



2025



Drinking Water Quality in Scotland Public Supplies

**SAFEGUARDING YOUR
DRINKING WATER**

**DRINKING WATER
QUALITY REGULATOR
FOR SCOTLAND**

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FOREWORD

This is the 24th Annual Report of the Drinking Water Quality Regulator for Scotland (DWQR), presenting an independent assessment of the quality of Scotland's public drinking water supplies during 2025, and the effectiveness of Scottish Water's arrangements for protecting public health in the supply of wholesome drinking water.

Overall, drinking water quality remained very high, with 99.88% of samples taken from consumers' taps complying with the required standards. This level of performance demonstrates that drinking water quality in Scotland remains amongst the best in the world and reflects the considerable efforts made by Scottish Water to deliver safe drinking water to communities across the country.

However, compliance figures alone do not tell the whole story. While they provide an important measure of drinking water quality, they do not fully reflect the risks that exist within the water supply system, in its operation, or in the experience of consumers. I do have concerns that Scottish Water have historically relied too heavily upon compliance figures to measure success.

In last year's report, I highlighted my concerns regarding the frequency of short-lived, yet largely avoidable, drinking water quality incidents and the occurrence of the discolouration of water supplies. Unfortunately, there has been little evidence of meaningful improvement during 2025.

It is disappointing that the number of drinking water quality incidents investigated by DWQR increased further during the year, particularly as many were preventable. Consumer contacts relating to drinking water quality also increased by 5%, with the majority concerning discoloured water. While such discoloration events rarely pose a risk to public health, they can significantly affect consumers' confidence in their drinking water supply.

While ageing infrastructure and the impacts of climate change present significant challenges and contribute to some of the issues encountered, DWQR's investigations continue to show that many failures arise from more fundamental weaknesses in the management, maintenance and operation of drinking water supply systems.

These issues demonstrate that Scottish Water has not yet fully embedded a Drinking Water Safety Plan approach to ensure risks to drinking water quality are consistently identified, assessed, controlled and reported in line with regulatory requirements.

In response, during 2025, I have initiated enforcement action requiring Scottish Water to strengthen its risk assessment processes and deliver the improvements necessary to better protect drinking water quality and the interests of consumers. I have been encouraged by the positive engagement and commitment that Scottish Water are doing to addressing the shortcomings identified.

The improvements required will take time to implement and their benefits may not be realised immediately. Nevertheless, their successful delivery is essential. Effective risk assessment, risk management and communication of the outputs across the organisation is fundamental to preventing incidents, reducing drinking water quality failures, supporting investment prioritisation and most importantly maintaining public confidence in Scotland's drinking water supplies.

DWQR will continue to work constructively with Scottish Water while maintaining robust and independent regulatory oversight to ensure that consumers continue to receive a safe, high-quality and reliable drinking water supply.

David Reynolds



Drinking Water Quality Regulator for Scotland

September 2026

EXECUTIVE SUMMARY

In Scotland, Scottish Water provides the public drinking water supply. All other supplies are known as private water supplies and are managed by owners and/or users. The Drinking Water Quality Regulator for Scotland (DWQR) regulates the quality of water supplied by Scottish Water, ensuring that drinking water supplies meet the requirements of The Public Water Supplies (Scotland) Regulations 2014, as amended (“the Regulations”). These regulations can be accessed using the following link: [The Public Water Supplies \(Scotland\) Regulations 2014](#).

This report considers the quality of the public water supply provided by Scottish Water and the regulatory activities that DWQR has undertaken during 2025. DWQR publishes a separate Annual Report on private water supplies which can be viewed on our website using the following link : [Annual Report](#).

Scottish Water takes and analyses its own samples to demonstrate compliance with regulatory requirements. Samples are taken from drinking water as it leaves water treatment works (WTW), service reservoirs (SRs) or storage points and from randomly selected consumers’ taps. This sampling and analysis is independently accredited and is consistent with water industry practice in the rest of the UK. DWQR independently assesses both Scottish Water’s monitoring programme and the resulting data.

In 2025, Scottish Water carried out sufficient sampling as required by the Regulations conducting a total of 296,935 regulatory tests. Of these, 255 exceeded the prescribed standards. While overall compliance remained high at 99.91%, this represents a reduction from 99.94% in 2024 when 205 sample exceedances were recorded. These are summarised in Table 1.

Table 1 Sample compliance for 2025.

Sample Point	No. of Tests	No. of Failing Tests	Compliance
WTW	62,134	22	99.96%
SR	96,854	65	99.93%
Consumer Tap	137,947	168	99.88%
Total	296,935	255	99.91%

Of the 137,947 tests on samples taken to represent water supplied at the consumers tap, 99.88% complied with the standards. This reduction in performance was almost entirely due to a high number of exceedances of the standard for chlorate (45), highlighting the need for improvement in the storage and management of sodium hypochlorite at WTW. DWQR is satisfied that Scottish Water is now taking appropriate steps to reduce risk of chlorate failure at high-risk locations.

An additional 62,134 tests were undertaken on water supplied from WTW. Of these, 22 results failed to meet the required standards, a level of performance comparable with previous years. DWQR was pleased to note that *Escherichia coli* (*E. coli*), a key indicator of microbiological water quality, was not detected in any sample collected from water treatment works across Scotland during 2025.

A total of 96,854 tests were carried out on samples collected from SR's, where treated water is stored during distribution. Of these, 65 results failed to meet the required standards. Despite targeted improvement activity, DWQR remains concerned that there has been no significant improvement in SR performance over the past decade. SR's are critical assets within the drinking water supply system and failures can present significant risks to water quality. DWQR therefore expects Scottish Water to deliver sustained improvements to reduce the risk of future water quality failures.

Scottish Water reported 17,558 consumer contacts relating to concerns about drinking water quality during 2025, representing a 5% increase compared with 16,779 contacts received in 2024. Discolouration of drinking water remains the primary cause of consumer concern. During 2025, DWQR declared nine incidents where significant numbers of consumers experienced discolouration to their water supply, accounting for 25% of all incidents that occurred. This highlights the need for Scottish Water to make further improvements to the management and operation of its water supply systems to ensure the acceptability of water to consumers.

DWQR carries out formal complaint investigations if consumers are not satisfied with Scottish Water's own investigation. DWQR carried out one such investigation during 2025 following contact by a consumer who was dissatisfied with the taste of their drinking water. Following detailed assessment, this complaint was not upheld, however, two recommendations were made to Scottish Water.

Further information on Scottish Water's monitoring programme, results and consumer contacts can be found in Section 1 of this report.

Scottish Water is required to notify DWQR of any event that may affect drinking water quality or lead to consumer concern. During 2025, Scottish Water reported 1,086 water quality events, a significant increase from 866 events reported in 2024. More serious events are classified as drinking water quality incidents. During 2025, DWQR investigated 36 incidents, two more than in 2024, continuing a concerning upward trend observed in recent years. DWQR remains particularly concerned by the number of preventable incidents caused or exacerbated by Scottish Water's own actions (or inaction), including recurring failings in maintenance, chemical dosing and alarm response. While Scottish Water is introducing improvements to address these issues, DWQR requires these measures to be fully embedded and to result in a sustained reduction in operationally driven incidents.

Audit and inspection are a key part of DWQR's role. DWQR inspects a range of Scottish Water activities and assets that could affect the quality of drinking water every year, auditing against regulatory requirements and industry best practice. Sites and activities are selected for inspection using a risk-based process that considers sample failures and water quality events and incidents.

During 2025, audits took place at 12 WTW across Scotland as well as a further five audits at locations within the distribution system. Two audits were also conducted upon critical business processes (including risk management and response to consumer concerns). A further fourteen investigatory visits were conducted to aid our understanding of company processes and the cause of events and incidents.

Further information on our audit and inspection activity is given in Section 3 of this report.

DWQR takes enforcement action where it is not satisfied that Scottish Water is adequately complying with its statutory obligations. During 2025, DWQR issued two enforcement notices. The first requires Scottish Water to deliver an inspection and repair programme for all SRs across Scotland to ensure asset integrity is maintained and risks to water quality controlled. This builds upon previous enforcement initiated during 2023 for development and initiation of the programme.

The second enforcement notice requires Scottish Water to strengthen its risk assessment processes to ensure that significant risks to drinking water quality are identified, assessed and reported to DWQR in accordance with statutory requirements. This is a fundamental measure to control risks throughout the water supply system, helping to prevent many of the avoidable water quality issues that have been experienced in recent years. Such a process also ensures appropriate prioritisation of investment and operational improvement. While DWQR welcomes the progress Scottish Water has made in addressing deficiencies, it is disappointing, however, that such regulatory intervention was necessary.

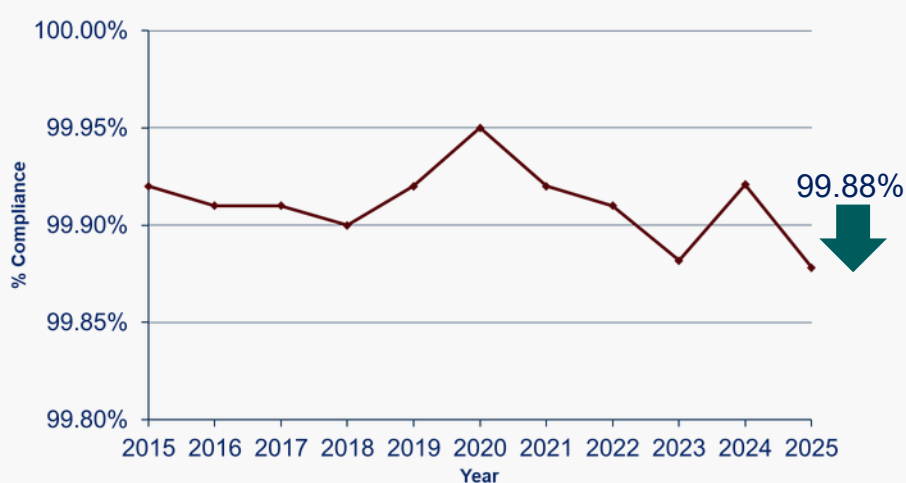
Comprehensive risk assessment has been a longstanding regulatory requirement, forming a cornerstone of the preventative approach to safeguarding drinking water quality. The need for enforcement action therefore represents a significant management failing in the application of established requirements.

During 2025, DWQR issued three Information Letters to clarify regulatory requirements and reinforce expectations across several key areas. This included Information Letter 2025/03, which reiterated the requirements relating to the disinfection of drinking water supplies. The letter was issued in response to DWQR's concerns about the number of preventable disinfection-related incidents that have occurred in recent years. Many of these incidents highlighted weaknesses in operational controls and contingency arrangements. DWQR is encouraged by the progress made in response to this guidance. This has included the revision of relevant policies and the development of a programme to assess all water treatment works across Scotland, identify vulnerabilities within disinfection systems, and implement appropriate mitigation measures. The successful delivery of this programme is critical in reducing the risk of future disinfection failures and ensuring that consumers continue to receive a safe and wholesome drinking water supply.

2025 IN REVIEW: PUBLIC SUPPLIES IN SCOTLAND

281 Raw Water Sources	224 Water Treatment Works	943 Water Storage points	49,002 km of pipe work	275 Water Supply Zones
				

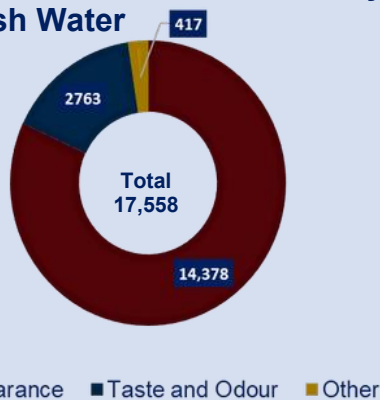
% Overall Compliance at Consumer taps



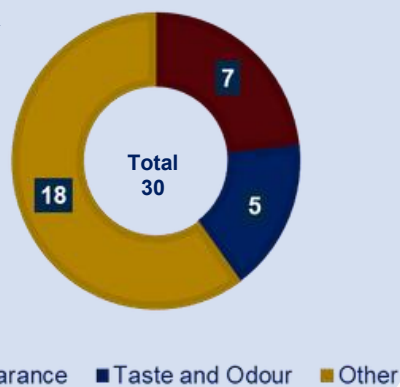
**137,947 tests taken
from consumer
taps**

**168 tests failed
to meet the
standard**

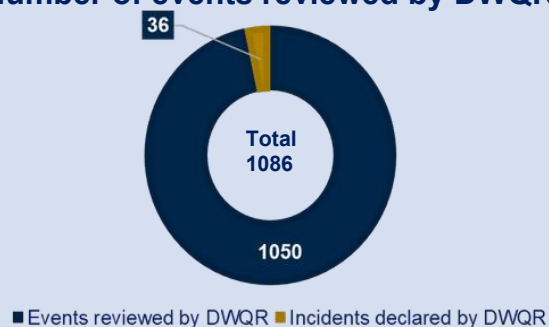
Consumer contacts received by
Scottish Water



Consumer contacts received by
DWQR



Number of events reviewed by DWQR



1. PUBLIC DRINKING WATER SUPPLIES IN SCOTLAND 2025

1.1 Water Treatment Works (WTW)

Scottish Water has 224 WTW that treat water to ensure it is safe to drink and complies with the standards set out in the Regulations.

WTW in Scotland vary considerably in size, ranging from large facilities supplying major urban populations to very small works serving only a small number of properties. Regardless of size, the Drinking Water Quality Regulator (DWQR) requires Scottish Water to ensure that all treatment works are adequately designed, operated and maintained to consistently treat raw water in accordance with regulatory requirements to meet drinking water standards.



Figure 1 A large WTW in the west of Scotland.



Figure 2 A small WTW in Orkney.

During 2025, a total of 62,134 compliance tests were undertaken on samples collected from WTW. Of these, 22 tests (0.04%) failed to meet the prescribed standards, resulting in a high overall level of compliance, while highlighting the need for continued operational vigilance and targeted improvements at underperforming sites.

1.1.1 Microbiological Quality at WTW

Escherichia coli (*E. coli*), and other coliform bacteria are measured in water leaving WTW help check that disinfection of the drinking water has been successful. Coliforms are a group of bacteria widely found in the environment, with *E. coli* being an indicator faecal contamination. The presence of either parameter suggests that the disinfection process may not have been effective at removing or killing potentially harmful bacteria. The

standard for both coliform bacteria and *E. coli* is zero, and all sample failures must be fully investigated by Scottish Water and reported to DWQR, the local NHS board, and the relevant local authority.

When investigating sample failures at WTW, Scottish Water conducts a detailed investigation to determine the likely cause that considers many potential factors, such as changes in the quality of the incoming raw water, issues with the treatment process, sampling conditions, and other evidence from samples collected at the WTW and in the distribution system. Further sampling can help establish whether there is a genuine problem. Data from on-line monitoring and manual testing of water at WTW for other parameters can also help with the investigation.

Samples taken at WTW during 2025 continued to show that supplies in Scotland were of a very high microbiological standard and of the 25,585 tests conducted, none failed the *E. coli* standard. However, 20 tests (0.08%) failed the coliform standard with Turret WTW, and Sandy Loch WTW each having more than one failure.

At Turret WTW near Crieff, Perthshire, low level coliforms were detected in June and October 2025 (both for 1CFU/100ml). Scottish Water's investigation identified several factors which may have contributed to this failure which included a deterioration in raw water quality and sub-optimal coagulation. Investigations also showed low turn-over within the final storage tanks. Following the failures, improvements have been made to coagulation control and future investment is being planned to improve turnover in the final storage tanks.

In response to these failures, DWQR carried out a technical audit of the WTW and identified six findings. DWQR reminds Scottish Water that appropriate arrangements should be in place at all sites to react to a deterioration in treatment performance to prevent the supply of inadequately treated water.

At Sandy Loch WTW, Shetland, there were low level coliform detections in April and September 2025 (both for 1CFU/100ml). No definitive root cause was identified for either failure, however, it was noted that the plant was operating above the design flow with bacterial cell counts in the final water samples (as measured by flow cytometry) higher than normally expected. In response, Scottish Water committed to undertake activity to optimise operation of the works.

DWQR conducted a technical inspection of Sandy Loch WTW in February 2026 following these failures. DWQR identified thirteen findings including the requirement for improved monitoring arrangements, resilience of chemical dosing and gaining further insight regarding the impact of flow changes on the disinfection process.

1.1.2 *Cryptosporidium* Monitoring at WTW

Cryptosporidium is a microscopic protozoan parasite that can live in the gut of humans and warm-blooded animals. *Cryptosporidium* oocysts can enter a drinking water supply if faecal material is washed into the raw water entering a WTW and the oocysts are not removed by the treatment process. *Cryptosporidium* oocysts are not killed by chlorine at the levels used in water treatment, so water treatment processes need to be optimised and well monitored to ensure they are physically removed. Scottish Water tests water supplies for *Cryptosporidium* to verify that these processes are removing oocysts. Ultraviolet (UV) light can be effective at inactivating oocysts. Scottish Water uses this process at a small number of sites where physical removal of oocysts by the original treatment process is not consistently achieved.

Although *Cryptosporidium* is not a regulatory monitoring parameter, its public health significance calls for risk-based sampling and analysis. In 2025, Scottish Water collected 5,783 pre-scheduled final water samples for *Cryptosporidium* with many additional samples collected for operational reasons.

In total, low levels of oocysts which were not subject to UV treatment were detected in twelve pre-scheduled and operational samples. A single oocyst was identified on one occasion at ten sites (Camphill WTW, Castle Moffat WTW, Daer WTW, Herricks WTW, Kingshill House SR, Pateshill WTW, Perth WTW, Rosebery WTW, Sanday WTW, and Winterhope WTW). Marchbank WTW recorded the detection of *Cryptosporidium* on two separate detections. This represents an improvement compared to 2024, when 21 samples were found to contain low levels of oocysts, with four sites experiencing more than one detection.

The first *Cryptosporidium* detection at Marchbank WTW serving Edinburgh was associated with reduced coagulation performance due to solids deposition in the chemical dosing lines, combined with increased filter loading resulting from a valve failure that prevented other filters from initiating wash cycles. The second detection followed a period of poor coagulation and

filtration performance caused by a chemical dosing container running empty. Scottish Water has identified a range of corrective actions to address these issues and developed a detailed improvement plan which was discussed with DWQR during a technical audit of Marchbank WTW in February 2026. More details of the incident declared by DWQR can be found in Section 2

As a result of historic *Cryptosporidium* detections from Turriff WTW in Aberdeenshire, DWQR instigated enforcement action and a new WTW is scheduled for commissioning by 2031. In the interim, Scottish Water has installed UV treatment to irradiate *Cryptosporidium* oocysts that have not been removed through the treatment process. During February and October 2025 *Cryptosporidium* oocysts were detected on four occasions with the UV irradiation system operating appropriately on each occasion. DWQR conducted an audit of Turriff WTW in June 2025, which highlighted nine improvement actions to further mitigate risks to water quality until the new plant is in operation.



Figure 3 A member of DWQR inspecting a UV unit at a WTW in the North East of Scotland



Figure 4 A UV monitor at a WTW in the North East of Scotland

1.1.3 Chemical Quality at WTW

The Regulations require that water is tested for two chemical parameters, turbidity and nitrite, in samples taken from treatment works.

Nitrite is a compound of nitrogen that can occur in supplies where ammonia is added to chlorine in a process called chloramination. This process needs to be carefully managed

and the presence of nitrite in significant quantities can indicate that it is not as controlled as it should be. There were 3,369 nitrite tests conducted in 2025 with one exceedance of the standard. This sample failure occurred at Tiree WTW in July 2025 and was concluded to not to be representative of water entering supply, with the most likely reason for the failure to be due to a mix-up of sample bottles. This issue was not reported to DWQR until October 2025, and Scottish Water has since implemented improvements to its quality management system to prevent recurrence. Scottish Water is reminded that all sample failures should be notified to DWQR in a timely fashion with investigations conducted and reported in line with Regulation 17.

Turbidity is a measure of the extent to which particulate matter in the water scatters light (how cloudy the water appears). There is a risk that water with elevated turbidity cannot be properly disinfected, so a treatment standard of 1.0 nephelometric turbidity units (NTU) has been set in the Regulations. Of the 7,595 turbidity tests conducted in 2025, one exceeded the regulatory standard, however, no microbiological failures were identified in connection with this failure.

At Glenelg WTW, a turbidity test of 4.4 NTU was recorded from a sample taken in October 2025. A detailed investigation did not identify a specific cause with assessment of online monitoring data showing all treatment processes were operating as expected. Subsequent final water and consumer tap samples were all within regulatory standards with no other water quality issues identified.

1.2 Service Reservoirs (SR)

SR, also known as treated water storage points (TWSPs), are strategically located within the distribution network to balance daily fluctuations in consumer demand and supply. They also provide a degree of operational resilience by storing water in the event of upstream supply disruptions. While SRs play a critical role in maintaining water sufficiency, they can pose risks to water quality if not subject to rigorous inspection, maintenance, and operational controls.



Figure 5 SR in the North of Scotland.



Figure 6 Inside a clarifier in the North of Scotland

Under regulatory requirements, service reservoirs are sampled weekly for coliform bacteria, including *E. coli*. These are given in Figure 7.

Samples must be taken from locations that accurately represent water entering distribution from the reservoir. During 2025, an audit of a SR on Barra raised concerns regarding Scottish Water's ability to consistently obtain representative samples at sites with common inlet and outlet pipework. Scottish Water subsequently identified 50 assets with this set-up, two of which have since been removed from supply.

Of the remaining 48 assets, investigations into sampling arrangements and hydraulic operation, alongside improvement works have been completed to enable representative sampling to be undertaken at 40 of these sites. For the further eight assets, where representative sampling could not be confirmed, DWQR has required that due diligence samples are taken where possible to provide reassurance of the microbiological quality of water supplied to consumers until permanent remedial measures are in place. The pace at which Scottish Water has worked to undertake its assessment of sampling arrangements and is addressing those assets which require intervention is commended.

Of the 48,427 tests conducted for each parameter, 62 failed to meet the standard for coliform bacteria, with seven SR recording more than one failure. This marks a deterioration in performance compared to 2024 where 56 failures occurred. DWQR is concerned that no significant improvement has been witnessed in SR compliance over the last ten years and

intends to complete a comprehensive audit of Scottish Water's management of SR processes and procedures.

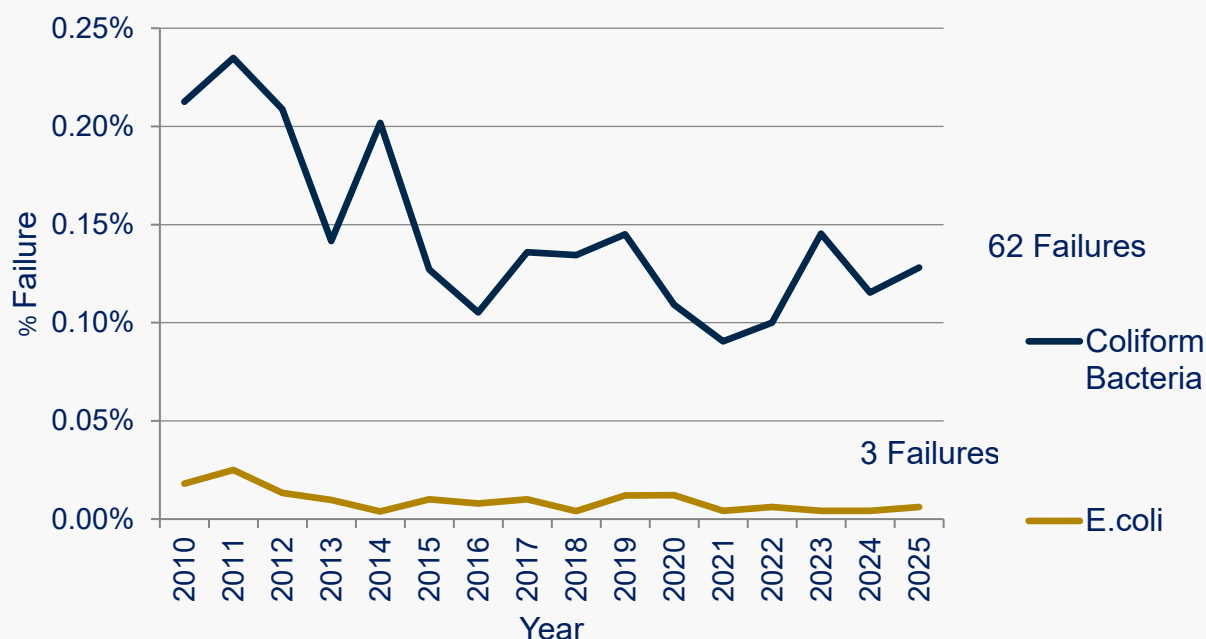


Figure 7 Microbiology failure rate at service reservoirs.

During 2025, three samples did not comply with the *E. coli* standard, one from Cairnborrow Huntly SR, one from Clarklyhill clear water tank (CWT) and one from Lossiemouth Low SR. During April 2025, a single *E.coli* detection (1 CFU/100 ml) was recorded in a sample collected from Cairnborrow Huntly Service Reservoir (SR), Aberdeenshire. In response, Scottish Water promptly removed the reservoir from supply to undertake an investigation. Repeat samples collected prior to the SR being isolated, together with upstream and downstream samples taken from consumer properties, were all satisfactory, with no coliforms or *E. coli* detected. The reservoir subsequently passed a flood test, indicating no significant ingress pathways, and the investigation did not identify a definitive cause for the detection.

Scottish Water is, however, currently reviewing the operational need for the reservoir, with a view to decommissioning the asset.

A regulatory sample from Clarklyhill CWT in Moray taken in July 2025 failed for *E. coli* (3CFU/100ml). During 2024 this asset failed twice for coliform bacteria and once for *E. coli* before removal from supply for inspection (December 2024). Despite this inspection identifying the potential for ingress at multiple locations, a decision was made to return the tank to supply, with enhanced monitoring, to manage demand. Following this further failure

in July 2025, Scottish Water removed Clarklyhill CWT from supply, with work commencing in August 2025 to carry out the required remedial work to address the points of ingress.

DWQR audited the site and declared an incident. DWQR was very critical that Clarklyhill CWT was not removed from supply earlier in 2024 and kept isolated until remedial works were complete. A summary of DWQR's assessment can be found here using the following link: [DWQR Incident Assessment Clarklyhill 15968 July 2025](#).

A regulatory sample taken from Lossiemouth Low SR in September 2025 failed for coliforms and *E. coli* (Coliforms – 3CFU/100ml, *E. coli* 2CFU/100ml). Resamples, downstream consumer tap samples and upstream SR samples were all satisfactory, as have subsequent samples. Scottish Water is carrying out investment appraisal to determine the long-term solution for Lossiemouth Low SR. Whilst no further failures have been encountered and enhanced monitoring is being conducted, DWQR is critical that this asset could not be easily removed from supply for inspection. This highlights the need for the enforcement action taken in 2025 to ensure the completion of enabling work that allows all TWSPs to be removed from supply in a timely fashion. More detail on DWQR's enforcement activity is given in Section 4.

1.3 Water Quality at Consumers' Taps

Scottish Water's supply area is divided into 275 water supply zones with each supplying up to 100,000 people.

In 2025, a total of 137,947 tests were conducted to assess water quality at consumers' taps. Of these, 168 results did not meet the regulatory standards, resulting in an overall compliance rate of 99.88%. This represents a slight reduction in performance compared with 2024, when compliance was 99.92% and 124 failures were recorded from 156,814 tests. This reduced performance is largely due to the number of chlorate failures recorded during the year. Chlorate was introduced as a parameter during 2023 when [The Public Water Supplies \(Scotland\) Amendment Regulations 2022](#) came into force. Of the 168, 45 (27%) were due to chlorate exceedances. Further discussion regarding the chlorate failures is given in Section 1.3.2 and Section 2.

Table 2 shows a summary of all tests completed on samples collected from consumers' taps, including all regulatory failures. The reasons for these failures are presented below.

The number of tests for each parameter that Scottish Water conducted is shown in the Performance Tables which accompany this report and can be found on our website using the following link: [Annual Report](#).

In addition to these regulatory samples, Scottish Water also takes samples for further investigation where the consumer reports an issue to ensure any issues are resolved. Scottish Water also take extra samples from consumer taps and across the distribution network for operational reasons, and to check that any treatment issues at a WTW have not affected consumers.



Figure 7 is a chlorine meter to measure the amount of total and free chlorine in a water sample

Table 2 Summary of tests on regulatory samples from consumers' taps in 2024 and 2025

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Key Parameters						
Bacteria						
Coliform Bacteria	0 number/100ml	14,961	39	34	99.74%	99.75%
<i>E. coli</i>	0 number/100ml	14,961	1	1	99.99%	100.00%
<i>Enterococci</i>	0 number/100ml	4,818	1	1	99.98%	100.00%
<i>Clostridium perfringens</i>	0 number/100ml	4,819	1	1	99.98%	100.00%
Total bacteria		39,559	42	37	99.89%	99.90%
Metals						
Aluminium	200µg Al/l	4,702	2	2	99.96%	99.96%
Copper	2mg Cu/l	597	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Iron	200µg Fe/l	4,703	24	18	99.49%	99.48%
Lead	10µg Pb/l	4,148	16	15	99.61%	99.52%
Manganese	50µg Mn/l	4,702	11	9	99.77%	99.81%
Nickel	20µg Ni/l	597	1	1	99.83%	99.87%
Total metals		19,449	54	45	99.72%	99.75%
Other parameters						
Colour	20mg/l Pt/Co	4,816	1	1	99.98%	100.00%
Hydrogen ion (pH)	6.5-9.5 pH	4,816	2	2	99.96%	99.96%
Nitrite	0.5mg NO ₂ /l	1,944	5	4	99.74%	99.85%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Odour	Acceptable / No abnormal change	4,816	8	7	99.83%	99.69%
Radon	100Bq/l	88	0	0	100.00%	100.00%
Taste	Acceptable / No abnormal change	4,815	4	4	99.92%	99.98%
Total trihalomethanes	100µg/l	2,736	2	1	99.93%	100.00%
Turbidity	4NTU	4,816	1	1	99.98%	100.00%
Total other key parameters		28,847	23	20	99.92%	99.93%
Other key parameters						
1,2 Dichloroethane	3µg/l	2,738	0	0	100.00%	100.00%
All Other Individual Pesticides	0.1µg/l	525	1	1	99.81%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Ammonium	0.5mg NH ₄ /l	1,944	0	0	100.00%	100.00%
Antimony	10µg Sb/l	597	0	0	100.00%	100.00%
Arsenic	10µg As/l	597	0	0	100.00%	100.00%
Benzene	1µg/l	2,735	0	0	100.00%	100.00%
Benzo 3,4 Pyrene	0.01µg/l	614	0	0	100.00%	100.00%
Bisphenol A	2.5µg/l	624	0	0	100.00%	100.00%
Boron	1.5mg B/l	598	0	0	100.00%	100.00%
Bromate	10µg BrO ₃ /l	2,048	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Cadmium	5µg Cd/l	597	0	0	100.00%	100.00%
Chlorate	25mg/l	3,542	45	18	98.73%	99.62%
Chloride	250mg Cl/l	4,817	0	0	100.00%	100.00%
Chlorite	0.25mg/l	2,048	0	0	100.00%	100.00%
Chromium	50µg Cr/l	597	0	0	100.00%	100.00%
Conductivity	2500µS/cm at 20°C	4,816	0	0	100.00%	100.00%
Cyanide	50µg CN/l	2,729	0	0	100.00%	100.00%
Fluoride	1.5mg F/l	596	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Haloacetic Acids 5 (HAA5)	60µg/l	2,722	3	3	99.89%	99.74%
Mercury	1µg Hg/l	597	0	0	100.00%	100.00%
Microcystin -LR	0.1µg/l	2,566	0	0	100.00%	100.00%
Nitrate	50mg NO3/l	576	0	0	100.00%	100.00%
Nitrite/Nitrate formula	<1mg/l	576	0	0	100.00%	100.00%
PAH - Sum of 4 Substances	0.1µg/l	614	0	0	100.00%	100.00%
Pesticides - Total Substances	0.5µg/l	188	0	0	100.00%	100.00%
Selenium	20µg Se/l	597	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Sodium	200mg Na/l	574	0	0	100.00%	100.00%
Sulphate	250mg SO4/l	623	0	0	100.00%	100.00%
Sum of PFAS	0.1µg/l	1,648	0	0	100.00%	100.00%
Tetrachloroethene/ Trichloroethene	10µg/l	2,738	0	0	100.00%	100.00%
Tetrachloromethane	3µg/l	2,738	0	0	100.00%	100.00%
Uranium	30µg/l	573	0	0	100.00%	100.00%
Sum Total of all other parameters		50,092	49	22	99.90%	99.97%
Scotland total		137,947	168	124	99.88%	99.92%

1.3.1 Microbiological Quality at Consumers' Taps

Coliform bacteria

Coliform bacteria were detected in 39 tests in 2025, with five zones reporting two failures. All these failures were attributed to either tap hygiene or had no clear cause when all other factors were considered. None of the failures was due to confirmed network contamination. When coliform bacteria failures occur, Scottish Water undertake further tests from the premises and from neighbours' taps to determine if there is a local property issue or a wider supply system concern. Scottish Water then notify the consumer of the findings and provide the appropriate advice in each case.

E. coli

A single test from the Whitehillocks supply zone in Angus in 2025 was positive for *E. coli*. This was attributed to the hygienic condition of the kitchen tap rather than indicating any wider issue.

E. coli is a critical parameter as it serves as an indicator of faecal contamination and the microbiological safety of drinking water. Its presence may suggest contamination either within the distribution network in that area or at the point of use where the sample was collected. Accordingly, Scottish Water is required to investigate each occurrence thoroughly to determine the source of contamination and implement appropriate corrective actions.

Enterococci

One test failed for Enterococci in 2025 in the Kinloch Rannoch supply zone. Investigation determined that the failure was attributable to poor hygiene at the kitchen tap from which the sample was taken, rather than contamination within the public water supply.

Enterococci are used as indicators of faecal contamination, even though they are typically present in lower numbers in faeces than *E. coli*, as they are more persistent in the aquatic environment and exhibit greater resistance to chlorination. As a result, their presence can provide evidence of faecal contamination that may not be detected through *E. coli* monitoring alone.

Clostridium perfringens

A single test from the Balmore Carron Valley zone in Cumbernauld in 2025 was positive for *Clostridium perfringens*, which was again concluded to be due to poor tap hygiene.

Clostridium perfringens is used as a secondary indicator of faecal contamination. Its spores are capable of surviving in water for significantly longer periods than coliform organisms and are resistant to chlorination. The presence of these spores in treated water may therefore indicate potential deficiencies in the treatment process. Within distribution systems and at consumer taps, their detection can also suggest the possibility of historic contamination.

1.3.2 Chemical Quality at Consumers' Taps

Aluminium

Aluminium occurs naturally in some water supplies but should be removed by the treatment process. It is also used as a flocculant at many WTW in Scotland which may cause a build-up of sediment within distribution systems.

Two tests failed to meet the standard for aluminium in 2025. One test was from a sample collected in the Glendevon A supply zone in Dunfermline with the disturbance of mains sediment determined to be the most likely cause. Whilst resamples were within regulatory requirements, precautionary mains flushing was carried out to reduce the likelihood of recurrence. The root cause of the other failure from a property within Milngavie M3 supply zone (Drumoyne) was not determined, with all resamples showing very low concentrations of aluminium.

Iron

A total of 24 tests failed the standard for iron in 2025 across 18 supply zones, compared with 25 failures in 2024. Although iron occurs naturally in some raw water sources and is used as a treatment chemical at several WTW, failures at consumers' taps are commonly associated with corrosion of cast iron water mains and the accumulation of iron-rich deposits within the distribution network. Elevated iron concentrations can result in discoloured water, which remains one of the principal causes of consumer dissatisfaction.

The Afton supply zone in East Ayrshire recorded the highest number of iron failures during 2025, with five exceedances, and Scottish Water has committed to developing a plan to specifically address issues in this area including improved flow management.

Scottish Water continues to invest in a programme of water main renovation and cleaning of network systems that pose the greatest risk. Over time, this work should contribute to a reduction in the number of iron failures, but DWQR has concerns regarding the pace of such activity to reduce the number of consumer contacts received regarding discoloured drinking water.

Lead

Lead is a toxic metal that can accumulate in the body. In Scotland, lead does not occur naturally in significant concentrations in raw water supplies. The problem arises when drinking water comes into contact with lead pipes, lead tanks, lead solder joints on copper pipes, or inferior quality brass fittings and taps, particularly for longer periods (e.g. overnight/weekends/holiday periods). This can result in high lead levels in drinking water.

Apart from some short sections of pipework that connect consumer properties to the Scottish Water distribution network (communication pipes) most lead pipework is privately owned and therefore outside Scottish Water's direct control. Scottish Water does, however, have a responsibility under the Regulations to reduce the risk of lead dissolving from pipes, regardless of ownership, and it does this by treating the water with orthophosphate.

In 2025, 16 regulatory tests exceeded the standard for lead, compared with five in 2024. Direct comparison between the two years is not appropriate, however, as the number of tests conducted increased significantly during 2025 following the introduction of a risk-based monitoring programme. A total of 4,148 tests were conducted in 2025, compared with 1,046 in 2024. In response to each exceedance, Scottish Water completed an investigation, removing any associated lead communication pipework from its network (where present) and provided advice to property owners on measures that they could take to reduce exposure to lead.

As part of the ambition for a Lead-Free Scotland, Scottish Water has a target date of 2045 for the removal of all lead communication pipes from the public water network.

Manganese

Manganese occurs naturally in some raw waters, especially in the west of Scotland. If it is not removed effectively by the treatment process it can accumulate as fine black sediment in distribution system pipework and cause the discolouration of drinking water supplies and be of inconvenience for consumers. Even a relatively low concentration of manganese in drinking water from a treatment works can build up in pipes and cause problems in distribution pipework particularly following flow changes, requiring a programme of cleaning to remove it. A total of 11 tests failed to meet the standard for manganese in 2025, compared with nine failures in 2024.

Nickel

Nickel is not found in high concentrations in Scotland's raw waters. However, it is used in the production of stainless steel and other metal products. Its presence in drinking water can arise from contact with plumbing fittings, such as nickel or chromium plated taps, or certain types of kettles. One nickel failure occurred in September 2025 and was attributed to internal plumbing and lack of water usage as the property which was unoccupied at the time of sampling. A test from a neighbouring property met regulatory requirements.

Hydrogen Ion (pH)

The pH of a substance is the measure of how acidic or alkaline the water is. Most waters in Scotland are naturally soft and have a low pH (and therefore acidic). Such water can be corrosive to metals used in plumbing; therefore Scottish Water must bring the pH into the required range to prevent this. High pH (alkaline) values can occur where water is in prolonged contact with water mains containing cement. Water with a very high pH can have a taste that consumers can find unpleasant.

There were two failures of the pH standard in 2025 across two supply zones. One of these failures, in Milngavie C1 zone (Milngavie), was believed to be due to low flow and a flush of the mains was conducted. Further sampling showed no ongoing issues. The other failure from Milngavie M3 zone (Glasgow) was also attributed to low turnover in the supplying main as the property was located near a dead end. An extended flush was completed again with further samples showing no ongoing issues.

Nitrite

Nitrite forms when nitrifying bacteria react with the ammonia that is added to chlorine in a process known as chloramination. If the process is not carefully controlled and nitrifying bacteria are allowed to persist in the distribution system, nitrite can build up and cause failures in the standard. Bacteria can persist due to water lying in pipes for prolonged periods, especially in warmer weather.

There were five failures of this parameter in 2025 across four supply zones: Howden zone (Scottish Borders in August and October 2025), Robertson zone (Scottish Borders in August 2025), Rawburn zone (Scottish Borders in September 2025) and Afton zone (East Ayrshire in October 2025). Investigations in each case identified low flow and associated nitrification within the distribution network as the cause of the exceedance. The affected sections of network was flushed and resamples complied with the standard. DWQR has reminded Scottish Water of the importance of maintaining robust operational monitoring programmes with regular review to proactively identify issues. These programmes should allow targeted intervention, including preventative flushing, to minimise the risk of failures of the nitrate standard.

Taste and Odour

There were four taste failures in 2025 compared with one failure in 2024. Eight tests failed for odour across seven supply zones in 2025 compared with 15 in 2024, bringing compliance back to similar levels experienced in 2022 and 2023. It should be noted, however, that ten of the odour failures in 2024 were concluded to be due to the laboratory testing methodology rather than being representative of water in supply. In response Scottish Water modified procedures to prevent recurrence.

During February 2025 the laboratory reported a musty/earthy taste and odour from the Glencorse A zone in Edinburgh. Additional sampling showed no wider issues and re-samples from the original failing property were satisfactory.

In February 2025, the laboratory reported an odour failure from a property near Elgin (Badentinan supply zone) that was described as 'like moss'. Whilst Scottish Water were unable to regain access to the property to collect further samples those collected from

neighbouring properties did not identify any issues nor had any consumer complaints been received from the local area.

An odour failure occurred from a sample collected in the Turriff supply zone in Aberdeenshire during May 2025 with a further failure for both taste and odour reported from this zone in July 2025. These issues were attributed to low levels of naturally occurring anisole compounds which can be detected at very low concentrations as an 'earthy' taste or odour by some people. The levels detected were not at a concentration that were a risk to the health of the consumers and resamples collected were satisfactory.

During September 2025 a sample collected from Clarkston, East Renfrewshire was reported as having an earthy/musty odour. Investigations and further sampling determined the cause to be due to the presence of geosmin which, whilst harmless to human health, occurs naturally in some raw waters and may not always be removed by water treatment. At the time of the failure, this supply zone was being supplied by Picketlaw WTW which was subsequently been removed from supply.

A sample from Eday Orkney supply zone failed the standards for both taste and odour in October 2025. The odour was described by the laboratory as being like diesel. Scottish Water's investigation concluded that the issue was attributable to a historical fuel spillage near the private service pipe serving the property. No evidence of contamination was identified within the wider public water supply network. Scottish Water provided bottled water to the affected consumer and advised the property owner to replace the existing service pipe with a 'barrier pipe' to prevent the permeation of hydrocarbons into the drinking water supply.

In October 2025, an odour failure was reported from a sample collected from a property within the Craigie supply zone in Ellon. This failure was also associated with the detection of coliforms within the same sample. Resampling showed no ongoing issues and the cause of the failure was not determined.

A taste & odour failure was reported from the Troon area during December 2025 (Bradan Milngavie Gorbals Supply Zone). This was described by the laboratory as having an earthy taste/odour. Despite a detailed investigation, the cause of this issue was not determined

with all resamples, including neighbouring properties, being shown to be satisfactory. In addition, no consumer complaints were received from the area.

Chlorate

Chlorate can form when sodium hypochlorite, used to disinfect drinking water at many of Scottish Water treatment works, decomposes. This is more likely if sodium hypochlorite is stored for too long or at warm temperatures.

In 2025, there was a notable increase in chlorate non-compliance, with 45 failures recorded compared to 11 in 2024 although 643 additional tests carried out during 2025 within the risk-based monitoring programme (2025: 3,542 tests, 2024: 2,899 tests). The highest number of failures occurred in the Mannofield, Turriff and Invercannie (Craigie) supply zone in Aberdeen and Aberdeenshire, which recorded 21 failures. In response to these repeated failures, DWQR declared an incident in August 2025. Scottish Water identified nine actions to address both the specific issues at Mannofield and Invercannie WTWs, and to strengthen the management of bulk sodium hypochlorite and chlorate formation across Scotland. Incidents for repeated chlorate failures were also declared for Pateshill WTW in West Lothian and Londornoch WTW in Highland. Over these two incidents Scottish Water identified a further eight actions, and DWQR made an additional two recommendations.

Other locations with repeat failures included Bradan Milngavie Gorbals zone supplying Irvine, Robertson (Jedburgh) Camphill (West Kilbride) and Glenlatterach (Elgin).

In response to these failures and DWQR's investigation, Scottish Water has established a Chlorate Working Group to oversee the implementation of mitigation measures across Scotland. Further measures, including air conditioning, reduced storage volumes, tank cleaning, and reflective kiosk coatings, have been implemented where appropriate to minimise the risk of chlorate formation.

DWQR is critical that Scottish Water did not fully address the risk of chlorate formation proactively, and that it took warmer summer conditions and repeated failures to bring further focus and intervention.



Figure 8 New analytical equipment in Scottish Water's laboratory to reduce the time taken to generate chlorate results.

Bisphenol A

Bisphenol A is a chemical additive used in the production of plastic pipes, and the maximum allowable concentration at consumers' taps is 2.5µg/l. In 2025 there were no failures of this standard.

Haloacetic Acids (HAAs)

The Regulations set a standard for a sum of 5 Haloacetic Acids (HAAs) of 60µg/l at customer taps. HAAs are disinfection by-products which are formed when chlorine-based disinfectants react with naturally occurring organic substances in water. The formation of HAAs can be higher where treatment processes do not remove sufficient organic matter. In 2025, three tests failed for HAAs compared to twelve failures in 2024, representing a marked improvement in compliance, however, 1826 fewer tests were carried out within the risk-based sampling programme (2722 tests during 2025; 4548 tests during 2024).

A failure recorded from the Dornoch supply zone was caused by the inadequate removal of

organic material and control of chlorine disinfection at Londornoch WTW which supplies this zone. The treatment process at the WTW is planned to be upgraded during the next investment period and in the interim Scottish Water has committed to continue optimisation of the coagulation treatment process along with targeted flushing and sampling within the network.

A failure from the Castle Moffat zone in East Lothian was caused by sub-optimal coagulation at the WTW during a period when poor raw water quality was experienced. This issue was due to the inadequate control of coagulant dosing and, in response, Scottish Water now employs a 'zetasizer' to more effectively optimise the treatment process, especially when poor raw water quality occurs.

A failure of the HAA standard was also encountered in the Daer zone. Actions to prevent future occurrences included reducing HAA precursor levels at the works for example by increasing primary filter backwash times.

Microcystin LR

Microcystin-LR is a toxin produced by blue-green algae, also known as cyanobacteria. Cyanobacteria can form algal blooms in reservoirs, but not all algal blooms contain the kinds of cyanobacteria that produce microcystin-LR. There are many types of microcystin, with microcystin-LR being one of the more relevant from a health perspective. Currently the Regulations set a PCV at 0.1µg/l at consumer taps. In 2025, Scottish Water conducted 2,566 tests compared with 2861 tests in 2024 and none breached the standard.

Per- and Polyfluoroalkyl substances (PFAS)

Per- and Polyfluoroalkyl substances (PFAS), commonly referred to as 'forever chemicals', are man-made substances that are heat resistant, stain resistant and/or waterproof, and have many and varied uses including fire-fighting foams, food packaging, cosmetics and sunscreen. There is a regulatory standard in Scotland of 0.1µg/l for the sum of 20 individually named PFAS, known as Sum of PFAS, compounds. In 2025, Scottish Water analysed 1,648 tests for the 'Sum of PFAS' and none failed the standard. In addition to the 20 PFAS compounds named in the Regulations, Scottish Water also monitors for a further 29 PFAS compounds.

1.4 Consumer Contacts

1.4.1 Consumer Contacts to Scottish Water

When customers contact Scottish Water regarding concerns about the quality of their water supply, all interactions are recorded and the contact is categorised according to the nature of the issue. In 2025, Scottish Water received 17,558 water quality related contacts, equating to a contact rate of 3.2 per 1,000 population served. This represents an approximate five percent increase compared to 2024 where 16,779 contacts were received (3.1 contacts per 1,000 of population).

Table 3 Shows a breakdown of Scottish Water's customer contacts from 2021 to 2025.

Contact Category	Number of Contacts				
	2025	2024	2023	2022	2021
Appearance					
Discoloured Water	12,170	11,461	11,437	12,251	17,887
Aerated (Milky) Water	1,656	1,524	1,532	1,563	1,662
Particles in Water	520	535	487	469	543
Organisms in Water	32	48	39	32	30
Taste and Odour					
Chlorine	737	722	693	522	731
Metallic	477	419	426	347	602
Solvent/Fuel Taste/Smell	47	60	32	13	14
Musty/Earthy	1,029	1,132	946	725	1,058
TCP/Chemical Taste/Smell	473	413	608	381	505
Other Contacts About Water Quality					
Illness due to Water	414	464	352	315	733
Other Contact	3	1	0	0	5
Total Contacts About Water Quality	17,558	16,779	16,552	16,618	23,770

The discolouration of supplies remains the primary cause of consumer contacts across Scotland with 12,170 contacts recorded in 2025. It is concerning that since 2022 no significant improvement has been observed and that there was an increase of 709 contacts between 2024 and 2025.

DWQR expects increased focus on preventing the discolouration of supplies particularly within the supply systems downstream of Daer WTW (South Lanarkshire) and Carron

Valley WTW (Forth Valley). Figure 9 shows that of the 12 water supply zones with the greatest number of total consumer contacts: seven are downstream of these two WTW alone. Within these seven zones 2758 contacts regarding discolouration were received (23% of total).

In addition, DWQR declared four incidents within these areas during 2025 (11% of total incidents). All of these incidents were because of the build-up and subsequent disturbance of mains deposits that could have been prevented through more effective network maintenance, rehabilitation or replacement. These incidents included Daer Camps B zone (February 2025, 49 contacts), Daer C zone (July 2025, 135 contacts), Carron Valley A zone (July 2025, 49 contacts) and Carron Valley B zone (June 2025, 78 contacts).

Contact volumes across all other categories remain broadly consistent with previous years.

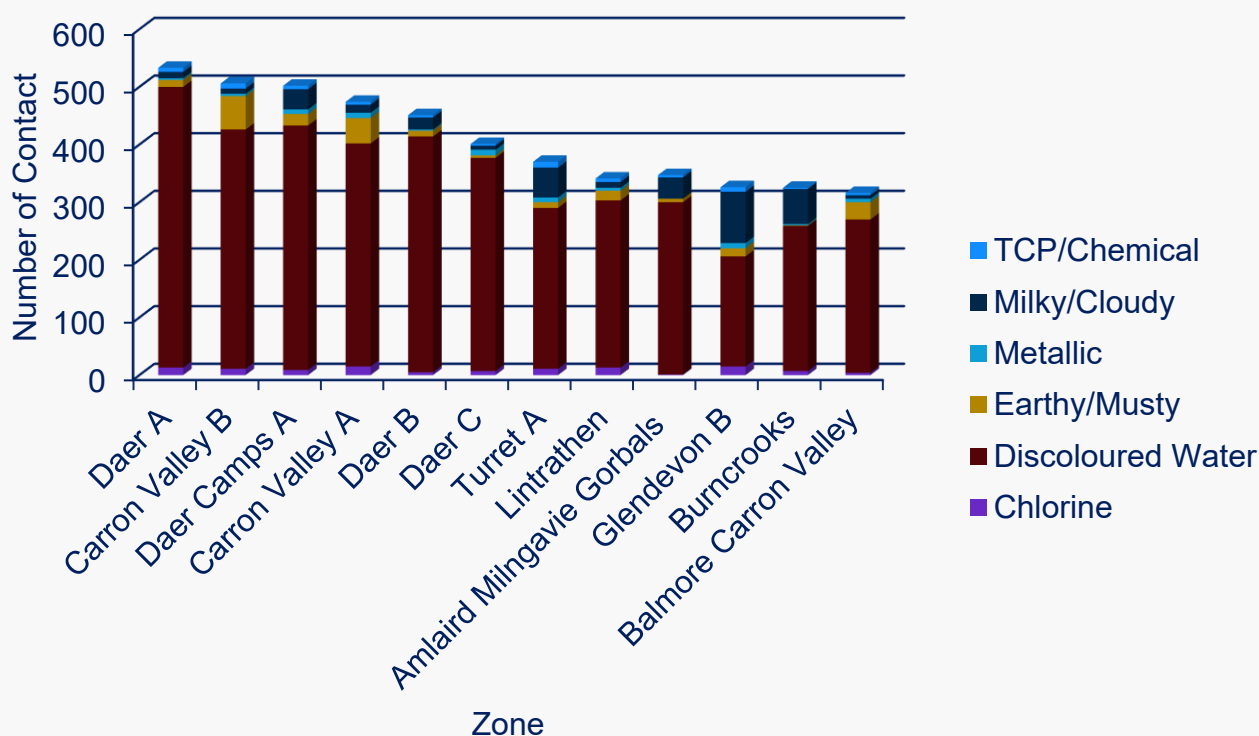


Figure 9 Water supply zones with over 300 Consumer Contacts in 2025.

While the number of discolouration contacts in Carron Valley A & B zones have increased (from 603 in 2024 to 802 in 2025), the number of consumers reporting an earthy/musty taste in these zones significantly reduced (from 357 in 2024 to 102 in 2025). This reduction reflects the ongoing activity being undertaken by Scottish Water at Carron Valley WTW to mitigate the compounds responsible for these taste and odour issues.

There were also 408 contacts that could not be allocated a supply zone. 280 of these were because the address was not supplied, with the remainder being either outside of a supply zone or could not be located on the system (for instance a new housing development).

1.4.2 DWQR Consumer Contacts

In 2025, DWQR received a total of 127 consumer contacts directly. Of these, 30 related to the quality of public water supplies, while 59 concerned private water supplies. This represents a slight increase compared with 2024, when the DWQR received a total of 112 consumer contacts, of which 23 related to public water supplies and 50 concerned private water supplies.

Where appropriate, the DWQR provided consumers with scientific and technical advice. For matters relating to public water supplies, consumers were referred to Scottish Water for further investigation where appropriate. In cases involving private water supplies, consumers were advised to contact their local authority for further assistance and support.

DWQR also received 33 general enquiries and five requests for information. A number of these sought advice on the Landlord's Repairing Standard and were referred to the Scottish Government's Housing Team. Several contacts also requested advice in relation to Regulation 33 approved products. Other enquiries included requests for career advice from students, questions regarding DWQR's organisational structure, and one enquiry concerning the Repairing Standard as it applies to agricultural holdings.

Email remained the primary method of contact, although DWQR also received 21 telephone enquiries. No correspondence was received by post.

In addition, DWQR responded to a total of 23 Environmental Information Regulation (2024) Scotland (EIR) and Freedom of Information Scotland Act 2002 (FOISA) requests. This represents a significant increase from 2024 where 11 such requests were received. Of these requests, only two related specifically to water quality. The majority concerned matters relating to staff resources and associated costs.

Table 4 Consumer contacts directly received by DWQR from 2021 to 2025.

Contact Category	Number of Contacts				
	2025	2024	2023	2022	2021
Appearance					
Discoloured Water	6	2	5	5	15
Aerated (Milky) Water	0	0	0	0	0
Particles in Water	1	2	0	1	0
Organisms in Water	0	2	0	0	0
Taste and Odour					
Chlorine	2	1	0	4	2
Metallic	0	1	0	1	0
Solvent/Fuel	0	0	1	1	0
Musty/Earthy	1	1	1	1	1
TCP/Chemical	2	0	0	1	1
Other contact about Water Quality					
Illness due to Water	5	3	4	2	2
Other Contact	13	11	11	4	7
Total Public Water Supply Water Quality contacts	30	23	22	20	28
Public water supply requests for information	5	20	5	17	5
Private water supply issues	59	50	44	55	50
General Enquiries to DWQR	33	19	47	26	24
Total Consumer Contacts to DWQR	127	112	118	138	107

1.4.3 Tier Two Investigations of Scottish Water Consumer Complaints

Where a consumer has exhausted Scottish Water's complaints procedure and remains dissatisfied with the outcome, they may request a formal investigation by DWQR. In such cases, DWQR undertakes an independent review of the complaint, considering evidence provided by both the consumer and Scottish Water, before determining whether the complaint should be upheld. Where appropriate, DWQR may also make recommendations to Scottish Water regarding any actions to be taken.

In 2025, DWQR conducted a formal investigation into one complaint against Scottish Water. Below is a summary of this complaint, with full determination available on the DWQR website at the following link [Consumer Complaint Determinations](#).

The consumer raised two complaints with Scottish Water about the “sour” taste of their drinking water during 2024. Scottish Water investigated by checking chlorine levels, which were satisfactory, and carried out four further visits for sampling and flushing, but the consumer’s concerns remained unresolved. After completing Scottish Water’s complaints process, the consumer asked DWQR to conduct a formal investigation.

DWQR reviewed all relevant information and three drinking water samples from the property, all of which complied with regulatory requirements. Additional GCMS and phenol analyses also found no water quality issues. Scottish Water’s Public Health Team confirmed that no taste or odour had been detected and that the water was safe to use. DWQR noted that flushing of the local supply system identified no issues and that no similar complaints had been received from neighbouring properties.

DWQR did not uphold the complaint, concluding that Scottish Water had responded appropriately, demonstrated compliance with regulatory standards, and provided accurate advice on taste and odour concerns. However, DWQR made two recommendations, including investigating the consumers’ internal plumbing.

2. EVENTS AND INCIDENTS

Scottish Water is required to notify DWQR of any events that have affected, or may have affected, drinking water quality, or that could cause concern to consumers. This includes all regulatory sample failures; operational sample failures that are significant or unexpected; any failure within a treatment process; large volumes of customer contacts; and issues that may generate significant media attention.

Each event is reviewed and classified into one of five categories: not significant, minor, significant, serious or major. Events categorised into one of the latter three categories are classed as incidents, requiring further detailed investigation by DWQR. Where further information is required, a full report may be requested from Scottish Water. It should be noted that where a full report is not requested, this does not suggest that the incident is less serious, simply that sufficient information has been provided.

Incidents are fully investigated by DWQR Drinking Water Specialists who produce a written assessment and make recommendations where appropriate. As part of the investigation, DWQR staff often visit Scottish Water sites to talk to Scottish Water employees and examine equipment failures. A short summary of each incident assessment is published on the DWQR website. For the most serious incidents, enforcement action or prosecution may be considered.

There were a total of 1086 events reported to DWQR during 2025, 1050 were not classified as significant or above. This represents a significant increase compared to 2024 where 866 events were reported. Out of the 1086 events 36 of these were classed as incidents. This is two more than 2024 and continues a concerning upward trend that has been observed since 2022.

Table 5 shows the number of water quality incidents across the Scottish Water operational areas. A summary of incidents is available on the DWQR website at [Water Quality Incidents](#).

Table 5 Drinking water quality incidents assessed by DWQR in 2025.

Area	Significant	Serious	Major	Total Number of Incidents
EAST	12	4	0	16
NORTH	2	0	0	2
SOUTH	9	1	1	11
WEST	4	2	0	6
SCOTLAND WIDE	1	0	0	1
TOTAL SCOTLAND	28	7	1	36

The most common reason for incident declaration by DWQR was significant consumer concern and/or media interest. In 2025, nine incidents were attributed to a significant number of discolouration complaints linked to burst water mains which resulted in the disturbance of mains deposits and receipt of consumer contacts. An additional two incidents were associated with taste and odour issues caused by geosmin in the raw water which could not be adequately removed by the existing treatment processes at the treatment works.

Four incidents were attributed to a significant loss of treatment, with a further seven resulting from a loss of disinfection. This represents a continuation of the poor performance relating to disinfection that was identified in 2024 which compelled DWQR to issue Information Letter 2025/03 requiring Scottish Water to strengthen its approach to disinfection management. (link: [Information Letter 2025/03](#)).

In response, Scottish Water has developed and issued a revised Disinfection Policy and is progressing the review and update of site-specific disinfection strategies for all WTW. DWQR welcomes these developments and expects Scottish Water to ensure that the revised arrangements are fully implemented and embedded across the organisation to reduce the risk of future disinfection-related incidents.

Of particular concern is that 16 incidents were assessed as being caused or exacerbated by Scottish Water's own actions (or inaction). These were the following incidents: Turret B RSZ, Lintrathen WTW, Marchbank WTW (x2) , Pateshill WTW, Tomnavoulin WTW, Clatto WTW (x2), Rawburn WTW, Balmore G RSZ, Glenfarg Kinnesswood Borehole A RSZ, Carron Valley A RSZ, Muirdykes RSZ, Turriff WTW, Sandy Loch WTW, Loch Calder WTW.

This classification is applied only after careful review by DWQR and reflects clear operational shortcomings. Recurring issues include inadequate preventative maintenance, incorrect chemical dosing, and repeated failure to escalate or respond to alarms in line with established procedures. Furthermore, DWQR audit activity during 2025 identified eight improvement actions relation to planned activities, to ensure an appropriate risk assessment is conducted prior to such work to mitigate possible impacts to drinking water quality.

A summary of each Incident Assessment can be viewed on the DWQR website [2025 Incidents](#). A number of these are worth highlighting as they illustrate significant issues that are of concern DWQR. These are set out below.

Clatto WTW (Dundee)

Loss of Disinfection x3 – August & November 2025 – Serious, Serious and Significant Incidents.

During 2025, chlorine dosing was interrupted for extended periods on three separate occasions, highlighting serious deficiencies in the control and operation of the site's disinfection process. Appropriate liaison was maintained with the Health Board during these incidents to review the associated public health risk assessment. On each occasion, it was concluded that restriction of the use of the water supply was not necessary, and monitoring undertaken following the incidents did not identify any microbiological deterioration in water quality.

DWQR was very critical regarding the circumstances of these incidents where Scottish Water did not demonstrate sufficient diligence in ensuring adequate arrangements for the disinfection of supplies. These incidents demonstrated a lack of management oversight, and intervention regarding performance of the treatment works over several years with implications regarding the appropriate management of disinfection across Scotland.

Following discussion with Scottish Water, DWQR was satisfied that Scottish Water was taking appropriate action to address issues. This included a comprehensive, independent review of the treatment process at Clatto WTW as well as several other measures to strengthen disinfection performance. These involve delivery of requirements set out in revised DWQR guidance (Information Letter 2025/03, Management of Disinfection) and the completion of measures specified within the Enforcement Notice issued on 1 December 2025 (Risk Management).

In response to this incident DWQR made a further three recommendations also requiring Scottish Water to brief relevant stakeholders, including Health Boards, on progress with implementation of the requirements within Information Letter 2025/03.

Rawburn WTW (Eyemouth and Duns)

Failure of Supply – August 2025 – Major Incident

During August 2025, a catastrophic failure of pipework at Rawburn Water Treatment Works (WTW) resulted in the works being taken out of service for approximately 24 hours.

Following repairs and return of the works, restricted output and low storage levels led to low pressure and intermittent supply interruptions in the downstream area. Tankering operations and bottled water distribution were implemented to support affected customers. Over 1000 customer contacts were received regarding no water or low pressure with 109 contacts regarding the discolouration of supplies.

The root cause of this incident was identified as a failure to inspect and maintain the orthophosphate dosing system in accordance with company procedures. As a result, a leak of orthophosphoric acid resulted in the corrosion and ultimate failure of the pipe transferring water from filtration to the chlorine contact tank.

A total of 145 water quality samples were collected with no microbiological failures detected, although exceedances for iron, manganese, turbidity and polycyclic aromatic hydrocarbons (PAHs) occurred because of the disturbance of deposits within the distribution network. Appropriate liaison was conducted with the local health board with the associated public health risk assessed as low. Follow-up sampling confirmed no ongoing issues.

DWQR was critical of the delay in removing the WTW from supply once the issue had been identified which contributed to the need to issue precautionary restriction of use advice to approximately 275 properties immediately downstream of Rawburn WTW. Scottish Water identified seven corrective actions following the incident, while DWQR made three additional recommendations.

Muirdykes RSZ (Paisley)

Discolouration – June 2025 – Serious Incident

Between 18 and 30 June 2025, Scottish Water received 30 consumer contacts reporting discoloured water across the southern area of the Foxbar West DMA and the analysis of samples identified failures for manganese and iron. Further sampling confirmed continued manganese failures before water quality returned to compliance during early July.

The incident was caused by disturbance of the distribution network arising from planned maintenance on a trunk main. Although the activity carried a known high risk of discolouration, turbidity spikes recorded during the works were not escalated, and no clear escalation criteria were in place. The issue was only identified following consumer complaints. Immediate remedial actions included suspension of the activity and network flushing. However, the activity resumed without formal approval and prior to confirmation that water quality had recovered, indicating inadequate risk assessment and control. Further turbidity exceedances were again not escalated, resulting in repeat manganese failures and the need for further suspension of the activity.

Scottish Water identified three actions, and DWQR made three further recommendations.

Mannofield and Invercannie WTWs (Aberdeen, Banchory and Stonehaven)

Chlorate Failures – July-August 2025 – Serious Incident

Between 7th July and 6th August 2025 there were a series of failures for the chlorate standard at Mannofield WTW (four failures) and across the network supplied by Mannofield and Invercannie WTWs (11 failures). All failures were below health-based guidance values.

Chlorate is a disinfection byproduct which can form from the degradation of sodium hypochlorite during incorrect storage: prolonged storage, high temperature and high concentration of the sodium hypochlorite all exacerbate its formation. Scottish Water has stipulated that sodium hypochlorite should not be stored for longer than 3 months, or above 20°C. During July 2025, the storage units at Mannofield and Invercannie recorded temperatures of 26°C and 32°C respectively. Both sites receive regular bulk deliveries of sodium hypochlorite. The bulk tanks are not drained between deliveries, meaning they are topped up, leaving 'older' sodium hypochlorite left in the tank from previous deliveries, resulting in a mix of old and new chemical in the tanks. The combination of high concentration (14.5%), turnover of the product and the high temperatures caused the chlorate failures.

Scottish Water identified nine actions to prevent recurrence, including reducing hypochlorite concentration at Mannofield and Invercannie WTWs to 10%, and setting up a Chlorate Management Group to reduce the risks of chlorate failures across all WTW.

Marchbank WTW (Edinburgh)

Loss of coagulation – December 2025 – Serious Incident

On 12th and 13th December, Marchbank WTW experienced intermittent elevated turbidity, and a final water *Cryptosporidium* oocyst was detected. The incident was caused by the polyelectrolyte hopper running empty, resulting in sub-optimal coagulation. Contributory factors included inadequate monitoring, poor filter condition, limited operator availability, ineffective escalation, and lack of management oversight.

DWQR has significant concerns about the circumstances leading to this incident. Despite ongoing treatment process issues, Scottish Water did not deliver an adequate or timely

resolution to the turbidity issues experienced which resulted in the detection of a *Cryptosporidium* oocyst. This appeared to have arisen from insufficient contingency arrangements and a lack of effective escalation and management oversight. There are direct parallels with an incident that occurred at this WTW in December 2024, where constraints on operator working hours and lack of escalation also resulted in *Cryptosporidium* detections.

Scottish Water has put in place an action plan to drive improvement across the site, and DWQR carried out a two-day technical site audit, identifying 33 actions. DWQR is considering enforcement action to ensure that appropriate arrangements are in place to prevent and/or respond to future issues in a timely manner.

3. AUDIT AND INSPECTION

A core element of DWQR's regulatory role is the inspection and audit of activities undertaken by Scottish Water. DWQR may inspect any aspect of Scottish Water's operations that has the potential to impact drinking water quality.

Inspections are routinely undertaken across a range of activities, including WTW, treated water storage assets, distribution system operations, responses to consumer water quality concerns, and analytical services. Audits assess compliance with the requirements of the Regulations, as well as adherence to recognised industry best practice. DWQR also verifies the delivery of investment projects through its inspection programme.

The inspection process delivers several key regulatory outcomes: it enables DWQR to confirm compliance with statutory requirements at operational sites across Scotland and provides visibility of emerging initiatives and examples of good practice. Inspections also allow direct engagement between DWQR inspectors and site-based Scottish Water staff, allowing water quality issues to be explored and discussed in detail. In addition, inspections support the promotion of regulatory awareness among operational staff and provide assurance on the delivery of investment activity. Findings from inspections enable DWQR to identify common trends, risks and systemic deficiencies, which are used to inform regulatory policy and guidance.

Sites are selected for inspection using a risk-based methodology, which takes account of compliance performance, including sample failures, as well as water quality events and

incidents. Inspections may also be undertaken on a reactive basis, including in response to specific incidents, emerging risks, or identified concerns. In addition, a proportion of inspections are carried out on a random basis to provide broader assurance.

To ensure consistency of approach, all inspections are carried out using standardised templates. DWQR also participates in benchmarking exercises with other UK and international regulators to promote consistency and support the adoption of best practice.

Where deficiencies are identified, these are recorded as recommendations and formally tracked to completion. Where recurring themes or systemic issues are identified, these are escalated and progressed centrally with senior Scottish Water management. Examples of good practice are also highlighted where observed. Scottish Water is given the opportunity to comment on draft reports and engages constructively throughout the inspection process. Finalised inspection reports are issued to Scottish Water.

A summary of inspections undertaken by DWQR is published on the DWQR website. [Audit and Inspection](#).

3.1 WTW

During 2025, 12 technical audits were carried out at WTW, including an audit of historic completed actions. DWQR findings highlighted the need for additional maintenance and upgrade of ageing assets, particularly to filters to maintain quality, and also a need to ensure appropriate risk-based monitoring of water quality parameters across treatment processes. These audits also demonstrated inadequacies in current risk assessment arrangements that ensure significant risks are identified, communicated and appropriately mitigated. DWQR issued an Enforcement Notice in December 2025 requiring Scottish Water to comply with Regulation 30 and 31 on risk reporting. More details are given in Section 4.

DWQR, however, continues to be impressed by the knowledge, passion and work ethic of Scottish Water staff operating treatment works.

In addition to WTW asset inspections, an audit was carried out on operational risk assessment and method statement processes. This was to conduct a review of planned activities at WTW to ensure the appropriate measures are in place when work is planned to minimise the effect on water quality. The audit was scheduled due to DWQR's concern

about the number of incidents where this was noted as a contributory factor and is explained in more detail in Section 2 (Events and Incidents).

DWQR identified eight findings to improve these risk assessment processes which are considered essential to reduce the number of issues encountered because of planned activity.



Figure 10 DWQR observing a filter back wash at a WTW in Northeast Scotland.



Figure 11 DWQR auditing a WTW in Northeast Scotland.



Figure 12 Two members of DWQR auditing Scottish Water's Process Science staff.

Table 6 WTW site visits for audits in 2025

Location	Area	Date	Reason for audit	Number of findings
Greenock WTW	West	April	Risk Based	15
Barra WTW	North	May	Risk Based	8
Boardhouse WTW	East	June	Risk Based	8
Stronsay WTW	East	June	Completed Actions	3
Turriff WTW	East	June	Enforcement	9
Daer WTW	South	June	Manganese Management	9
Camphill WTW	West	July	Risk Based	11
Killylour WTW	South	July	Risk Based	3
Loch Calder WTW	North	September	Risk Based	14
Assynt WTW	North	September	Risk Based	18
Broadford WTW	North	November	Risk Based	14
Turret WTW	West	December	Risk Based	6

In addition to full technical audits, DWQR made ten other visits to assist investigations into events and incidents, to interview staff, understand business processes and increase our understanding of situations that have arisen. Four visits were also made to inspect the progress of investment activities. These are recorded in Table 7.

Table 7 DWQR site visits for incident assessment, investment and performance monitoring during 2025.

Location	Area	Date	Reason for visit
Glendevon WTW	East	January	Incident Investigation
Herrick WTW	East	January	Investment
Craighead WTW	East	January	Investment
Mannofield WTW	East	January	Enforcement
Invercannie WTW	East	January	Investment
Afton WTW	West	April	Incident Investigation
Rawburn WTW	South	August	Incident Investigation
Clatto WTW	East	August	Incident Investigation
East Rogerton SR	South	August	Event Investigation
Invermoriston WTW	North	September	Event Investigation
Bertha Park SR	East	September	Investment
East Craigs SR	South	October	Event Investigation
Pateshill WTW	South	December	Event Investigation
Intelligent Control Centre (ICC)	N/A	December	Incident Investigation

3.2 Distribution Systems

We carried out five audits on Scottish Water's activities and assets in distribution systems (including TWSP) in 2025, with a number of these audits inspecting multiple assets at a time. Key findings highlighted the need for improved flood testing of TWSPs during inspection to ensure all ingress points are identified and; the need for additional monitoring of water quality during planned activities.

Table 8 Distribution system audits in 2025.

Location	Area	Date	Number of findings
Crianlarich Tankering	West	January	9
Conon Bridge & Cromarty SRs	North	April	10
Borve SR	North	May	1
Clarklyhill SR	East	June	2
West Network	West	October	4



Figure 13 Tankering activity in the West of Scotland.

3.3 Services

In addition to auditing Scottish Water's operational assets, we also carry out audits of other business areas that have a direct impact on water quality.

3.3.1 Customer Excellence Centre

This audit was the first review of Scottish Water's management of drinking water quality consumer contacts since 2021. DWQR's assessment found that Scottish Water generally provides a good standard of customer service, with clear consumer website information, professional handling of contacts, and prompt field responses. However, 12 findings were identified, highlighting opportunities for improvement in procedures to ensure a consistent response to contacts across all operational areas including public health risk assessment, escalation processes and with regard to the quality of written communication with consumers. In particular, DWQR was disappointed with the information provided to consumers relating to the potential impact that domestic plumbing systems may have upon the quality of drinking water.

3.3.2 Risk Management Audit

Regulation 30 of the Regulations require Scottish Water to complete a comprehensive risk assessment of all supply systems. This is required to identify and report to DWQR significant risks to public health with detail of planned mitigation (Regulation 31).

During May 2025 DWQR audited Scottish Water to assess compliance with Regulations 30 and 31. Whilst it was recognised that Scottish Water had made some improvement over recent years, a wide range of contraventions were identified and DWQR issued an Enforcement Notice requiring the necessary improvements. Delivery of all requirements of this notice is due by April 2028. Further details are given in Section 4.

3.3.3 Benchmarking Audits

DWQR continues to work closely with water quality regulators across the UK and Europe to share knowledge, experience and good practice. These partnerships provide valuable opportunities to learn from each other, helping to ensure that DWQR inspections are carried out to a high and consistent standard, and that Scottish Water's operational and procedural practices compare well with those of other water suppliers.

During 2025, Drinking Water Specialists from DWQR worked jointly with Inspectors from Northern Ireland to carry out audits in both Scotland and Northern Ireland. These visits supported the sharing of skills and experience and helped build strong working relationships between regulators.

DWQR plans to continue this collaborative approach and has invited colleagues from England, Wales, Northern Ireland and the Republic of Ireland to take part in joint inspection activities in Scotland during 2026.

4. ENFORCEMENT

DWQR have a power of enforcement as set out in Section 10 of the Water Industry (Scotland) Act 2002, and detailed in the [DWQR Enforcement and Prosecution Policy](#).

When DWQR has evidence that Scottish Water has contravened a drinking water quality duty and the contravention is likely to recur, DWQR may serve an enforcement notice on Scottish Water. Such an enforcement notice must set out specific actions to be taken by Scottish Water within specified timescales.

In 2025, two new enforcement notices were issued, and two existing notices were amended.

A copy of all Enforcement Notices are available on the DWQR website link: [Enforcement](#).

The amended notices, issued in August 2025, relate to Turriff WTW and Mannofield WTW with both notices requiring the risk of *Cryptosporidium* to be addressed, including the construction of a new treatment works at Turriff WTW by May 2030 and the installation of additional treatment at Mannofield WTW by March 2033.

An enforcement notice issued in September 2025 requires Scottish Water to complete a programme of internal inspections of all TWSPs, with permanent repairs completed where necessary by March 2033. This builds on a notice issued in 2023 for Scottish Water to develop an inspection programme to inspect and clean all SR assets in accordance with Water UK Technical Guidance. [Principles of water supply hygiene | Water UK](#).



Figure 14 An example of temporary mitigation at an SR in the North of Scotland.



Figure 15 Inspection hatch with secondary chlorine dosing at an SR



Figure 16 SR after repair

A further enforcement notice, issued in December 2025, relates to risk reporting. It followed an audit conducted during May 2025 to determine compliance with Regulations 30 and 31, which identified significant weaknesses in the identification, verification and reporting of risk compliance with the Regulations. The notice requires these issues to be fully addressed by April 2028. DWQR was very disappointed with the findings of the audit and that such a regulatory intervention was necessary for such a critical business process which has been a longstanding regulatory requirement.

5. OTHER REGULATORY ACTIVITIES

DWQR maintains regular engagement with key stakeholders in the water industry, including the Water Industry Commission for Scotland (WICS), the Scottish Environment Protection Agency (SEPA), and Consumer Scotland. These interactions occur both jointly and individually, with a particular focus on matters relating to investment as Scottish Water progressed with their business plans for the next financial period, which starts in April 2027.

In addition, DWQR holds frequent discussions on water quality issues with public health stakeholders such as Public Health Scotland, NHS Health Boards, and local authority environmental health departments. These stakeholders are routinely invited to provide input on incident assessments to ensure a comprehensive and informed evaluation process. DWQR has also supported Public Health Scotland with a review of guidance on the public health management of elevated lead levels in drinking water.

DWQR maintains a strong working relationship with counterpart regulators across the UK, including the Drinking Water Inspectorate in England and Wales as well as Northern Ireland. This collaboration includes biannual meetings and participation in benchmarking audits which, in 2025, included a focus on water treatment, mains rehabilitation and consumer contacts. Regular liaison also takes place on a wide range of topics such as private water supplies, the Network and Information Systems (NIS) regulations, product approvals, lead removal, laboratory services and research initiatives.

The DWQR team are active in promoting our public health agenda. Members of the DWQR team have presented at water industry events on lead in drinking water, Institute of Water events, Water Regs UK conference and other UK water quality conferences. They have also continued to drive innovation and research on lead, water reuse, cyanobacteria and PFAS across the industry and within government.

Team members also delivered presentations on DWQR's role in the water sector and water treatment to students at University of Edinburgh, University of West of Scotland, and Clyde College, and to members of the Royal Environmental Health Institute of Scotland. Several members of the DWQR team also attended the Annual Conference held by the Institute of Water in Plymouth.

DWQR have also supported a Hydro Nation PhD student at the University of Strathclyde with their research on the capture and destruction of PFAS; Chartered Scientist assessments for the Institute of Water, as well as supporting a review of the National Occupational Standards and Scottish Qualifications for Water Supply Distribution, helping to ensure that water quality is at the heart of the training of the next generation of skilled workers within the water industry.

Ensuring that future generations understand the importance of water quality and the efforts required to maintain it is essential. During 2025, members of the DWQR team participated in STEM (Science, Technology, Engineering and Mathematics) initiatives at Wallyford Learning Campus in East Lothian. During these initiatives, students were challenged to design and construct a water filter. Students then tested their filters using 'fake' contaminated water and evaluated the effectiveness of their designs. In addition to the hands-on activity, students explored the characteristics of an effective water filter and considered additional factors necessary to ensure water safety.

6. NETWORK AND INFORMATION SYSTEMS DIRECTIVE

The Network and Information Systems (NIS) Directive was introduced to improve the levels of cyber security and resilience of essential services across the EU. It provided the basis of the Network and Information Systems Regulations that were introduced in 2018. These regulations provide legal measures to protect essential services by improving the security of the network and information systems that support the delivery of these services. In line with the NIS Regulations, Scottish Water is identified as an 'Operator of Essential Services' as it supplies water to more than 200,000 people. The DWQR is identified as the relevant Competent Authority in Scotland. The National Cyber Security Centre (NCSC) are the technical authority supporting both Operators of Essential Services and their competent authorities with cyber security advice and guidance. Further information is available using the following link: [The National Cyber Security Centre | National Cyber Security Centre.](#)

In September 2024, DWQR received the Cyber Assessment Framework (CAF) return, which Scottish Water must submit on a three-yearly cycle. The CAF provides a systematic and comprehensive approach to assessing the extent to which cyber risks to essential functions are being managed by Scottish Water. An audit of this CAF was undertaken in

November 2025 by DWQR in conjunction with an assured Cyber Resilience Audit provider with another planned to take place in early 2027. Recommendations from these audits feed into discussions on Scottish Water's next CAF which is due in 2027.

7. ANNEXES

Annex A

7.1 Information Letters issued during 2025

Three Information Letters were issued by DWQR in 2025.

Information Letter 2025/01 regarded the reporting of events by Scottish Water to DWQR, with particular emphasis in the quality of the outcome and timescales for reporting.

Information Letter 2025/02 set out the requirement for reporting data returns to DWQR

Information Letter 2025/03 details the requirement for management of disinfection to comply with Regulation 29.

All current Information Letters can be found on the DWQR website [2025 Information Letters](#).

Annex B

7.2 Letters of Commitment and Enforcement Notices

A letter of commitment relating to Scottish Water's raw water supplies was received in October 2025. A copy is available on our website using the following link: [Letters of Commitment](#).

In 2025, two new enforcement notices were issued, and two existing notices were amended. The amended notices, issued in August 2025, relate to Turriff and Mannofield Water Treatment Works (WTW) and require mitigation of *Cryptosporidium* risk. These include construction of a new treatment works at Turriff WTW by May 2030 and installation of additional treatment at Mannofield WTW by March 2033.

An enforcement notice issued in September 2025 requires Scottish Water to complete a programme of internal inspections of all treated water storage points (TWSPs), with permanent repairs undertaken where necessary by March 2033. This builds on a notice issued in 2023.

A further enforcement notice, issued in December 2025, relates to risk reporting. It followed a May 2025 audit of compliance with Regulations 30 and 31, which identified significant weaknesses in the identification and reporting of risks to public health, including associated action plans. The notice requires these issues to be fully addressed by April 2028. Further information on enforcement notices is available on the DWQR website via the following link: [Enforcement](#).

Annex C

7.3 Abbreviations and Glossary

BH - Borehole

Bq/l - Becquerels per litre, a measure of radioactivity

CAF - Cyber Assessment Framework

CWT - Clear Water Tank

DCMS - Department for Digital, Culture, Media and Sport

DMA – District Metered Area

DOMS - Distribution Operation and Maintenance Strategy

DWSP -Drinking Water Safety Plan

DWQR - Drinking Water Quality Regulator for Scotland

EAL - Emergency Action Levels

IAF - Impact Assessment Form

ISO - International Standards Organisation

mg/l - Milligrams per litre

NCSC - National Cyber Security Centre

ng/l – Nanograms per litre

NHS - National Health Service

NIS - Network and Information Systems

NRV - Non-Return Valve

NSO - Network Service Operator

NTU - Nephelometric Turbidity Unit

PAC - Powdered Activated Carbon

PAH – Poly Aromatic Hydrocarbon

PCV - Prescribed Concentration or Value

PFU – Plaque Forming Units

PHT - Scottish Water's Public Health Team

PLC - Programmable Logic Controller

RSZ - Regulated Supply Zone

SCADA - Supervisory Control and Data Acquisition

SEPA - Scottish Environment Protection Agency

SR - Service Reservoir

THM- Trihalomethanes

TL- Team Leader

TOMS- Treatment Operation and Maintenance Strategy

TWS- Treated Water Storage

µg/l - Microgrammes per litre

UV - Ultraviolet Light

WOA – Water Operational Area

WTW - Water Treatment Works

8. SUPPORTING INFORMATION

8.1 Water Performance Tables

Table 9 Summary of Scottish Water assets.

Asset Type	Count
Water Abstraction Point	281
Length of Water Mains (km)	49001.6
Reservoirs	943

Table 10 Summary of water quality at WTW.

Parameter	Prescribed Concentration or Value (PCV)	No. of tests	No. of tests failing	% of tests failing	No. of works failing
Coliform Bacteria	0 number/100ml	25,585	20	0.08%	18
Colony Counts After 3 Days At 22°C	No abnormal change	25,588	N/A	N/A	N/A
<i>Cryptosporidium</i> oocysts (per 10L)	N/A - no regulatory standard	5,783	9	0.16%	9
<i>E. coli</i>	0 number/100 ml	25,585	0	0.00%	0
Nitrite	0.1mg NO ₂ /l	3,369	1	0.03%	1
Residual Disinfectant - Free	N/A - no regulatory standard	25,633	N/A	N/A	N/A
Residual Disinfectant - Total	N/A - no regulatory standard	25,633	N/A	N/A	N/A
Turbidity	1 NTU	7,595	1	0.01%	1

Table 11 Summary of water quality at storage points.

Parameter	Prescribed Concentration or Value (PCV)	No. of tests	No. of tests failing	% of tests failing	N of SRs with sample failures
Coliform Bacteria	0 number/100ml	48,427	62	0.13%	55
Colony Counts After 3 Days At 22°C	No abnormal change	48,415	N/A	N/A	N/A
<i>E. coli</i>	0 number/100ml	48,427	3	0.01%	3
Residual Disinfectant - Free	N/A - no regulatory standard	48,508	N/A	N/A	N/A
Residual Disinfectant - Total	N/A - no regulatory standard	48,505	N/A	N/A	N/A

Table 12 Water quality at consumers' taps.

Parameter	Pre scribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Key Parameters						
Bacteria						
Coliform Bacteria	0 number/100ml	14,961	39	34	99.74%	99.75%
<i>E. coli</i>	0 number/100ml	14,961	1	1	99.99%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
<i>Enterococci</i>	0 number/100ml	4,818	1	1	99.98%	100.00%
<i>Clostridium perfringens</i>	0 number/100ml	4,819	1	1	99.98%	100.00%
Total bacteria		39,559	42	37	99.89%	99.90%
Metals						
Aluminium	200µg Al/l	4,702	2	2	99.96%	99.96%
Copper	2mg Cu/l	597	0	0	100.00%	100.00%
Iron	200µg Fe/l	4,703	24	18	99.49%	99.48%
Lead	10µg Pb/l	4,148	16	15	99.61%	99.52%
Manganese	50µg Mn/l	4,702	11	9	99.77%	99.81%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Nickel	20µg Ni/l	597	1	1	99.83%	99.87%
Total metals		19,449	54	45	99.72%	99.75%
Other parameters						
Colour	20mg/l Pt/Co	4,816	1	1	99.98%	100.00%
Hydrogen ion (pH)	6.5-9.5 pH	4,816	2	2	99.96%	99.96%
Nitrite	0.5mg NO ₂ /l	1,944	5	4	99.74%	99.85%
Odour	Acceptable / No abnormal change	4,816	8	7	99.83%	99.69%
Radon	100Bq/l	88	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Taste	Acceptable / No abnormal change	4,815	4	4	99.92%	99.98%
Total trihalomethanes	100µg/l	2,736	2	1	99.93%	100.00%
Turbidity	4NTU	4,816	1	1	99.98%	100.00%
Total other key parameters		28,847	23	20	99.92%	99.93%
Other key parameters						
1,2 Dichloroethane	3µg/l	2,738	0	0	100.00%	100.00%
All Other Individual Pesticides	0.1µg/l	525	1	1	99.81%	100.00%
Ammonium	0.5mg NH ₄ /l	1,944	0	0	100.00%	100.00%
Antimony	10µg Sb/l	597	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Arsenic	10µg As/l	597	0	0	100.00%	100.00%
Benzene	1µg/l	2,735	0	0	100.00%	100.00%
Benzo 3,4 Pyrene	0.01µg/l	614	0	0	100.00%	100.00%
Bisphenol A	2.5µg/l	624	0	0	100.00%	100.00%
Boron	1.5mg B/l	598	0	0	100.00%	100.00%
Bromate	10µg BrO ₃ /l	2,048	0	0	100.00%	100.00%
Cadmium	5µg Cd/l	597	0	0	100.00%	100.00%
Chlorate	0.25mg/l	3,542	45	18	98.73%	99.62%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Chlorite	0.25mg/l	2,048	0	0	100.00%	100.00%
Chromium	50µg Cr/l	597	0	0	100.00%	100.00%
Conductivity	2500µS/cm at 20°C	4,816	0	0	100.00%	100.00%
Cyanide	50µg CN/l	2,729	0	0	100.00%	100.00%
Fluoride	1.5mg F/l	596	0	0	100.00%	100.00%
Haloacetic Acids 5 (HAA5)	60µg/l	2,722	3	3	99.89%	99.74%
Mercury	1µg Hg/l	597	0	0	100.00%	100.00%
Microcystin -LR	0.1µg/l	2,566	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Nitrate	50mg NO3/l	576	0	0	100.00%	100.00%
Nitrite/Nitrate formula	<1mg/l	576	0	0	100.00%	100.00%
PAH - Sum of 4 Substances	0.1µg/l	614	0	0	100.00%	100.00%
Pesticides - Total Substances	0.5µg/l	188	0	0	100.00%	100.00%
Selenium	20µg Se/l	597	0	0	100.00%	100.00%
Sodium	200mg Na/l	574	0	0	100.00%	100.00%
Sulphate	250mg SO4/l	623	0	0	100.00%	100.00%
Sum of PFAS	0.1µg/l	1,648	0	0	100.00%	100.00%

Parameter	Prescribed Concentration or Value (PCV)	Total No. of Tests	No. Failed Tests	No. Zones with Failures	% Compliance in 2025	% Compliance in 2024
Tetrachloroethene/ Trichloroethene	10µg/l	2,738	0	0	100.00%	100.00%
Tetrachloromethane	3µg/l	2,738	0	0	100.00%	100.00%
Uranium	30µg/l	573	0	0	100.00%	100.00%
Sum Total of all other parameters		50,092	49	22	99.90%	99.97%
Scotland total		137,947	168	124	99.88%	99.92%

Table 13 Water quality consumer contacts received by Scottish Water.

Contact Category	Number of Contacts				
	2025	2024	2023	2022	2021
Appearance					
Discoloured Water	12,170	11,461	11,437	12,251	17,887
Aerated (Milky) Water	1,656	1,524	1,532	1,563	1,662
Particles in Water	520	535	487	469	543
Organisms in Water	32	48	39	32	30
Taste and Odour					
Chlorine	737	722	693	522	731
Metallic	477	419	426	347	602
Solvent/Fuel Taste/Smell	47	60	32	13	14
Musty/Earthy	1,029	1,132	946	725	1,058
TCP/Chemical Taste/Smell	473	413	608	381	505
Other contact about Water Quality					
Illness due to Water	414	464	352	315	733
Other Contact	3	1	0	0	5
Total Contacts about Water Quality	17,558	16,779	16,552	16,618	23,770

8.2 Summary of events and incidents 2025

Table 14 Classification of incidents.

Area	Significant	Serious	Major	Total Number of Incidents
EAST	12	4	0	16
NORTH	2	0	0	2
SOUTH	9	1	1	11
WEST	4	2	0	6
SCOTLAND WIDE	1	0	0	1
TOTAL SCOTLAND	28	7	1	36

Table 15 Summary of 2025 incidents.

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
January	15345	Loch Calder WTW	North	Significant	26,876	Microbiology	Ammonia Dosing Pump Fail	Issue causing significant consumer concern/media interest
February	15438	Amlaird Milngavie Gorbals Zone RSZ	West	Significant	9,986	Iron	Burst Main	Issue causing significant consumer concern/media interest
February	15450	Lomond Hills BH Mix RSZ	East	Significant	5,226	Discolouration	Pipe Deposits	Issue causing significant consumer concern/media interest
February	15464	Daer Camps B	South	Significant	23,230	Discolouration	Pipe Deposits	Issue causing significant consumer concern/media interest
April	15605	Sandy Loch WTW	East	Significant	14,308	Microbiology	Chemical Tank Low or Empty	Failure of disinfection process

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
April	15654	Significant Outage of Telemetry	Scotland Wide	Significant	5,408,211	Security	N/A	Other
April	16189	Carron Valley	West	Serious	143,657	Taste and Odour	Out with Design Capacity	Serious /recurring quality issue
May	15698	Turriff RSZ	East	Significant	50	Microbiology	Unrepresentative Sample	Alternative supplies issued to more than one property
June	15798	Marchbank WTW	South	Significant	142,457	Microbiology	Disinfectant Dosing Pump Fail	Failure of disinfection process
June	15845	Muirdykes RSZ	West	Serious	75	Manganese	Turbidity	Failure of management process

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
June	15863	Carron Valley B	West	Significant		Colour	Burst Main	Issue causing significant consumer concern/media
July	15892	Carron Valley A	West	Significant	18,275	Discolouration	Flow Disturbance - Scottish Water Intervention	Issue causing significant consumer concern/media
July	15937	Chalkieside DSR	South	Significant	23,270	Discolouration	Low Water Level	Issue causing significant consumer concern/media
July	15945	Mannofield WTW	East	Serious	330,782	Chlorate	Chemical Storage	Serious/ recurring quality issue
July	15950	Rosebery WTW	South	Significant	67,277	<i>Cryptosporidium</i>	Coagulant aid (Poly) Failure	Significant loss of the treatment
July	15960	Daer C	South	Significant	8,462	Iron	Burst Main	Serious/ recurring quality issue

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
July	15968	Clarklyhill CWT	East	Significant	4,042	Microbiology	Asset Integrity	Serious/ recurring quality issue
July	15986	Sandy Loch WTW	East	Significant	14,308	Manganese	Out with Design Capacity	Serious/ recurring quality issue
July	15995	Dornoch WTW	North	Significant	916	Chlorate	Chemical Storage	Serious/ recurring quality issue
August	16036	Clatto WTW	East	Serious	188,041	Microbiology	Disinfectant Dosing Pump Fail	Failure of disinfection process
August	16120	Glenfarg WTW	East	Serious	178,011	Taste and Odour	Out with Design Capacity	Issue causing significant consumer concern/media interest

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
August	16126	Glenfarg KWOODBH A	East	Significant	25,447	Discolouration	Flow Disturbance - Scottish Water Intervention	Issue causing significant consumer concern/media interest
August	16155	Amlaird Milngavie Gorbals Zone RSZ	West	Significant	6,620	Colour	Burst Main	Issue causing significant consumer concern/media interest
August	16168	Pateshill RSZ	South	Significant	47,711	Chlorate	Chemical Storage	Serious/ recurring quality issue
August	16174	Rawburn WTW	South	Major	17,957	Loss of Supply	N/A	Failure of Asset
August	16263	Balmore G	South	Serious	3	Organics	Age of Water/Turnover	Serious/ recurring quality issue

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
September	16223	Lintrathen WTW	East	Significant	96,388	Manganese	Out with Design Capacity	Serious/ recurring quality
September	16313	Rawburn WTW	South	Significant	17,957	Manganese	Incorrect Dose Settings	Significant loss of the treatment process
November	16451	Clatto WTW	East	Serious	188,041	Microbiology	Disinfectant Dosing Failure - Carrier Water	Failure of disinfection process
November	16489	Tomnavoulin	East	Significant	159	Microbiology	Disinfectant Dosing Pump Fail	Failure of disinfection process
November	16492	Clatto WTW	East	Significant	188,041	Microbiology	Disinfectant Dosing Failure - Dosing Line	Failure of disinfection process

Month	Event Number	Site Name	Area	Class	Population Affected	Hazard	Root Cause	Reason
November	16555	Pateshill	South	Significant	47,711	Microbiology	Disinfectant Dosing Pump Fail	Failure of disinfection process
December	16606	Marchbank WTW	South	Serious	142,457	<i>Cryptosporidium</i>	Coagulant aid (Poly) Failure	Significant loss of the treatment process
December	16614	Lintrathen WTW	East	Significant	96,388	Microbiology	Disinfectant Dosing Pump Fail	Significant loss of the treatment process
December	16615	Whitehillocks WTW	East	Significant	25,029	pH	Scada/PLC/ Instrumentation	Issue causing significant consumer concern/media interest
December	16616	Turret B	East	Significant	37,029	Manganese	Pipe Deposits	Issue causing significant consumer concern/media interest



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