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Drinking Water Quality in Northern Ireland, 2025

A Report by the Drinking Water Inspectorate for Northern Ireland



An Agency within the Department of
Agriculture, Environment and Rural Affairs
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Gníomhaireacht de chuid na Roinne
Talmhaíochta, Comhshaoil agus Gnóthaí Tuaithe

An Agency wi'in the Depairtment o
Fairmin, Environment an' Kintra Matthers



Northern Ireland Environment Agency

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A Report by the Drinking Water Inspectorate for Northern Ireland

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Foreword

I am pleased to present the 30th annual report on the quality of drinking water in Northern Ireland. The Drinking Water Inspectorate's (DWI's) primary role is to protect public health through effective drinking water regulation. This report provides an independent assessment of the quality of drinking water from both public and private supplies for the calendar year 2025.

In Northern Ireland, over 99% of the population receive their drinking water from Northern Ireland Water Limited (NI Water), with the remainder served by private water supplies. Public drinking water quality remained high during 2025, with overall compliance of 99.91%, a slight increase from 99.88% in 2024. Compliance at private water supplies also improved, increasing from 99.12% in 2024 to 99.33% in 2025.

The resilience of the public water supply was tested during 2025. Freezing weather and a subsequent thaw in January led to widespread burst mains and supply interruptions, while Storm Éowyn caused significant disruption to services and damaged NI Water infrastructure. These events reinforce the need for resilient infrastructure and effective contingency planning.

Blue-green algae (cyanobacteria) continued to pose a potential risk to drinking water quality in 2025. NI Water maintained enhanced monitoring and optimised treatment, particularly at works abstracting from Lough Neagh. Although high levels of algae were recorded in raw water, treatment processes were not challenged to the same extent as during 2023 and 2024. Consequently, no Significant or above algae-related water quality events occurred during 2025.

While overall compliance remained high, Total Trihalomethanes (THMs) recorded the lowest compliance of all regulatory parameters during 2025 at 98.61%. THMs are disinfection by-products formed when naturally occurring organic matter reacts with chlorine used to disinfect drinking water. Improvements are planned at a number of water treatment works (WTWs) under NI Water's Price Control programmes (PC21 and PC28) to improve THM compliance.

DWI continued to use its audit and enforcement powers to ensure that appropriate action was taken where risks or persistent compliance issues were identified. Eight technical audits were undertaken under the 2025 risk-based inspection programme. Three Regulation 31(4) Enforcement Notices were revoked following improvement works at Ballinrees and Drumaroad WTWs, while three Warning Letters were issued relating to the herbicide, MCPA, at Carmoney WTW and blue-green algae-related taste and odour risks at Moyola and Castor Bay WTWs.

Although less than 1% of the population are directly served by a private water supply, many more people are exposed to them through their use in food production and as drinking water in public buildings. DWI delivered 99.1% of the annual regulatory monitoring programme for private water supplies in 2025 and a total of 50 risk assessments of private water supplies were completed or updated. I would like to recognise the continued contribution of council staff in supporting DWI through sampling and risk assessment activities.

Despite the challenges experienced during 2025, the quality of drinking water supplied across Northern Ireland remained high. Our focus remains on ensuring safe, clean and acceptable drinking water for all consumers. We will continue to work with NI Water and other stakeholders to promote sustainable catchment management, strengthen the resilience of drinking water supplies and ensure that efforts are focused on addressing current and emerging risks.

I trust you will find this report a useful reference for drinking water quality in Northern Ireland.



Bernadette Corr
Chief Inspector of Drinking Water
November 2026

Request for Feedback on this Report

The Drinking Water Inspectorate is continually aiming to improve the standard of information provided in this report.

We are seeking the views and opinions of all stakeholders on the report itself and would greatly appreciate your feedback which can be provided online, email or post.

Online Feedback Form:

To access the short online feedback form, follow the QR code below or link (closes 31st March 2027):

or

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Executive Summary

This is the 30th report in a series published by the Drinking Water Inspectorate (DWI) in its role as the drinking water quality regulator for both public and private water supplies in Northern Ireland.

The report provides an independent assessment of the quality of drinking water provided by NI Water and details of the quality of private water supplies for which DWI has regulatory responsibility and undertakes a monitoring programme.

Public Water Supplies

NI Water undertakes comprehensive monitoring to assess the quality of public drinking water quality throughout the water supply chain, including water treatment works, service reservoirs, supply points and consumers' taps.

During 2025, 102,332 regulatory tests were used to assess overall drinking water quality. Of these, 97 tests, or 0.09%, did not meet the regulatory standards. Overall compliance was therefore 99.91%, compared with 99.88% in 2024. Overall microbiological compliance was 99.92% and overall chemical compliance was 99.89%. Compliance at consumers' taps was 99.88%, a slight increase from 99.87% in 2024. However, 15 parameters did not achieve full compliance during 2025: Aluminium; Arsenic; Coliform bacteria; *E. coli*; Enterococci; Hydrogen ion (pH); Iron; Lead; Manganese; Nickel; Odour; Other Pesticides (MCPA); Taste; Turbidity; and Total Trihalomethanes (THMs).

The parameter with the lowest reported compliance in 2025 was THMs, decreasing from 99.17% in 2024 to 98.61%, with seven non-compliant samples. Four of these occurred within the Altnahinch WTW supply zone. DWI audited this works in November 2025 as part of its risk-based technical audit programme. Improvement work relating to THMs is continuing under the PC21 programme, and NI Water must continue to optimise treatment processes and manage storage and the distribution systems to minimise THM formation.

Aluminium compliance decreased from 99.95% in 2024 to 99.63% in 2025, with eight contraventions at consumers' taps. Despite this, operational performance improved, with only two Significant events involving elevated aluminium compared with ten in 2024. Improvement works at Drumaroad WTW were completed during 2025 in response to DWI enforcement, and further PC21 and PC28 deliverables are expected to support improved compliance.

Microbiological quality remained high. At water treatment works, compliance was 100% for *E. coli* and 99.89% for coliform bacteria, with seven coliform bacteria contraventions compared with 14 during 2024. Similarly, for service reservoirs, coliform bacteria compliance was 99.91% in 2025, an increase compared to 99.82% recorded in 2024. Coliform bacteria were detected on 14 occasions at 14 different service reservoirs in 2025, compared to 26 occasions at 26 different service reservoirs in 2024. Investigations determined that this increase in microbiological compliance in 2025, at water treatment works and service reservoirs, was largely due to improved sample analysis, following environmental contamination of microbiological samples during analysis at NI Water's Gelvin Grange laboratory in 2024.

At consumers' taps, microbiological compliance was 99.81%. Coliform bacteria were detected in 20 samples, while *E. coli* was detected in two of the 5,784 consumer tap samples and

enterococci in one of 504 samples. Investigations found that contamination of consumer tap fittings was responsible for more than half of the coliform bacteria contraventions and for both *E. coli* contraventions.

NI Water's investigation into contraventions must determine if they are due to the internal distribution systems within domestic dwellings or public buildings. The investigations, where appropriate, should also ensure internal plumbing is compliant with The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009.

NI Water reported 14 contraventions in 2025, due to internal plumbing within 13 domestic properties: Coliform bacteria (11), Nickel (two) and *E. coli* (one). NI Water investigated each contravention and issued letters to the affected consumers, advising them of the findings and providing appropriate guidance to protect public health.

The occurrence of blue-green algae (cyanobacteria) in Lough Neagh and other raw water sources, continued to represent a potential risk to drinking water. Throughout the algal season, NI Water maintained enhanced monitoring and optimised treatment, particularly at works abstracting from Lough Neagh, including testing for the algal toxin Microcystin-LR (MC-LR). While high algal concentrations were recorded at some raw water intakes, treatment processes were not challenged to the same extent as in 2023 and 2024, and levels of MC-LR in final water remained below the World Health Organisation guideline value for drinking water. No increase in consumer contacts relating to taste and odour was observed, and no algae-related taste or odour contraventions occurred in 2025.

Pesticide monitoring continued throughout the year. NI Water monitored 38 individual pesticides, with 236 compliance samples giving 8,968 individual determinations. One regulatory contravention for MCPA was reported at Seagahan WTW, together with two operational programme contraventions. The raw water source supplying Seagahan WTW is recognised as a pesticide risk area and NI Water commenced a Farming for Water catchment management scheme in the area in 2026 to help reduce the risk from MCPA.

DWI assessed and categorised 49 drinking water quality events during 2025, compared to 48 events in 2024. These comprised one Major, three Serious and 14 Significant events, together with nine Minor and 22 Not Significant events. The Major event was associated with Storm Éowyn in January, when damage to electricity, telecommunications and NI Water infrastructure resulted in supply interruptions to around 6,000 properties. A separate Serious event followed freezing-thaw conditions earlier in January, when widespread burst mains increased demand and interrupted supplies. The other Serious events concerned taste and odour complaints within the Glenhordial WTW supply area and discoloured water and associated contraventions in the Cam Service Reservoir supply area. Nine Significant events occurred at seven water treatment works with causes primarily relating to inadequate treatment or treatment difficulties. Three significant events related to the distribution network, one to unrepresentative sampling and another related to recurrent contraventions and subsequent 'Boil Water Before Use' notice to a single property.

Consumer contact information provides an important indicator of consumers' acceptance of their drinking water. NI Water reported 4,732 water quality contacts during 2025, compared with 5,470 in 2024, representing a decrease of 13.49%. Appearance remained the principal reason for consumer contact, accounting for 59.36% of the total. Taste and odour accounted for

16.97%, down from 27.4% in 2024, with a reduction in “earthy/musty” contacts following the elevated levels experienced during the algal bloom periods of 2023 and 2024.

DWI continued to regulate NI Water in 2025 through risk assessment, technical audit and, where necessary, enforcement action. This included: eight technical audits completed as part of DWI’s risk-based inspection programme; three Regulation 31(4) Enforcement Notices revoked following completion of required improvement works at Ballinrees and Drumaroad WTWs; and three Warning Letters issued for the herbicide, MCPA, at Carmoney WTW, the algae-related taste and odour risk at Moyola and Castor Bay WTWs.

Private Water Supplies

The same drinking water quality standards apply to private and public water supplies in Northern Ireland. Although less than 1% of the population receives water from a private supply, many more people are exposed to them through their use in commercial activities, food and drink production, hospitality and public buildings.

There were 178 registered private water supplies within the 2025 monitoring programme, of which 85% were commercial or public supplies and 15% were small shared domestic supplies. Nine new supplies were registered during the year and six were removed from the monitoring programme.

In 2025, 393 samples were collected from registered private water supplies, including compliance, resample, enhanced, and investigative samples. A total of 16,100 determinations were scheduled, of which 15,955 were completed, representing 99.1% delivery of the annual regulatory monitoring programme for 2025. Of the determinations completed, 13,521 were undertaken for compliance monitoring purposes.

Of the 13,521 compliance tests carried out during 2025, 99.33% met the regulatory standards, compared with 99.12% in 2024. The regulatory requirements were not met on 91 occasions for 15 parameters: Coliform bacteria; *E. coli*; Enterococci; *Clostridium perfringens*; Manganese; Hydrogen ion (pH); Sodium; Iron; Sulphate; Ammonium; Nickel; Bromate; Lead; Turbidity; and Radon.

Full compliance with all drinking water standards was achieved at 74% of the supplies tested, or 131 of the 178 sites, leaving 47 sites which did not comply with all regulatory standards. Of these, 21 contravened microbiological standards only, 24 chemical standards only and two contravened both microbiological and chemical standards.

Microbiological compliance improved from 94.17% in 2024 to 94.99% in 2025. Microbiological contraventions accounted for 46 of the 91 contraventions recorded. Micro-organisms were detected in 23 supplies during the year. Although microbiological compliance remains below the levels achieved in 2020 and 2021, compliance has improved in each year from 2023 to 2025, indicating a sustained upward trend in microbiological performance.

Chemical compliance also improved, from 99.53% in 2024 to 99.65% in 2025. There were 43 chemical contraventions, compared with 55 during 2024. Manganese, Hydrogen ion (pH), Iron, Lead, Nickel and Bromate accounted for 38 of the 43 chemical contraventions. Trace levels of individual pesticides, below the regulatory limit, were detected at 26 sites, but there were no regulatory contraventions for individual pesticides during 2025.

Where a contravention in a private supply used as drinking water or in food production is considered a potential risk to health, DWI seeks advice from the Public Health Agency. Of the 47 sites with contraventions during 2025, 25 were referred to the Public Health Agency. Restrictions on use were implemented at 12 sites to protect public health. Following investigation, remedial work and satisfactory resampling, restrictions were removed at 12 sites.

Risk assessment remains central to the regulation and management of private supplies. During 2025, 27 risk assessments were completed or updated on DWI's web-based system. A further 69 supplies required their statutory five-year risk assessment review, of which 23 were completed. The shortfall was primarily due to resource constraints and competing operational priorities. DWI will continue to work with Environmental Health staff and supply owners to progress outstanding reviews and associated action plans.

DWI works in partnership with the Environmental Health Departments of all 11 local councils to regulate private water supplies. During 2025, 28 Environmental Health staff were trained in sampling and a further 13 in undertaking risk assessments, supported by joint site visits.

Providing advice and guidance remains an important part of DWI's role. In 2025, DWI provided advice on 223 occasions, while the Single Well Application continued to support owners and users by raising awareness of potential risks and measures to improve water quality.

Many single domestic properties rely on private water supplies but are not subject to regulatory monitoring. With support from Carrier Bag Levy funding, DWI commenced a project in 2025 to identify these properties, confirm their water source and establish baseline information on water quality and sufficiency. The findings will improve understanding of households reliant on private supplies and support future public health and source protection activities.

Looking Forward

Drinking water quality in Northern Ireland remained high in 2025, however, the year's events and contraventions highlight the need for continued vigilance.

Protecting drinking water catchments remains a key priority, as improving source water quality reduces contamination risks, minimises the need for upgrades to water treatment processes and supports a more sustainable source-to-tap approach. DWI will continue to work with NI Water, NIEA and other stakeholders to support delivery of the Third River Basin Management Plan and plan for the fourth cycle, helping to address the impacts of changing raw water quality, including blue-green algae, and other emerging risks.

The severe weather experienced during 2025 also highlights the importance of resilient water infrastructure and operations. As NI Water progresses through the remainder of PC21 and plans for PC28, it will be important to address both water quality and resilience risks, including those arising from climate change.

Despite the challenges ahead, the provision of safe, wholesome drinking water to consumers remains paramount. It is therefore essential that the quality, safety and resilience of drinking water is not compromised, and that the protection of public health remains a key priority for NI Water.

Section 1
Public Water Supplies

Part 1
Drinking Water Quality



Image: NI Water Network Operations

Public Water Supplies
2025 Key Facts

Drinking Water Sources

Rivers & Loughs - **56.1%**
(including **38.2%** from Lough Neagh)

Impounding Reservoirs - **43.8%**

Boreholes - **0.1%**

There are **27,265 km** of drinking water distribution pipes.

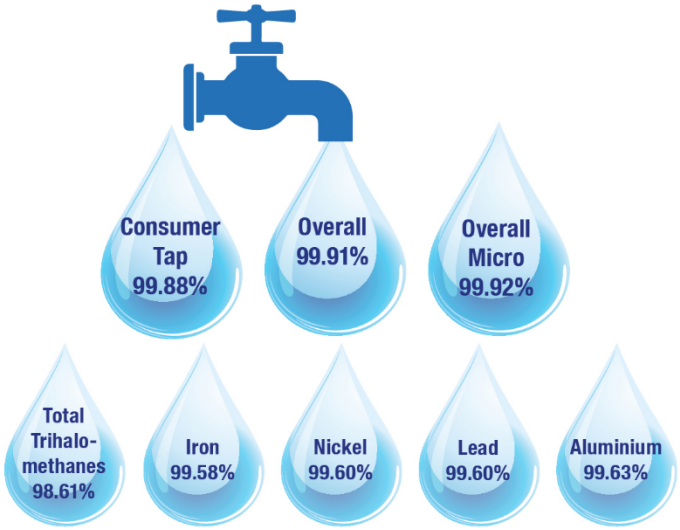
Supply System

24 Water Treatment Works & **24** Supply Points

288 Service Reservoirs

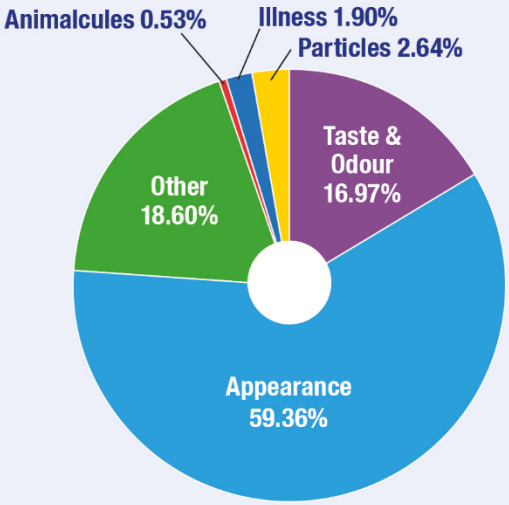
64 Water Supply Zones

% Compliance



11 Public Building Contraventions

Consumer Complaints



Down 13.49% from 2024

Discoloured water was the main issue of concern

Actions

Audits	Enforcements	Events	Product Approvals	Regulatory Contraventions
8 technical audits of NI Water	**3** Regulation 31(4) Enforcement Notices revoked **3** Warning letters issued	**49** Water Quality Events assessed & categorised	**114** Regulation 33 Product Approval letters issued	**97** regulatory contraventions reviewed & assessed

Drinking Water Quality

NI Water is a government-owned company with sole responsibility for supplying and distributing public drinking water throughout Northern Ireland.

Drinking Water Quality Testing

During 2025, NI Water sampled drinking water across Northern Ireland to test for compliance with the standards in The Water Supply (Water Quality) Regulations (Northern Ireland) 2017. The regulations require sampling programmes to be in place to ensure that water quality is monitored at: water treatment works (WTWs); service reservoirs (SRs); supply points[1]; and consumers' taps in water supply zones (WSZs). A summary of the number of sites that were in service in 2025 is shown in Table 1 –1.

Table 1 – 1 Number of Sites in Service in 2025

Sites	Number in Service
Water treatment works	24
Service reservoirs	288
Supply points[1]	24
Water supply zones	64

In 2025, 102,332 tests were carried out for a range of different parameters. A description of each parameter and its regulatory limit (or prescribed concentration or value [PCV]) is available on our website.

Sampling and Analysis Frequencies

NI Water is required to meet specified sampling frequencies in demonstrating the wholesomeness of drinking water supplies. We undertake an assessment of these requirements throughout the water supply chain: at WTWs; SRs; and WSZs.

Under the regulations, we can consent to NI Water deviating from the monitoring requirements. Any deviations must be based on historical monitoring data, and a risk assessment of the treatment works and its related water supply system to confirm that there is no likely deterioration in water quality.

Based on evidence provided by NI Water, a Notice of Decision[2] not to monitor radioactivity in a number of water supply areas was issued by us to NI Water in December 2022. This Notice is for a period of five years, 2023 to 2027. The Notice may be withdrawn in the event of any change in risk.

During 2025, there was a shortfall of 25 individual tests out of the 102,332 tests carried out, compared with a shortfall of 18 out of 100,522 tests in 2024.

[1] a point, other than a consumer's tap, authorised for the taking of samples for compliance with the Regulations
[2] Notice of Decision Not to Monitor Radioactivity Parameters

Overall Drinking Water Quality

Compliance with the quality standards is important, as contraventions may indicate a failure in the treatment process or a breach in the integrity of the water supply system, which could pose a potential risk to human health. It also ensures that water meets aesthetic standards and is acceptable to consumers.

Of the 102,332 tests we used to assess overall compliance, 97 (0.09%) contravened the regulatory standards, compared with 118 (0.12%) from 100,522 tests in 2024. Table 1 - 2 provides further information on these contraventions.

Table 1 – 2 Overall Drinking Water Quality in 2025

	Number of Tests	Number of Tests not Meeting the Standards	% Compliance
Water Leaving Water Treatment Works (WTWs)			
E. coli	6200	0	
Coliform bacteria	6200	7	
Microbiological Total	**12400**	**7**	**99.94**
Nitrite	236	0	
Turbidity	6199	9	
Chemical Total	**6435**	**9**	**99.86**
Total (Microbiological and Chemical)	**18835**	**16**	**99.92**
Water in Service Reservoirs (SRs)			
E. coli	14908	0	
Coliform bacteria	14908	14	
Total (Microbiological)	**29816**	**14**	**99.95**
Water at Consumers' Taps or Supply Points (WSZs)			
E. coli	5784	2	
Coliform bacteria	5784	20	
Enterococci	504	1	
Clostridium perfringens	236	0	
Microbiological Total	**12308**	**23**	**99.81**
Zone Chemical Analysis	31871	43	
Supply Point Chemical Analysis	9502	1	
Chemical Total	**41373**	**44**	**99.89**
Total (Microbiological and Chemical)	**53681**	**67**	**99.88**
Overall Water Quality			
Overall Microbiological Quality	**54524**	**44**	**99.92**
Overall Chemical Quality	**47808**	**53**	**99.89**
Overall Drinking Water Quality	**102332**	**97**	**99.91**

The results confirm that overall drinking water quality in 2025 remained high at 99.91% for the key parameters monitored at water treatment works, service reservoirs and consumers' taps. This was a slight increase in overall compliance compared with 2024 (99.88%). The improvement was largely due to higher bacteriological compliance in 2025; investigations found that the lower compliance in 2024 was linked to environmental contamination of microbiological samples during analysis at NI Water's Gelvin Grange laboratory. See Drinking Water Quality in Northern Ireland 2024 for further details.

Figure 1 – 1 Illustrates the percentage compliance over the last five years.

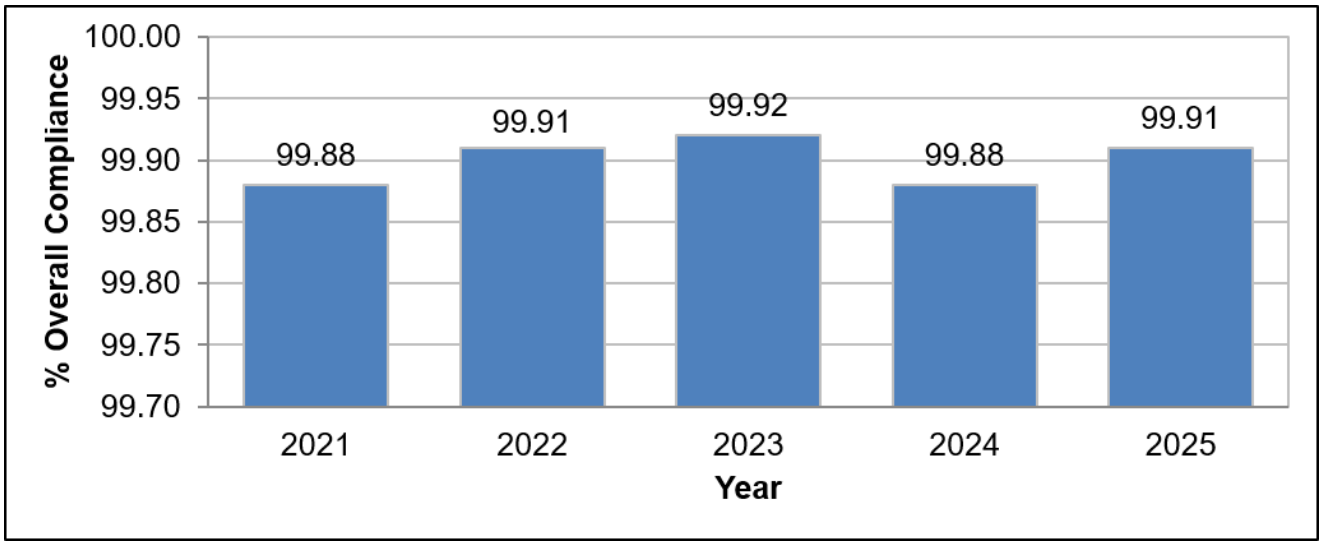


Figure 1 – 1 Overall Drinking Water Quality, 2021 - 2025

Water Quality at Consumers' Taps

To assess the quality of water supplied to consumers, we assess the results of regulatory samples taken by NI Water from consumers' taps and, where appropriate, at authorised supply points. Table 1 – 3 shows the percentage compliance for 34 Schedule 1 (Directive and national) parameters and nine Schedule 2 (indicator) parameters. Drinking water quality compliance at consumers' taps was 99.88% in 2025, a slight increase compared with 99.87% compliance reported for 2024.

15 parameters did not achieve full compliance at consumers' taps in 2025: Aluminium, Arsenic, Coliform bacteria, *E. coli*, Enterococci, Hydrogen Ion (pH), Iron, Lead, Manganese, Nickel, Odour, Other Pesticides (MCPA), Taste, Turbidity and Total Trihalomethanes (THMs).

Table 1 – 3 Consumer Tap Compliance 2025

Parameter	Number of Samples	Number of Tests not Meeting the Standards	% Compliance
Schedule 1 (Directive and National parameters)			
Total Trihalomethanes	503	7	98.61
Iron	2139	9	99.58
Nickel	504	2	99.60
Lead	504	2	99.60
Aluminium	2139	8	99.63
Taste	2144	6	99.72
Arsenic	503	1	99.80
Enterococci	504	1	99.80
Manganese	2139	3	99.86
Odour	2144	3	99.86
Turbidity	2144	1	99.95
E. coli	5784	2	99.97
Pesticides (other)	8968	1	99.99
1,2 Dichloroethane	504	0	100
Antimony	502	0	100
Benzene	504	0	100
Benzo(a)pyrene	504	0	100
Boron	501	0	100
Bromate	504	0	100
Cadmium	503	0	100
Chromium	503	0	100
Colour	2144	0	100
Copper	504	0	100
Cyanide	236	0	100
Fluoride	504	0	100
Mercury	504	0	100
Nitrate	504	0	100
Nitrite	504	0	100
PAH - Sum of four substances	504	0	100
Pesticides - Total Substances	236	0	100
Selenium	503	0	100
Sodium	504	0	100
Tetrachloroethene/Trichloroethene - Sum	504	0	100
Tetrachloromethane	504	0	100
Total (Schedule 1)	**41799**	**46**	**99.89**
Schedule 2 (Indicator parameters)			
Coliform bacteria	5784	20	99.65
Hydrogen Ion (pH)	2144	1	99.95
Chloride	504	0	100
Clostridium perfringens	236	0	100
Conductivity	2144	0	100
Indicative Dose	31	0	100
Sulphate	504	0	100
Ammonium	504	0	100
Tritium	31	0	100
Total (Schedule 2)	**11882**	**21**	**99.82**
Overall Total	**53681**	**67**	**99.88**

Chemical/Physical Quality

Trihalomethanes (THMs)

In 2025, THMs had the lowest level of compliance, decreasing from 99.17% in 2024 to 98.61% in 2025. In addition, DWI notes that 52 regulatory samples across 24 of the 64 water supply zones were categorised as 'likely to fail', as the results exceeded 75% of the regulatory standard. Further discussion on THMs is contained in Part 2 of this section.

Iron

Iron compliance increased from 99.02% in 2024 to 99.58% in 2025. The regulatory standard for Iron is set for aesthetic reasons, as elevated levels can cause discoloured water. Corrosion of iron water mains remains the most common cause of Iron contraventions.

Most Iron contraventions in 2025 were linked to the build-up and subsequent disturbance of deposits within water mains. Where investigations confirm this cause, NI Water takes remedial action to reduce the likelihood of recurrence. Figure 2 - 8 in Part 2 shows Iron compliance over the last five years.

Nickel

In 2025, there was a decrease in Nickel compliance to 99.60% compared to the 100% achieved in 2024. Nickel may occur naturally in some groundwater but is rarely found in the mains water supply. Contraventions of the standard (20 µg/l) do occur occasionally, and the main source of nickel in drinking water is leaching from modern taps and other plumbing fittings.

Lead

In 2025, Lead compliance decreased slightly to 99.60% from 100% in 2024. Compliance with the Lead standard is still an issue in properties built before 1970, so it is important that NI Water continues to implement its Lead Strategy which is in place to deliver improved compliance for Lead and effectively manage the risk to public health.

The Regulations require NI Water to treat water to reduce the risk of exceeding 10 µg/l. In 2025, two of 504 regulatory samples contravened the Lead standard. A further 27 operational samples collected at consumers' taps also exceeded the Lead standard, showing that continued action is needed to reduce the public health risk from lead in drinking water.

When a sample has contravened the Lead standard and NI Water's investigation finds the property's service pipe contains lead; it notifies the owner of the property. It is the owner's decision whether to replace their supply pipe and any other lead pipes within the property. Further information, including a consumer advice leaflet on "Lead in Drinking Water" (Figure 1 – 2), can be found on NI Water's website.



Figure 1 – 2 Lead Leaflet

Figure 1 – 3 shows the overall trend in Lead compliance over the last five years. Compliance had improved since 2021, but decreased slightly in 2025. Further work is still required to ensure compliance is maintained.

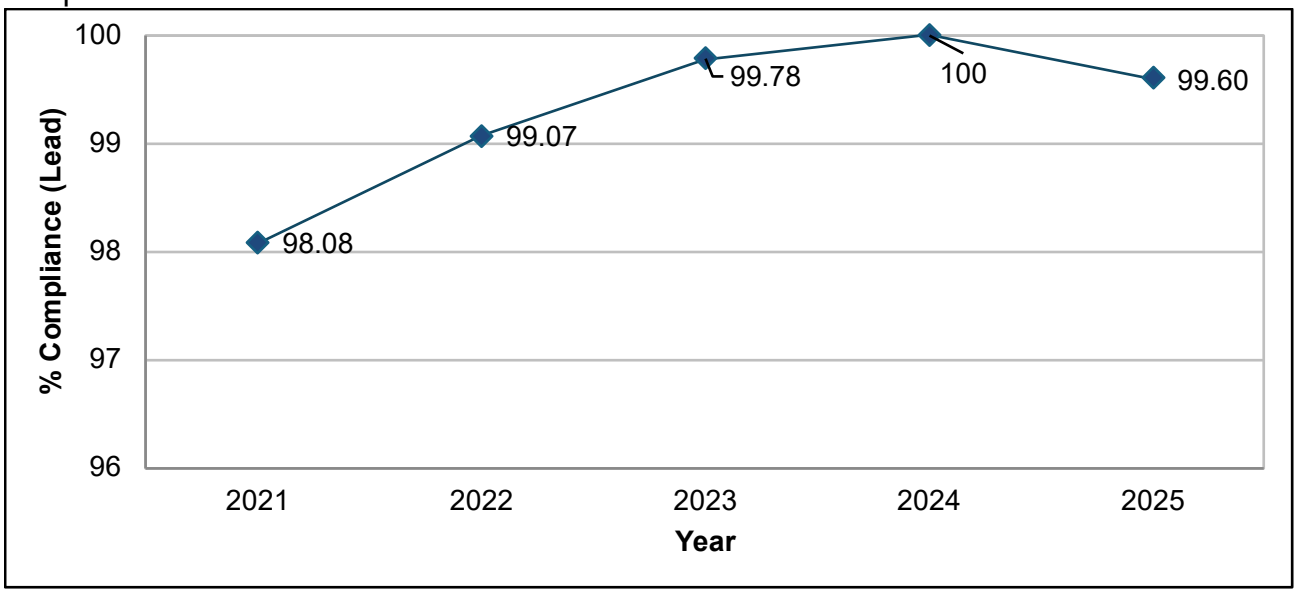


Figure 1 – 3 Percentage of Regulatory Tests Meeting the Lead Standard, 2021 – 2025

Aluminium

Aluminium compliance decreased to 99.63% in 2025, compared with 99.95% in 2024. The eight Aluminium contraventions recorded in 2025 occurred in individual water supply zones. Further discussion on aluminium is included in Part 2 of this section.

Odour & Taste

The regulatory requirement for Odour and Taste is “Acceptable to consumers and no abnormal change.” DWI has issued guidance to NI Water on the interpretation of this regulatory requirement. Where a sample has an unacceptable odour, taste analysis is not performed and a Taste contravention is recorded.

In 2025, Odour compliance was 99.86% and Taste compliance was 99.72%. This shows an improvement from 2024 when compliance was 99.56% for Odour and 99.46% for Taste.

In total, three of the six Taste contraventions in 2025 were samples that were not tasted due to an unacceptable odour. In 2025, no regulatory samples had an “earthy/musty” odour or taste, unlike in 2024, when two “earthy/musty” Odour and Taste samples were related to an algal bloom event in Lough Neagh. More information on algae can be found in Part 2 of this section.

Although no regulatory samples contravened the Odour or Taste standards with “petroleum” recorded as a descriptor, three drinking water quality events involving petroleum odours at individual properties were notified to DWI in 2025. Further information on Drinking Water Quality Events is provided in ‘Section 1 - Part 2 The Drinking Water Cycle’.

Odour and Taste compliance over the last five years is shown in Figure 1 – 4. There is further information on Odour and Taste in the "Consumer Contacts" section later in this part of the report.

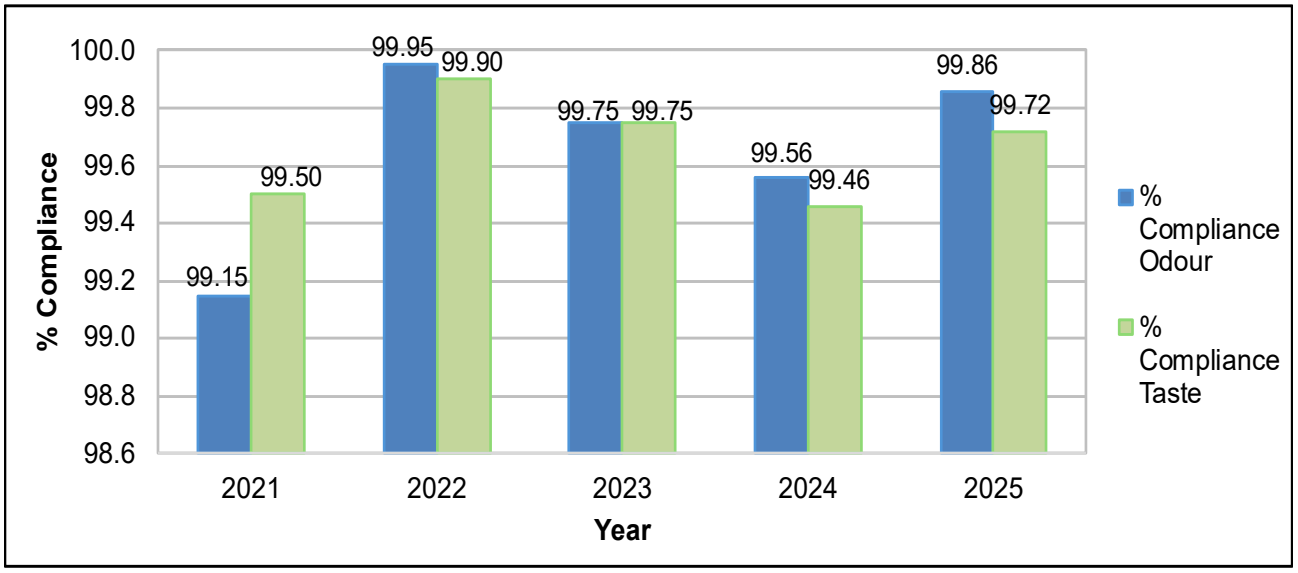


Figure 1 – 4 Percentage Compliance for Taste and Odour, 2021 - 2025

Microbiological Quality

Microbiological compliance at consumers' taps was 99.81% in 2025, a slight decrease from 99.84% in 2024 (see Table 1 - 3). Coliform bacteria were detected in 20 consumer tap samples in 2025, compared with 17 in 2024. Investigations found that contamination of consumer tap fittings was the main cause of more than half (12) of the Coliform bacteria contraventions in 2025.

E. coli were detected in two of the 5,784 samples taken at consumers' taps in 2025, giving 99.97% compliance; this was a slight decrease from 100% compliance in 2024. Investigations found that both *E. coli* contraventions were caused by contamination of consumer tap fittings.

Enterococci were detected in one of the 504 samples taken at consumers' taps in 2025 (99.80% compliance). This was similar to 2024 when Enterococci were detected in one of the 480 samples taken at consumers' taps in 2024 (99.79%).

Clostridium perfringens were not found in any of the 236 samples taken in 2025 (100% compliance). This was unchanged from 2024.

Domestic Dwellings Distribution Systems

NI Water's investigation into contraventions must determine whether they are due to the internal distribution systems within domestic dwellings. Where this is identified, NI Water must inform the owner, provide details of the failure and give appropriate advice on actions the owner may take to rectify the contravention and protect public health. The investigations, where appropriate, should also ensure consumers' internal plumbing is compliant with The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009.

In 2025, 14 contraventions were reported to us that NI Water determined were due to internal plumbing within 13 domestic properties. These contraventions related to the following parameters: Coliform bacteria (11), Nickel (two) and *E. coli* (one). NI Water investigated each contravention and issued letters to the affected consumers, advising them of the findings and providing appropriate guidance to protect public health.

Public Buildings Distribution Systems

At premises where water is made available to members of the public, such as schools, hospitals or restaurants, 521 samples were taken during 2025. Of these, 11 samples contravened the drinking water quality standard at eight individual premises for one or more of the following parameters: Aluminium, Coliform bacteria, *E. coli*, Iron, Lead, Odour and Taste.

NI Water must take appropriate action to rectify any failure attributable to the water it supplies or where there is a contravention of the Water Fittings Regulations. Other failures within such premises are notified to us for follow-up with the owners under The Water Supply (Domestic Distribution Systems) Regulations (Northern Ireland) 2010. In line with our enforcement policy, an advisory letter is initially issued. If we assess the failure as likely to recur, or if it constitutes a potential risk to human health, a notice may be served on the owner to undertake the necessary actions to protect public health and bring the supply back into compliance.

In 2025, none of the 11 contraventions reported for samples taken within public buildings required notification to us by NI Water under The Water Supply (Domestic Distribution Systems) Regulations (Northern Ireland) 2010.

Consumer Contacts

NI Water provides us with consumer contact information to help us assess consumers' acceptance of their drinking water quality (Table 1 - 4 refers). The total number of consumer contacts reported in 2025 was 4,732, compared with 5,470 in 2024, a decrease of 738 (13.49%). We will continue to monitor trends in consumer concerns.

Table 1 – 4 Water Quality Contacts received by NI Water in 2025

Contact Category	Contact Sub-Category	Number of Contacts
Appearance	Colour	1814
	General	127
	Hardness	12
	Stained Washing	3
	White - Air	668
	White - chalk	185
Taste and Odour	Chlorinous	320
	Earthy/Musty	221
	Other	220
	Petrol/Diesel	18
	TCP	24
Illness		112
Particles		136
Animalcules		11
Boil Water Notice		7
Other	Water Quality Concern - Campaigns	1
	Water Quality Concern - Incident Related	204
	Water Quality Concern - Lifestyle	1
	Water Quality Concern - Pets/Animals	2
	Water Quality Concern - Sample	329
	Water Quality Concern - Lead	332
	Water Quality (No Concern) Fluoride	1
	Water Quality (No Concern) Other Information	6
	Water Quality (No Concern) Water Hardness	3
	Water Quality (No Concern) Water Quality Report	1
Total		**4732**

The highest percentage of contacts and concerns continued to relate to the appearance of drinking water, with 59.36% in 2025 (51.13% in 2024). This is illustrated in Figure 1 – 5.

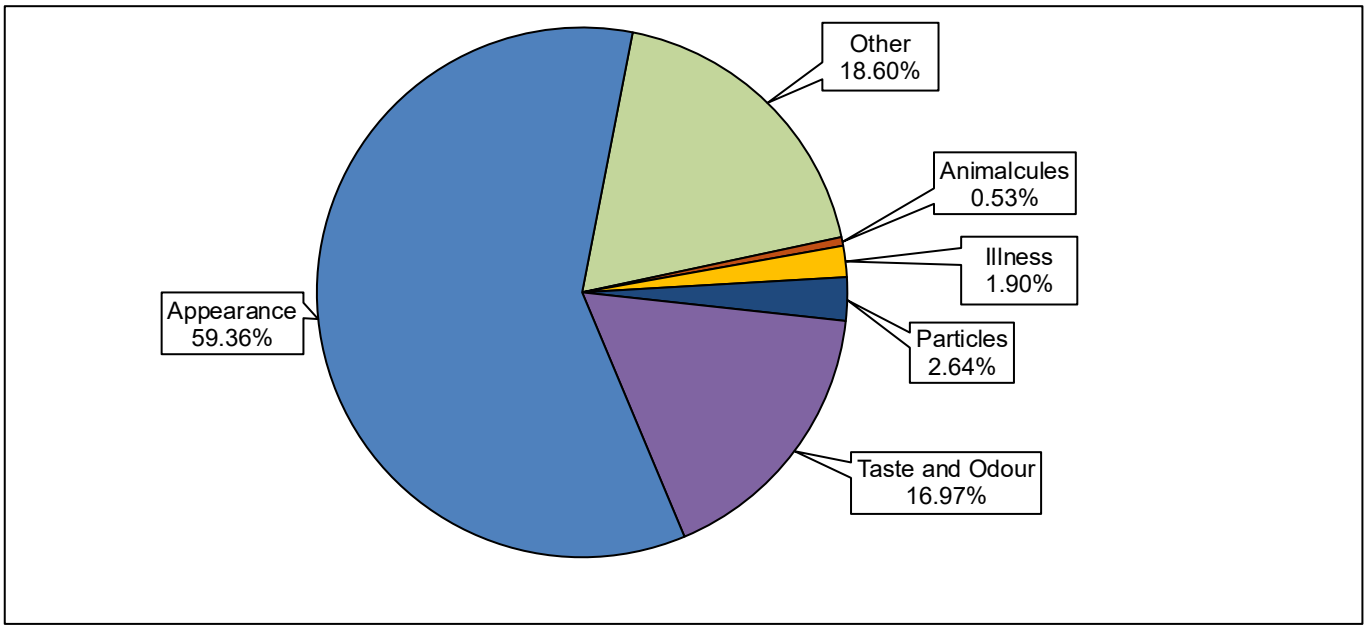


Figure 1 – 5 Water Quality Concerns received by NI Water in 2025

Appearance

Within the overall appearance category, there are several different sub-categories that are a cause of concern for consumers. Consumer contacts relating to appearance have decreased since 2021 and remained steady for the last three years as shown in Figure 1 – 6.

Colour

In 2025, as in every year, most appearance concerns (64.58%) related to discoloured water. The most common cause of discoloured water concerns is an orange, brown or black discoloration caused by suspended particles of iron (orange/brown) and manganese (black). Figure 1 – 6 demonstrates a decrease in consumer contacts relating to colour since 2021.

Iron discolouration may occur when naturally occurring iron in raw water passes through inadequate treatment, from the treatment process, or from corrosion of cast-iron distribution mains. Manganese is naturally present in some raw waters and may not be fully removed if treatment is inadequate. See ‘Section 1 - Part 2 The Drinking Water Cycle’ for further information on Iron and Manganese contraventions.

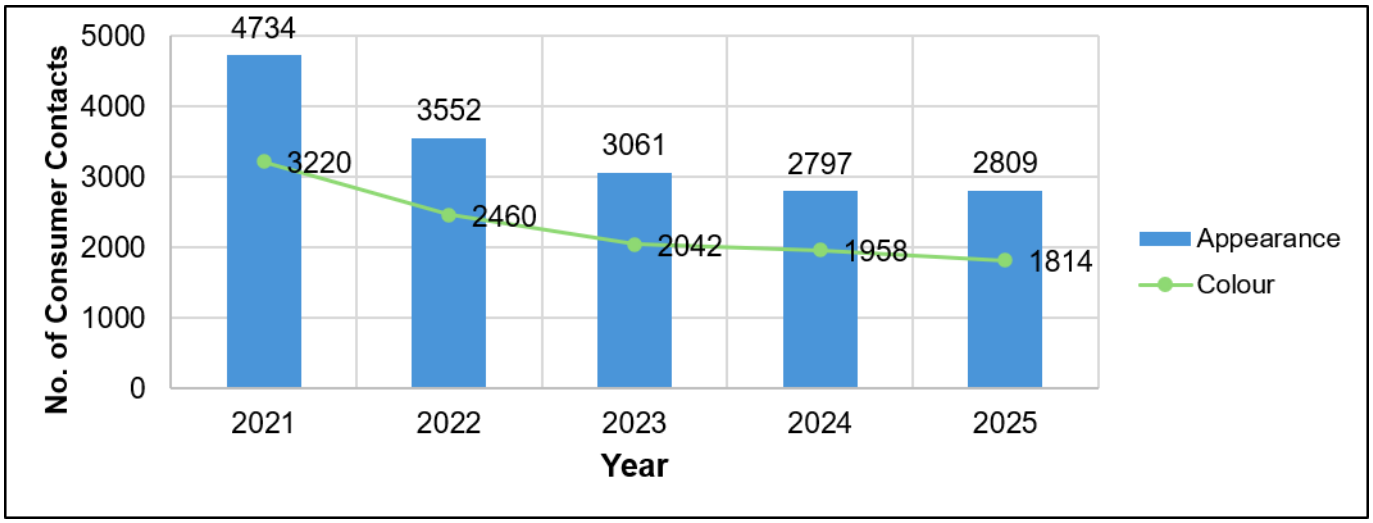


Figure 1 – 6 Appearance Consumer Contacts with Colour Descriptor, 2021 - 2025

White Water

White water is mainly caused by air dissolved in the water, making it appear cloudy or milky white. It can be caused by internal plumbing, burst water mains or NI Water maintenance work on pipes. Where air is the cause, the cloudy appearance will clear in a glass of water from the bottom up.

Another cause of white water may be chalk. Chalk has a white powdery appearance and is made up of natural minerals found in water, which form what is known as “hardness”. A glass of water containing chalk may take up to an hour to clear from the top downwards, leaving fine white sediment at the bottom of the glass.

White water accounted for 30.37% of appearance concerns in 2025.

Taste and Odour

All water sources contain naturally occurring minerals. Water also contains dissolved gases, such as oxygen and carbon dioxide, which give tap water its characteristic taste. One substance added to drinking water for disinfection is chlorine, which can give rise to consumer complaints (as discussed in the next section, Chlorinous).

Other tastes and odours should not be present in drinking water, either for aesthetic reasons, for example “TCP” or “earthy/musty”, or for health reasons, for example “petrol/diesel”.

Taste and odour complaints decreased to 16.97% of total consumer contacts in 2025, compared with 27.4% in 2024. “Earthy/musty” contacts had increased since 2022, but declined in 2025, as shown in Figure 1 – 7. This reduction was due to fewer “earthy/musty” complaints associated with algal blooms in drinking water sources compared to 2023 and 2024. Further discussion on algae is contained in Part 2 of this section.

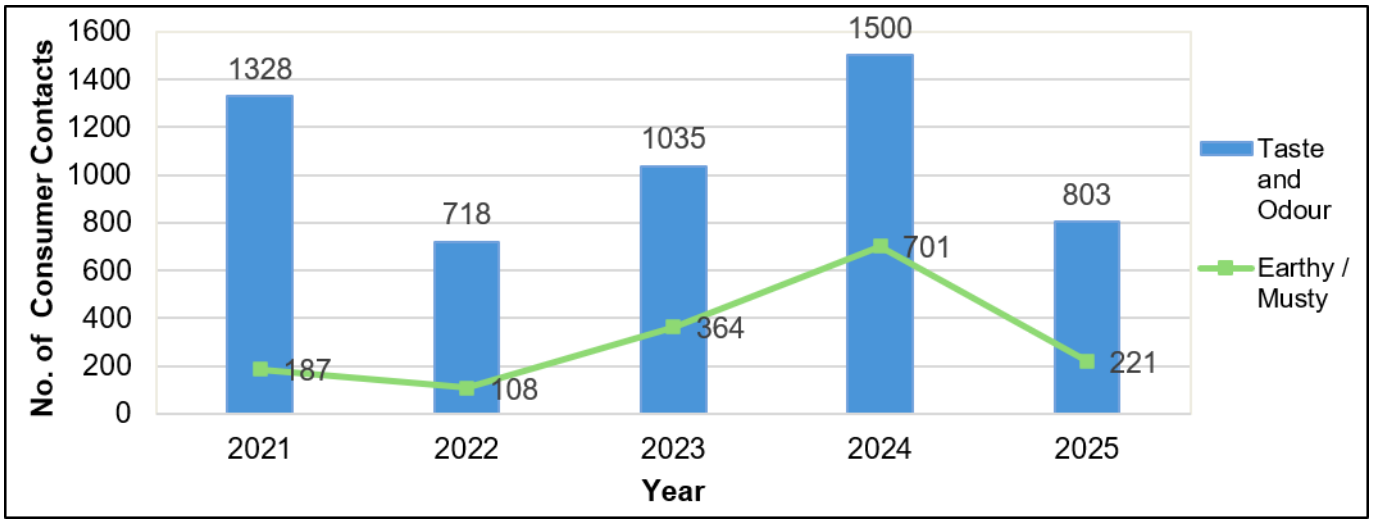


Figure 1 – 7 Taste and Odour Consumer Contacts with Earthy/Musty Descriptor, 2021 - 2025

Chlorinous

Some individuals are more sensitive than others to the taste and odour of chlorine, which is used to maintain hygienic conditions within the water supply network. In 2025, 320 taste and odour consumer contacts were related to a "chlorinous" taste and odour in the water, compared with 277 in 2024. NI Water should continue to investigate the reasons for taste and odour complaints related to a "chlorinous" taste and odour.

Consumer Advice

Given that appearance, taste, and odour remain key reasons for consumer contact, accessible guidance is important in helping consumers maintain tap water quality within the home. A useful consumer guide, 'Looking after water in your home' (Figure 1 - 8), was produced by the water industry to help consumers maintain and enjoy the quality of tap water once it enters the home.

It contains a number of household tips, from how to reduce unwanted tastes and odours and address appearance issues, to advice on water filters and storage tanks.

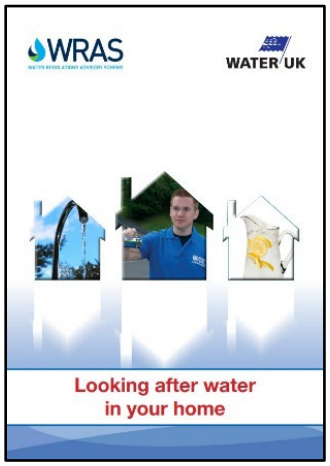


Figure 1 – 8 Looking After Water in Your Home Leaflet

Section 1
Public Water Supplies

Part 2
The Drinking Water Cycle











The Drinking Water Cycle

- Catchment: There were fewer MCPA detections in 2025
- Treatment Process Control Parameters: In 2025, Iron and THMs were the parameters with the lowest levels of compliance
- Treatment Disinfection Parameters: There was an increase in Coliform bacteria compliance in 2025
- Events: There was one Major, three Serious and 14 Significant Events reported in 2025

This part of the report details our assessment of how NI Water manages the drinking water cycle, from the **catchment** to the **treatment** processes at Water Treatment Works (WTWs), through Service Reservoirs (SRs) and into the **distribution network** to supply **consumers**. It also summarises the risk management approach adopted by NI Water in ensuring that water supplies remain safe and wholesome throughout their journey to homes and businesses.

Catchments

NI Water mainly abstracts its raw water from 39 sources including rivers and loughs (56.1%), impounding reservoirs (43.8%), and boreholes which supply a small population on Rathlin Island and in Mid Ulster (0.1%).

A risk assessment of the catchment must be completed as part of the overall ‘source to tap’ approach. NI Water liaises with the Northern Ireland Environment Agency (NIEA) and a range of other stakeholders through Water Catchment Partnerships to identify and put mitigations in place to manage risks within the catchment. The Catchment Management Plans developed by NI Water throughout the Price Control (PC) process for 2015-2021 (PC15) continue to be implemented in this current investment period 2021-2027 (PC21) and planning is underway for the next investment period commencing in 2028 (PC28). Where catchment solutions alone are unable to reduce the risks sufficiently, NI Water must ensure that it has appropriate treatment processes in place.

As the potential list of contaminants within catchments is diverse, NI Water must risk assess each catchment individually to determine the specific risks and identify appropriate mitigations to reduce or adequately control the risks. Where a risk is identified, NI Water must consider if water quality monitoring is required within the catchment and at its abstraction points.

This monitoring plays an important role in providing information on the risks within the catchment and for the operational management of water treatment works to ensure treatment processes provide an effective barrier against the identified levels of contaminants.

Algae

The increased occurrence of algae, including blue-green algae (cyanobacteria), in raw water sources poses a potential risk to drinking water quality. NI Water identifies this catchment risk in its risk assessments of water treatment works that abstract from Lough Neagh and other

drinking water sources affected by algal blooms. Therefore, to mitigate this risk, the treatment processes at these water treatment works are designed and operated for the removal of algae and its toxins.

In advance of the algal blooms observed in drinking water sources during 2025, shown in Figure 2 - 1, NI Water implemented a range of measures to further optimise and improve treatment processes at the Lough Neagh works. Enhanced operational monitoring, which had been introduced in previous years, continued throughout the 2025 algal season at works identified as being at risk. This included testing for the algal toxin, Microcystin-LR (MC-LR). The results of this monitoring, together with operational updates and trends in consumer contact data, were reported to DWI on a regular basis throughout the algal season. Although high levels of algae were recorded for the raw water intakes at several water treatment works in 2025, including those abstracting from Lough Neagh, treatment processes were not challenged to the same extent as in 2023 and 2024. The levels of MC-LR in the final treated water remained below the World Health Organisation guideline value for drinking water (1.0 µg/l).

The main impact of algae in source waters is consumer taste and odour complaints, commonly described as “earthy” or “musty”. These are caused by algal compounds, including 2-Methylisoborneol (MIB) and Geosmin, which have very low taste and odour thresholds but do not pose a health risk to consumers. Therefore, while algae in raw water sources may affect the acceptability of drinking water, their presence does not necessarily indicate a health risk. In 2025, no regulatory contraventions with “earthy/musty” descriptors were reported, compared with four in 2024. A reduction in “earthy/musty” taste and odour complaints in 2025 is also shown in Section 1 - Part 1 Consumer Contacts. In addition, there were no Significant or above drinking water quality events related to Lough Neagh algal blooms in 2025, compared with two Serious water quality events in 2024 and one in 2023.



Figure 2 – 1 Algal Bloom in Lough Neagh

Whilst multi-stage treatment processes remain operational at works affected by algal blooms, there continues to be a risk to drinking water quality. Consequently, DWI issued Warning Letters to NI Water in 2025 in relation to Moyola WTW and Castor Bay WTW, details of which are provided in Annex 4. Ongoing monitoring remains essential as algal blooms continue to occur in raw water sources, particularly Lough Neagh. DWI will continue to monitor geosmin, MIB, MC-LR, and Taste and Odour compliance in final treated water. Further information on blue-green algae is available on the DAERA webpage.

Pesticides

During 2025, 38 individual pesticides were monitored by NI Water under its sampling programmes. There are two separate sampling programmes in place. The compliance programme is based on the set regulatory frequencies required to be monitored by NI Water for assessing compliance. There is also the operational programme which monitors works that have a history of contraventions.

Within the compliance programme there were 236 samples taken for pesticides giving a total of 8,968 individual determinations. There was one regulatory contravention reported for the individual pesticide MCPA (2-methyl-4-chlorophenoxyacetic acid) at Seagahan WTW in 2025.

Where contraventions occur, DWI may require NI Water to carry out enhanced operational sampling to monitor any continuing risk. In 2025, NI Water reported two operational programme contraventions of the individual pesticide standard for MCPA at Seagahan WTW. MCPA is a widely used herbicide, and the raw water source supplying Seagahan Reservoir is recognised as a pesticide risk area, with elevated MCPA levels detected at the works intake. NI Water has introduced the "Farming for Water" catchment management scheme in the Seagahan area in 2026 to help reduce MCPA use through education and management measures aimed at lowering pollution risk and improving drinking water quality. This follows the successful implementation of the Farming for Water Scheme in the Clay Lake WTW catchment (2023 - 2025).

A table listing water treatment works with all contraventions for pesticides from 2021 to 2025 is provided in Table 2 – 1.

Table 2 – 1 Pesticides Detected Above the Regulatory Limit, 2021 – 2025

Water Treatment Works		2025	2024	2023	2022	2021	
		MCPA	MCPA	MCPA	MCPA	MCPA	MCPP
W4722	Belleek				1		
W2509	Clay Lake					3	
W4301	Carmoney		5	1		1	
W2802	Carran Hill			1			
W4501	Derg		2	1	4	6	1
W4541	Glenhordial				1	1	
W2514	Seagahan	3					
All WTWs		**3**	**7**	**3**	**6**	**11**	**1**

Water Treatment

Water treatment processes normally include the physical removal of potential contaminants by using chemical coagulation/flocculation, clarification or DAF (Dissolved Air Flotation), and filtration. DAF cells require regular de-sludging (Figure 2 - 2) and filters require periodic backwashing to operate effectively (Figure 2 - 3). Additional treatments such as ozone dosing and GAC (Granular Activated Carbon) filtration or PAC (Powdered Activated Carbon) dosing can also be required to remove unpleasant tastes and odours, and for pesticide reduction. The final stage of treatment is disinfection.

An important measure of the effectiveness of treatment is the assessment of the water quality throughout the treatment process and the quality of the final water leaving the works.



Figure 2 - 2 DAF Cell Sludge Blanket



Figure 2 – 3 Backwashing a Filter

In Table 2 – 2, results are outlined for two sets of parameters that are used to assess the effectiveness of water treatment processes: process control parameters; and disinfection parameters.

Table 2 –2 Water Quality at Water Treatment Works, 2025

Parameters	Place of Sampling	Number of Tests in 2025	Number of Tests not Meeting the Standards in 2025	% of Tests Meeting the Standards	
				2025	2024
Process Control Parameters					
Aluminium	WSZ	2139	8	**99.63**	99.95
Trihalomethanes	WSZ	503	7	**98.61**	99.17
Disinfection Parameters					
Coliform bacteria	WTW	6200	7	**99.89**	99.78
E. coli	WTW	6200	0	**100**	99.97
Turbidity	WTW	6199	9	**99.85**	99.86
Indicator Parameter					
Clostridium perfringens	WTW	236	0	**100**	100

WSZ = Water Supply Zone (consumer tap sample)

Process Control Parameters

Process control parameters are used to measure the effectiveness of treatment and are based on a selection of chemical parameters relevant to the processes in place at the water treatment works.

In 2025, results from the compliance monitoring programme, shown in Table 2 – 2, reported non-compliances for both process control parameters; Aluminium and Trihalomethanes (THMs).

Aluminium

Aluminium compliance, measured at consumers' taps, declined in 2025, to the second lowest compliance in the last five years with eight regulatory contraventions (0.37%) compared with one (0.05%) in 2024. Figure 2 – 4 shows Aluminium compliance levels over the past five years.

Operational sample results, together with data from online monitors and alarms, often identify elevated aluminium levels at a water treatment work before treated water enters the distribution system. In many cases, NI Water's early remedial actions prevent, or reduce the impact of, water quality events.

In 2025, there were two Significant events at individual WTWs associated with elevated aluminium levels, as detailed in Annex 2. This represents an improvement from 2024, when ten Significant events occurred across three water treatment works. Five of the 2024 events were linked to Drumaroad WTW, compared with none in 2025. This improvement may be attributed to work undertaken by NI Water and completed in 2025 to improve Aluminium compliance (see Enforcement Action in Annex 4). One Significant aluminium event in 2025 was associated with Killylane WTW, where treatment performance studies are continuing to support improved compliance. Although these events do not always directly coincide with regulatory contraventions at consumers' taps, they can contribute to aluminium accumulation in the distribution system and result in contraventions at a later date. This is reflected in the increase in regulatory Aluminium contraventions recorded in individual water supply zones in 2025.

Overall, the reduction in Significant aluminium events at water treatment works is encouraging; however, the decrease in regulatory compliance in 2025 shows that continued improvement is needed. NI Water should continue to review operational practices at its water treatment works and take appropriate action to sustain or improve compliance. Planned treatment process improvements at water treatment works identified for funding through the PC21 Price Control process should support better Aluminium compliance over the next two years.

Trihalomethanes (THMs)

THMs are disinfection by-products that form when naturally occurring organic substances react with chlorine, which is added to disinfect water and make it safe to drink. THM non-compliance can arise from several factors, including raw water quality, water treatment work performance, network condition and the length of time water remains in the distribution system (residence time). Effective, well-managed treatment processes reduce organic substances in final waters, which are directly linked to THM formation.

In 2025, THMs recorded the lowest compliance of all regulatory parameters, at 98.61%, due to seven non-compliant samples. This was the second-lowest THM compliance result in the past five years, as shown in Figure 2 - 4. THM levels are known to increase within the distribution system, with contraventions often occurring at or near network extremities. The water supply zone associated with Altnahinch WTW had the lowest zonal compliance, with four regulatory THM contraventions in 2025. DWI added Altnahinch WTW to the risk-based technical audit programme and conducted an audit of this works in November 2025; the findings are being managed through the technical audit process.

In addition to regulatory contraventions, elevated THM levels just below the regulatory limit were recorded in several water supply zones during 2025. To maintain and improve THM compliance, NI Water must ensure that treatment processes at water treatment works are

consistently optimised for organics removal. It should also manage service reservoir storage levels carefully and maintain the distribution network adequately to control THM formation. Continued improvement through NI Water's THM reduction programmes should help reduce the risk of future THM contraventions at consumers' taps.

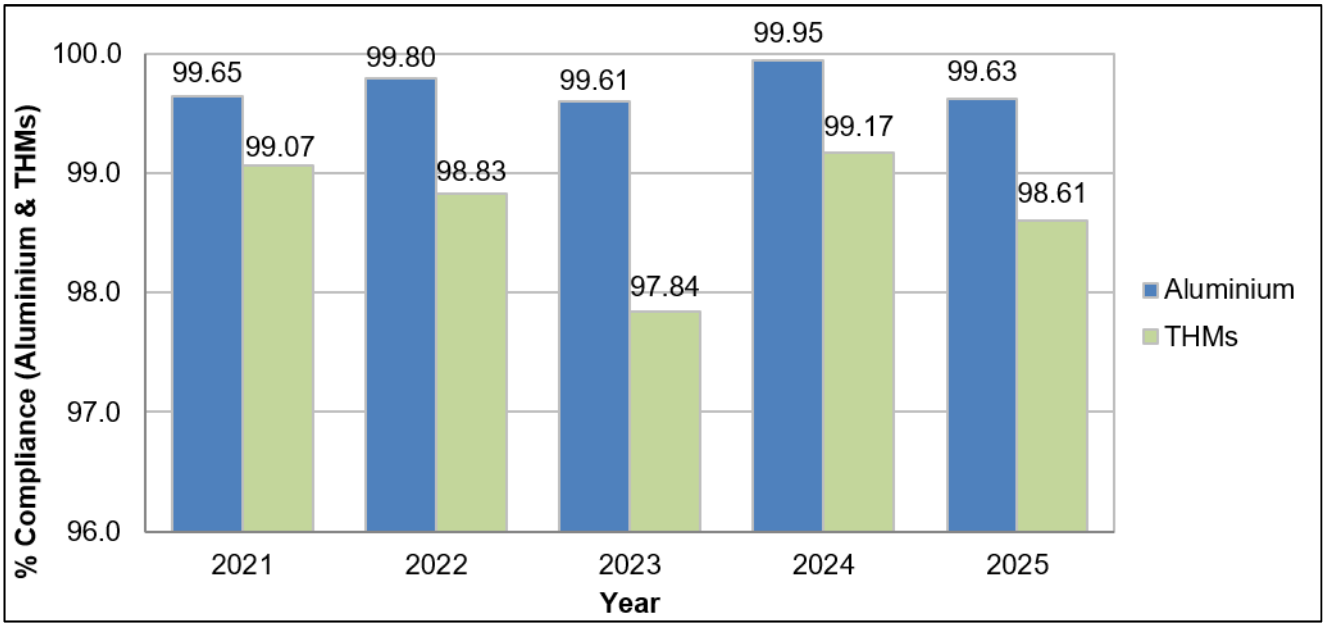


Figure 2 – 4 Percentage Compliance for Aluminium and THMs at Consumer Taps, 2021–2025

Disinfection Parameters

The parameters Coliform bacteria, *E. coli* and Turbidity, shown in Table 2 – 2, indicate the effectiveness of disinfection and pathogen removal. Effective disinfection is essential to protect consumers from microbiological risks in drinking water. Testing for *E. coli* and Coliform bacteria at water treatment works provides assurance that treatment is adequate and that safe, clean drinking water is being supplied. In 2025, NI Water reported 100% compliance for *E. coli* and 99.89% compliance for Coliform bacteria at its water treatment works, compared with 99.97% and 99.78%, respectively, in 2024. Coliform bacteria compliance improved in 2025, with seven contraventions at four water treatment works, compared with 14 contraventions in 2024. Four of the 2025 contraventions related to unrepresentative sample collection at Dunore Point WTW.

Turbidity is caused by fine suspended particles in water and must be reduced to below 1 NTU to ensure effective disinfection. Compliance with the Turbidity standard decreased slightly in 2025, to 99.85% from 99.86% in 2024. Nine Turbidity contraventions occurred at three water treatment works in 2025. Seven of these were at Moyola WTW, where an associated water quality event (Annex 2) was assessed as Significant due to unrepresentative sample collection.

Figure 2 – 5 shows five-year compliance trends for disinfection parameters. Coliform bacteria compliance improved in 2025, and Turbidity compliance remained broadly similar to 2024; however, compliance over the past two years has been at its lowest level in the five-year period. Investigations found that this was primarily due to environmental contamination within NI Water's Gelvin Grange laboratory in 2024 and a series of unrepresentative sample collection issues in 2025. DWI emphasises the importance of representative sample collection and analysis to ensure that drinking water quality is monitored effectively.

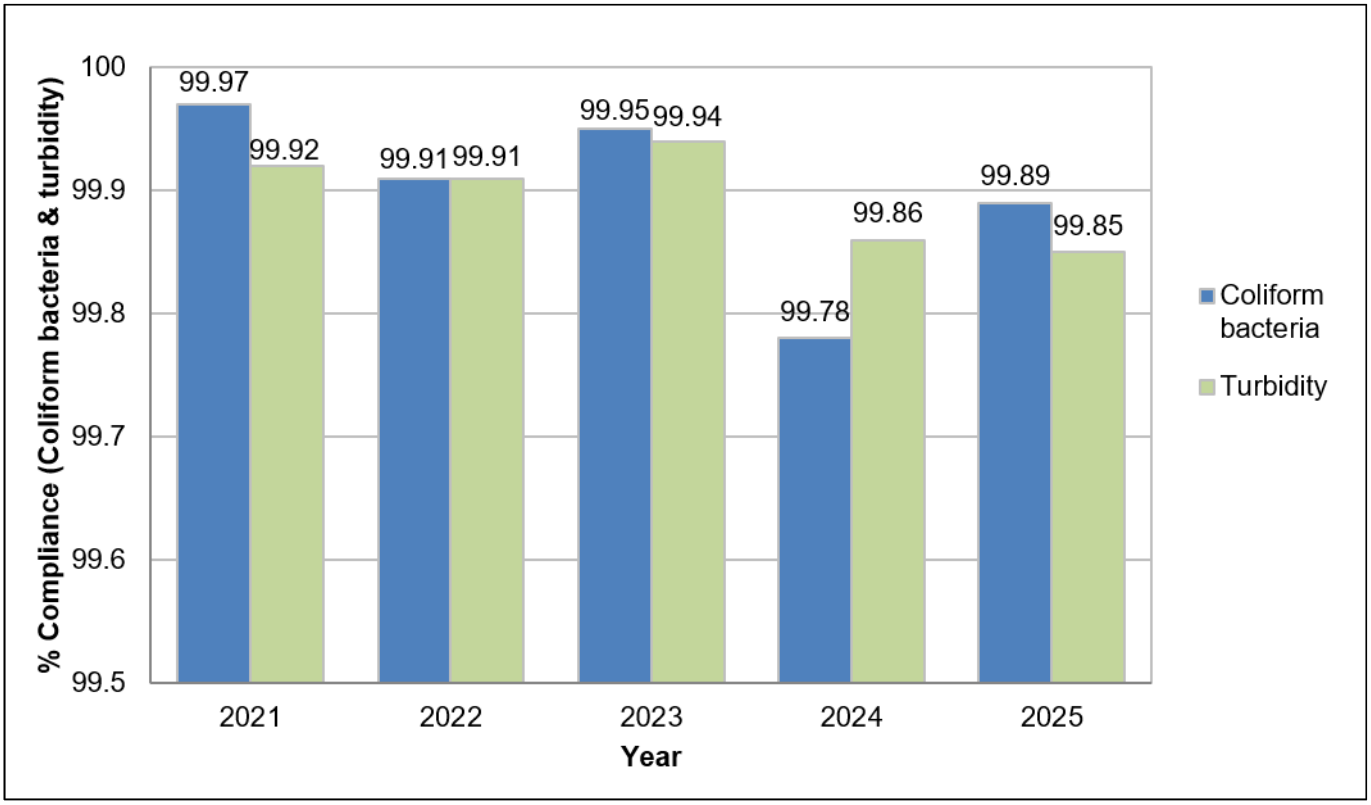


Figure 2 – 5 Percentage Compliance for Coliform bacteria and Turbidity at WTWs, 2021–2025

Indicator Parameter

Clostridium perfringens

Clostridium perfringens can be used in association with other parameters to assess the effectiveness of the water treatment processes. This organism is a spore-forming bacterium that is exceptionally resistant to unfavourable conditions in the water environment such as extremes of temperature and pH; and disinfection by chlorination.

In 2025, for the fourth year in a row, full compliance was achieved for *Clostridium perfringens*.

Distribution

The water distribution network in Northern Ireland is extensive, consisting of 288 service reservoirs and 27,265 km of mains pipe. Water mains transfer drinking water from the water treatment works to service reservoirs and onwards to the consumer. The volume of water in service reservoirs is carefully managed throughout each day to ensure an adequate supply is always available at consumers' taps.

In Table 2 – 3, two measures are used to assess the water quality within a distribution system: reservoir integrity and distribution networks.

Table 2 – 3 Water Quality Indicators within the Distribution System, 2025

Parameters	Place of Sampling	Number of Tests in 2025	Number of Tests not Meeting the Standards in 2025	% of Tests Meeting the Standards	
				2025	2024
Reservoir Integrity					
Coliform bacteria	SR	14908	14	**99.91**	99.82
E. coli	SR	14908	0	**100**	100
Distribution Networks					
Turbidity	WSZ	2144	1	**99.95**	100
Iron	WSZ	2139	9	**99.58**	99.02
Manganese	WSZ	2139	3	**99.86**	99.90

Service Reservoirs

Samples are collected weekly at every service reservoir in Northern Ireland. One such service reservoir is shown in Figure 2 – 6. It is a regulatory requirement that at least 95% of samples collected annually from each reservoir are free from Coliform bacteria. The 288 reservoirs sampled in 2025 all met this requirement.

Figure 2 – 7 shows Coliform bacteria compliance was 99.91% in 2025, an increase compared to 99.82% recorded in 2024. Coliform bacteria were detected on 14 occasions at different service reservoirs, compared to 26 occasions at different service reservoirs in 2024.



Figure 2 – 6 Service Reservoir

E. coli was not detected at any service reservoir in 2025 as in 2024.

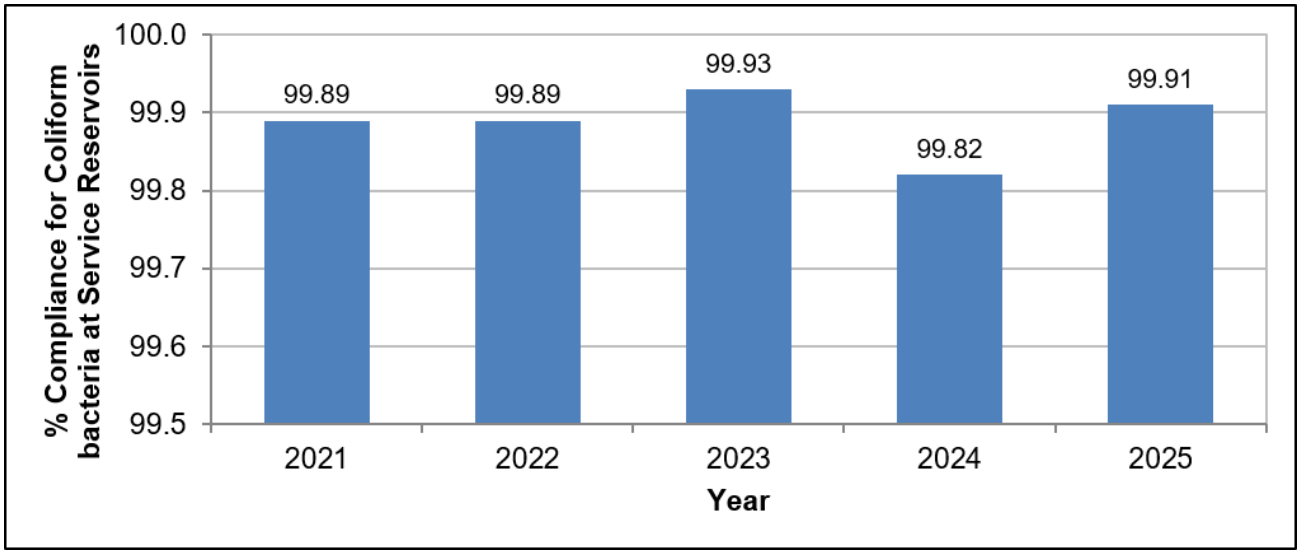


Figure 2 – 7 Percentage Compliance for Coliform bacteria at Service Reservoirs, 2021 - 2025

Water Mains

In 2025, a total of 2,139 samples collected from consumers' taps were tested for Iron and Manganese and 2,144 samples for Turbidity. Of these, 9 (0.42%) contravened the regulatory standard for Iron of 200 µg/l. This demonstrates an increase in compliance over 2024 when there were 20 (0.98%) contraventions reported as illustrated in Figure 2 – 8. There were three (0.14%) contraventions of the regulatory standards for Manganese (50 µg/l), one more than 2024, and one contravention of the Turbidity standard (4 NTU) in 2025, following 100% compliance in 2024.

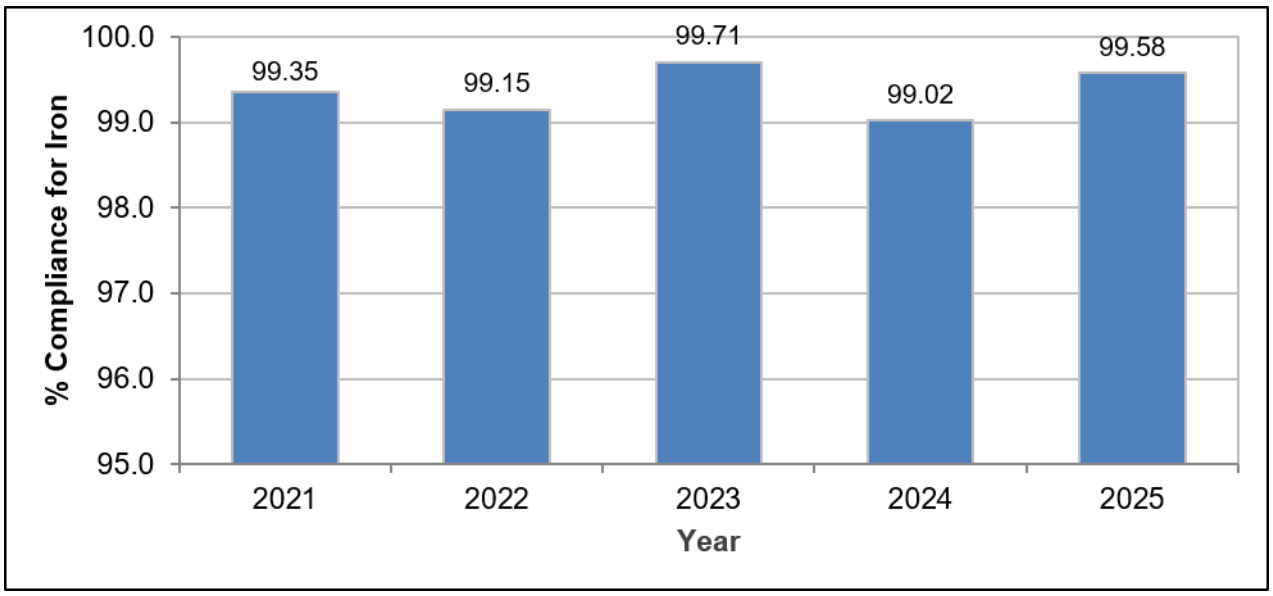


Figure 2 – 8 Percentage Compliance of Iron in Distribution, 2021 – 2025

Many of the mains delivering water to consumers' taps are made of cast iron and the deterioration of older mains may result in consumers receiving discoloured drinking water due to the presence of iron and manganese. NI Water has an ongoing Water Mains Rehabilitation Programme (WMRP), and this enables corrective action to be taken on a priority basis to improve the water quality being supplied to consumers. For a second consecutive year, NI Water reduced the outputs of their WMRP in 2025 due to financial constraints. However, rehabilitation of mains associated with water quality issues continued to be prioritised. New mains are also installed or upgraded as required for new developments. A typical new mains installation is shown in Figure 2 – 9.



Figure 2 – 9 New Mains Installation

Events and Risk Management

Drinking Water Quality Events

NI Water informs DWI of events that have affected, or are likely to affect, drinking water quality or sufficiency, including any potential risk to consumers' health. DWI assesses each event and assigns it to one of five severity categories: Not Significant, Minor, Significant, Serious or Major. Lessons should be learned from all events and any necessary remedial action completed. For events categorised as Significant or above, the risk assessments for the relevant water supply system must be reviewed.

In 2025, NI Water reported 49 events to us. We categorised one as Major, three as Serious, 14 as Significant, nine as Minor and 22 as Not Significant.

In January 2025, two weather related events disrupted drinking water supplies. A Serious event related to a period of freezing temperatures and thaw, which caused burst mains across the network. A Major event was linked to Storm Éowyn, when a red weather warning for severe winds across Northern Ireland disrupted electricity and telecommunications services and damaged NI Water infrastructure. NI Water used advanced planning and substantial resources, including generators, bottled water distribution and asset to asset tankering, to restore supplies and limit the impact on consumers and drinking water quality.

Two further Serious events involved increased levels of consumer contacts. One occurred in the Glenhordial WTW supply area, Omagh, where contacts were received relating to the taste and odour of the mains water supply; most likely caused by a change in raw water quality. The other involved discoloured water complaints in the Cam SR supply area, Garvagh, with associated metals and Turbidity contraventions; most likely due to scouring of the main following a telecommunications fault.

In 2025, there were nine Significant events at seven water treatment works: Caugh Hill, Moyola, Carran Hill, Seagahan, Altnahinch, Killyhevlin and Killylane. Most were due to inadequate treatment or treatment difficulties including chemical dosing issues, chemical batch problems and equipment faults. Three of these events related specifically to THM contraventions in the Killyhevlin, Altnahinch and Caugh Hill WTW supply areas. One event related to the individual pesticide MCPA at Seagahan WTW, and another to unrepresentative sampling at Moyola WTW.

Three Significant events related to the distribution network, where burst mains or network operations resulted in discoloured water, chemical parameter contraventions or supply disruption. One further Significant event involved a combination of issues, including internal fittings and low residual chlorine following a burst main. This resulted in recurrent Coliform bacteria contraventions and, following advice from the Public Health Agency, a 'Boil Water Before Use' notice was issued.

It should be noted that following advice from the Public Health Agency, 'Do Not Use for Drinking or Cooking' or 'Boil Water Before Use' notices were also issued for seven Not Significant events relating to single domestic properties. Three related to petrochemical odours, most likely caused by domestic heating oil spills or leaks. The remaining four related to Coliform bacteria contraventions, where internal property issues such as tap fittings were identified as the cause.

Annex 2 provides further details on the Major, Serious and Significant water quality events reported in 2025.

Risk Management

As part of the drinking water safety plan (DWSP) approach, NI Water must carry out a “source to tap” risk assessment for each water supply system, covering the catchment, abstraction point, treatment process, storage system and consumer tap. The assessments must be kept under review, to ensure ongoing risks are adequately controlled, and any new or emerging risks are properly identified. We monitor these plans to ensure, where risks are identified, there are control measures in place to ensure the protection of public health. There are 24 risk assessments in place covering all of NI Water’s drinking water supplies.

Asset health is essential to protecting drinking water quality. Demonstrating the integrity of treated water storage and post treatment assets, including service reservoirs, is vital. NI Water maintains these assets through a planned cleaning and inspection programme, under which tanks are scheduled for cleaning on a rolling five-year cycle. Risk areas identified through this programme, such as asset condition, structural defects or history of microbiological failures, are prioritised for maintenance and service reservoir rehabilitation.

Regulatory Control

The Technical Audit Process

DWI conducts a risk-based technical audit programme to assess NI Water’s compliance with statutory obligations and best practice. The recommendations arising from these technical audits form part of the risk management approach for protecting drinking water supplies. Eight technical audits were completed in 2025. For three of these audits, DWI was accompanied by inspectors from the Drinking Water Quality Regulator in Scotland as part of a shared learning and benchmarking exercise. A summary of the 2025 Technical Audit Programme is detailed in Annex 3.

Enforcement Action

Protecting, maintaining and improving drinking water supplies requires the continued delivery of improvements by NI Water. NI Water’s capital and operational investment needs are managed through the Price Control (PC) Process. The PC21 (2021 - 2027) investment programme, which commenced in April 2021, was ongoing throughout 2025. DWI, alongside other stakeholders, continued to monitor the delivery of the agreed PC21 outputs associated with drinking water quality drivers.

Although it is better to be able to plan improvements through the PC process, there are occasions when it is necessary for DWI to take enforcement action against NI Water to secure compliance and protect public health.

During 2025, three Regulation 31(4) Notices issued under The Water Supply (Water Quality) Regulations (Northern Ireland) 2017 (the Regulations) were revoked following completion of improvement works. Additionally, three Warning Letters were issued to NI Water in relation to water quality events in 2024.

The details of these enforcements are contained in Annex 4.

DWI monitors the progress of major capital improvement projects associated with enforcement Notices through site visits and regular engagement with NI Water.

NI Water completed treatment improvements at Ballinrees WTW (circa £17.5m) to comply with two Notices issued by DWI in 2020 in relation to the individual pesticide MCPA and Taste and Odour contraventions.

NI Water also completed work at Drumaroad WTW to address a third Notice, issued in July 2021 following non-compliances with the Aluminium standard. This Notice required treatment improvements to be in place by September 2025 to achieve compliance with the regulatory standard for Aluminium.

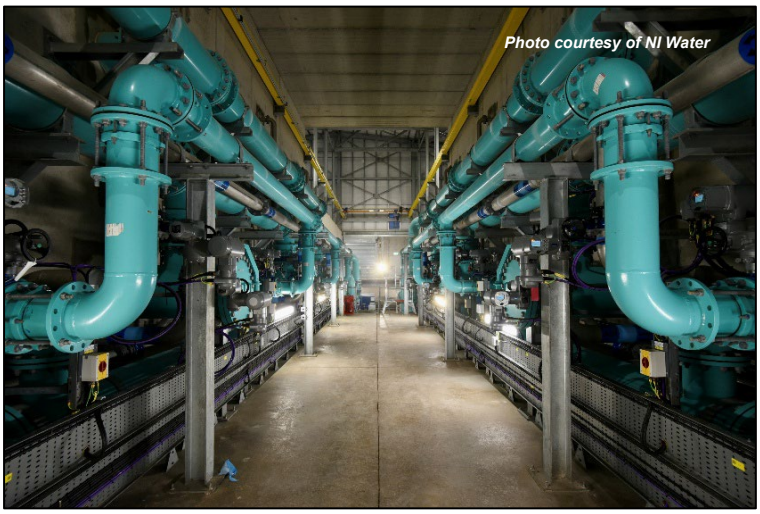


Figure 2 – 10 New Pipework Installed as part of Treatment Improvements at Ballinrees WTW

Following completion of the works, DWI assessed the evidence provided by NI Water and was satisfied that the new treatment improvements achieved compliance with the regulatory requirements. Consequently, all three Notices were revoked in 2025.

Future Investment in Drinking Water Quality

DWI will continue to work collaboratively with stakeholders throughout the remainder of the PC21 period to ensure that the agreed drinking water quality outputs are delivered. Risks identified through NI Water's Drinking Water Safety Plans (DWSPs) will be used to inform the development of proposals for the next Price Control process, PC28, for which preparatory work continued throughout 2025.

In identifying the capital investment needs, NI Water will continue to assess the most effective treatment solutions through the use of pilot plants. Pilot plants can mimic the existing treatment process and identify potential improvements. This approach increases the probability that a selected process will be effective on the actual water treatment work itself. It also helps to identify more carbon neutral solutions for water treatment, thereby contributing to the company’s net zero targets. We fully support this approach and will continue to work closely with NI Water to contribute to climate change targets.

Despite the challenges ahead, the provision of safe, wholesome drinking water to consumers remains paramount. It is therefore essential that the quality, safety and resilience of drinking water is not compromised, and that the protection of public health remains a key priority for NI Water.

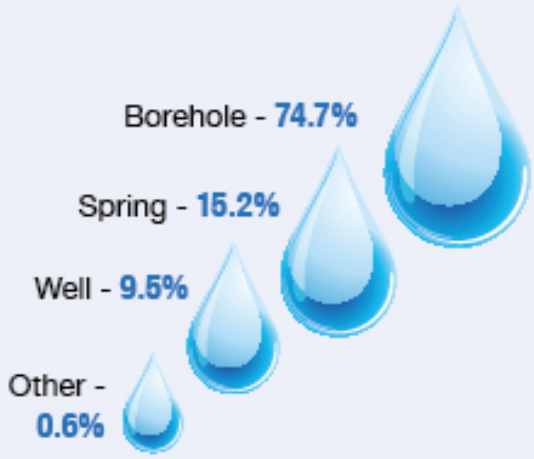
Section 2
Private Water Supplies



Image: Private Water Supply Well Source

Private Water Supplies
2025 Key Facts

Private Water Supply Sources



Register

178 Registered PWS Sites

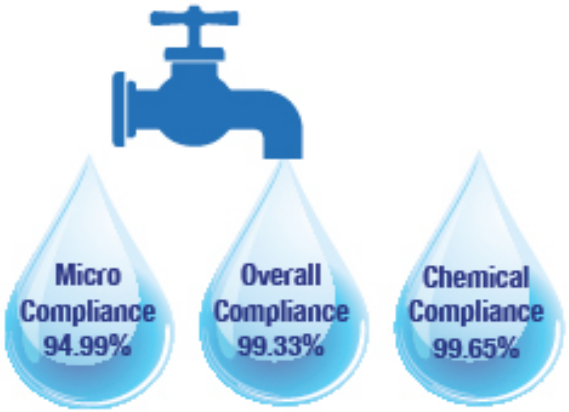
85% Commercial / Public

15% Small Shared Domestic

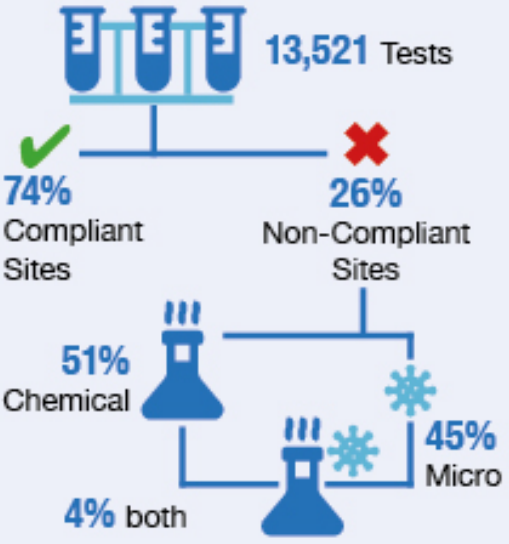


9 new sites added
6 sites removed

% Compliance



Monitoring Programme



Actions

Restrictions	Training	Risk Assessments	Sampling	Advice
Applied at **12** sites Removed at **12** sites	**41** local Environmental Health staff trained	**50** site risk assessments completed / updated	**99.10%** of scheduled samples collected	Responded to **223** queries

Section 2

Private Drinking Water Supplies

Over 99% of the Northern Ireland population is supplied with potable drinking water through a NI Water network of public water mains. If a water supply is separate from NI Water mains, these are classified as private water supplies. Included are those found in remote areas with no access to mains water or in urban areas where businesses opt to use water not provided by NI Water. The geographical extent of the NI Water mains water supply network, and subsequently the areas which cannot avail of this service, is shown in Figure 1 - 1. Properties using private water supplies outside of the NI Water mains network are typically but not exclusively domestic properties.

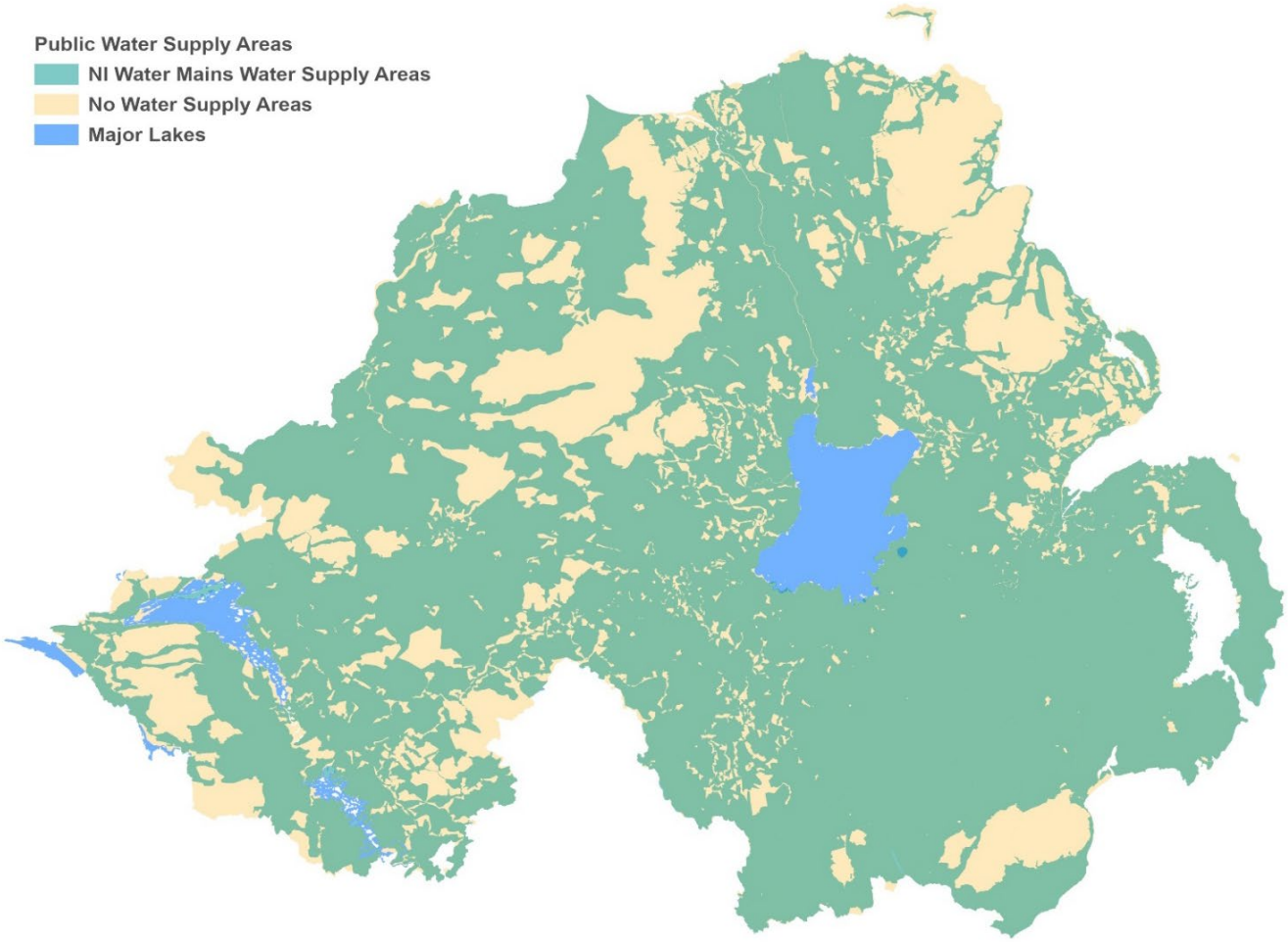


Figure 1 – 1 NI Water Mains Water Supply (and no water supply) Areas

Given the proportion of potable water supplied across Northern Ireland by NI Water, consumers may assume the water they are drinking is from the public water supply. However, although the percentage of the population directly served by a private supply is relatively small, many more people are exposed to water from private supplies through its use in both commercial activities and public buildings. Even if a public water supply is available, some businesses prefer to utilise groundwater as a sustainable and more economically viable option.

Private water supplies can be the sole water supply, used alongside, or blended with the public water supply depending on the nature of operations at the site. In some circumstances, a particular composition of water is required as an ingredient for a food product, or a volume is

required which is beyond the supply capacity of the existing mains water network. Private water supplies are found at a range of sites such as:

- food and drink manufacturers;
- public buildings including hospitals, workplaces and universities; and
- within the hospitality industry such as hotels, restaurants, and tourist accommodation.

Register of Supplies

Under The Private Water Supplies Regulations (Northern Ireland) 2017, the Drinking Water Inspectorate (DWI) is required to maintain a register of private water supplies serving more than one domestic dwelling / commercial premises / public buildings for domestic purposes or the production of food / drink for human consumption. In addition, specific requirements are laid down in relation to monitoring to be performed on each supply. There were 178 private water supplies on our register in 2025 which required appropriate monitoring under the Regulations. The categories of these supplies are presented in Figure 1 – 2.

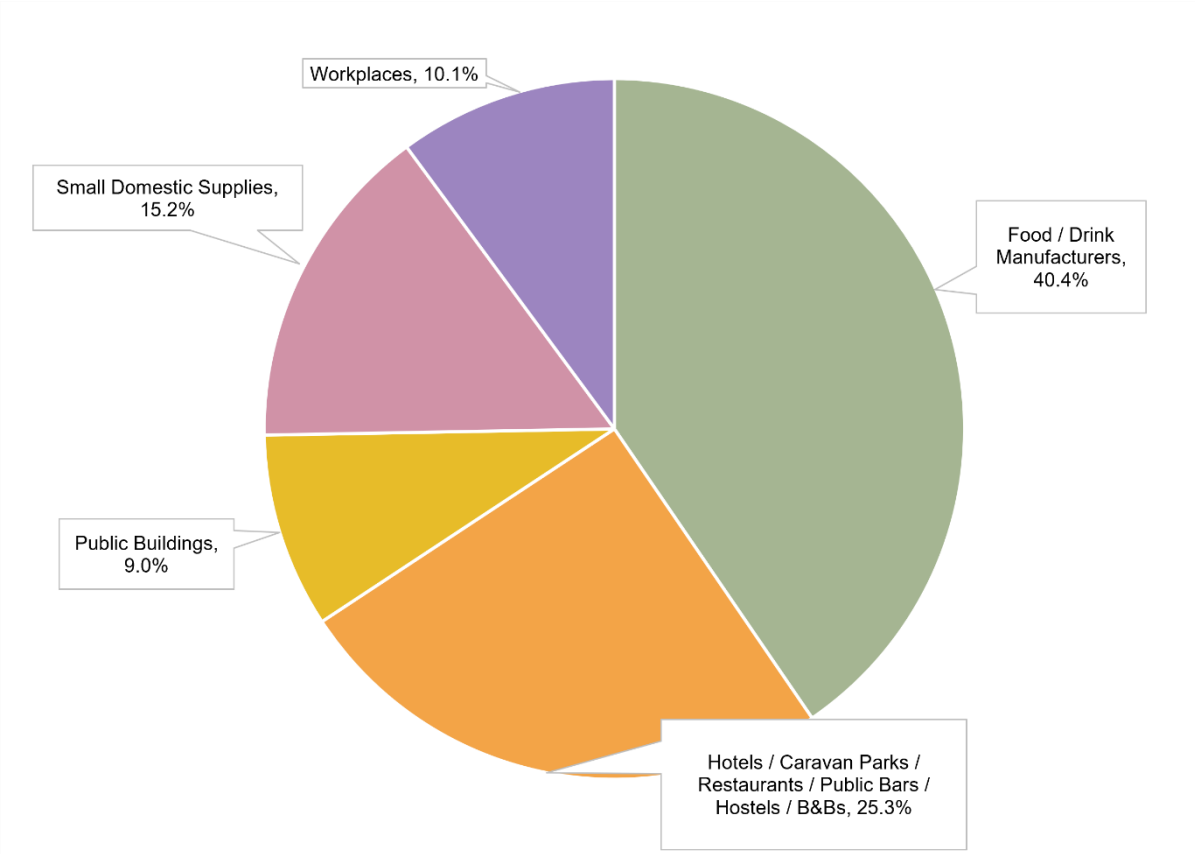


Figure 1 – 2 Categories of Registered Private Water Supplies in Northern Ireland in 2025

A large number (estimated to be in the region of 1,200) of private water supplies serve single domestic dwellings which are not required to be monitored under the Regulations. These supplies are sampled by the Environmental Health Departments of local councils on request from owners / users. In 2025, DWI commenced a project to confirm the location and status of these single domestic properties reliant on a private water supply and to assess the quality and sufficiency of their water sources. Further detail is provided later in this section of the report.

A private water supply may be drawn from either surface or groundwater sources. A surface source may be a stream, river or reservoir while groundwater sources can include boreholes, springs and wells. In 2025, 99.4% of registered private supplies in Northern Ireland were from groundwater sources, with boreholes representing the most common source type. Following professional site assessment, sizing, installation and testing, a borehole can be expected to provide a sustainable yield of groundwater throughout the year.

Monitoring of Supplies

Under Regulations 9 and 12, DWI has a duty to conduct an annual sampling programme for all registered supplies. Variations in sampling frequency and range of parameters analysed are determined by the volume of water used and the type of the supply, i.e. commercial, public or domestic. DWI staff do not collect samples directly, rather a service level agreement is in place with local councils whereby Environmental Health Departmental staff conduct sampling activities on our behalf. The Inspectorate has an established training programme to ensure consistent and representative sample collection by Council sampling officers. Staff are only authorised to collect samples after completing the required training and being issued with an appropriate warrant card. The 2025 sampling programme included premises using private water supplies in all 11 council areas and consisted of 178 registered sites.

Of the 178 registered private water supplies for monitoring in 2025, 85% were commercial or public supplies and 15% were small shared domestic supplies (groupings of two or more houses). This represents no change in the proportions of supply types from 2024. A breakdown of the numbers and sizes of private water supplies in 2025 is shown in Table 1 – 1.

Table 1 – 1 Numbers and Types of Private Water Supplies in 2025

Types of Private Water Supplies Volume (m^3/day)	Number of Supplies	Frequency of Sampling (per annum)
(i) Commercial / Public Supplies		
> 1000 ≤ 2000	2	10
> 100 ≤ 1000	22	4
> 10 ≤ 100	50	2
≤ 10	77	1
(ii) Small Domestic Supplies (two or more dwellings)		
≤ 10	27	1
Total	**178**	

The number of sites monitored by the Inspectorate under the regulations can fluctuate during any calendar year and across years. Sites may cease or alter the use of their private supplies resulting in the criteria for registration and monitoring not being met. During 2025, six sites were removed from the sampling programme (i.e. no longer used for human consumption or in food production or no longer required monitoring under the regulations).

During the same period, an additional nine new supplies were registered with us, these were:

- six food / drink manufacturers;
- one holiday accommodation premises;
- one workplace and;
- one hospitality premises.

At the start of each calendar year, the required monitoring frequency and extent (i.e. the number of parameters analysed in each sample) are determined based on the type of supplies registered with the Inspectorate and the requirements of the regulations. An annual review of historic monitoring data is also undertaken to determine whether individual parameters can be removed from the monitoring programme for a defined period. This is only considered where there is sufficient evidence to demonstrate that the parameter is unlikely to exceed the regulatory parametric value. As supplies may be added to or removed from the register throughout the year, the final number of analyses undertaken may differ from that initially forecast.

Where a supply has switched to the public mains supply, or the private supply has otherwise not been used for a period during the year, the required regulatory monitoring frequency may be reduced accordingly. For example, where a site requiring four samples per year is supplied by the mains for three months, only three regulatory samples would be required. In 2025, three sites were sampled at a reduced frequency due to the use of mains water. One site required three samples instead of four, while two sites did not require their annual sample as mains water was used throughout the year.

In 2025, 393 samples were collected from registered private water supplies, including compliance, resample, enhanced, and investigative samples. A total of 16,100 determinations were scheduled, of which 15,955 (99.1%) were completed, leaving 145 scheduled determinations not analysed across all monitored sites. This represents a shortfall of 0.90% in the delivery of the annual regulatory monitoring programme for 2025. Of the determinations completed, 13,521 were used for compliance monitoring purposes.

Although the sampling frequency for compliance monitoring is set within the regulations, additional samples are often collected throughout the year as part of follow-up on regulatory contraventions. Where circumstances warrant further investigation, we support site owners through supplementary sampling to help identify the cause of a water quality issue or to confirm that corrective actions have been effective. In addition, sites may be placed on an increased sampling frequency for a defined period where monitoring indicates that particular parameters present a risk to the supply. During 2025, a total of 45 such samples were collected. The results of analyses from these samples are not included in the calculation of overall compliance for private water supplies.

A breakdown of registered supplies in Northern Ireland in 2025, categorised by size, is shown in Figure 1 – 3. The distribution of all monitored supplies can be found on the DAERA Drinking Water Inspectorate Private Water Supplies Viewer.

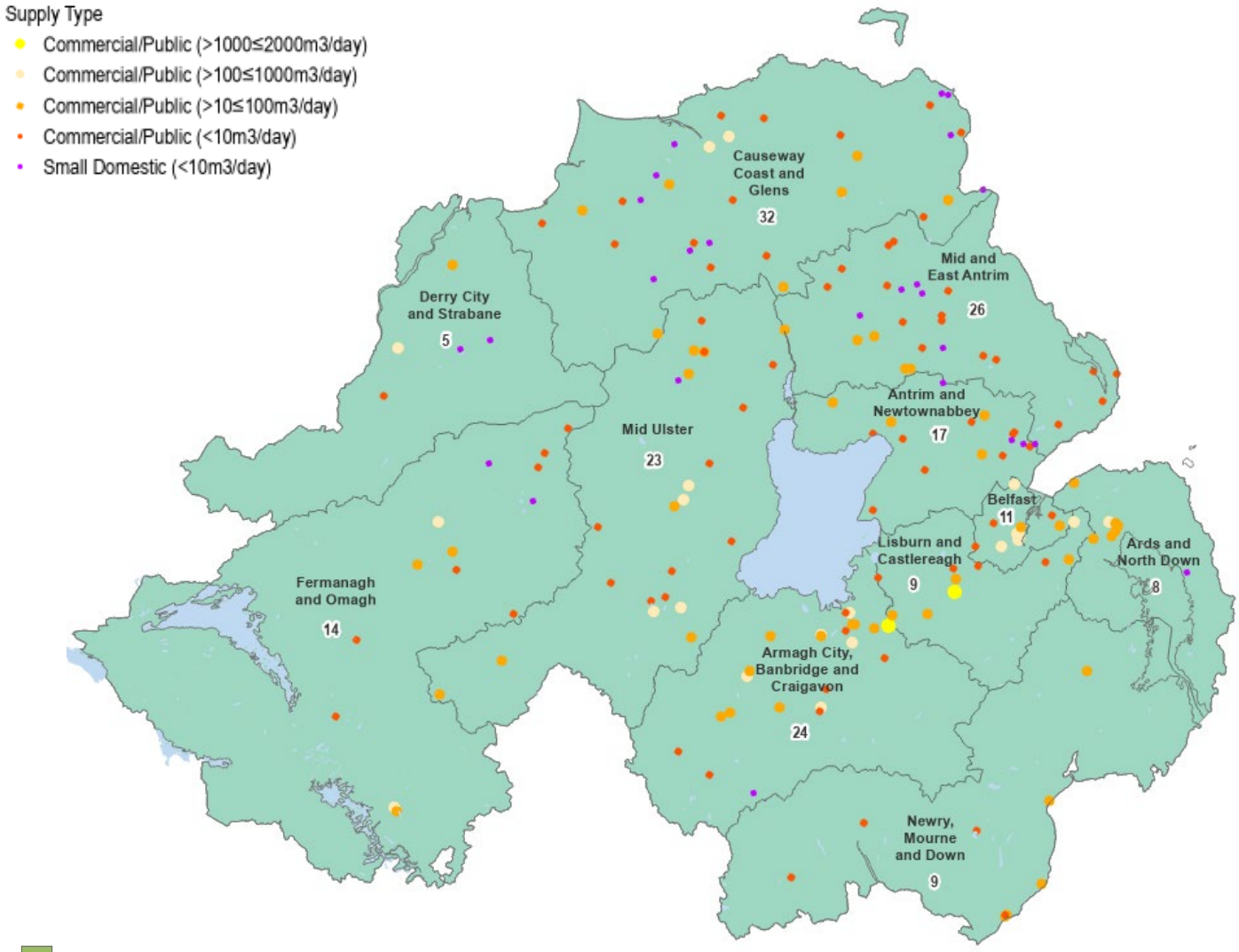


Figure 1 – 3 Distribution of Private Water Supplies by Council Area in 2025

Risk Assessment

The Regulations require a risk assessment to be carried out for each registered supply to identify where there may be potential risks to the water quality. This assessment includes the whole private water supply system, from its source to the point where the water is used, incorporating any storage or treatment systems. These assessments are required to follow the same standard (BS: EN 15975-2:2013[1]) as is used for the risk assessment of the public water supply.

The risk assessments of private water supplies are undertaken by Environmental Health Departments of local councils, acting on our behalf who input the findings onto a web-based application, developed by DWI, to record the risk assessments. This web-based application helps ensure consistency of approach across supplies regardless of nature of use, volume used or treatment present.

[1] BS: EN 15975-2: Concerning security of drinking water supply, guidelines for risk and crisis management

Each Environmental Health staff member can only risk assess a private water supply once they have completed the relevant training provided by us. This training details the principles of risk assessment (including likelihood, severity and risk scores) and an overview of the process and information required before summarising in a suitable case study. As required, DWI attend site and / or assist the Environmental Health staff with the written completion of the assessment. Upon completion, the Environmental Health staff present the initial assessments to DWI who then review, verify and finalise the assessment.

A total of 10 risk assessments of private water supplies were completed on the web application in 2025, with a further 17 updated and awaiting review by us. The information gathered through the risk assessment process is used by DWI to provide sites with an action plan to mitigate identified risks and to assist sites with the ongoing management of their water supplies. It can also be used to fine-tune the monitoring programme for each site as it can identify additional analysis which may be required to monitor a risk or reduce the need for specific analysis where there is no risk to drinking water quality.

As required under the regulations, risk assessments must be reviewed at least every five years and, if necessary, reviewed and updated where there has been a deterioration of the quality of water or a modification to, or extension of, the supply system. To facilitate these reviews, DWI issued a prioritised list to each Council area, together with a six-month timeframe for completion of the required risk assessments. In 2025, 69 sites required their five-year review, of which 23 were completed. The shortfall was primarily due to resource constraints and competing operational priorities. Engagement with site owners continued throughout the year to develop and implement action plans arising from risk assessments, to reduce the risks to the quality of these water supplies.

Overall Drinking Water Quality

Comparable water quality standards are applied to both private and public water supplies in Northern Ireland through appropriate drinking water regulations. The regulations allow a reduced monitoring frequency for some parameters where certain criteria are met, and a risk assessment confirms there is no risk to human health. This flexibility was introduced in 2021, with a large set of parameters being placed on a reduced monitoring frequency. As with risk assessments, a periodic review of parameters subject to reduced monitoring is undertaken on a five-year cycle. Consequently, supplies for which monitoring frequencies were reduced in 2021 are due a full review of all parameters in 2026. Given the number of supplies affected, this review programme has been phased over a 12 to 18-month period, commencing in late autumn 2025 and continuing throughout the 2026 monitoring year.

The results in Table 1 – 2 show that, out of a total of 13,521 compliance tests carried out in 2025, 99.33% met the regulatory standards, a notable increase from 99.12% reported for 2024. The regulatory requirements were not met on 91 occasions for 15 parameters, namely: Coliform bacteria; *E. coli*; Enterococci; *Clostridium perfringens*; Manganese; Hydrogen Ion (pH); Sodium; Iron; Sulphate; Ammonium; Nickel, Bromate, Lead, Turbidity and Radon.

Table 1 – 2 Overall Water Quality in Private Water Supplies in 2025

Parameters	Determinations in 2025		
	Total Number of Tests	Number of Tests Not Meeting the Standards	% Compliance
Coliform bacteria	301	22	92.69
E. coli	301	12	96.01
Enterococci	174	11	93.68
Clostridium perfringens	143	1	99.30
Microbiological Total	**919**	**46**	**94.99**
Manganese	270	20	92.59
Hydrogen ion (pH)	301	9	97.01
Sodium	96	1	98.96
Iron	270	2	99.26
Sulphate	69	1	98.55
Ammonium	143	1	99.30
Nickel	70	2	97.14
Bromate	86	2	97.67
Lead	76	3	96.05
Turbidity	301	2	99.34
Other parameters	10775	0	100
Chemical Total	**12457**	**43**	**99.65**
Radon	96	2	97.92
Radioactivity	49	0	100.00
Radiochemical	**145**	**2**	**98.62**
Overall Total	**13521**	**91**	**99.33**

Where a parameter has historically failed or is greater than 30% of the parametric concentration value, it is retained and its inclusion in the monitoring programme will be reviewed again on an annual basis. This annual review of monitoring requirements for each private water supply also considers the removal of parameters not detected and where there is no identified risk. In 2025, a total of 4 sites were subject to a reduction in parameters which required monitoring. This reduction is set for a period of up to five years at which point all parameters will be analysed again to re-evaluate the potential risk.

A different approach is adopted for the annual review of the radon monitoring requirements in private water supplies. The radon risk is determined independently using Public Health England and British Geological Survey data in support of our monitoring results. Where no risk is identified and results are historically stable, monitoring for radon is removed with a review to be conducted through a check sample after five years. The 'Notice of Decision' not to monitor radioactivity parameters in 2025 is published on our website.[2]

Microbiological contraventions account for 46 (50.55%) of the 91 contraventions at private water supplies in 2025. As illustrated in Figure 1 - 4, the figures represent an improvement from 94.17% in 2024 to 94.99% compliance with the microbiological standards in 2025. Although microbiological compliance remains below the levels achieved in 2020 and 2021, the gap

[2] Notice of Decision Not to Monitor Radioactivity Parameters – 2018 to 2025 | Department of Agriculture, Environment and Rural Affairs

continues to narrow. Following the decline in 2022, compliance has improved in each year from 2023 to 2025, indicating a sustained upward trend in microbiological performance over the last four years.

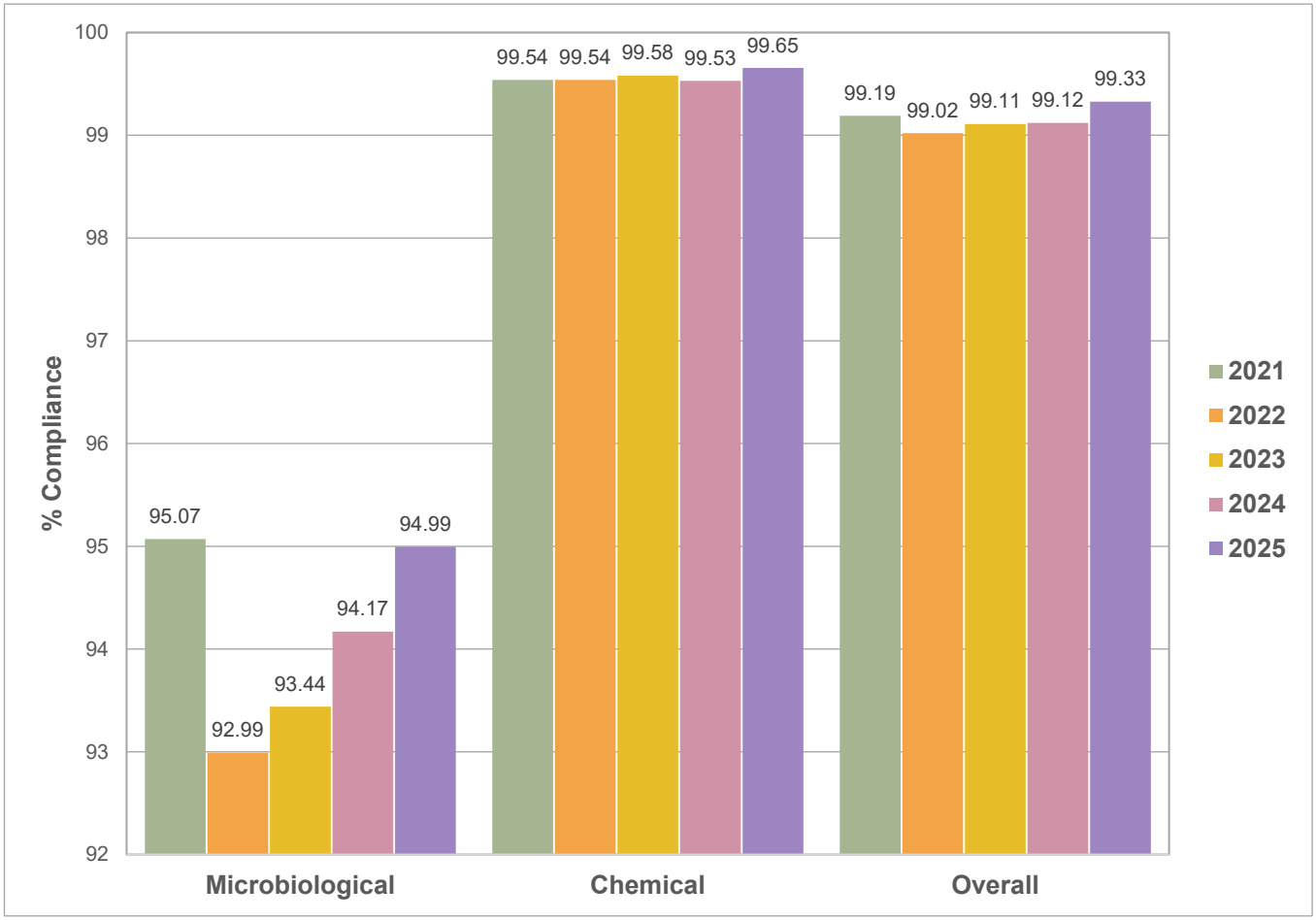


Figure 1 – 4 Comparison of Compliance in Private Water Supplies, 2021 – 2025

Contraventions of the chemical standards have been reported for a range of parameters listed in Table 1 – 2. Overall, the number of chemical contraventions in 2025 decreased to 43 from 55 in 2024. A total of 43 contraventions out of the 12,457 chemical parameters analysed provides a chemical compliance of 99.65% for 2025, as displayed in Figure 1 – 4, a marked increase from 99.53% in 2024. As with previous years, where the chemical standards have not been met, they relate mainly to Manganese, Hydrogen ion (pH), Iron, Lead, Nickel and Bromate, which together comprise 38 of the 43 recorded contraventions.

Full compliance was achieved for 74% of the private water supplies (131 sites) tested in 2025. Of the 47 sites which did not comply with the regulatory standards, 45% (21 sites) contravened only microbiological standards; 51% (24 sites) only chemical standards; and 4% (2 sites) failed to comply with both microbiological and chemical standards.

The categories of these non-compliant sites, presented in Figure 1 – 5, show that c. 96% of chemical only contraventions occurred at commercial / public sites such as food / drink manufacturers, hotels, or holiday lets. For the microbiological only contraventions, 53% were at small shared domestic supplies and 47% were at commercial / public sites. This represents a shift from 2024, when 61% of microbiological contraventions occurred at commercial / public

sites. The change indicates that a greater proportion of microbiological contraventions occurred at shared domestic supplies in 2025 compared with 2024.

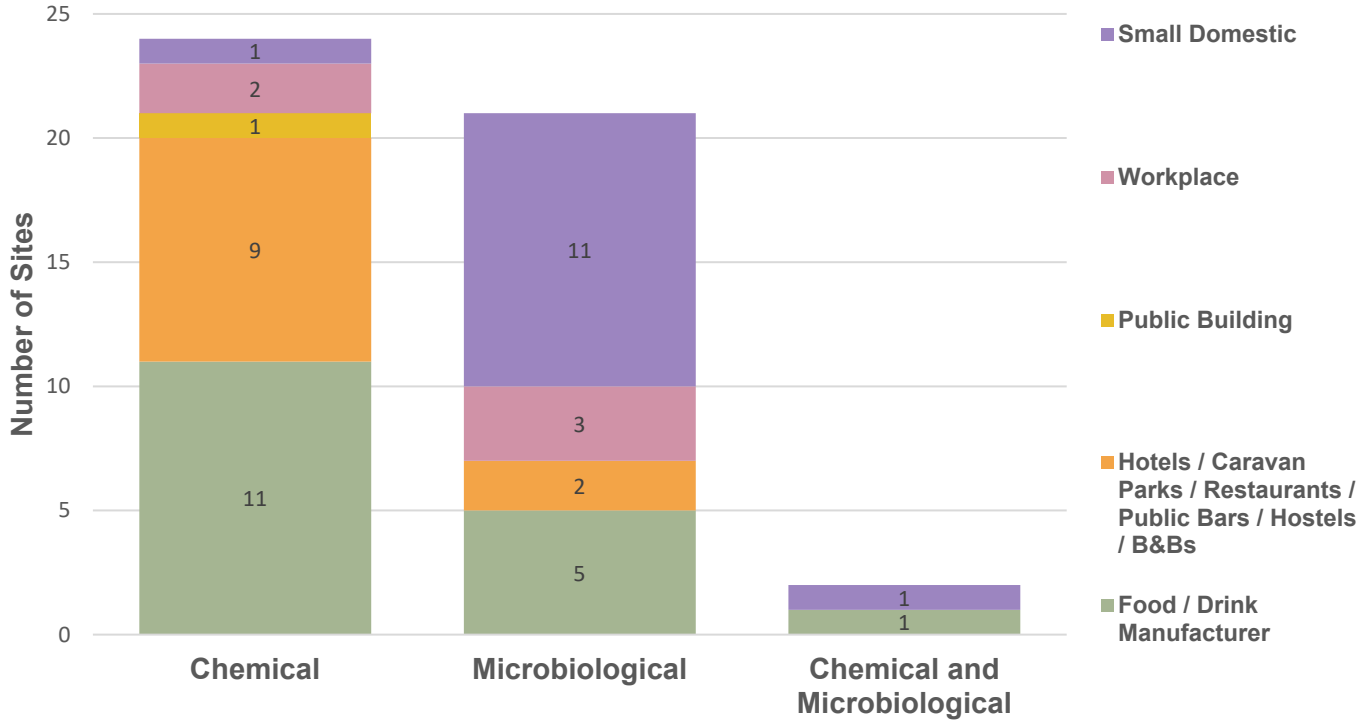


Figure 1 – 5 Categories of Non-Compliant Private Water Supply Sites in 2025

The significance of each contravention not only depends on the category or size of the sites but often, more importantly, on the purpose for which the water is used at the sites. In summary, for the 47 sites which did not comply with all the drinking water quality standards in 2025:

- 38 use the supply as the primary source of drinking water;
- eight use the supply as an ingredient in food or drink; and
- one uses the supply for personal hygiene.

Please note that some sites use their private water supply for more than one purpose.

Factors Affecting Drinking Water Quality

Different aspects of the water supply chain contributed to the microbiological and chemical water quality contraventions reported in 2025 such as: catchment (including source protection); treatment; distribution; and sampling point (tap) issues.

Monitoring of private water supplies was kept constantly under review and adapted to account for any operational changes within businesses or access restrictions at domestic dwellings. Communication with supply owners primarily focused on regulatory contraventions and how they could effectively remediate their supply to ensure the wholesomeness of the water.

Micro-Organisms

The presence of micro-organisms in a private water supply is indicative of contamination of the water either at source or at some point within the distribution system. Coliform bacteria are a broad group of micro-organisms, while *E. coli*, Enterococci and *Clostridium perfringens* are specific sub-sets of these bacteria. In particular, the detection of *E. coli* or Enterococci bacteria specifically indicates faecal contamination of a water supply and can be a risk to public health, with the former implying a recent / on-going contamination event and the latter implying an older contamination event. *Clostridium perfringens* is a further faecal indicator but is more resistant to disinfection; therefore, it typically implies a persistent historic contamination event.

Micro-organisms, as detailed in Table 1 – 2 above, were found to be present in 23 supplies during 2025: seven commercial supplies, six of which had disinfection treatment in place at time of sampling; five public supplies, three of which had disinfection treatment in place at time of sampling; and 11 shared domestic supplies, four of which had disinfection treatment in place. Typically, Enterococci was identified alongside Coliform bacteria and *E. coli* in shared domestic supplies. The identification of *Clostridium perfringens* occurred at a location known to be at risk from wildlife.

Rural water supplies in the vicinity of where animals graze or manure is spread are most at risk. This is particularly prevalent at times of heavy rainfall when water may run directly off farmland and carry micro-organisms into unprotected private supplies. Guidance on source protection is available in the Private Water Supplies Technical Manual.

Poor microbiological quality also highlights where there is a lack of suitable treatment, or the treatment installed is not being operated and maintained appropriately. The quality of the raw water is a key element in selecting the correct treatment for a private water supply which may require pre-treatment prior to disinfection.

Metals

Metals can occur naturally in groundwater for a variety of reasons, i.e. brackish groundwaters contain sodium, geology can contribute to nickel, manganese, iron and arsenic levels. Concurrently, they can be present in private water supplies as a result of other processes i.e. sodium introduced from mismanaged softening treatment, iron from cast iron pipe / storage tank, or nickel / copper from corroded pipework or fittings.

On occasion, elevated concentrations of metals or other particulate matter can increase the turbidity (cloudiness) of a water source. Turbidity should be below 1 NTU in treated water to ensure the effectiveness of the disinfection process. There were two turbidity contraventions within 2025, both occurring at sites where cartridge filters had been installed specifically to prevent such contraventions. One also occurred concurrently with contraventions for metals (manganese and iron).

High levels of iron and manganese may affect the appearance, taste or smell of the water resulting in turbidity, colour, taste, and odour contraventions and discoloration or staining of water fittings. It can also affect treatment systems, such as ultra-violet lamps due to metal deposits causing a reduction in their effectiveness for disinfection. Sites are advised to routinely purge wells / boreholes, clean storage tanks, flush pipework and, where necessary, replace parts of their distribution network to reduce the levels of iron in their supplies. In 2025, 15 sites

reported contraventions for one or both of these metals, despite 12 of these sites having some form of filtration in place designed to remove suspended material.

Lead, and other heavy metals such as nickel and copper, are usually detected at elevated levels due to corrosion of pipe work or fittings, especially if the source water is naturally acidic, and / or due to the use of inappropriate fixtures and fittings. The regulations specify that only products and substances approved for use with drinking water supplies should be used. The Drinking Water Inspectorate for England and Wales have published a list of approved products which are suitable for use within a private water supply system.

There were two nickel and three lead contraventions in 2025, reported at three different sites, only one of which had filtration installed. Whilst Hydrogen Ion (pH) compliance was achieved at all three affected sites, pH alone does not determine how water behaves in contact with plumbing materials. As a result, metals such as nickel and lead can occasionally be detected even where pH standards are being met. In some circumstances, lead and nickel may also occur naturally in groundwater.

Ammonium

Ammonia or ammonium compounds are naturally present, in trace amounts, in both ground and surface water sources. However, unexpected levels may indicate that recent pollution has taken place.

There was one Ammonium contravention at a site that uses the supply for all domestic purposes, including drinking water for the general public. The site also recorded contraventions for metals and turbidity despite the presence of treatment. The combination of these contraventions indicates that the treatment system was not operating effectively at the time of sampling.

Hydrogen Ion (pH)

The hydrogen ion value of water is a measure of the acidity (low values) or alkalinity (high values). Soft acidic waters can cause corrosion of pipework and the dissolution of metals such as copper, zinc and lead. Hard, alkaline waters can cause problems associated with scale formation. There were nine contraventions for pH, three of which had accompanying lead and manganese contraventions.

Sodium

The regulatory standard for sodium is set for aesthetic reasons as elevated levels may give rise to taste problems. The source of elevated sodium is typically due to ineffective management of a treatment system; however, it can occur naturally in brackish waters. In 2025, one site with water softening treatment reported contraventions for sodium.

Disinfection by-products

The use of chlorine in water treatment is an important public health safeguard. Good operational management of treatment processes minimises the formation of bromate. Bromate is not normally present in source waters and is primarily a by-product of disinfection processes. It may be formed when hypochlorite disinfectants are used in waters containing elevated bromide

concentrations, for example as a result of saline intrusion. Bromate may also be present as an impurity in sodium hypochlorite disinfectants. There were two bromate contraventions in 2025: both sites use sodium hypochlorite for disinfection.

Pesticides

There were trace levels of a range of individual pesticides, below the regulatory limit of 0.10 µg/l, detected at 26 sites. However, there are no regulatory contraventions for individual pesticides in 2025.

Actions in the Event of Failure

Contraventions are investigated through site visits conducted by Environmental Health staff and the collection of follow up samples. Depending on the nature and significance of the contraventions, it may also be necessary for us to conduct a site inspection.

Any contraventions at supplies, where the water is used as an ingredient in food production or as drinking water, and that are considered as a potential risk to human health, are reported to the Public Health Agency (PHA) for appropriate health advice. Where necessary, the regulations contain a provision to issue Notices which can be used to restrict or prohibit the use of a supply.

Out of the 47 sites with contraventions identified in 2025, 25 were notified to PHA for advice. These comprised nine sites with microbiological contraventions and 15 with chemical contraventions, with one site reporting both types of contravention. As a result, restrictions on the use of the private water supply were implemented at 12 sites to protect public health.

These restrictions of private water supplies can include switching to, or blending with, the public water supply (where this is available), ‘Boil Water Before Use’ and ‘Do Not Use’ advisory notes.

Removal of these restrictions requires investigation into the cause of the water quality contravention, completion of work to remedy any issues identified, and two consecutive satisfactory resamples. Accordingly, the restrictions were removed at 12 sites, of which six were imposed within the previous years.

We continue to work with the owners and users of private water supplies and Environmental Health staff to bring the remaining supplies into compliance. Priority is given to advancing improvements to the water quality through provision of advice and guidance; agreeing action plans (particularly at the larger commercial / public sites); and promotion of Drinking Water Safety Plans (DWSP) for the ongoing management of these supplies.

We have a duty to ensure compliance with the water quality standards in The Private Water Supplies Regulations (Northern Ireland) 2017. Our approach, where there is no known health risk, is initially through informal negotiations. However, where necessary, we may take formal enforcement action to secure compliance and ensure a safe, clean supply of drinking water from private water supplies.

Collaborative Working

DWI has a Service Level Agreement and Data Processing Contract in place with the Environmental Health Departments of all 11 local councils for the regulation of private water supplies. These agreements are reviewed by all parties every two years, and this review was last conducted in October 2025. They provide details of the roles and responsibilities and ensure the efficient operational delivery of services in regulating private water supplies across Northern Ireland. In addition, the annual Drinking Water Working Group, comprising DWI and representatives from the Environmental Health Departments of all 11 local councils, provides a forum for discussing private water supply matters. The Group last met in July 2025.

Formal training and ad hoc guidance are provided to councils throughout the year. In 2025, 28 Environmental Health staff received training in the sampling of private water supplies, while a further 13 staff were trained in the completion of private water supply risk assessments. Training was delivered through scheduled sessions and tailored support in response to council needs. In addition, DWI worked collaboratively with Environmental Health staff on joint site visits to support the completion of a number of private water supply risk assessments.

DWI continue to engage with a range of stakeholders in relation to private water supplies to promote the protection of source water catchments, investigate new and emerging contaminants of concern, and support the sustainable use of groundwater resources. The register of monitored supplies is regularly reviewed and updated as new supplies are identified by DWI, notified by Environmental Health Departments, or reported by supply owners.

Provision of Advice and Guidance

DWI has a duty to provide appropriate advice to the owners and users of private water supplies to protect human health. For owners and users of commercial or public supplies, and supplies serving two or more domestic properties, this advice is primarily delivered through the monitoring and risk assessment process.

However, single domestic properties served by a private water supply are not required to be monitored or risk assessed by DWI. Where DWI is contacted directly regarding the contamination of one of these supplies, tailored advice can be provided to owners and users based on the specific circumstances. This may include guidance on protecting the drinking water source, treatment options and water quality testing.

In addition, the Single Well Application continues to be a valuable tool for raising awareness of potential risks and identifying measures to improve water quality. During 2025, DWI provided advice and guidance on 223 occasions.

Private Water Supply Resilience

Many single domestic properties in Northern Ireland, predominantly located in rural and remote areas, rely on a private well, spring or borehole as their source of drinking water and do not have access to the public mains water network.

In 2025, with support from Carrier Bag Levy funding, DWI commenced a project to identify these properties, confirm their drinking water source and establish baseline information on water quality and sufficiency.

Potential private water supply users were identified through a review of historical records and mapping of properties located outside the NI Water mains network. This enabled properties to be contacted to confirm their water supply arrangements and to offer water quality sampling.

The project commenced in September 2025, with site visits beginning in October 2025, and has continued into 2026. The findings will improve understanding of the number and distribution of households reliant on private wells, springs and boreholes for their drinking water supply, support the provision of advice to householders, and promote the protection of groundwater sources and public health.

DWI has appreciated the co-operation of the properties who have been visited as part of this project so far and looks forward to a similar level of interaction with further households as the project continues.

Annexes

Annex 1 **Glossary**

Annex 2 **Events**

Annex 3 **Technical Audit Programme**

Annex 4 **Enforcement Action**



Annex 1

Glossary and Definition of Terms

Abstraction Point	The point at which water is abstracted from a lake, reservoir, river, or groundwater source for the purposes of drinking water production.
Aesthetic	Associated with the senses of taste, smell, and sight.
Algae	Algae are a diverse group of organisms that contain chlorophyll and are often found in rivers and lakes.
Algal Bloom	An increase in numbers of Cyanobacteria which can form visible algal “blooms” and may lead to poor water quality and the production of harmful toxins (from certain strains of cyanobacteria).
Ammonium	May be naturally present in water sources. Unexpected levels may indicate that recent pollution has taken place.
Animalcule	A tiny or microscopic life form.
Bromate	Is not present in source waters. It may be formed when concentrated hypochlorite solutions are used to disinfect water containing elevated bromide concentrations due to saline intrusion. It may also be generated in the manufacture of sodium hypochlorite disinfectant.
Catchment	The area of land that drains into a watercourse.
Clarification	A process employed during drinking water treatment to assist in the removal of suspended solids and particulate matter.
Clopyralid	A herbicide used for controlling broad-leaved weeds such as dock and creeping thistle in grassland and cereal crops. It can be persistent in soil and water systems.
Clostridium perfringens	A spore-forming bacterium which is exceptionally resistant to unfavourable conditions in the water environment.
Coagulation	A process during drinking water treatment which uses metallic salts to cause impurities to form small particles which can be removed following further treatment.
Coliform bacteria	A group of bacteria which may be faecal or environmental in origin.
Contravention	A breach of the regulatory requirement.

Cyanobacteria (Blue-Green Algae)	Cyanobacteria are found in rivers and lakes and contain chlorophyll, but are classified as bacteria, unlike algae. Cyanobacteria are sometimes referred to as “blue-green algae”. Certain species of Cyanobacteria can produce toxins.
DAF (Dissolved Air Flotation)	A process during drinking water treatment which uses air bubbles as a flotation agent to assist removal of suspended particles from the water.
Determination	An analysis for a specific parameter.
Desludging	The process of removing a layer of accumulated solids (sludge) from a tank.
Dicamba	Dicamba (3,6-dichloro-2-methoxybenzoic acid) is a herbicide used for control of annual and perennial broadleaved weeds and brush species.
Distribution Network	The system of mains water pipes bringing water from a water treatment works to service reservoirs and onwards to the consumer.
Drinking Water Quality Standards	The prescribed concentrations or values listed in the Regulations.
Drinking Water Safety Plan (DWSP)	A comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer.
DWQR	Drinking Water Quality Regulator for Scotland.
Enterococci	A sub-group of faecal streptococci commonly found in the faeces of humans and warm-blooded animals.
Escherichia coli (*E. coli*)	A type of faecal coliform bacteria commonly found in the intestines of animals and humans. The presence of *E. coli* in water is a strong indication of recent sewage or animal waste contamination.
Event	A situation affecting, or with the potential to affect, drinking water quality.
Faecal Coliforms	A sub-group of coliforms, almost exclusively faecal in origin.
Faecal Indicators	A group of organisms that indicate the presence of faecal contamination of a water supply e.g. *E. coli*.
Filtration	A process used during drinking water treatment to remove suspended particles from water.
Flocculation	A process during drinking water treatment used to increase the size of particles formed during coagulation. This enables impurities to be removed by settlement, flotation or filtration.
Geosmin	A naturally occurring compound associated with the breakdown of algae and other micro-organisms in raw water sources. It can cause an earthy / musty taste and odour in drinking water.

Granular Activated Carbon (GAC)	An absorbent filtration media used to remove trace organic compounds from water.
Groundwater	Water from aquifers or other underground sources.
Hydrogen ion (pH)	The degree of acidity of the water. A pH of 7 is neutral; values below 7 are acidic and above 7 are alkaline. A low pH water may result in pipe corrosion. This is corrected by adding alkali during water treatment.
Impounding reservoir	A raw water source from which water is abstracted for the purposes of drinking water production.
Incident	An event where there has been a demonstrable deterioration in the quality of drinking water.
Indicative Dose	Indicative dose is a measure of the effective dose of radiation the body will receive from consumption of water. Its calculation is only required when screening values for gross alpha or gross beta are exceeded.
Indicator Parameter	Something that is measured to check that the control measures, such as water treatment, are working effectively.
Leaching	To lose, or cause to lose, soluble substances by the action of a percolating liquid.
MCPA	MCPA (2-methyl-4-chlorophenoxyacetic acid) is a herbicide used for controlling broad-leaved weeds in grass or cereal crops.
Microbiological	Associated with the study of microbes.
Microcystin-LR (MC-LR)	A naturally occurring toxin produced by a number of species of cyanobacteria (blue-green algae).
2-Methylisoborneol (MIB)	A naturally occurring compound associated with the breakdown of algae and other micro-organisms in raw water sources. It can cause an earthy / musty taste and odour in drinking water.
m^3/d	Cubic metres per day.
µg/l	Micrograms per litre (one millionth of a gram per litre).
Parameters	The substances, organisms and properties listed in Schedules 1 and 2, and regulation 2 of the Regulations.
Pathogen	An organism which causes disease.
PC15	The third price control process whereby funding was allocated to NI Water by the Utility Regulator for the 2015 to 2021 period.
PC21	The fourth price control process whereby funding was allocated to NI Water by the Utility Regulator for the 2021 to 2027 period.
PC28	The fifth price control process whereby funding will be allocated to NI Water by the Utility Regulator. Time period to be finalised.

Pesticides	Any fungicide, herbicide, insecticide or related product (excluding medicines) used for the control of pests or diseases.
Powder Activated Carbon (PAC)	An adsorbent media typically used to remove taste and odour compounds during a water treatment process.
Price Control Process (PC)	The process for the funding of NI Water by the Utility Regulator for a set period.
Prescribed Concentration or Value (PCV)	The numerical value assigned to drinking water standards, defining the maximal or minimal legal concentration or value of a parameter.
Radon	A naturally occurring, odourless, colourless radioactive gas that may be present in groundwater.
Raw Water	The term used for water abstracted for the purpose of drinking water provision, prior to receiving treatment.
Remedial Action	The action taken to improve a situation.
Residence Time	The period of time treated water spends in a clear water tank, service reservoir or other storage facility.
Service Reservoir	A water tower, tank or other reservoir used for the storage of treated water within the distribution system.
Sludge	A semi-solid waste material removed from water during treatment processes.
Supply Point	A point, other than a consumer's tap, authorised for the taking of samples for compliance with the Regulations.
Sulphate	May occur naturally in water sources. Concentrations normally found in drinking water do not represent a risk to health. The regulatory standard is set for aesthetic reasons as levels above the standard (250mg/l) may cause noticeable taste problems.
Trihalomethanes (THMs)	A group of organic substances comprising, for the purposes of the Regulations, four substances: trichloromethane (also known as chloroform), tribromomethane (also known as bromoform), dibromochloromethane and bromodichloromethane.
Turbidity	Turbidity is the measure of relative clarity of a liquid.
Tritium	Tritium is a radioactive isotope of hydrogen. Discharges to the environment are strictly controlled in Northern Ireland by the Industrial Pollution and Radiochemical Inspectorate of the Northern Ireland Environment Agency (NIEA).
Water Catchment Partnership	The Water Catchment Partnership (WCP) was established in 2013 to help address significant water quality issues in Northern Ireland related to pesticides.

Water Supply Zone	A pre-defined area of supply used for establishing sampling frequencies, compliance with standards and information to be made publicly available.
Water Treatment Works	A facility that produces drinking water from a raw water source.
Wholesome/ Wholesomeness	A concept of water quality which is defined by reference to standards and other requirements set out in the Regulations.

Annex 2 – Events

Major Drinking Water Quality Events in 2025

Date of Major Event	Area Potentially Affected	Nature and Cause of Major Event	Associated Council Area(s)
23/01/2025 – 28/01/2025	Throughout Northern Ireland	Ahead of the red weather warning for Storm Éowyn on 23 January 2025, NI Water declared a major incident. Severe winds across Northern Ireland disrupted electricity and telecommunications services and damaged NI Water infrastructure. Around 6,000 properties experienced mains water supply interruptions. Substantial resources including, generators, bottled water and asset-to-asset tankering were deployed in response.	All Council Areas

Serious Drinking Water Quality Events in 2025

Date of Serious Event	Area Potentially Affected	Nature and Cause of Serious Event	Associated Council Area(s)
09/01/2025 - 16/01/2025	Throughout Northern Ireland	A period of freezing weather followed by thaw caused burst mains across the network, increasing water demand and interrupting supply. NI Water declared a Category 1 Incident. While burst repairs were prioritised, output from treatment works was increased to meet demand, and re-zoning and asset-to-asset tankering were used where necessary to restore water levels.	All Council Areas
17/02/2025 – 07/03/2025	Glenhordial WTW supply area	A high number of consumers reported taste and odour issues with the mains water supply in the Glenhordial WTW area. Investigations indicated that the most probable cause was due to changes in the raw water quality.	Fermanagh and Omagh District Council
01/11/2025 - 07/11/2025	Cam SR supply area	Discoloured water complaints were received after a telecommunications fault at the pumping station supplying Cam SR resulted in low levels and scouring of the outlet main. Two samples from consumer properties contravened the standards for metals and turbidity. Targeted flushing was carried out in the area.	Causeway Coast and Glens Borough Council

Significant Drinking Water Quality Events in 2025

Date of Significant Event	Area Potentially Affected	Nature and Cause of Significant Event	Associated Council Area(s)
14/01/2025 - 17/01/2025	Belfast Road, Muckamore, Antrim	As a precaution, “Boil Water Before Use Until Further Notice” advice was issued to six properties after a distribution main was damaged during repairs to a burst sewage main in the vicinity. The Public Health Agency agreed with NI Water’s response. The main was repaired and follow-up bacteriological samples were satisfactory.	Mid and East Antrim Borough Council
01/03/2025 - 03/03/2025	Ormeau Bridge, Belfast area	A third-party contractor caused damage to an 18-inch trunk main. Operational work to facilitate rezoning and mains repair resulted in discoloured water complaints and subsequent local media interest.	Belfast City Council
07/09/2024 - 05/03/2025	Caugh Hill WTW supply area	Orthophosphoric acid (OP) is dosed at Caugh Hill WTW for plumbosolvency control. During this period, no OP was dosed due to operational issues. No elevated levels of lead were reported during this timeframe.	Causeway Coast and Glens Borough Council Derry City and Strabane District Council
03/03/2025 - 31/03/2025	Ballydugan Road, Downpatrick	Samples collected after a consumer taste and odour complaint contravened the standard for hydrogen ion. The investigation found that the material of the mains, size and low turnover were contributing factors. The main was flushed and added to a routine flushing programme.	Newry, Mourne and Down District Council
01/01/2025 – 03/04/2025	Moyola WTW	Recurring contraventions of the turbidity parameter in the works final water. Investigations determined the results to be unrepresentative of the final water due to a series of sampling issues.	Mid Ulster District Council
06/05/2025 - 07/05/2025	Carran Hill WTW	A contravention of the standard for the turbidity parameter occurred in the works final water. Following an investigation, NI Water was unable to identify the cause of the contravention.	Newry, Mourne and Down District Council

Date of Significant Event	Area Potentially Affected	Nature and Cause of Significant Event	Associated Council Area(s)
29/04/2025 - 29/05/2025	Seagahan WTW supply area	Contraventions of the standard for the individual pesticide MCPA[1] occurred in the works final water on three occasions. Treatment was not fully optimised at the time of this event which coincided with elevated MCPA levels in the raw water. Seagahan Farming for Water Scheme commenced in 2026 and aims to reduce MCPA levels in the raw water through catchment management and engagement.	Armagh Craigavon & Banbridge District Council
18/05/2025 - 19/05/2025	Carran Hill WTW supply area	A contravention of the standard for the aluminium parameter occurred in the works final water. Following an investigation, NI Water identified the cause as a chemical batch issue which subsequently caused treatment difficulties.	Newry, Mourne and Down District Council
13/06/2025 - 07/07/2025	Castor Bay Road, Lurgan	Recurring contraventions of the standard for coliform bacteria led to “Boil Water before Use until Further Notice” advice being issued to one property. The initial sample was collected in response to a burst main. Water Fittings inspections identified internal issues at the property which, together with low chlorine residuals, were a likely cause of the contraventions.	Armagh City, Banbridge & Craigavon Borough Council
24/06/2025 - 09/12/2025	Altnahinch WTW supply area	Contraventions of the standard for the Total Trihalomethanes (THMs) parameter occurred in the works final water and supply area due to insufficient organics removal. DWI conducted a technical audit of the works in November 2025. Improvement work in relation to THMs at Altnahinch WTW is ongoing under the PC21 work plan.	Causeway Coast and Glens Borough Council

[1] *MCPA (2-methyl-4-chlorophenoxyacetic acid) is a herbicide used for controlling broad-leaved weeds in grass or cereal crops*

Date of Significant Event	Area Potentially Affected	Nature and Cause of Significant Event	Associated Council Area(s)
07/07/2025 - 30/07/2025	Caugh Hill WTW supply area	A contravention of the standard for the Total Trihalomethanes (THMs) parameter occurred in the works supply area due to insufficient organics removal. Improvement work at Caugh Hill WTW is ongoing under the PC21 work plan.	Causeway Coast and Glens Borough Council Derry City and Strabane District Council
21/08/2025 - 23/09/2025	Killyhevlin WTW supply area	A contravention of the standard for the Total Trihalomethanes (THMs) parameter occurred in the works supply area due to insufficient organics removal. Further optimisation of the works to improve organics removal was undertaken in 2025 and is ongoing. DWI conducted a technical audit of the works in January 2026.	Fermanagh and Omagh District Council
16/11/2025 - 17/11/2025	Killylane WTW supply area	Treatment difficulties relating to a sample pump malfunction at Killylane WTW caused elevated aluminum in the works final water. Resultant issues with telemetry communications and shutdown alarms were identified.	Antrim and Newtownabbey Borough Council Mid and East Antrim Borough Council
06/11/2025 - 10/11/2025	Waterside Area, Londonderry	Discoloured water complaints were received following a flushing exercise undertaken during the commissioning of a section of new trunk main. Additional targeted flushing was undertaken in response to consumer complaints.	Derry City and Strabane District Council

After investigations during the reporting period, there were also nine events categorised by DWI as “Minor”, and 22 events categorised as “Not Significant”.

Annex 3

Technical Audit Programme

DWI carried out eight technical audits in 2025. We acknowledge NI Water's co-operation during the completion of the audits as detailed in Table 3 –1. NI Water has implemented or provided comment on, the recommendations and suggestions we raised in our audit reports.

The following table provides a summary of our 2025 Inspection Programme:

Table 3 – 1: Summary of the 2025 Inspection Programme

Date of Audit	Location	Audit Activity	Number of Recommendations [1]	Number of Suggestions [2]
16/01/2025	Killylane WTW	To check that good operational practice is used in the water treatment process.	5	8
12/02/2025	Networks Operations [3]	To check that good operational practice is being followed during the installation of new water mains.	10	2
13/02/2025	Carmoney WTW [3]	To check that good operational practice is used in the water treatment process.	9	6
28/03/2025	Sampling Procedures	To check the sampling technique and ensure sample points are fully compliant.	9	8
16/04/2025	Service Reservoirs	To check that good operational practice is being followed in the storage and distribution of treated water.	5	2

[1] Recommendations are made where, in our opinion, action is required to avoid a foreseeable risk or a breach of a regulatory duty. If such a breach occurs, then we may consider 'enforcement action'. A formal written response from NI Water is required.
[2] Suggestions are made in relation to matters which relate to best practice.
[3] Shared learning and benchmarking exercise with DWQR

Date of Audit	Location	Audit Activity	Number of Recommendations [1]	Number of Suggestions [2]
24/10/2025	Consumer Contacts [3]	To check consumer contacts are properly recorded, actioned and advised appropriately.	12	5
11/11/2025	Laboratory Information Management System (LIMS)	To check that data is adequately managed by the LIMS.	8	2
25/11/2025	Altnahinch WTW	To check that good operational practice is used in the water treatment process.	12	5

Annex 4

Enforcement Action

The DWI Section of the DAERA website publishes details of all Enforcement actions.

Table 4 – 1: Summary of Enforcement Actions 2025

Type of Enforcement	Location	Reason for Enforcement	Summary
Regulation 31(4) Notice 2023/001	Ballinrees WTW and Supply Area	Contravention of the regulatory standard for MCPA[1] (0.10µg/l)	The Notice, issued on 18 December 2023, required NI Water to install and have operational, a treatment system at Ballinrees WTW that is effective in the removal or reduction of MCPA to achieve a final water result that meets the maximum regulatory limit of MCPA of 0.10 µg/l by 20 December 2024. Following completion of the works by that date and a subsequent period of operational work, NI Water provided evidence to demonstrate that the new treatment process meets the requirements of the Notice. DWI issued a Revocation Notice on 12 December 2025.
Regulation 31(4) Notice 2023/002	Ballinrees WTW and Supply Area	Contravention of the regulatory standard[2] for Taste and Odour	The Notice, issued on 18 December 2023, required NI Water to install and have operational, a treatment system at Ballinrees WTW that is proven to be effective in the treatment of taste and odour parameters to achieve a final water and consumer tap result that is acceptable to the consumer and there is no abnormal change by 20 December 2024. Following completion of the works by that date and a subsequent period of operational work, NI Water provided evidence to demonstrate that the new treatment process meets the requirements of the Notice. DWI issued a Revocation Notice on 12 December 2025.
Regulation 31(4) Notice 2021/001	Drumaroad WTW and Supply Area	Contravention of the regulatory standard for Aluminium (200µg/l)	The Notice, issued on 8 July 2021, required NI Water to install and have operational, a treatment system at Drumaroad WTW that is proven to be effective in the removal or reduction of Aluminium to achieve compliance with the regulatory standard by 30 April 2025. This Notice was amended on 27 May 2025 to provide an additional five months to complete the required treatment upgrade by 30 September 2025. Following completion of the works by that date and evidence provided by NI Water demonstrating that the new treatment process meets

[1] MCPA (2-methyl-4-chlorophenoxyacetic acid) is a herbicide used for controlling broad-leaved weeds in grass or cereal crops
[2] Acceptable to consumers and no abnormal change

Type of Enforcement	Location	Reason for Enforcement	Summary
			the requirements of the Notice, DWI issued a Revocation Notice on 19 December 2025.
Warning Letter 01/25	Carmoney WTW and Supply Area	Contravention of the regulatory standard for MCPA (0.10µg/l)	Five MCPA contraventions occurred in Carmoney WTW final water between 14 May and 18 June 2024, following previous contraventions in 2023, 2021 and 2020. The catchment has a known pesticide risk, with run off entering the River Faughan, the raw water source for Carmoney WTW. Ahead of the 2025 MCPA risk season, NI Water took remedial action to further optimise treatment at the works. No MCPA contraventions were detected in Carmoney WTW final water in 2025. DWI continue to closely monitor MCPA results and may consider further enforcement action if future contraventions are reported for this supply.
Warning Letter 02/25	Moyola WTW and Supply Area	Contravention of the regulatory standard for Taste and Odour	Two serious water quality events involving high levels of consumer complaints regarding the taste and odour of the mains water supplied from Moyola WTW occurred in September 2023 and 2024. The unacceptable taste and odour in the water supply was principally due to a deterioration in the quality of raw water abstracted from Lough Neagh, associated with algal blooms. NI Water reviewed the DWSP[3], introduced enhanced monitoring and took remedial action to further optimise treatment processes at the works. DWI will continue to closely monitor taste and odour results from Moyola WTW and the associated supply area, along with the level of consumer complaints reported for this supply. Further enforcement action may be considered.
Warning Letter 03/25	Castor Bay WTW and Supply Area	Contravention of the regulatory standard for Taste and Odour	A serious water quality event involving a high level of consumer complaints regarding the taste and odour of the mains water supplied from Castor Bay WTW occurred in September 2024. The unacceptable taste and odour in the water supply was principally due to a deterioration in the quality of the raw water abstracted from Lough Neagh, associated with algal blooms. NI Water reviewed the DWSP, introduced enhanced monitoring and took remedial action to further optimise treatment processes at the works. DWI will continue to closely monitor the taste and odour results from Castor Bay WTW and the associated supply area, along with the level of consumer complaints reported for this supply. Further enforcement action may be considered.

[3] Drinking Water Safety Plan (DWSP)

Useful Information

(To access the information, click on the links below)

Regulatory Framework – provides details and links to current legislation relating to drinking water quality.

Drinking Water Quality Tables – provide details of drinking water compliance within individual water supply zones and council areas for Public and Private Supplies.

Drinking Water Advice and Guidance for Public and Private Supplies – provides a list of links for consumers and professionals requiring further information on drinking water quality.

Useful Contacts – provides a list of organisations and contact details related to drinking water.

Northern Ireland Environment Agency
Gníomhaireacht Comhshaoil Thuaisceart Éireann
Norlin Airlan Environment Agency
www.daera-ni.gov.uk

Drinking Water Inspectorate for Northern Ireland
Northern Ireland Environment Agency
Camowen Building
17 Antrim Road
Tonagh
Lisburn
BT28 3AL

Tel: 028 9056 9282

Email: DWI@daera-ni.gov.uk

Email: privatewatersupplies@daera-ni.gov.uk

www.daera-ni.gov.uk

An Agency within the Department of
Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

Gníomhaireacht de chuid na Roinne
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