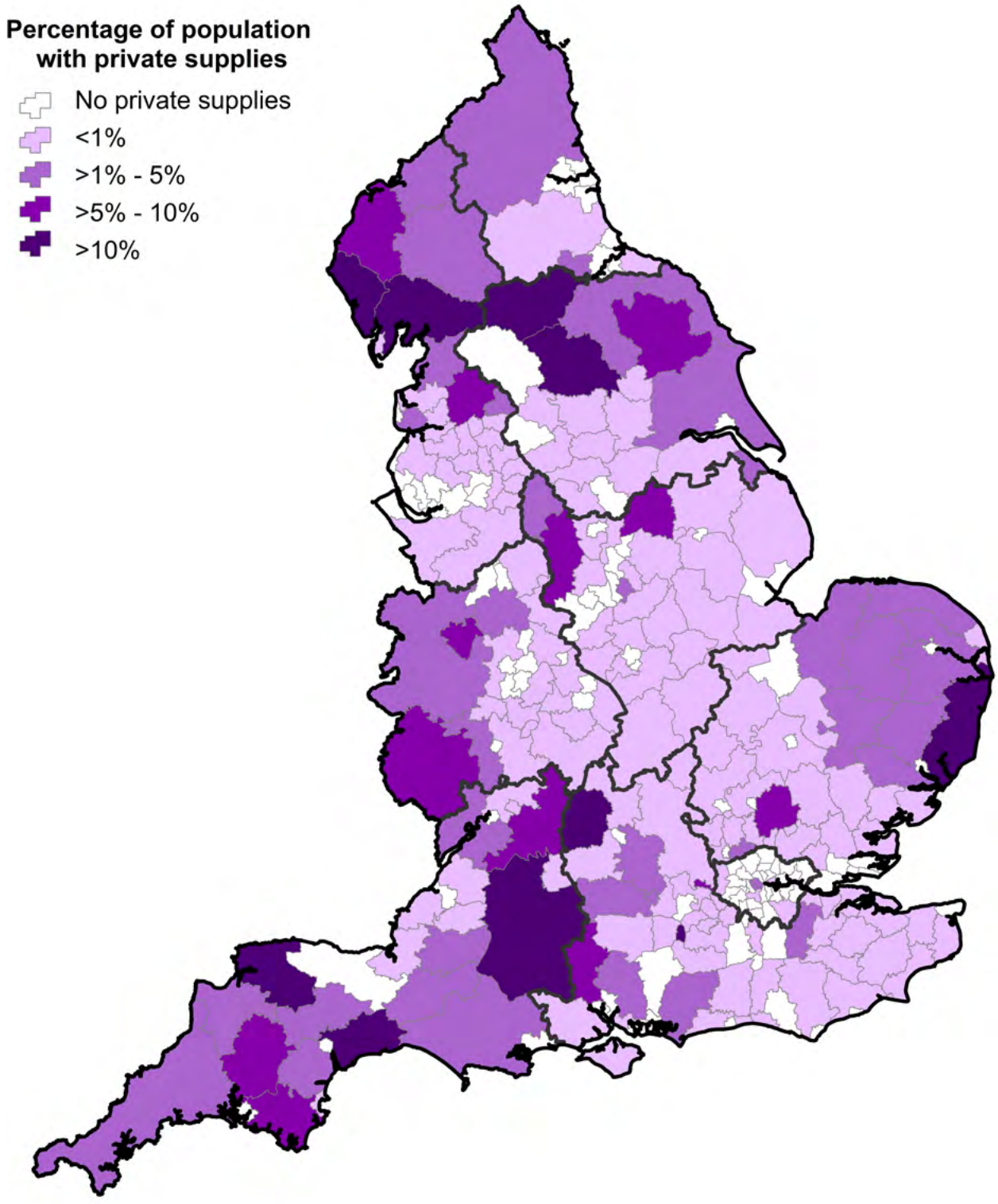
A private water supply is any water supply which supplies one or more properties, that is not provided by a water company. Around 1.7% of the population in England use a private supply, which can originate from a range of sources including boreholes, natural springs, and water courses.

1.2 The locations of private supplies

Private water supplies are found across most regions of England. The highest numbers are usually found in rural areas where connection to the public mains network may be difficult. Figure 1.1 shows the density of the supplies across England. In 2022, local authority records reported a total of 34,904 private supplies in England (34,302 in 2021).

Figure 1.1

Private water supplies in England



1.3 The Importance of regulating private supplies

A private supply is one received by consumers who are not customers of water companies in England. Typically, these provide water to approximately 1.7% of the population in England covering not just domestic supplies to households but also those to commercial premises such as farms, bed and breakfast accommodation, hotels, sporting clubs, manufacturers and other businesses. The contribution to the economy as well as the health and welfare of a notable population of 956,429 is significant.

The standards and principles of regulation are the same for both public and private supplies. The expectation is that the level of quality should be the same as public supplies, however, this is not always the case. Small private or community supplies are often of a poorer quality as evidenced by the relative numbers of indicators of faecal pollution 3.7% when compared to the public mains supply (approximately 0.1%).

The reasons for this are complex but in part the resources necessary to achieve this can be disproportionate when maintaining a small supply. For instance, technical knowledge covering geology and catchment science, borehole construction, treatment and distribution engineering as well as water quality and risk assessment are highly specialist skills and often inaccessible to private supply users. These difficulties can be exacerbated by property and ownership arrangements where a source may not be in the control of the user, and it may not be known who is responsible for the upkeep, or no one accepts responsibility, leading to its neglect. In these instances, necessary safeguards to protect water quality can be absent, such as a lack of adequate maintenance and poor management practices.

The principle of water supply regulation is one of self-regulation by owners/users/controllers, and independent scrutiny by the regulator, which for private supplies is the local authority.

Environmental health staff of local authorities are essential to regulating private supplies. They have a duty for keeping a record of those supplies that are known to them and carrying out water quality and sufficiency risk assessments. Risk assessments are fundamental in identifying hazards and the associated risks, and how these might be observed, managed, and controlled though a plan to protect public health. This helps users become better informed to manage supplies safely and, where necessary, carry out improvements to mitigate any risks identified to water quality.

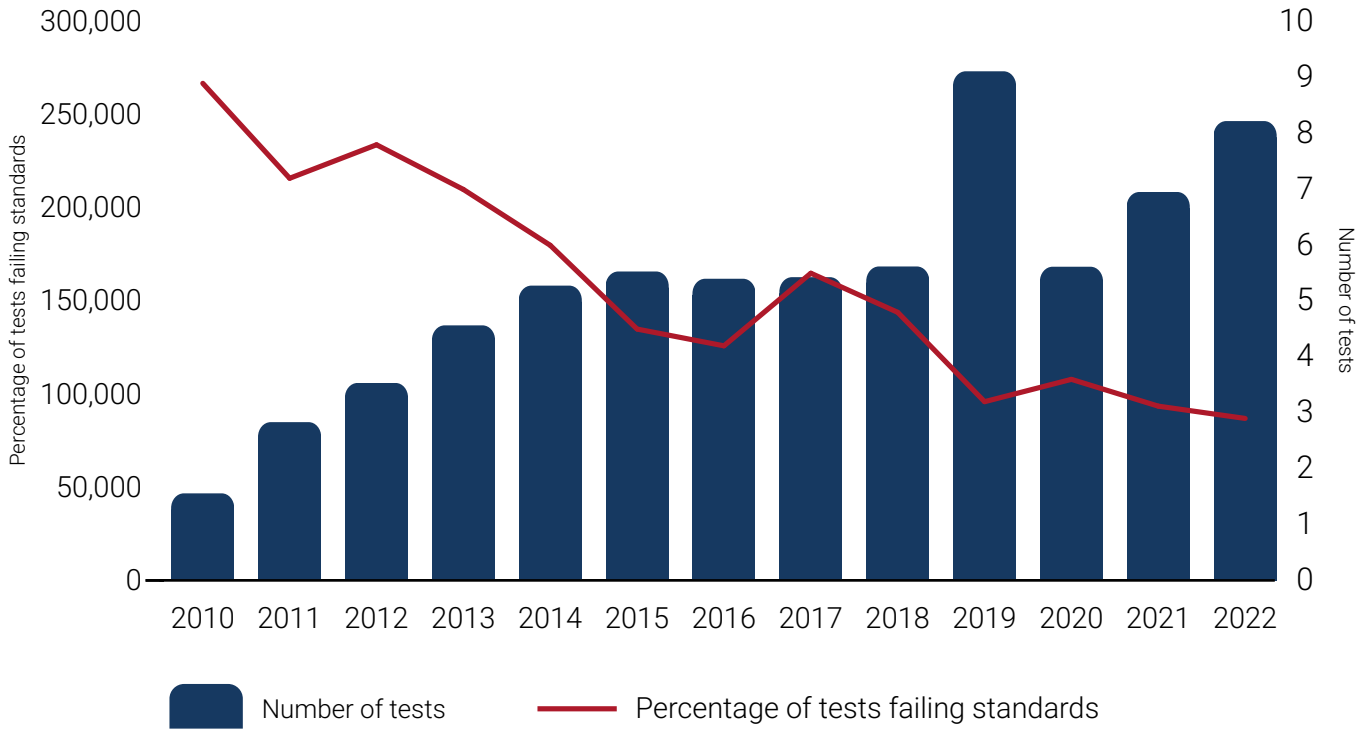
It is becoming ever clearer how vulnerable some private water supplies are as our climate changes, and this is evident by the increasing numbers that run dry in periods of drought. Risk assessment should identify these supplies and contingency plans should be established. As the water companies begin to work on the business plans for Asset Management Period 8 (2025 to 2030), there should be a dialogue between them and local authorities to explore first-time connections.

1.4 Quality of private supplies

In 2022, 2.9% (7,183) of 246,737 tests by the local authorities in England were found not to be meeting one or more of the standards for wholesomeness. Figure 1.2 shows that overall there has been a reduction in tests failing the regulatory standards. However, these figures must be caveated because the overall number of tests carried out is below that which would be expected for the number of private supplies recorded in England.

Figure 1.2

Percentage of tests failing to meet the standards for wholesomeness and the number of tests



1.5 The significance of sample results

3.8% (699 of 18,505) of tests in England during 2022 showed faecal contamination, with 3.0% (359 of 11,849) of samples tested found to contain *E. coli* and 5.1% (340 of 6,301) containing Enterococci. These organisms are almost exclusively found in faeces, indicating a potential danger to the health of those drinking this water.

The percentage of samples collected from supplies found to be contaminated by *E. coli* and Enterococci, in the period 2010 to 2022 is shown in figure 1.3.

Figure 1.3

Percentage of tests in 2010 to 2022 found to contain *E. coli* or Enterococci

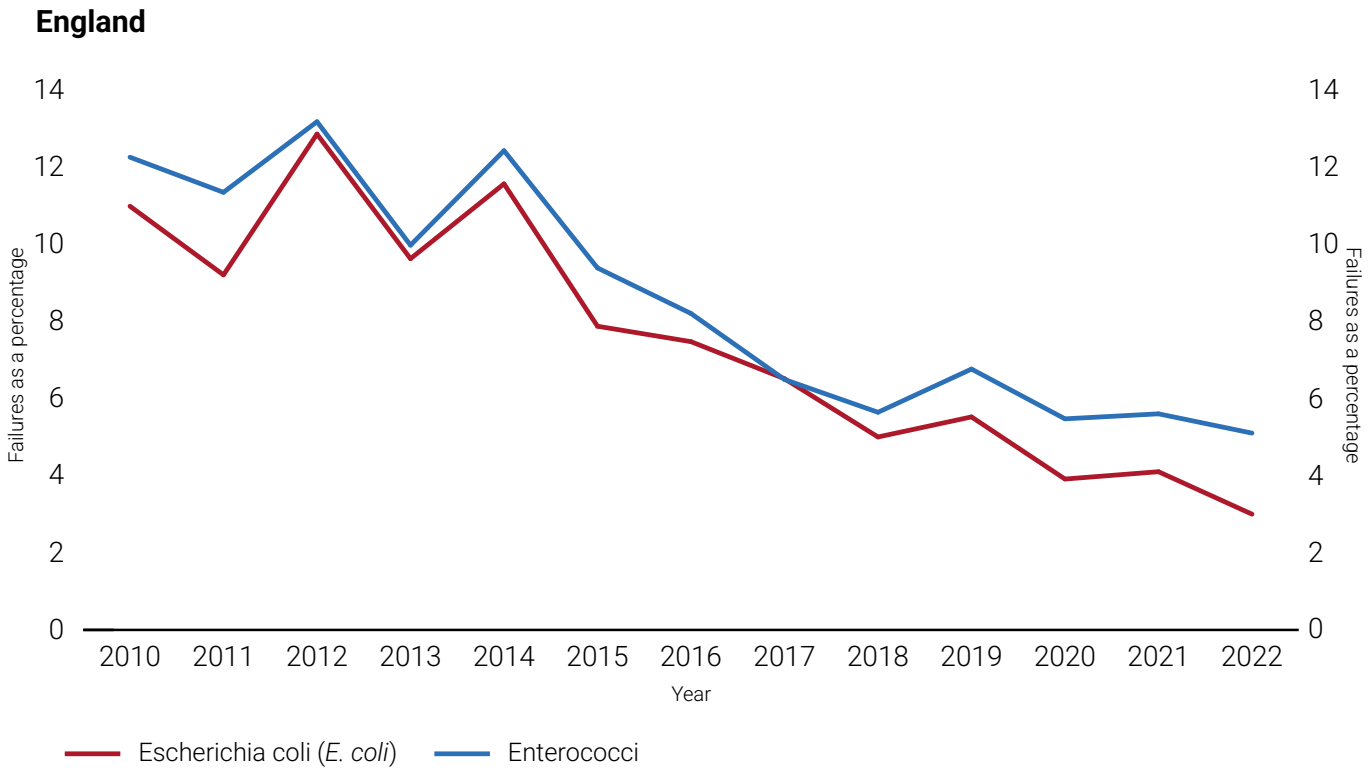


Figure 1.3 shows an overall improving trend in the number of supplies which were sampled in 2022 and found to contain *E. coli* or Enterococci. However, this is with a backdrop of fluctuating sample numbers over the last four to five years and a similarly fluctuating number of failures which may be influenced by sample numbers and the sites from which they were taken. Summing up the number of consumers at private supplies where *E. coli* and/or Enterococci have been found equates to 576 supplies where faecal contamination was indicated in their drinking water. Whilst this number is not insignificant, the proportion of failures reduced by 0.9% against a recovering number of samples following the pandemic, indicating tangible confidence in an improving outcome.

1.6 Improving water quality through risk assessment, risk management and enforcement

One of the key principles of the Regulations is to carry out a risk assessment to establish whether there is a likely risk of supplying water that would constitute a potential danger to human health. This is a whole system approach from source to tap for the lifetime of a private water supply and including its operation. The Regulations have advanced from the compliance-based methodology of end point monitoring, to minimise the dependency on a sample which may be as infrequent as once in five years and serve little purpose as an assurance to a safe and secure supply. Risk assessments are a proactive approach to identify the risks, which are often visible to the trained and competent assessor, resulting in simple action to put a method of control in place.

The importance of risk assessment will become more apparent as supplies are now reaching the point where there are more than three years' worth of sample results allowing some to qualify for a potential sample frequency reduction for some parameters. When sampling frequencies are reduced, risk assessment will be the primary mechanism for quality and sufficiency issues to be identified and mitigated.

Point of use sampling will play the part of monitoring when used as a measure of efficacy following a risk assessment, or more widely as a measure of general improvement or otherwise of an intervention strategy.

Each local authority must carry out or review a risk assessment of each private water supply system in its area, at least every five years, or earlier, if it is considered that the supply presents a risk.

The Inspectorate has developed a set of risk assessment tools to help local authorities comply with their duties under regulation 6. These can be found on the Inspectorate's risk assessment **web page**. A Microsoft Teams forum has been set up to facilitate training and videos are available through this group.

Local authorities report information on risk assessments and enforcement action to the Inspectorate in two ways. In the annual data return, and through summaries of risk assessments. Also, throughout the year, they must submit copies of notices served.

To date, the numbers in the annual data returns have never matched the number of documents received, with under-submission of risk assessment summaries and notices a consistent issue of concern.

Risk assessment and notices

Where any private supply of water intended for human consumption constitutes a potential danger to human health, the local authority must serve a regulatory notice on any or all relevant persons involved with the supply. The key point is to protect public health and so timely action is essential.

The local authority must consider the risk assessment, all the relevant local circumstances, and any advice from United Kingdom Health Security Agency (UKHSA). Any site-specific local agreements, covenants or deeds specifying responsibilities for specific aspects of the supply, or its management should be considered.

The 2022 data indicates that across England, the number of private supplies that had been risk assessed within the previous five years was 3,703, covering 49% of all relevant private supplies. This compares to 2021 where data indicated that 45% of supplies were covered by risk assessment. This is an improvement, however there is still work to do to ensure that consumers are not exposed to unknown water quality and sufficiency risks.

In 2022, where a sample was taken for *E. coli*, this parameter was found in 183 supplies without a risk assessment or where a risk assessment was not carried out in the last five years. With 110 fewer supplies without a risk assessment than the previous year this is a welcome improvement. Nevertheless, it remains disappointing that in these cases, a sample result revealed the contamination because the consumer is at their most vulnerable, as they are unsuspecting and cannot take action to protect their own health.

The better practice approach is for a risk assessment to identify sources of contamination and pathways of contamination to the supply. This approach should identify all potential contaminants, and not rely on the results of a spot sample which cannot be guaranteed to detect all contaminants at the point a sample is taken. Most worrying is that where samples are taken in the absence of a risk assessment, the consumer continues to use the water for drinking and cooking while the samples are analysed. Where a local authority receives a positive result for bacteriological tests in the absence of a supply risk assessment, the supply should be prioritised in the local authorities' risk assessment programme.

Fulfilment of statutory duties

In this 12th year of reporting against this current regulatory framework, local authorities are still not fully delivering their statutory duties which aim to protect public health.

Understanding the state of private supplies in England relies on the provision of information and data by local authorities. In turn, the analysis of this information allows national reporting to direct policy change in pursuit of improving the quality of private supplies. However, this has been impeded by late or absent returns to the Inspectorate of sample data, summaries of risk assessments and notices which have been served.

To remedy this issue and modernise the risk assessment tool provided to local authorities, the Inspectorate has commissioned a new online system which will replace the Excel risk assessment tools, and parts of the information submission requirements. The plan to roll out the system now called 'Neptune', was put on hold during 2022 to allow the Inspectorate and its IT providers time to re-solution the final tool against changes to internal data systems. The Inspectorate will update local authorities on this during 2023.

2. Data return findings

During 2022, the Inspectorate gathered data through the annual data return which is a statutory reporting requirement of local authorities.

2.1 The quality of water supplies from private water supplies in England

Under regulation 14 of the Regulations, local authorities must keep records of every private supply in its area and submit these to the Inspectorate by 31 January each year.

For the reporting year 2022, a submission was received from 278 local authorities. This is similar to the 279 received for reporting in 2021.

In 2022, local authorities carried out 246,737 analyses of private water supplies samples. This is an increase of 18.0% on the previous year indicating a recent improvement in overall sample numbers but this is still some 9.9% less than the numbers taken in 2019 pre-pandemic. Figure 2.1 shows a general increase in samples taken since 2010, with 2020 representing an exceptional year due to the impact of the pandemic.

Figure 2.1

Number of tests from 2010 to 2022

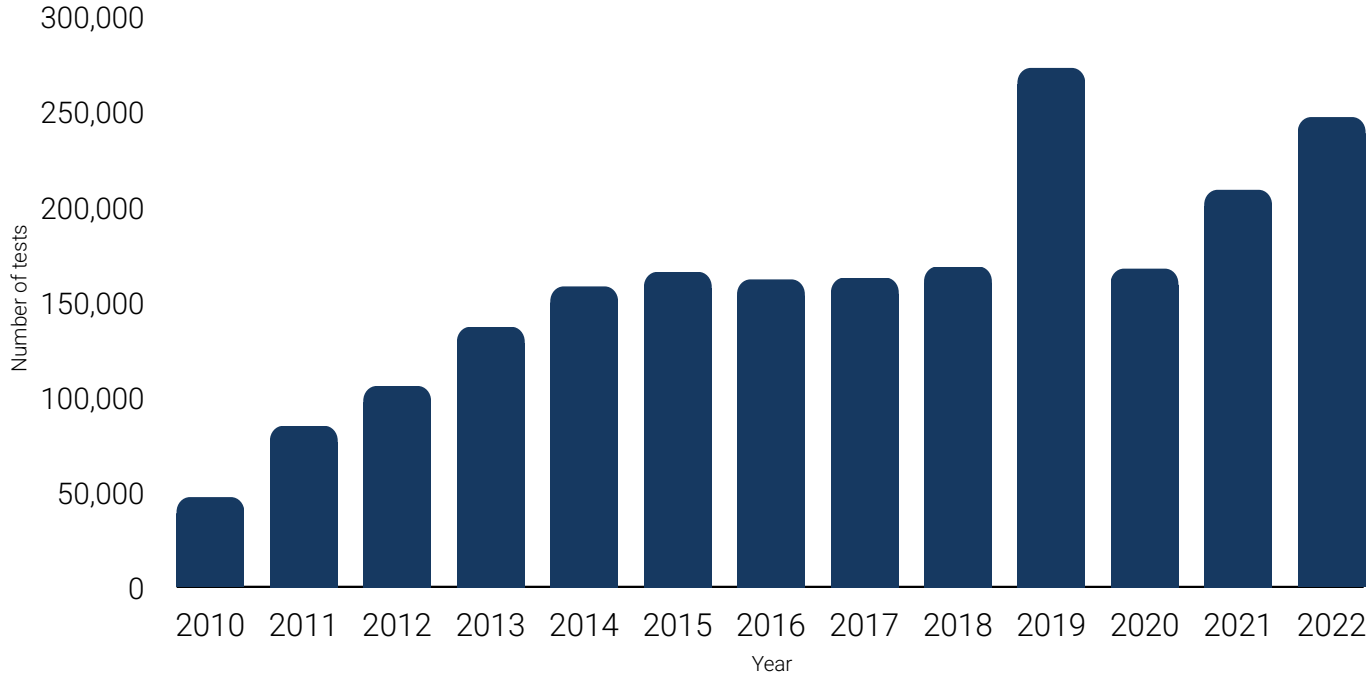


Table 1

A summary of the percentage of tests failing for various microbiological and chemical parameters

Microbiological parameters	
E. coli	3.0%
Coliform bacteria	9.6%
Enterococci	5.1%
Clostridium perfringens	3.3%
Chemical parameters	
Odour	20.4%
Taste	17.4%
Manganese	4.9%
Iron	5.4%
Aluminium	1.0%
Turbidity	1.0%
Colour	0.9%
Lead	3.6%
Nickel	3.2%
Pesticides	0.1%
Fluoride	1.4%
Others	2.4%

Microbiological failures

The detection of specific indicator micro-organisms means that a supply is contaminated. When *E. coli*, Enterococci and to a lesser extent *Clostridium perfringens* are found, this suggests that the contamination may be faecal in origin. Faeces often carries micro-organisms including bacteria, viruses and parasites which are harmful to health and when a faecal indicator is found, this water should not be consumed.

Table 1 shows that during 2022, in England nearly one in 30 supplies may be unfit for consumption and pose a risk to health containing *E. coli*. Whilst coliforms are not always a direct indicator of faecal contamination, they still indicate that there is a route for contamination to enter the supply and that contamination is not removed by treatment. This was found in over one in 20 tests. Protection of supplies from contamination is critical to protecting public health. Should a supply be found to contain the presence of faecal matter it would be expected that the local authority investigates.

Other failures

Taste and odour failures could be caused by the quality of the source water or develop as water passes through the distribution system. How consumers describe the taste or odour can help identify the cause with descriptions such as 'earthy' or 'musty' pointing to possible algal problems in the source water and 'woody/pencil shavings' suggesting the presence of black alkathene pipework as a couple of examples.

Lead and nickel were detected in 3.63% and 3.15% of tests respectively. For lead this is an increase compared with 2.8% in 2021 and 3.1% in 2020. Lead is a neurotoxin particularly affecting children and can cause health effects in adults including chronic kidney disease, raise blood pressure and cardiovascular disease. Where lead is detected above the standard, local authorities must serve a regulation 18 notice to secure actions to protect the health of the consumers. The most robust long-term solution is the removal of the lead pipework. Nickel is largely detected because of nickel plated domestic fittings such as taps. Notably, the percentage of failures has doubled from 2.3% last year and this trend is also seen in public supplies as fittings containing nickel appear to be becoming more prevalent in properties. Sometimes the source is not as obvious and could be under-sink mixers and temperature regulators. Consumers should be advised to replace these fittings where failures of the standard occur.

Iron, manganese and aluminium can be seen to have failed in 5.44%, 4.86% and 1.02% of tests respectively. All these metals can be found naturally occurring in source waters. Local authorities should consult with UKHSA to determine whether the concentration of these metals pose an immediate danger to health, and if so, serve a regulation 18 notice. Should the presence of these metals not be deemed a potential danger to health, local authorities can still act under section 80 to compel the relevant persons to make the supply wholesome and acceptable.

Turbidity and colour were found in 0.96% and 0.89% of tests respectively. Turbidity can reduce the effectiveness of disinfection so a detection of turbidity in excess of the standard should trigger an investigation to determine the cause. This would be followed by the appropriate course of action under regulation 18 or section 80 of the Water Industry Act 1991 (the Act) to carry out improvement actions. Colour detections are usually caused by compounds which arise from the catchment of the source waters and can be removed by suitable treatment processes.

2.2 Risk assessments

In 2022, the percentage of private supplies which have an in-date risk assessment are:

- For private distribution systems – 25.4%.
- Large, commercial and public use – 46.6%.
- Small supplies and those as part of a domestic tenancy – 25.7%
- Untenanted single supply dwellings are only risk assessed upon the owner's request and 1.3% have had an assessment.

In total, 13,040 supplies require a risk assessment, and only 4,903 (38.4%) have one that has not expired. For all supply types other than single untenanted supplies, local authorities have been required to complete risk assessments since 2010. It is concerning that, thirteen years after the introduction of this requirement, there is still a significant proportion (32.8%) where the risk assessment has exceeded the requirement for a five yearly review and a critical 28.8% which have never had a risk assessment where users remain unsuspecting that their supply may contain faecal contamination. Nevertheless, these figures are a significant improvement over the previous year where 21.0% of relevant private supplies had valid risk assessments and 7,425 private supplies have never had an assessment.

In 2017, a change in the Regulations brought about the requirement for local authorities to provide a summary of the results of risk assessments to ministers (in practice the Inspectorate), within 12 months of having carried out the assessment. In 2022, the Inspectorate received 201 risk assessment summaries from 24 local authorities.

This is a 190% increase on the previous year. This is encouraging, but there are still 254 out of 278 local authorities in England that submitted data on private supplies who have not met the statutory reporting requirements regarding risk assessments in 2022. Local authorities are encouraged to at least programme an annual exercise to submit the risk assessment summary pages to the Inspectorate, perhaps to coincide with the annual data return submission.

2.3 Enforcement

Local authorities are required to send notices served under the legislation to ministers (in practice the Inspectorate) in accordance with regulation 18 where supplies are a potential danger to human health. They may also serve notices under section 80 of The Water Industry Act 1991 where supplies are unwholesome and or insufficient.

In 2022, the Inspectorate received 93 notices served under regulation 18 of the Regulations for supplies that were considered a potential danger to human health. The data return indicated that 382 had been served. 111 notices were served under section 80 of the Act according to the data return, but only two were received by the Inspectorate.

2.4 Reasons for serving notices

Most notices are historically served in response to a failure of a microbiological standard, with a very small minority for failures of other standards. In 2022, 60 out of the 93 notices submitted were served for failures of microbiological standards. Seven were served in response to failures of the standard for nitrate. The tenet of the Regulations is one of proactive risk assessment to prevent failures and a risk to health from ever being realised, and four were served due to actions from this process. Local authorities still appear to be predominantly reacting to sample results, rather than proactively eliminating the problems that would result in a sample failure. The use of a proactive risk assessment, and if necessary, a notice in this context, is to protect users before an incident occurs so they are not unsuspecting, and they can be responsible for protecting their own health. Table 2 shows the number and driver for the 93 notices returned to the Inspectorate.

Table 2

Notices served

Reason for serving the notice	Number
Microbiological	60
Arsenic	2
Boron	1
Iron	1
Lead	2
Nitrate	7
Risk assessment hazards	20

Sixty notices were served for microbiological drivers. The majority of these required treatment systems to be serviced or the installation of additional treatment.

The two section 80 notices received by the Inspectorate were associated with manganese and pH at one supply and copper at the other.

3. Inspectorate activities

3.1 Site visits to large regulation 9 food and drink producers 2022

In recent years the private water supplies team have chosen an annual theme for visits to local authorities. In 2022 Inspectors looked at how risk assessments were applied to a selection of larger regulation 9 supplies at sites where food and drink was produced or where the water was provided to the public.

The visits help the Inspectorate gain an understanding of local authorities' practical enforcement activities, with the intention of improving the technical guidance on the Regulations by incorporating the benefits of first-hand experiences of implementing them.

Site visits

During the year, Inspectors visited an outward-bound centre, a large poultry production facility, a brewery, and a watercress farm. Each operation was very different, and it was enlightening to see the approach being taken by the local authorities to ensure that the mitigations to the various risk assessments were being implemented.

Common themes

Where an authority believes that there is a potential danger to human health, they have a duty under regulation 18 of the Regulations to issue an improvement notice. These may be issued in the absence of sample results should the risk assessment conclude enforcement is required.

The Inspectorate has observed that local authorities prefer to negotiate improvements at larger sites with their management teams rather than serving a notice under regulation 18. This requires a level of trust to be effective and needs to be balanced with the risks to avoid a public health incident if action is not taken by the responsible person. The enforcement process is designed to be legally robust. However, the balance of better regulation suggests a pragmatic approach accepting that immediate enforcement is not always the most effective approach. It is worth

emphasising that local authorities are highly experienced in direct regulation of small businesses covering not just water, but food premises, and as the delivery regulator, the risks are known.

The patience, drive, and general diligence of local authorities is impressive by bringing about improvements in the management of water quality through thorough risk assessment at the sites visited.

The Inspectorate carried out remote meetings with the following local authorities in England, as part of its remit to provide guidance on the Regulations in England and Wales.

- East Suffolk
- Isles of Scilly
- South Lakeland

These meetings took place for a variety of specific reasons, and in the case of South Lakeland Council and East Suffolk Council, were initiated at the request of the local authority. The meeting in November with East Suffolk Council was convened largely to make the Inspectorate aware of local plans for the construction of a very large desalination plant on the east coast, which will fall within scope of the Regulations. The local authority called the meeting to clarify its obligations, discuss its water quality concerns and to seek guidance with regard the supply of water to the site from the public network in the short to medium term.

The Inspectorate regularly meets remotely with environmental health officers from the Council of the Isles of Scilly, where some private water supplies are being converted to public supplies under license. This local authority experiences unique travel challenges which bring constraints to its ability to comply with its sampling duties. This is largely due to the spread of supplies across the islands and their remote locations.

4. ISO/IEC 17024 certification

The private water supplies ISO 17024 accredited sampling manual was updated in 2022, along with minor changes to the ISO scheme itself. A number of modifications to the manual were made based on feedback from stakeholders. These changes have reduced the volume of the content. The revisions to the manual and the scheme document have now been implemented. It is anticipated that in 2023 the administration of future reviews and changes of the documents will be transferred to the scheme certification body as part of a formal written agreement. The Inspectorate will, however, remain the independent owners of both the Scheme and the manual going forward.

In January 2023 the scheme was audited by the United Kingdom Accreditation Service (UKAS). Feedback from the certificate body indicated that no issues were found.

The Inspectorate meets with the sampling certification body approximately quarterly each year. This is primarily to monitor progress with the implementation of the scheme across the local authorities in England and Wales, and to identify any areas that are causing setbacks. Although training and certification were greatly curtailed by the pandemic of 2020, the number of delegates that have been trained has since increased, and a programme of sampling audits by the certification body is in place.

Figure 4.1

Scheme training sessions

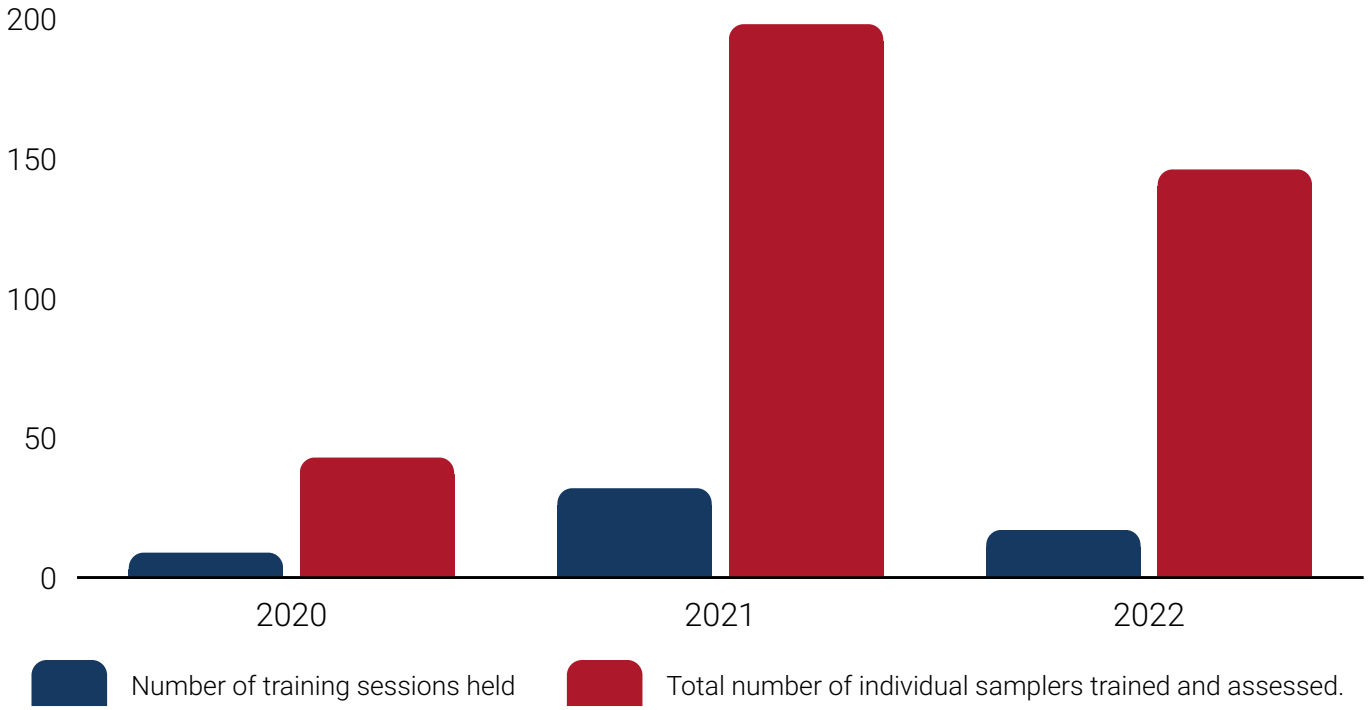


Table 3

Local authorities in England with at least one sampler certified to date

Adur and Worthing	Gedling	Sedgemoor
Allerdale	Gravesham	Sevenoaks
Amber Valley	Great Yarmouth	Somerset West and Taunton
Arun	Hambleton	Somerset
Bassetlaw	Hartlepool	South Cambridgeshire
Bath and North East Somerset	Herefordshire	South Gloucestershire
Birmingham	High Peak	South Kesteven
Blackburn	Horsham	South Lakeland
Bolton	Huntingdonshire	South Norfolk
Braintree	Hyndburn	South Oxfordshire
Breckland	Isle of Wight	South Ribble
Broadland	Isles of Scilly	South Somerset
Buckinghamshire	Lancaster	South Staffordshire
Burnley	Lewes and Eastbourne	South West Devon
Calderdale	Medway	Stafford

Carlisle	Mendip	Staffordshire Moorlands
Central Bedfordshire	Mid Devon	Stoke-on-trent
Cherwell	Mid Kent	Swindon
Cheshire East	Mid Sussex	Tameside
Chichester	Milton Keynes	Teignbridge
Chorley	New Forest	Telford and Wrekin
Colchester	Newcastle Under Lyme	Tendring
Copeland	North Devon	Test Valley
Cornwall	North East Lincolnshire	Tonbridge and Malling
Craven	North Hertfordshire	Torridge
Darlington	North Kesteven	Uttlesford
Derbyshire Dales	North Norfolk	Warrington
Dorset	North Northamptonshire	Welwyn Hatfield
Durham	North Somerset	West Berkshire
East Cambridgeshire	Northumberland	West Norfolk
East Devon	Peterborough	West Northamptonshire
East Hertfordshire	Preston	West Oxfordshire
East Riding	Reading	Wiltshire
East Staffordshire	Redcar and Cleveland	Winchester
East Suffolk	Richmond	Wokingham
Eden	Rossendale	Worcestershire
Epping Forest	Rother	Wyre
Exeter	Ryedale	
Fenland	Scarborough	

Although some local authorities in England may not be represented in the above table, it is possible that they contract out their sampling to a sampler that is accredited to the required standard.

Annexes

A – Research and special projects

Private water supplies at Ministry of Defence (MOD) site managed by Ancala Water Services and Severn Trent Services

In 2003 the MOD let a Public Private Partnership (PPP) contract called Aquatrine, lasting 25 years, to provide water and wastewater services to approximately 40,000 MOD sites.

The contract stipulated that the service provider should "Provide an uninterrupted supply of wholesome water in accordance with the Water Supply (Water Quality) Regulations 2000, to all points of water supplies". The inference is that the Private Water Supplies Regulations were not specified/included or that any regulatory updates since 2000 have been adhered to.

The Aquatrine contract was divided into three packages A, B and C.

- Package A Ancala (South and West) including all of Wales.
- Package C Severn Trent Services (STS) (North and East).
- Package B Veolia Nevis (Scotland) operate the service at 50 different sites.

The Inspectorate receives information via the local authority annual data returns.

Investigation

Local authorities have clear duties to carry out risk assessment on private water supplies, other than those serving only single dwellings. This is because of the duties conferred on them in The Private Water Supplies (England) Regulations 2016 (as amended), and The Private Water Supplies (Wales) Regulations 2017.

During 2022 the Inspectorate made an information request to both Ancala and STS to ascertain how the relationships are managed by both contractors with respect to water quality and private

water supplies at MOD sites. Both contractors made a positive response and what is clear from analysing this data is that the overseeing of risk assessments and the responses to failing water quality samples by local authorities is very inconsistent. There are some examples of very good practice, for example, The Vale of Glamorgan has agreed a notification system with Ancala for water quality results and has commented on current risk assessments.

Enforcement of the Regulations by local authorities at these sites is inconsistent, despite the guidance available from the Inspectorate's website. The Inspectorate will recommend that a stipulation taken from the Regulations for sharing risk assessments and responses to failing water quality data, is explicitly incorporated into any reletting of the successor to Aquatrine contract in 2028.

Outcomes

The Inspectorate reminded all local authorities in England of the location of major MOD sites and of the requirements to carry out risk assessments.

The Inspectorate has also reminded all licensed water companies of the requirement to protect the public supplies according to the risk posed by connection to MOD sites, where private, public or both types of supplies are present.

Future developments

The Inspectorate will establish an annual meeting with both Ancala and STS to discuss their performance with private water supplies within the contract. It should be noted that the Inspectorate does not have a remit to regulate these sites but could offer help for technical support, to both the contractor and the local authority whose area these sites are in.

B – Case studies

The Inspectorate publishes on its website, a variety of case studies on private water supplies. These cover a range of scenarios and subjects, which are largely derived from enquiries to the Inspectorate, either from local authorities or private water supply users. Some come from third parties, including lawyers, agencies, local councillors, and MPs. These case studies show and share the range and diversity of issues and circumstances that can come about in relation to private water supplies. The additional benefit of their publication on the Inspectorate's website is to make available the learning that can be taken from them.

There are four cases from 2022. These can be found on the website **Search – Drinking Water Inspectorate (dwi.gov.uk)**. The first of these is an update of an earlier case study, published for the year covering 2020 during the pandemic lockdown. In this year, a failing supply that was previously unknown to the local authority, was investigated and found to be both insufficient and a danger to human health for a wide range of deficiencies. So serious was the failure of the supply owner

to protect public health that the local authority decided to pursue a prosecution for the offenses committed. This reached a conclusion in 2022 and is covered in this case study.

The second of the case studies covering 2022 is another update, this time from 2021. It concerns the ambiguity of ownership of some supplies and whether they even fall within scope of the private water supplies regulations at all. In this case, the supply concerned is a public waterspout and determining the supply's ownership would lead to understanding which legislation should be used to protect those who might use it. The matter of ownership in this case, could only be determined by specialist lawyers.

The third case study concerns a lead breach from a sample taken from a large private water supply. The supply concerned serves domestic properties that were developed before 1970, when lead was widely used as a plumbing material. This case study shows how the local authority's regulation 16 investigation established the cause, which in turn determined the necessary actions that were required by this regulation to protect consumers.

The fourth case study describes a complaint, which had become insufficient after storm Eunice and then discoloured on reinstatement. It is a common misconception that the Inspectorate will investigate and intervene in matters relating to private water supplies as a means to resolve domestic difficulties or to overrule local authority actions where the authority is the primary regulator, this is not the case. This case study describes the Inspectorate's remit with regard private water supplies.

C – Guidance

The provision of technical guidance on the Inspectorate's website is a fundamental part of the Inspectorate's role in relation to private water supplies. The main purpose of this is to set out an interpretation of the Regulations to assist local authorities in discharging their duties as regulators in a consistent and compliant manner. However, this guidance is also made available for other stakeholders, including supply users, who may wish to understand how the Regulations apply to their specific circumstances. Technical guidance is also provided on private water supply management, water treatment, and advice which is aimed specifically at prospective buyers of premises served by a private water supply.

The private water supplies guidance on the Inspectorate's website is reviewed and updated continually by Inspectors. This is largely in response to matters that have been raised through formal enquiries for further clarification, or occasionally where they are not fully covered in the published guidance. Some guidance on the website is necessary only for temporary periods. For example, in the autumn of 2022 supply users were alerted to the potential water quality risks associated with aquifer recharge after a prolonged period of extreme drought. Consumers were advised to contact their local authority and consider having their supply tested where they suspected it to be unwholesome. This was removed from the website once the period of drought had passed.

During 2022 various minor amendments were necessary to the existing guidance to correct typographical errors, or to make minor changes that did not affect the fundamental meaning of the guidance. In contrast, a significant update to the guidance was the inclusion of new stand-alone information on the enforcement of private water supplies.

D – Enquiries

Despite published guidance being made available on the Inspectorate's website a significant amount of Inspectors' time is spent each year providing guidance on a case by case basis by responding to enquiries. These enquiries comprise of phone calls and email contacts. Unsurprisingly the majority have been consistently from local authorities since the inception of the Regulations in 2010. The nature of these enquiries is variable, but some regulations attract a greater need for clarification than others, regulation 8 being a prime example. This regulation concerns an unusual type of private supply which is derived from a public supply, that is further distributed by a water company customer to a consumer that is not a water company customer. The Inspectorate intends to provide additional guidance on regulation 8 in 2023 and is currently working with the Defra Policy and Legal teams, and other stakeholders to assist with the production of this guidance.

Local authorities are encouraged to consult the Inspectorate's website prior to making an enquiry on private water supplies. In 2022 a new search facility specifically for private water supplies was created to assist those visiting the Inspectorate's website to locate the information and relevant guidance they seek: **Guidance Documents – Drinking Water Inspectorate (dwi.gov.uk)**. Figure D1 shows the searchable guidance page.

Figure D1

Searchable guidance documents

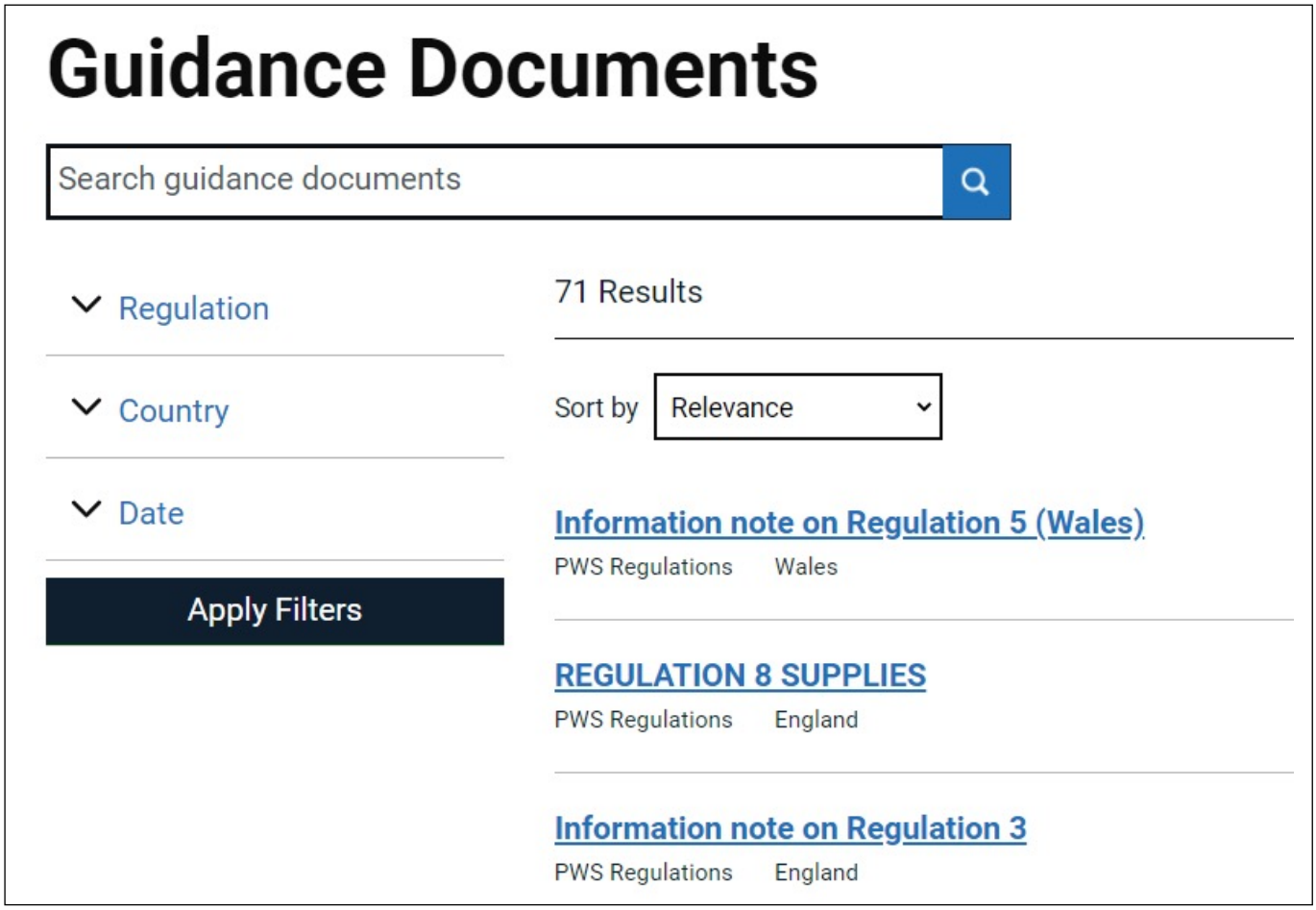
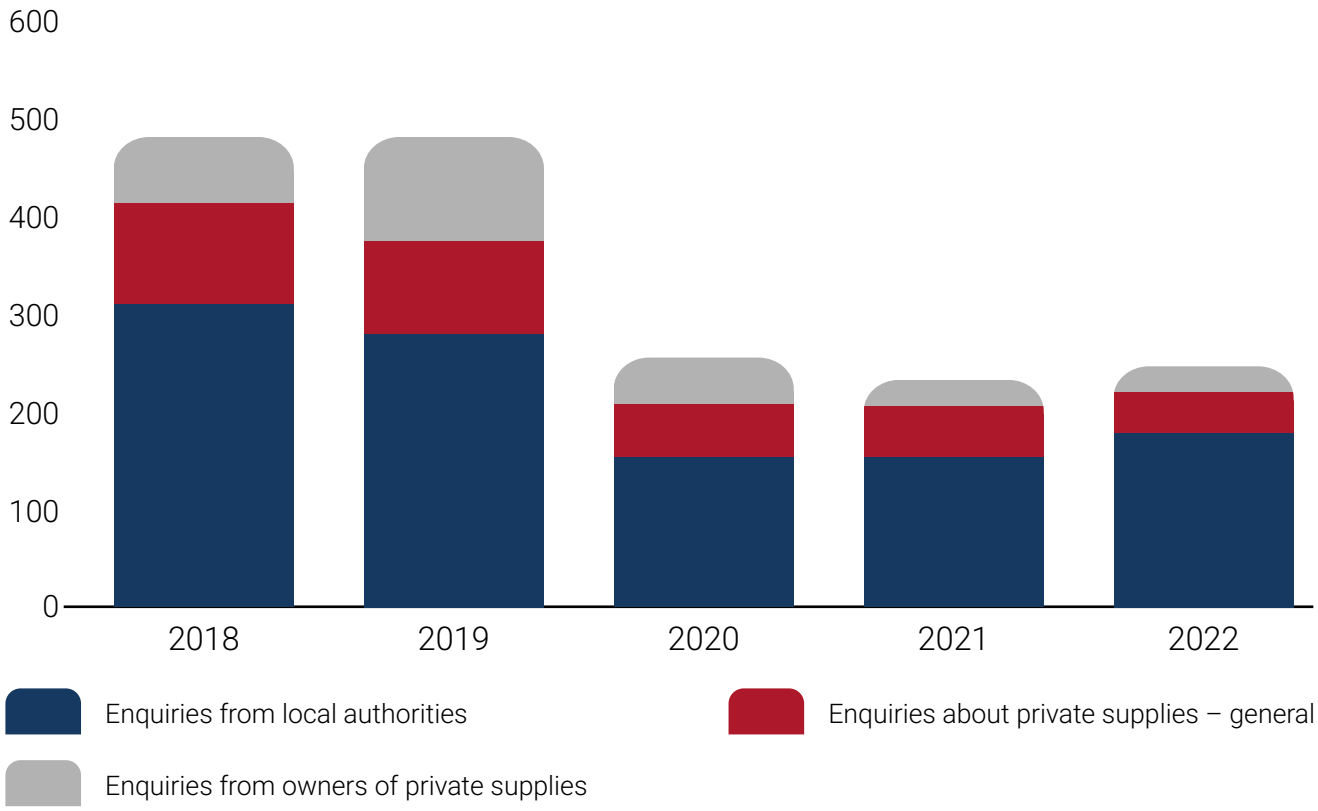


Figure D2 below shows that in England and Wales the number of private water supplies enquiries and the proportion of enquiries from local authorities and other enquiry groups has remained largely consistent since 2020.

Figure D2

Private supplies enquiries – England and Wales



Enforcement guidance

Although enforcement had previously been referenced in several locations on the website, comprehensive guidance specifically dedicated to this was lacking until this inclusion. The new piece consolidated learning from a variety of real-life cases and appeals to notices. These were case specific and highlighted the range of complexities and ambiguities that require intervention by legal professionals.

Guidance on enforcement powers – Drinking Water Inspectorate (dwi.gov.uk)

Monitoring guidance

Further additional guidance was published in 2022 on the monitoring of large, commercial, and public supplies. These supplies must be tested for parameters that are listed in the annexes to the Regulations within two groups, known as Group A and Group B, some of which are only required under certain circumstances. Further guidance on this was given in response to enquiries made by local authorities during the completion of their data returns in 2022, as this highlighted that the scheduling requirements of these parameters was not always well understood. A tool was also specifically developed and made available on the website in 2022 to assist local authorities to develop sampling programming for these types of supplies.

What sampling is required? – Drinking Water Inspectorate (dwi.gov.uk)

Sampling Suites Calculator – Drinking Water Inspectorate (dwi.gov.uk)

Wholesomeness guidance

Alterations with regards 'wholesome' water were also made to the guidance where relevant. These notes provide guidance on each regulation. These changes followed consultation with the Defra Legal team who confirmed that the Water Industry Act does not explicitly require private water supplies to be wholesome (unlike public supplies), although the Regulations make it obligatory for local authorities to enforce where supplies are a potential (or actual) danger to human health. Where a supply is unwholesome, but not a danger to human health the local authority has discretionary powers to enforce and require appropriate risk mitigation on a case-by-case basis. The Inspectorate nevertheless advises that local authorities seek to ensure that aesthetic standards of wholesomeness on private water supplies are met in the interests of consumer acceptability, wherever possible.

978-1-911087-48-9