Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Drinking Water Quality in Public Supplies 2024

Drinking Water Quality in Public Supplies

2024

ENVIRONMENTAL PROTECTION AGENCY

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Cover photo: *EPA audit at an Uisce Éireann drinking water treatment plant.*

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CONTENTS

Executive Summary 1

1. Introduction 5

2. Drinking water quality 7

Water quality in public supplies 7

Water quality in public group schemes 8

3. Priorities for Drinking Water Supplies 9

The Remedial Action List (RAL) 9

Drinking Water Priority 1: Ensure that water is free of bacteria 13

Drinking Water Priority 2: Ensure that water is free of protozoan organisms (i.e. *Cryptosporidium and Giardia*) 16

Drinking Water Priority 3: Ensure that water is free of chemical substances (trihalomethanes and pesticides) 18

Drinking Water Priority 4: Ensure that water treatment plants are operated effectively. 27

4. Protection of human health 30

Boil water and water restriction notices 30

Reducing exposure to lead 36

Resilience of supplies - Drinking Water Safety Plans 39

5. Concluding Remarks 42

APPENDIX A Remedial Action List at the end of 2024 43

APPENDIX B Monitoring and Compliance Summary for public water supplies in 2024 47

APPENDIX C Monitoring and Compliance Summary for public group water supplies in 2024 49

APPENDIX D1 Directions issued during 2024 51

APPENDIX D2 Other Directions remaining open at the end of 2024 52

APPENDIX E Public Group Schemes trihalomethane failures in 2024 53

APPENDIX F Boil Water and Water Restriction Notices in place during 2024 54

EXECUTIVE SUMMARY

Drinking water is sourced from rivers, lakes, springs, and groundwater and must be treated to make it clean and safe to drink before it is supplied to consumers. The European Union (Drinking Water) Regulations 2023[1] are the basis for drinking water regulation in Ireland. Compliance with the microbiological and chemical standards for drinking water in these regulations remains high at greater than 99.8%[2], which means the water in our public water supplies is safe to drink. However, drinking water treatment in many supplies is still not as robust as it needs to be to ensure all supplies are resilient and safe into the future.

The Remedial Action List

The Environmental Protection Agency (EPA) maintains a priority list of "at-risk" drinking water supplies, called the Remedial Action List, that must be improved to ensure that these water supplies are safe and secure, and therefore resilient for consumers. A supply may be placed on the Remedial Action List if water treatment at the supply is not adequate. People can become ill from drinking inadequately treated water - especially vulnerable people, such as the young and the elderly.

In 2024 there has been a reduction in the number of people served by supplies on the Remedial Action List - down to almost 497,000 (from 561,000 in 2023). The number of supplies on the Remedial Action List is also down to 45 (from 57 in 2023). This decrease is mainly due to supplies being upgraded or rationalised[3]. These works successfully resolved mainly trihalomethanes[4] and inadequate *cryptosporidium* treatment issues. At the end of 2024, there were 7 supplies on the Remedial Action List for over 2 years and while an action programme is currently being defined by Uisce Éireann for these supplies – a completion date has yet to be provided. EPA has taken enforcement action in 2024 against Uisce Éireann by issuing legally binding directions for supplies in relation to trihalomethane and *cryptosporidium* risk. This is to ensure long term improvements are carried out within a set timeframe. Supplies on the Remedial Action List must be addressed as a priority by Uisce Éireann.

Drinking Water Priorities and Challenges

Ensure that water is free from bacteria. There are no supplies on the Remedial Action List for bacterial breaches – down from 2 in 2023. Nevertheless, the overall resilience of some plants remains inadequate resulting in compromised disinfection under certain conditions. This remains an issue to be resolved, as seen by the level of Boil Water Notices in place during 2024.

Uisce Éireann continues to undertake upgrades to disinfection systems across the country to ensure the quality of drinking water is safeguarded and free from bacteria. Uisce Éireann should continue to prioritise their Disinfection Programme[5] and carry out upgrades where required.

1 *European Union Drinking Water Regulations 2023, S.I 99 of 2023*

2 'If 99 % of the analyses undertaken comply, the Member State is considered to be compliant with the DWD for that parameter' *"Drinking water quality in the EU 2017-2019 European Commission"*

3 Where the supply source is closed and the area is connected to a different supply of water.

4 THMs are disinfection by-products caused by the interaction of chlorine and dissolved organic matter

5 *https://www.water.ie/projects/national-projects/national-disinfection-programme/*

Ensure that water is free of protozoan organisms *Cryptosporidium* and *Giardia* are harmful **micro**organisms that can cause gastrointestinal infections. At the end of 2024 there were 11 supplies (supplying over 53,000 people) on the Remedial Action List for detections of (or risk of) *Cryptosporidium* – down from 15 in 2023. Detections of protozoan organisms highlight the need for Uisce Éireann to upgrade treatment plants, or make sure they are properly operated.

Ensure that water is free of chemical substances. The was a European Court of Justice finding against Ireland in relation to THMs in drinking water, however trihalomethanes compliance has improved in recent years with only approx. 1 in 40 supplies failing in 2024[6]. This is welcome, however the level of compliance is still not where it should be. There are now 19 supplies serving almost 245,000 people on the Remedial Action List for trihalomethanes - down from 25 supplies serving almost 300,000 people in 2023. The improved compliance and decreased number of trihalomethane supplies on the Remedial Action List reflects the targeted investigations and improvement works implemented by Uisce Éireann in recent years. Water quality from public group schemes is also high generally, however there is a lower trihalomethane compliance rate – similar to that seen in public supplies (public group scheme water is supplied by public schemes). Improved trihalomethane compliance remains a national priority.

The number of supplies with pesticide detections was 23, the same as in 2023. The challenge remains for Uisce Éireann to continue its engagement with multiple stakeholders to prevent this problem at source, or ensure adequate treatment is in place at affected supplies.

Ensure that water treatment plants are operated effectively. At the end of 2024 there were 20 supplies on the Remedial Action List due to aluminium/turbidity issues or because of audit observations, serving over 266,000 people (down from 23 in 2023). Examples of issues identified during EPA audits include inadequate contact time, unsatisfactory incident escalation and inadequate alarms. A water treatment plant must have the appropriate infrastructure and be managed and operated effectively, and also be able to adapt and respond to changing conditions and incidents. Essential alarms, monitors and staff training are critical prerequisites for a well-run drinking water treatment plant. Incident reporting, escalation, and response by Uisce Éireann remains a focus of EPA audits.

Protection of Human Health

Boil Water and Water Restriction Notices. In 2024 total Boil Water Notice numbers decreased to 59 (from 91 in 2023[7]) – and fewer people (95,000) were impacted (254,000 in 2023). The EPA recognises Boil Water Notices are essential to protect public health when supplies are compromised, and the reduction seen in 2024 is welcomed. However, the obligation on Uisce Éireann to improve the performance and resilience of plants remains. The EPA expects to see the number and duration of Boil Water Notices reduce in the long-term following from improved infrastructure and management practices.

6 Under Regulatory monitoring 97.6% of supplies were compliant in 2024 compared to 94.3% in 2023.

7 14 of the 91 BWNs in 2023 were only precautionary, due to industrial action in Waterford, Tipperary & Cork.

Reducing Exposure to Lead. The concentration of lead permissible in drinking water will be reducing from 10 µg/l to 5 µg/l which effectively means that drinking water must have minimal contact with lead piping[8]. There are a number of key stakeholders that have a role to play in the removal of lead piping from drinking water supplies: Uisce Éireann, the Department of Housing, Local Government and Heritage (DHLGH), the Department of Health (DoH) and homeowners.

Uisce Éireann's rate of replacement of individual lead connections is still unsatisfactory. With only an estimated 37% of public-sided lead connections removed, at the current rate Uisce Éireann will not meet its commitment to remove these by 2026.

Despite having a National Lead Strategy in place since 2015, the DHLGH/DoH have yet to publish a plan on lead replacement in public buildings, or report on progress as required under the strategy. Due to this lack of progress, it is unknown how many public buildings (e.g. hospitals, schools and government offices) have unsafe levels of lead in their drinking water. The continued absence of progress reporting in this area is unsatisfactory. The EPA welcome the Department of Housing, Local Government and Heritage commitment to progressing this work in 2025.

The *Lead Remediation Grant Scheme*[9] is now easier for the public to get, and the level of financial support is enhanced. There has been a slight increase seen in the removal of lead pipes by householders during 2024 and this is welcomed by the EPA. However, uptake of the scheme by householders remains far too low. Homeowners should avail of the grant to replace lead pipes in their properties.

All stakeholders: Uisce Eireann, the Department of Housing, Local Government and Heritage and householders, must play their part to urgently prioritise the removal of lead piping in water supplies due to the health risks posed by lead and the impending stricter limit.

Resilience of supplies (Drinking Water Safety Plans). The Drinking Water Regulations[10] put the requirement for increasing the resilience of our water supply infrastructure on a statutory footing. It requires risk assessment of our drinking water supplies and infrastructure through Drinking Water Safety Plans. This requirement includes completion deadlines and provision of an EPA role in reviewing these plans. More use of the Risk Assessment/Drinking Water Safety Plan approach is welcomed by the EPA, but implementation of the findings will be crucial to improving resilience of supplies. It is a proactive way to avoid supplies ending up on the Remedial Action List, embeds resilience within drinking water supplies, and provides a rational framework to allow for targeted investment of resources.

8 The new Drinking Water Directive (EU) 2020/2184 was transposed in 2023 and includes a reduction in the lead limit from 10 µg/l to 5 µg/l in January 2036

9 *https://www.gov.ie/en/publication/7fe5d-domestic-lead-remediation-grant-scheme-customer-leaflet/#*

10 *European Union Drinking Water Regulations 2023, S.I 99 of 2023*

Summary of key actions recommended

- Uisce Éireann must complete upgrades to resolve the drinking water supplies on the Remedial Action List to address issues such as trihalomethane and *Cryptosporidium* without delay.
- Uisce Éireann must ensure existing infrastructure is operated effectively to meet drinking water quality standards.
- The Department of Housing, Local Government and Heritage/Department of Health need to publish a report on progress with the 2015 National Lead Strategy.
- Uisce Éireann must implement the findings of the risk assessments of our drinking water supply infrastructure (Drinking Water Safety Plans) to improve the resilience of supplies, and this will require sustained national investment of resources.

1. INTRODUCTION

This report by the Environmental Protection Agency (EPA) provides a summary of our assessment of drinking water quality in public supplies and public group water schemes in Ireland during 2024. Everyday drinking water is supplied to approximately 4 million people from public supplies. Uisce Éireann is the national water utility responsible for providing this essential service. Uisce Éireann also provides water from its treatment plants to public group schemes. The EPA is the drinking water quality regulator responsible for enforcing the Drinking Water Regulations (Box 1).

Box 1 Regulations

New Drinking Water Regulations: The new Drinking Water Directive (EU) 2020/2184 was transposed into Irish law in 2023 as *European Union Drinking Water Regulations 2023, S.I 99 of 2023* and enacts new requirements for water suppliers and regulators.

This includes for example:

- Monitoring for new parameters and/or new limits for certain parameters e.g. Lead and PFAS
- Additional roles and responsibilities for the EPA e.g. enforcement powers
- Increased reporting frequency to the EU Commission
- Completion of risk assmements to improve resilience of water supplies

New Water Abstractions regulations: The new Water Abstractions regulations came into operation on 28th August 2024. These regulations put in place new requirements for water suppliers and regulators.

More information can be found on the EPA website *Water abstraction | Environmental Protection Agency*

A drinking water supply includes the abstraction, treatment, storage, and distribution of water from the water source to the consumer's tap. The raw water sources, which are rivers, lakes, springs, and groundwater, can be a source of contaminants if the water is not properly managed and treated at all stages of the process[11]. The Drinking Water Regulations require that water supplied meets quality standards and is therefore safe to drink. Failure to meet those standards can put public health at risk. The Health Service Executive (HSE) plays a key statutory role on the safety of drinking water supplies. They must be consulted by Uisce Éireann where there is a risk to health. The roles of the relevant authorities are outlined on the next page.

11 This Uisce Éireann video outlines the treatment process https://youtu.be/iYFwFRWOEho?feature=shared

Table 1.1: Roles of the Relevant State Authorities

EPA	Uisce Éireann	Health Service Executive
EPA is the drinking water quality regulator.	**Uisce Éireann** is the national water utility.	The **HSE** must be consulted by Uisce Éireann if there could be a public health risk from drinking water.
It is responsible for regulatory oversight of Uisce Éireann via enforcement of the Drinking Water Regulations 2023.	It is responsible for the provision of safe and secure public drinking water.	A Boil Water/Restriction Notice may be imposed, if deemed appropriate by the HSE and Uisce Éireann.

Drinking water must be **safe** for consumers to drink, not just today, but every day. If a supply is meeting the drinking water standards today and is safe to drink, the supply also needs to be **secure** to prevent the risk of water quality failures in the future. The overall resilience of a supply therefore, is dependent on the risks to the supply, the adequacy of the water treatment infrastructure, and the management and operational controls in place. The EPA has identified a list of "at-risk" supplies called the Remedial Action List (RAL) (*Appendix A*) where the resilience of the supply must be improved. Uisce Éireann are required to put an action plan with timelines in place to rectify the issues at each of these supplies. Uisce Éireann is also undertaking nationwide programmes for example: improving disinfection and reducing trihalomethanes, pesticides, and exposure to lead. Uisce Éireann have committed to the risk assessment (Drinking Water Safety Plan) approach, to identify and mitigate risks at supplies, in order to improve their resilience.

2. DRINKING WATER QUALITY

Water quality in public supplies

2024 Sample Compliance Rates (Public Supplies)	
99.87%	**Microbiological parameters**
99.76%	**Chemical parameters**
99.28%	**Indicator parameters**

Uisce Éireann monitors drinking water quality in public supplies to ensure that it meets the standards set out in the Drinking Water Regulations and is safe to drink. Sample compliance rates remain consistently high year to year, with results for 2024 summarised here. This is based on over 125,000 regulatory parameter results, from approx. 7,500 regulatory samples taken. This overall compliance rate compares well with the EU-wide historic compliance rate[12] of more than 99.5% for a range of chemical parameters.

While public drinking water is safe to drink, the THM sample compliance rate is only 98.4% (95.5% in 2023). While this is showing an improving trend, the number of drinking water supplies on the remedial action list (RAL) for THM is still too high.

The microbiological compliance rate shows that water quality from public supplies continues to remain high. In cases where the HSE/Uisce Éireann have determined that the water is not safe to drink then the public are notified of the precautionary actions to take. This is done through local/national media or direct communication to affected people (see Chapter 4). In recent years most public water users have not been affected in this way.

For each individual parameter, if 99% of the analyses undertaken in a year meet the required standard, the Member State is considered to be compliant for that parameter[13]. A more detailed summary of the results along with individual parameter compliance can be found in *Appendix B*. Uisce Éireann also carry out non-regulatory monitoring (investigative and operational monitoring) and may find failures, which must also be notified to the EPA and investigated by Uisce Éireann. Additionally, Uisce Éireann is required under the Radioactive Substances in Drinking Water Regulations[14] to monitor and report to the EPA on radioactivity parameters.

12 *https://www.eea.europa.eu/publications/zero-pollution/health/water-pollution*

13 *'Drinking water quality in the EU 2017-2019 - European Commission'*

14 European Union (Radioactive Substances in Drinking Water) Regulations 2016, S.I. 160 of 2016

Water quality in public group schemes

2024 Sample Compliance Rates (Public Group Schemes)	
99.86%	**Microbiological parameters**
99.95%	**Chemical parameters**
99.32%	**Indicator parameters**

Uisce Éireann also provides water to public group schemes. Local authorities regulate these supplies and ensure that monitoring is carried out. Water quality from public group schemes is also high and compliance rates remains consistent year to year, with results for 2024 summarised here.

However, the lower trihalomethanes compliance as seen in public supplies is also seen here - as this water is sourced from Uisce Éireann. The level of trihalomethanes compliance has however improved from 2023. A more detailed summary of results can be found in *Appendix C*.

3. PRIORITIES FOR DRINKING WATER SUPPLIES

The Remedial Action List (RAL)

The EPA's RAL is a priority list of "at-risk" supplies where significant improvements are needed to protect public health. Uisce Éireann are required to put an action plan in place to rectify the issues at each of these supplies. The water in these supplies is safe to drink – if there is an immediate risk to human health then consumers are informed (e.g. by issuing a Boil Water Notice). A supply may be placed on the RAL if it fails to meet any of the criteria in Table 3.1.

RAL supplies are identified during audits or based on breaches of standards reported to the EPA. This means that the RAL is reactive in nature. Risk assessments/Drinking Water Safety Plans (DWSPs) and implementation of their findings will be a more proactive approach that is expected to prevent supplies being added to the RAL - as sites will be identified for improvement before breaches of standards occur (for further details on DWSPs see Section 4).

Table 3.1: Remedial Action List Criteria

Criteria 1	Ensure that water is free of bacteria	*e.g. E. coli / Entercocci*
Criteria 2	Ensure that water is free of protozoan organisms	*e.g. Cryptosporidium*
Criteria 3	Ensure that water is free of chemical substances	e.g. Disinfection by-products (trihalomethanes)/Pesticides
Criteria 4	Ensure that water treatment plants are operated correctly	e.g. Poor turbidity removal

When Uisce Éireann has verified that the issue has been fixed, a supply can be removed from the list. The RAL is updated twice a year and can be viewed on the EPA's website.[15]

15 *https://www.epa.ie/publications/compliance--enforcement/drinking-water/*

Findings for 2024

In 2024 there has been a reduction in the number of people served by supplies on the RAL down to almost 497,000 (561,000 in 2023). The number if supplies on the RAL is also down – from 57 in 2023 to 45 in 2024 (see Figure 3.1).

The current number of people impacted by supplies on the RAL remains well under the 2021 peak of over 1 million people. The large decrease was primarily due to the upgrade at the Leixlip treatment plant.

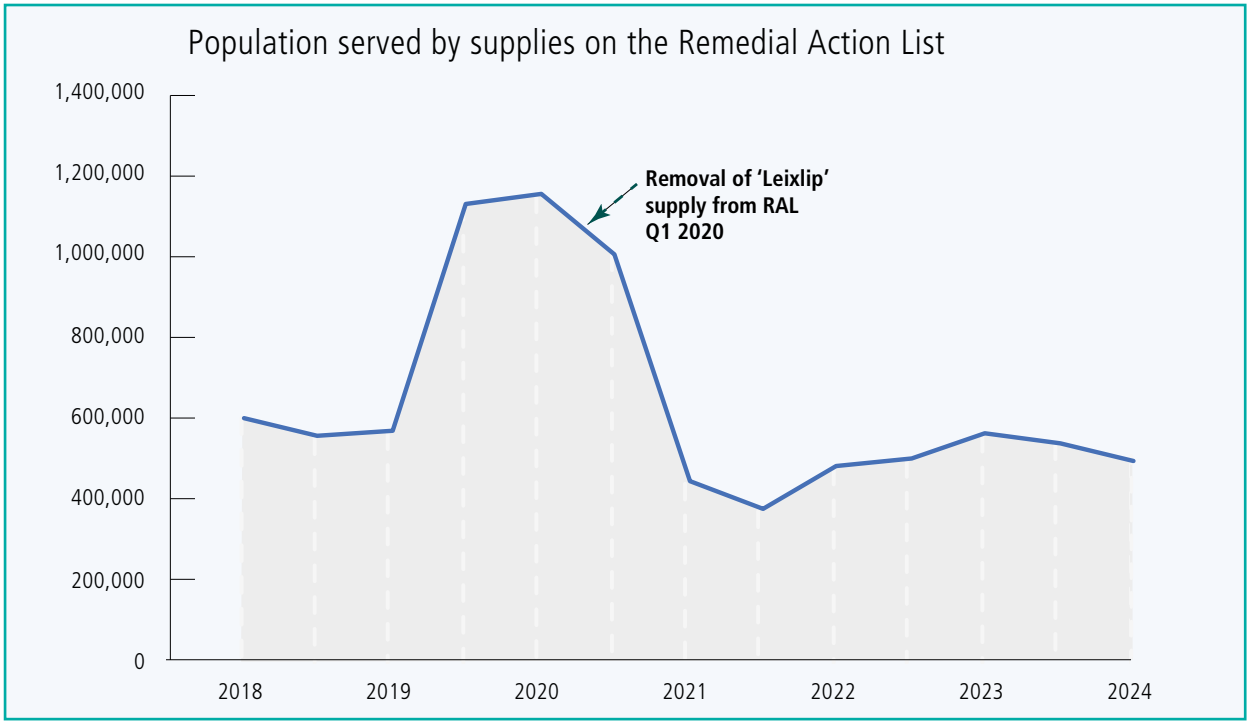


Figure 3.1: Population served by supplies on the Remedial Action List

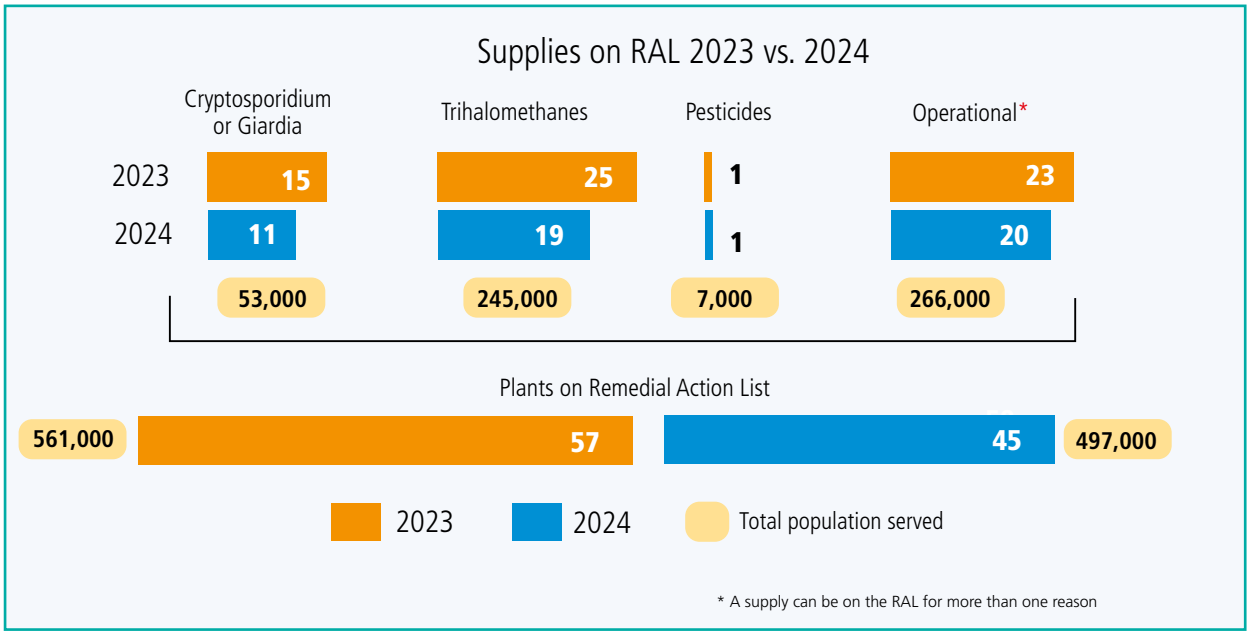


Figure 3.2: Supplies on the RAL for 2024 vs. 2023

During 2024, 14 supplies were removed from the RAL due to improvement works/rationalisation by Uisce Éireann (See Table 3.2). There were 2 new supplies added, due to Trihalomethanes exceedances or inadequate treatment. This brings the overall number of supplies down to 45 – which is the lowest number of supplies for over a decade.

Table 3.2: Reasons supplies were removed from the RAL in 2024

Reason for being on the RAL	Number of supplies removed
Cryptosporidium	3
Inadequate Disinfection	2
Trihalomethanes	6
Treatment issues/Audit observations	3
Total	**14**

While a significant number of supplies were removed from the RAL during 2024 – progress which is welcomed by the EPA, it is clear from Figure 3.1 that the population impacted remains relatively unchanged level since 2021.

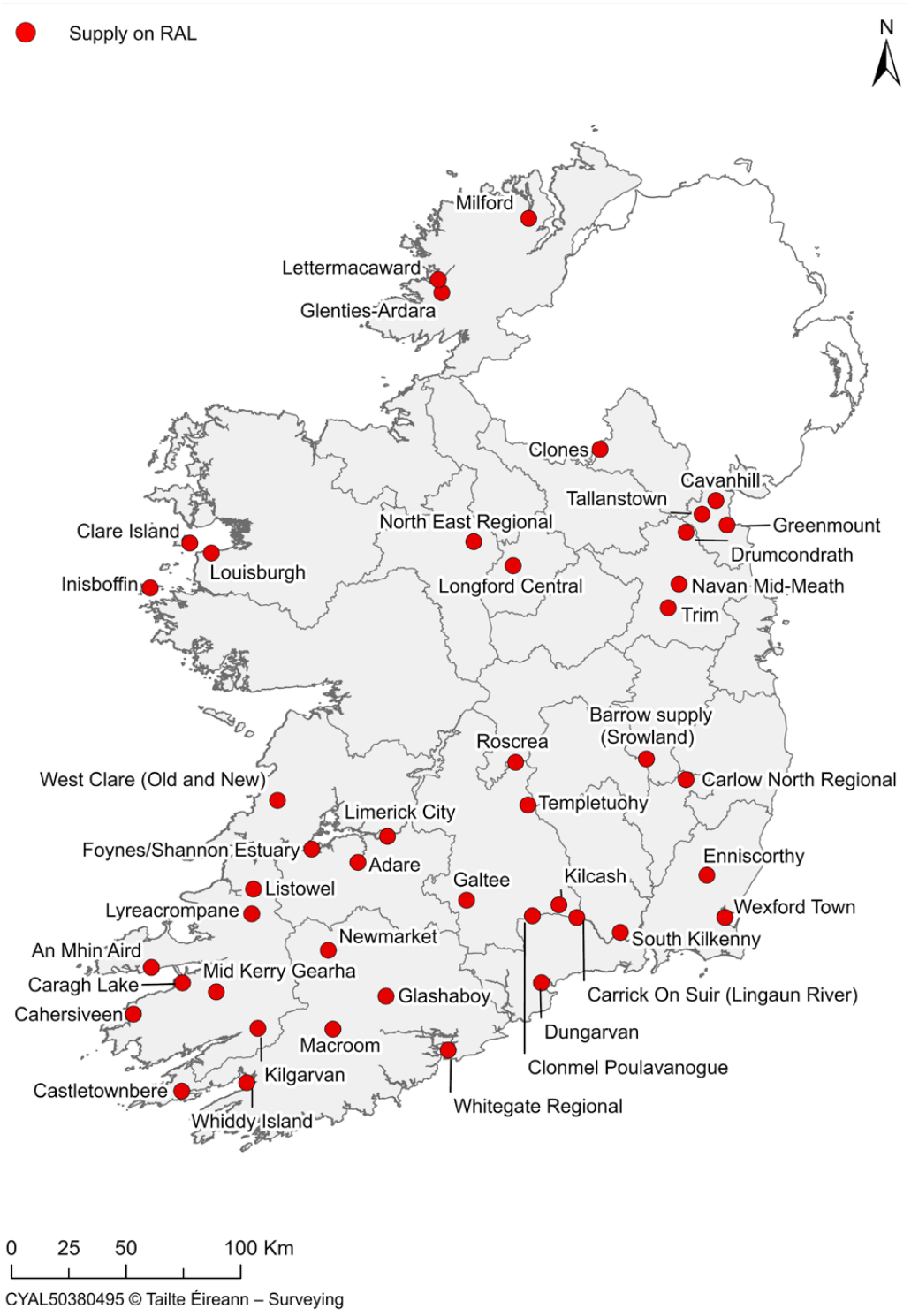


Figure 3.3: Supplies on RAL at the end of 2024.

Once a supply is on the RAL, Uisce Éireann must put in place an action plan with timelines for its removal as soon as possible. At the end of 2024, there were 10 RAL supplies without action plan completion dates (an improvement from 2023 with 15 supplies). Of these, 6 supplies have been on the RAL for over 2 years and while an action programme is currently being defined by Uisce Éireann for these supplies – a completion date has yet to be provided. In cases where a final delivery date is difficult to state with confidence (e.g. due to planning issues), Uisce Éireann must provide evidence to the EPA that it is developing a plan for these RAL supplies. EPA issues

enforcement notices to all supplies on the RAL where warranted, to ensure that improvement work is completed in a timely manner. Corresponding sustained national investment is needed to bring these to a resolution. Details on the RAL can be seen in Appendix A and also here on the EPA website.

Box 2 – Example of a supply removed from the RAL - Aughacasla, Co. Kerry

The Aughacasla Public Water Supply in Kerry was a lake water supply that was added to the EPA Remedial Action List (RAL) in January 2022. This was due to elevated levels of Trihalomethanes (THMs) above the standard in the Drinking Water Regulations. EPA required intervention by Uisce Éireann on this supply. Uisce Éireann investigated the treatment options available to resolve the THM issue.

Uisce Éireann replaced the lake source for the supply with groundwater, and also augmented the treatment process on the supply in order to minimise the risk of Trihalomethane formation in the network. The supply is now served by three boreholes, slow sand filtration treatment, Granular Activated Carbon (GAC) filtration and chlorination.

Satisfactory Trihalomethane monitoring by Uisce Éireann has verified the effectiveness of the works – and the supply was removed from the Remedial Action List.

Uisce Éireann completed a targeted communication campaign in early 2025, to inform customers who receive water from supplies that are on the RAL. Each household received a booklet providing key details, including the name and source of the supply, the reason for its inclusion on the RAL and planned remediation actions.

Actions required

- Uisce Éireann must provide plans and completion dates for all supplies on the RAL and take all necessary measures to resolve these issues without delays.
- Additionally, Uisce Éireann must prioritise the completion of Risk Assessments/Drinking Water Safety Plans (DWSPs) as required under the Drinking Water Regulations. Implementing the findings of the Risk Assessments should reduce the number of supplies added to the RAL in the first place.

Drinking Water Priority 1: Ensure that water is free of bacteria

Disinfection is the most important step of the water treatment process. It keeps our water supplies safe from pathogens such as bacteria, which can cause illness. Disinfection can be carried out using chlorination and/or ultra-violet light, to kill or deactivate pathogens.

Uisce Éireann are implementing a National Disinfection Programme[16] to ensure that standard specifications for disinfection systems are met at all sites.

A supply may be placed on the RAL if critical disinfection infrastructure is absent or if there is persistent presence of *E. coli* or *Enterococci* in the treated water.

Findings for 2024

There are currently no supplies on the RAL specifically under the bacteria/disinfection criterion – down from 2 in 2023. The supplies that were removed from the RAL were small (serving <60 people) and they were connected to better quality public water supplies in the area.

However, the Boil Water Notices seen in 2024 (often due to the presence of bacteria) underline the fact that inadequate disinfection remains an issue. All Uisce Éireann plants have some form of disinfection in place before the water is provided to consumers. In some cases, additional infrastructure is required, or the management and control of existing infrastructure is inadequate. During 2024, 29 Boil Water Notices (thirty five percent – the same proportion as 2023) were in place due to disinfection issues, affecting over 15,000 people. Disinfection systems have been upgraded and commissioned at a total of 401 sites to date, with 26 of these sites delivered in 2024. Uisce Éireann has also initiated additional work to further enhance disinfection performance. These improvements aim to optimise elements of the treatment process that can affect disinfection effectiveness, ultimately strengthening the overall resilience of the plants.

Figure 3.4: Inspection of chemical storage arrangements during an audit

16 Available at *https://www.water.ie/projects-plans/national-projects/national-disinfection-programme/*

The EPA through its audit programme continues to find issues with inadequate disinfection (e.g. inadequate contact time[17]). During 2024, the EPA carried out a targeted audit campaign. Part of this campaign focussed on disinfection processes – for details see Box 3.

Actions required

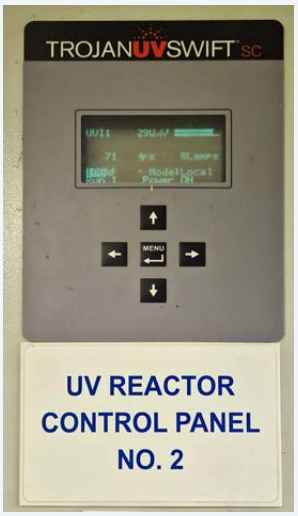
The National Disinfection Programme is of fundamental importance in identifying and addressing issues with disinfection in water supplies.

- Uisce Éireann must continue to undertake improvements to disinfection systems across the country to ensure that the quality of drinking water is safeguarded;
- Where significant issues are found, for example, inadequate contact time, these should be resolved immediately to protect public health.

Box 3 – Targeted audits completed in 2024

In 2024, EPA carried out over 200 audits of drinking water treatment plants – primarily focused on disinfection related issues. The focus of the audits included these areas of drinking water plant operation:

1. **Alarms and shutdowns** – key infrastructure should have adequate alarms in place and automatic shutdowns to prevent inadequately treated water entering the network.
2. **Barriers to *cryptosporidium*** – *cryptosporidium* cannot be treated by chlorination and therefore special treatments are used.
3. **Disinfection processes** – focussed on water network monitoring for chlorine, adequacy of chlorine contact time, UV treatment, dosing pump back-ups.



Reactive audits – These were carried out responding to issues such as boil water notices/ parametric failures and are not part of the 3 audit campaigns above.

While most plant controls inspected were satisfactory – there remain issues at plants for Uisce Éireann to resolve. Issues were uncovered at several sites including for example:

- Lack of/or inappropriate location of continuous chlorine monitors in the treatment plant.
- Turbidity monitoring pointing to ineffective filter operations.
- Turbidity alarms/ shutdowns not in accordance with EPA guidance.

The detection of these issues underlines the requirement for improved management and ongoing investment by Uisce Éireann.

17 Where chlorine is used in disinfection, it needs time (known as contact time) to fully kill any bacteria or viruses, before it reaches the first consumer on the distribution network.

Drinking Water Priority 2: Ensure that water is free of protozoan organisms *(i.e. Cryptosporidium and Giardia)*

While disinfection deals with many pathogens, chlorination on its own is insufficient to kill or deactivate protozoan organisms such as *Cryptosporidium* and *Giardia* which can cause serious gastro-intestinal illness. The Drinking Water Regulations do not explicitly require monitoring of these organisms, however Uisce Éireann is required to determine if there is a risk that protozoans could be present in raw water sources. If so, then appropriate treatment processes (referred to as a 'barrier') must be put in place. C*ryptosporidium* and *Giardia* may be detected in treated water where:

- there is no treatment barrier in place at the water treatment plant; or
- the treatment barrier is not being properly operated, or maintained, or is inadequate.

A supply will be placed on the RAL if protozoan detections are persistent, or a protozoan barrier is not in place.

Findings for 2024

Uisce Éireann detected *Cryptosporidium* or *Giardia* in 13 supplies during 2024, down from 20 in 2023 (see Figure 3.5). Of the 13 supplies, 4 were placed on BWNs. There is again a strong clustering of protozoan issues in the south of the country as seen in previous years. It is considered that this is attributable to a combination of the geology, the higher number of supplies in this part of the country, and the intensive farming practices in the south.

At the end of 2024 there were 11 supplies (supplying over 53,000 people) on the RAL for detections of (or risk of) *Cryptosporidium* – down from 15 in 2023. Four supplies were removed from the RAL during 2024 (due to upgrade of treatment or rationalisation). Action plans for dealing with these issues are generally the installation/upgrading of UV-treatment, or provision of alternative supplies. Completion dates for 4 of the supplies are during 2025/2026, with the remaining supply completion dates in 2026 – 2029.

As part of the ongoing enforcement response to this matter EPA has issued 8 legally binding Directions to Uisce Éireann during 2024 to drive compliance with the *Cryptosporidium* limit.

The number of supplies on the RAL for protozoal risk decreased in 2024 which is welcome by the EPA. Uisce Éireann are completing risk assessments, called C-SRAMs, on all supplies to determine where additional treatment is required. This information will provide the opportunity for Uisce Éireann to improve the resilience of their supplies.

Actions required

Protozoa detections are due either to barriers not being in place, or because barriers aren't functioning correctly.

- It is critical that Uisce Éireann operate their treatment barriers correctly.
- Deficits identified with *Cryptosporidium* barriers must be addressed immediately.

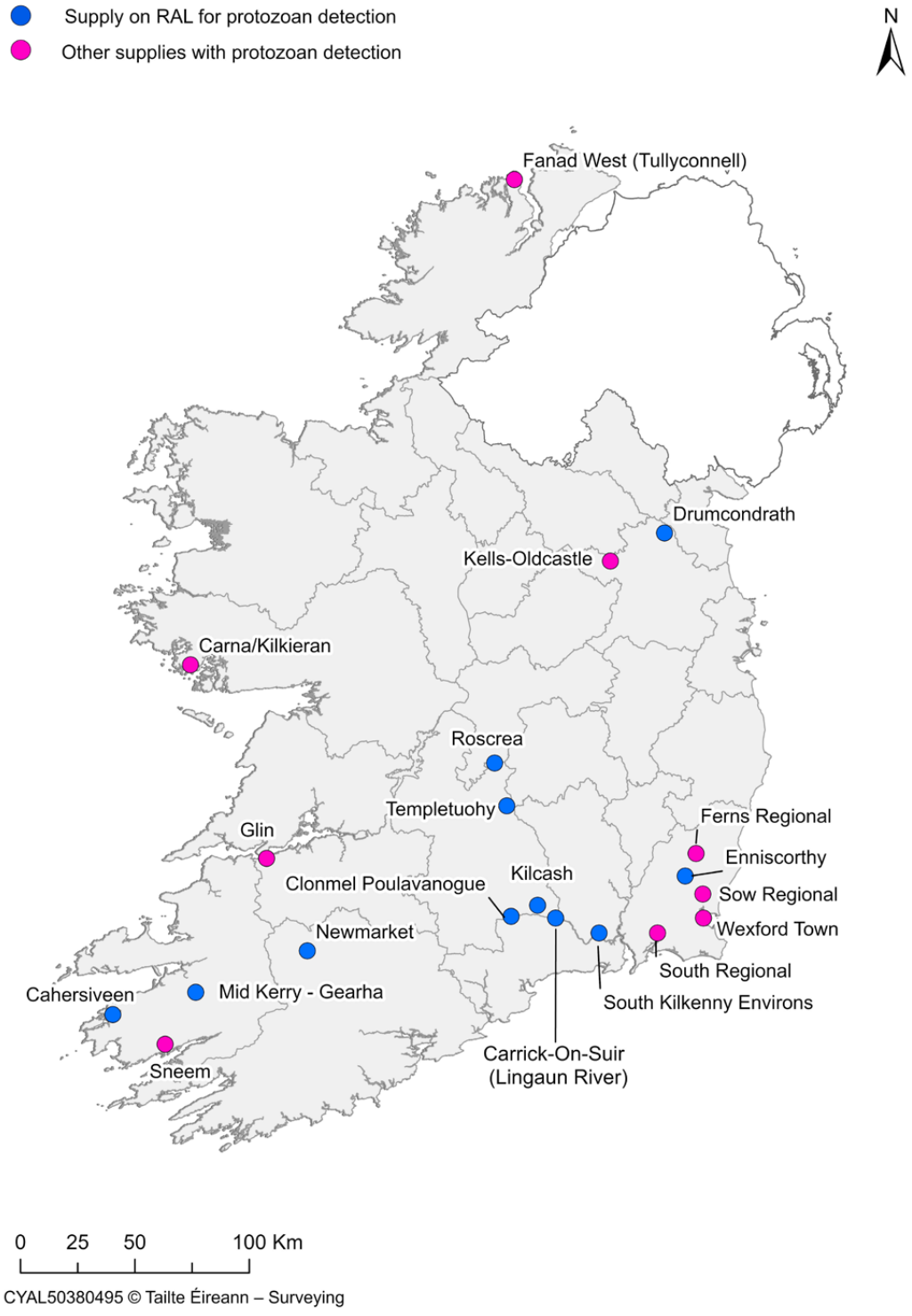


Figure 3.5: Supplies on the RAL for inadequate protozoa (i.e. *Cryptosporidium* and *Giardia*) treatment, and supplies with failures during 2024.

Drinking Water Priority 3: Ensure that water is free of chemical substances (trihalomethanes and pesticides)

Trihalomethanes (THMs) form when natural organic matter in the water source, such as vegetation, reacts with chlorine used in the disinfection treatment process. For this reason, it is important to remove as much organic matter as possible from the raw water using processes at the water treatment plant. THMs are a particular issue in Ireland where about 80% of our drinking water is abstracted from rivers and lakes, with associated catchments often having peaty soil.

There is a legal limit of 100µg/l for THMs and Uisce Éireann must meet this limit in order to protect public health. A supply may be placed on the RAL if there is a persistent failure to meet the limit and processes are not sufficient to maintain THM levels below that level.

In relation to the health risks from THMs, HSE advice states:

> *'.. [Health] guidelines for THMs are set to ensure a very low level of potential risk over a typical lifetime of consumption (i.e. 70 years). Short-term use of drinking water that exceeds guidelines is unlikely to have an impact on human health.'*

It goes on to state:

> *'There is insufficient scientific evidence to indicate that THMs cause cancer in people …… It should be noted that any potential health risks from disinfection by-products, including THMs, are much less than the risks from consuming water that has not been disinfected.'*

However, when uncertainty exists a precautionary approach is needed and Uisce Éireann must take the necessary actions to meet the THMs limit. For the latest health advice on THMs, please refer to the HSE website at the referenced link.[18]

The European Commission infringement proceedings against Ireland in 2015 was ruled on in early 2024. The Court of Justice of the European Union ruled that Ireland had failed to fully implement the Drinking Water Directive in relation to Trihalomethanes (THMs) in 30 drinking water supplies (see Box 4). Trihalomethanes remain a national priority.

18 *www.hse.ie/eng/health/hl/water/drinkingwater/trihalomethanes/*

Box 4 THM Infringement case against Ireland

On **25/1/24**, the Court of Justice of the European Union ruled that Ireland had failed to fully implement the Drinking Water Directive in relation to breaches of the 100ug/l limit for Trihalomethanes (THMs) in drinking water in (30) drinking water supplies.

Of these 30 supplies, the EPA has regulatory oversight of 21 public water supplies managed and operated by Uisce Éireann. Local authorities have regulatory oversight of 9 private group water supplies.

Of the 21 public water supplies in the original complaint, 19 have been resolved (including 3 supplies resolved in 2024 (see below).

- **Kilkenny City, Radestown.** Works completed, successfully verified, and removed from the RAL.
- **Aughrim/Annacurra, Wicklow.** Supply rationalised, successfully verified, and removed from the RAL.
- **Caragh Lake, Kerry.** Upgrades works have been completed, successfully verified, and removed from the RAL for THMs.

Examples of work undertaken to resolve THM issues include:

- Construction of new treatment plant/equipment
- Optimising existing treatment process to reduce/eliminate the causes of THMs (e.g. organics)
- Replacement of supply source e.g. using groundwater supply instead of surface water supply
- Connecting to a compliant operating supply and decommissioning of old supply.

The 2 remaining public supplies are on the EPA's Remedial action list (RAL) and are detailed below:

1. **Glenties-Ardara, Donegal.** Construction of water treatment plant upgrade is underway - expected works completion date of March 2025.
2. **Drumcondrath, Meath.** Action programme to develop new groundwater sources and upgrade of the water treatment plant has an expected completion date of June 2026.

As part of the ongoing enforcement response to this matter EPA has issued a further 12 legally binding Directions in 2024 to Uisce Eireann – specifically to drive compliance with the Trihalomethanes limit.

Pesticides are found in drinking water due to the presence of such products in the catchment of water bodies used for drinking water abstraction where pesticide use is not well managed. The term 'pesticides' includes a wide range of products, but in Ireland, herbicides are the most commonly detected, in particular MCPA[19] which is primarily used for rush control in grassland. Where pesticide failures are found, monthly monitoring must be carried out during the spraying season of April to November. However, pesticides are now being detected outside this growing

19 2-methyl-4-chlorophenoxyacetic acid

season, and this may require an adjustment to the monitoring regime applied. This in under consideration by a Departmental cross-office group of stakeholders lead by the Departmental of Agriculture (called NPDWAG[20]), which includes the EPA . A supply may be placed on the RAL if failures are persistent and NPDWAG investigations fail to resolve the issue.

Findings for 2024

Trihalomethanes

In total, 31 public supplies failed to meet the standard for THMs at least once in 2024, a continued improvement from 41 in 2023. Figure 3.6 shows THM compliance trend since 2017.

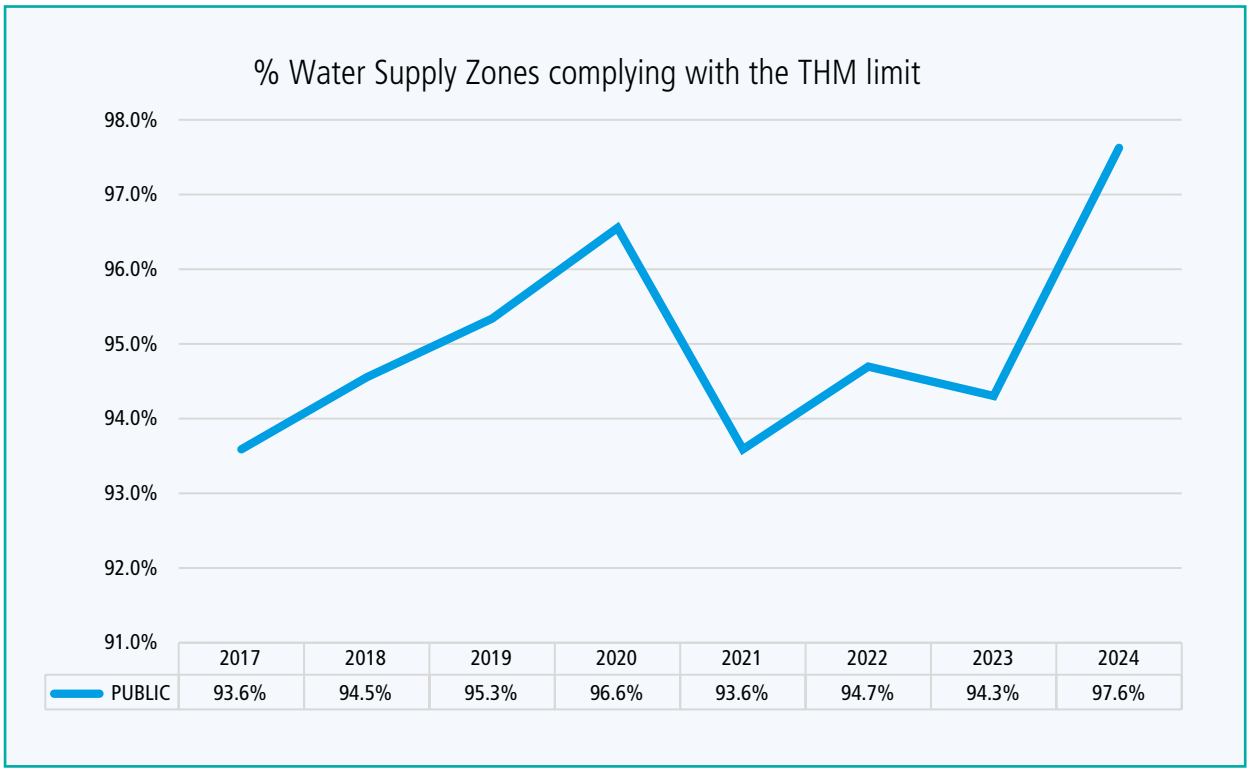


Figure 3.6: Percentage of water supplies complying with the Trihalomethane limit[21]

THM Compliance

Nationally, THM supply compliance has improved in 2024 to over 97.6% of supplies (94.3% in 2023), which means approx. 1 in every 40 supplies in Ireland is failing the THM limit of 100ug/l (from 1 in 20 in 2023).

While the overall trend of THM supplies on the RAL is reducing - it still constitutes over 40% of supplies on the RAL. At the end of 2024 they impacted almost 245,000 people (19 supplies) – down from almost 300,000 in 2023. Nevertheless, we can see from Fig 3.8 that the overall number of supplies on the RAL for THMs has been on an overall decreasing trend since 2016.

20 *'National Pesticides and Drinking Water Action Group'* www.pcs.agriculture.gov.ie

21 Based on regulatory data only

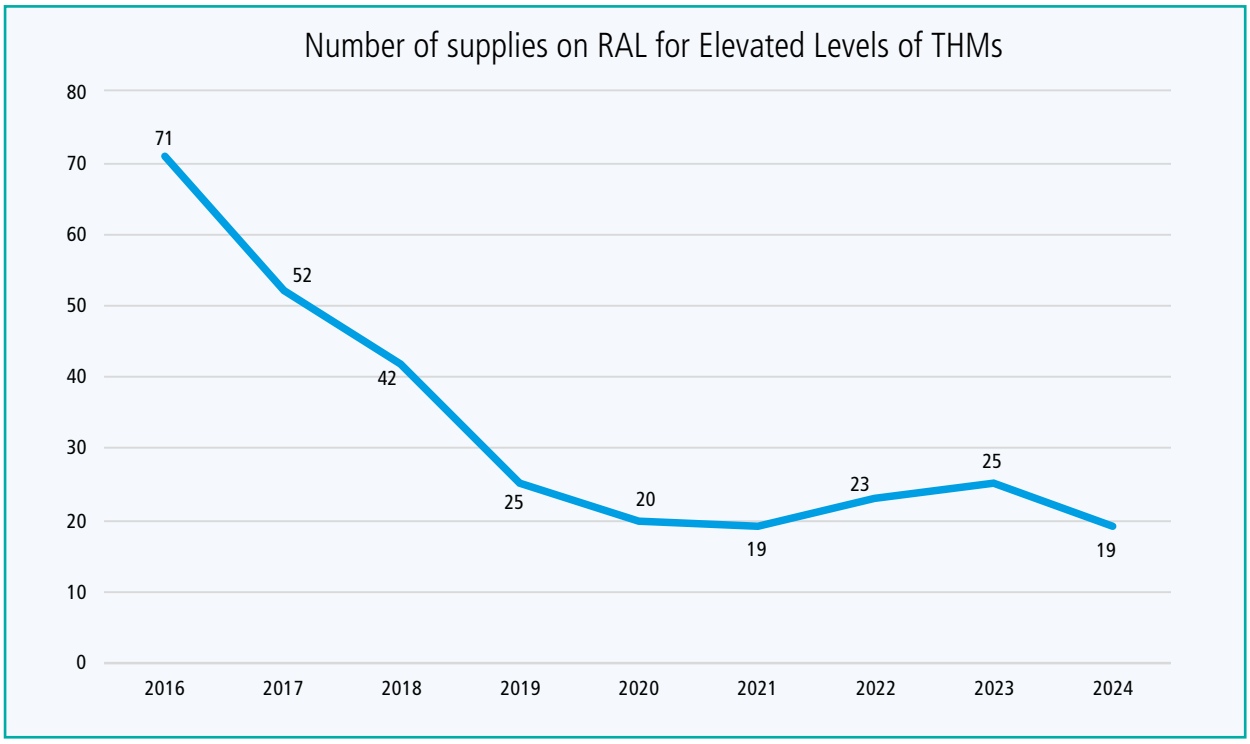


Figure 3.7: Number of supplies on the RAL for THMs 2016-2024

In 2024, one supply was added to the RAL for THM issues. This is balanced by the fact that 7 supplies were removed from the RAL for resolving THM issues in 2024. This is welcomed by the EPA. EPA considers that this reflects the proactive THM investigative work and investment in treatment infrastructure being done by Uisce Éireann in recent years. Uisce Éireann have completed a risk assessment of every supply in Ireland for THM formation potential. Sites that are considered higher risk have undergone an enhanced monitoring regime, beyond the levels required by regulation. This is the main reason for continued significant detections of THM failures. Another factor in the increased detections of THM in the water supply system is the heavier rainfall events experienced in recent years associated with climate change. These have increased the levels of organic matter in rivers and lakes, which are the main sources of drinking water in Ireland.

Figure 3.8: pH correction tanks – this reduces acidity and improves water treatment results

The average levels of THMs in our drinking water exceedances have decreased over the last decade. In 2012 the average THM exceedance reported in Ireland was 157 ug/l and this has declined steadily. In 2024 the average THM exceedance is 124 ug/l (See Figure 3.9). This is a good reflection of the ongoing works undertaken by Uisce Éireann to investigate and resolve this issue.

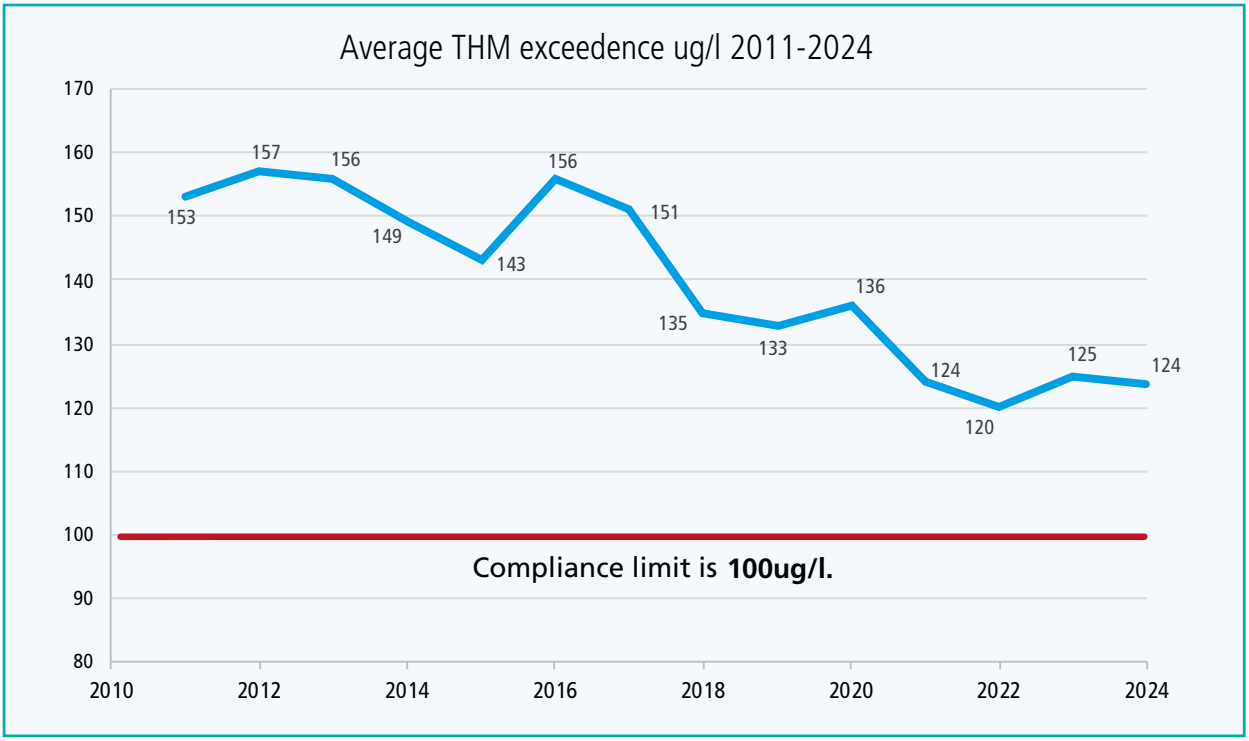


Figure 3.9: Average levels of THM exceedances reported by year in Ireland.

The EPA can issue legally binding directions to Uisce Éireann under the Drinking Water Regulations. There were 12 new directions relating to THM exceedances issued in 2024. For further details on these open directions see **Appendix D**. The EPA will continue to target THM compliance as part of its enforcement activities, and progress will be reported as part of the THM Infringement finding against Ireland.

Failure to meet the THM standard for a public group scheme[22] may be due to the quality of the water supplied by the parent public supply or it may be that the THMs were formed in the public group scheme network. In 2024 exceedances of the THM standard were found at 2 public group schemes in 2 counties – this is a decrease since 2023 (see *Appendix E* for the full list).

22 A public group scheme, set up by the local community, manages the distribution of treated water to users. Uisce Éireann manages the abstraction and treatment of the water.

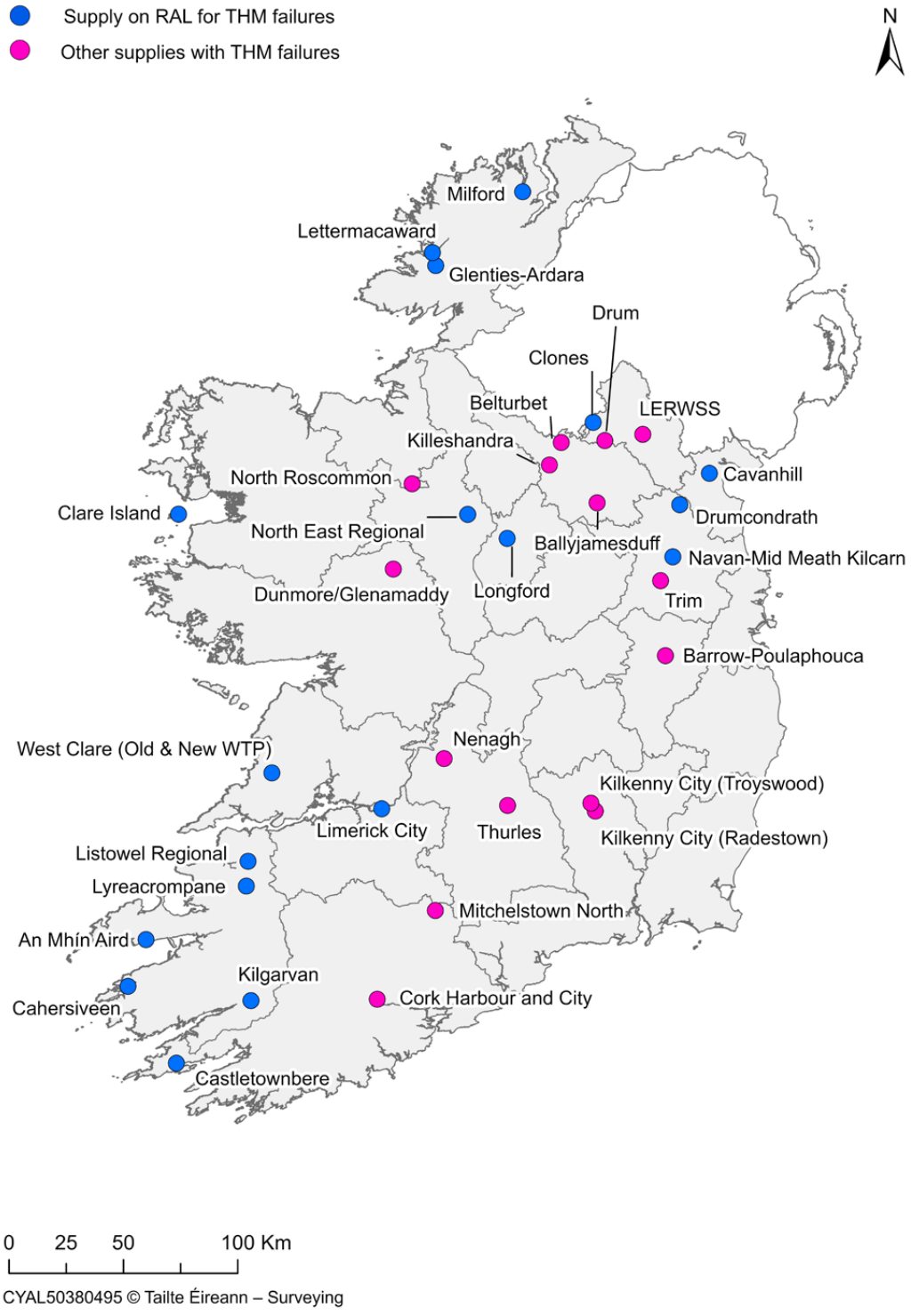


Figure 3.10: Public supplies on RAL for THM or with THM failures during 2024

Actions required

- Uisce Éireann must address supplies on the RAL for persistent THM exceedances and comply with the requirements of the open THM related directions.
- Uisce Éireann must also address the breaches of the THM limits seen in 2024 in order to protect public health, and to ensure compliance with the THM standard in the Drinking Water Regulations.
- Local authorities must investigate THM failures in public group schemes to determine whether the cause is the quality of the water from the parent supply or the conditions in the group scheme network, so that the appropriate corrective action is taken.

Pesticides

Pesticides were detected in twenty-three water supplies[23] in 2024, the same number as 2023. However, only one of these supplies is on the RAL for persistent pesticide breaches. The herbicide MCPA continues to dominate – causing well over 50% of the failures, with a mix of other pesticides causing the others.

The primary strategic approach to reducing the risk of pesticides by Uisce Éireann is catchment management (see Box 5), through the National Pesticides and Drinking Water Action Group. The Department of Agriculture, Food & the Marine coordinates the National Pesticides & Drinking Water Action Group (NPDWAG), working with a range of stakeholders such as EPA, Uisce Éireann, and the Local Authority Water Programme to support compliance with pesticide limits. Supplies with persistent pesticide exceedances have Catchment Focus Groups put in place under the NPDWAG. The Catchment Focus Group brings relevant stakeholders together to promote responsible pesticide use within those catchments – with the ultimate aim of resolving the issues at source before they reach the water supply.

One element of this strategy is communication by the focus groups, for example farm visits, focussed communications and social media campaigns.

23 68 individual exceedances notified

Box 5 – Pesticides and a water source protection project

Where pesticides are detected in drinking water one single stakeholder can rarely solve such an issue. The NPDWAG[24] employs a collaborative approach to resolve such issues. In the case of the Erne-Larah project[25] we can see examples of actions that have been taken to deal with MCPA pesticide exceedances. While some positive results have been seen – it will take further time to assess the full effect of these efforts[26].

Erne-Larah project – Works carried out in Jan – Nov 2024

Physical improvements were provided at 24 of the 35 farms in the programme, including:

- Fencing-off of rivers
- Riverside planting to reduce sediment loss and run-off
- Mulching as a 'greener' alternative for rush control - so spraying is not required
- Assistance and advice to farmers where relevant
- Pesticide storage/handling advice and 'best-practice' support

24 *'National Pesticides and Drinking Water Action Group'*

25 *Erne-Larah | National Projects | Uisce Éireann (formerly Irish Water)*

26 Photos courtesy of Uisce Eireann

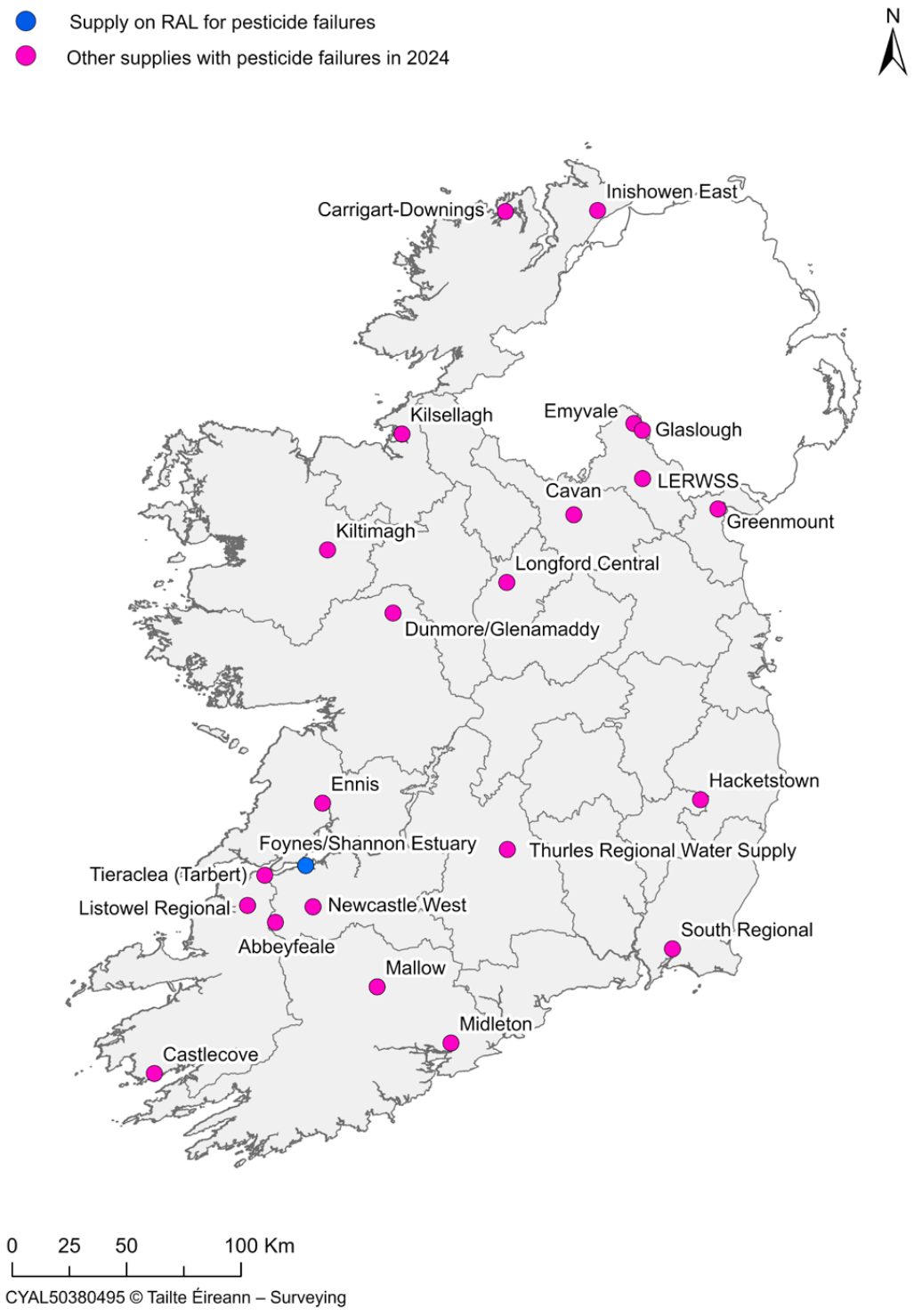


Figure 3.11: Supplies on the RAL for pesticides or with pesticides failures during 2024.

Actions required

- It is crucial that Uisce Éireann in conjunction with National Pesticides & Drinking Water Action Group implement the catchment management approach, and where the catchment focus groups fail to achieve compliance, consider water treatment options.
- Stakeholders, such as EPA, Uisce Éireann and the Local Authorities Local Authority Water Programme must effectively coordinate monitoring in the catchment to ensure that it is as effective as possible and responds to changes in pesticide use patterns.

Drinking Water Priority 4: Ensure that water treatment plants are operated effectively.

Persistent aluminium and turbidity failures indicate poor control over treatment processes. Control and management issues at supplies, such as issues with critical alarms and monitors, can result in situations where disinfection, protozoal removal/deactivation, or other processes are not optimised.

A supply may be placed on the RAL if aluminium or turbidity failures are persistent or if an EPA audit finds that treatment control or management issues pose a risk to reliable water treatment.

Figure 3.12: Inspection of a large water treatment facility

Findings for 2024

At the end of 2024 there were 20 (down from 23 in 2023) supplies on the RAL due to aluminium/ turbidity issues or because of audit observations, serving over 266,000 people - with most of these issues being identified through audits (Figure 3.13).

The overall number of sites on the RAL for these reasons has shown some improvement in 2024. EPA audits continued to identify issues at water treatment plants that need to be addressed.

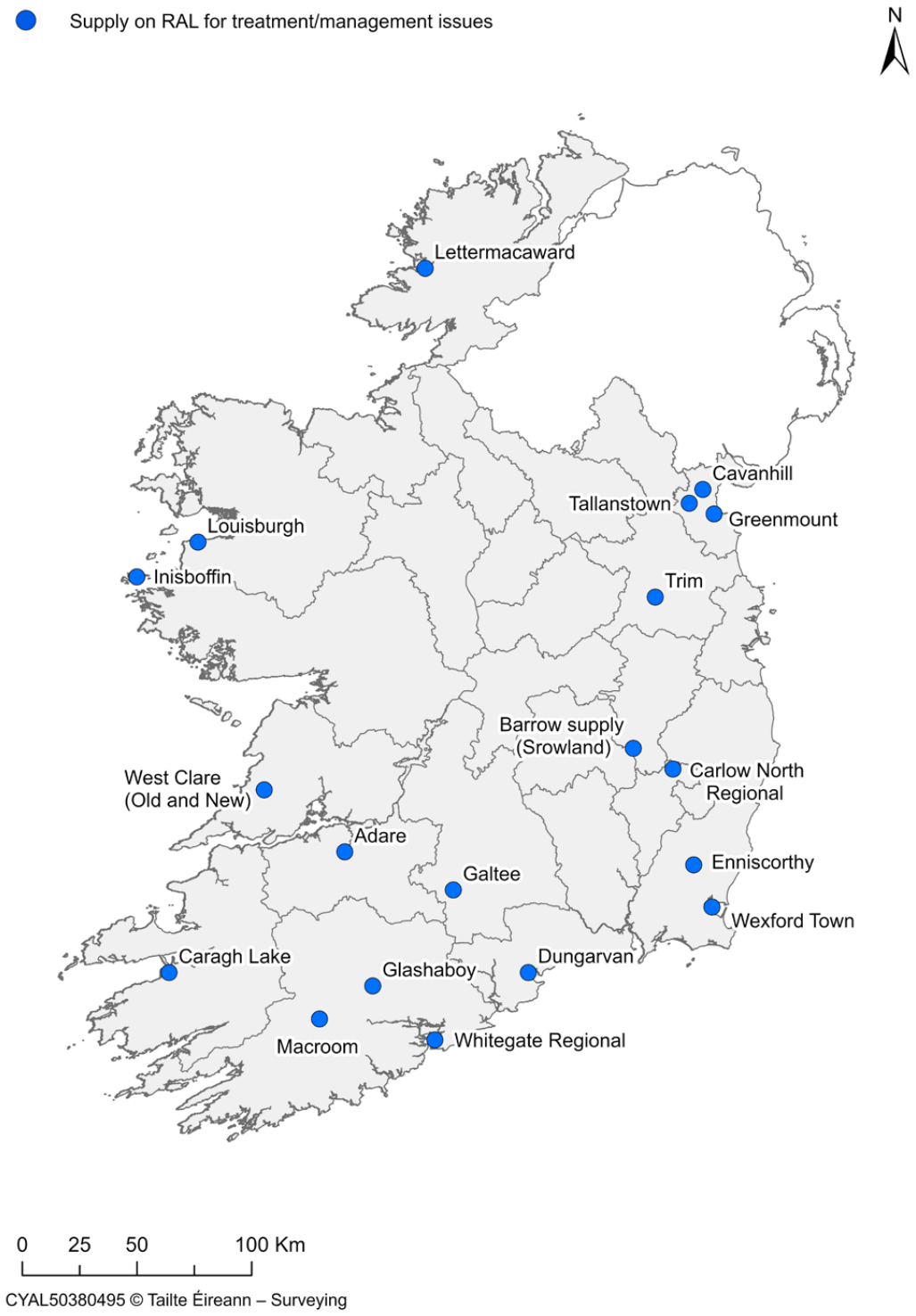


Figure 3.13: Supplies on the RAL during 2024 for treatment issues/plant upgrades required.

Actions required

Uisce Éireann must ensure that consistent and documented operational control and management measures are in place at all supplies, including;

- Monitors and alarms with appropriate triggers in place and operational at all times;
- Staff trained and available to respond to alarms and incidents;
- Operational monitoring to assess plant performance on an ongoing basis.

Examples of the information sought and reviewed by the EPA during the audit process are presented in Figure 3.14.

Figure 3.14: Examples of meters, records and systems reviewed during a site audit.

4. PROTECTION OF HUMAN HEALTH

Boil water and water restriction notices

A failure or incident at a supply can put the water quality at risk. The Health Service Executive is responsible for public health and must be consulted by Uisce Éireann where a water quality failure or incident could result in a public health risk. In these events, a boil water notice (BWN) or a water restriction notice (WRN) may be imposed.

It is critical that such failures or incidents are responded to promptly. Failure to adequately respond and take the appropriate actions up to and including the imposing of BWNs or WRNs can have a significant impact on public health. The consequences of consuming inadequately treated water can be very severe, particularly in vulnerable people, such as the young, the elderly, and those with underlying conditions.

While BWNs or WRNs cause inconvenience to consumers, they are necessary to ensure that members of the public do not consume water that could be contaminated and make them ill. Uisce Éireann must also take prompt action to ensure that the duration of the notice period is as short as possible.

Figure 4.1: Water clarification tanks allow solids to settle and be removed

Boil water notices - During 2024, 59 BWNs were in place at 49 supplies affecting almost 95,000 consumers. This is **down** from 91 in place during 2023[27] (254,000[28] consumers affected). (*Appendix F, Table 1*). It should be noted that

- 33 BWNs were in place for more than 30 days, with 17 of those in place for more than one year (13 of which each affected <50 people);
- 6 supplies had two or more BWNs issued within 2024 (down from 17 in 2023).

Table 4.1 shows that there has been no sustained reduction in total BWNs despite the Uisce Éireann Disinfection Programme having commenced in 2016. EPA considers that Uisce Éireann's ongoing improved incident awareness, escalation and management contributes to the increased number of BWNs.

Table 4.1: Boil Water Notices in place from 2018 to 2024.

Year	Number of notices in place	In place for 31 days or longer[29]	Total population affected during year
2018	44	18	97,200
2019	68	59	696,900[30]
2020	43	27	75,000
2021	70	29	211,000
2022	79	25	182,000
2023	91[31]	46	254,000
2024	59	33	95,000

The significant increase in number of long-term BWNs seen in 2023 may be improving - with a decrease welcomed for 2024 (see Figure 4.2). Nevertheless, the EPA considers that based on the magnitude of long-term BWN numbers – the obligation on Uisce Éireann to improve the performance and resilience of plants thereby reducing the need for BWN's remains.

27 14 BWNs issued in 2023 were precautionary in nature, short-lived (1-8 days) and were issued due to industrial action in Waterford, Tipperary and Cork with no associated parametric failures.

28 Note that where multiple notices are issued for the same supply during 2024 – the population affected is counted only once in *'total population affected'* figures to avoid duplication.

29 As of 31/12/24.

30 This includes the 657,000 people supplied by Leixlip water treatment plant, affected by two notices in 2019.

31 14 due to industrial action

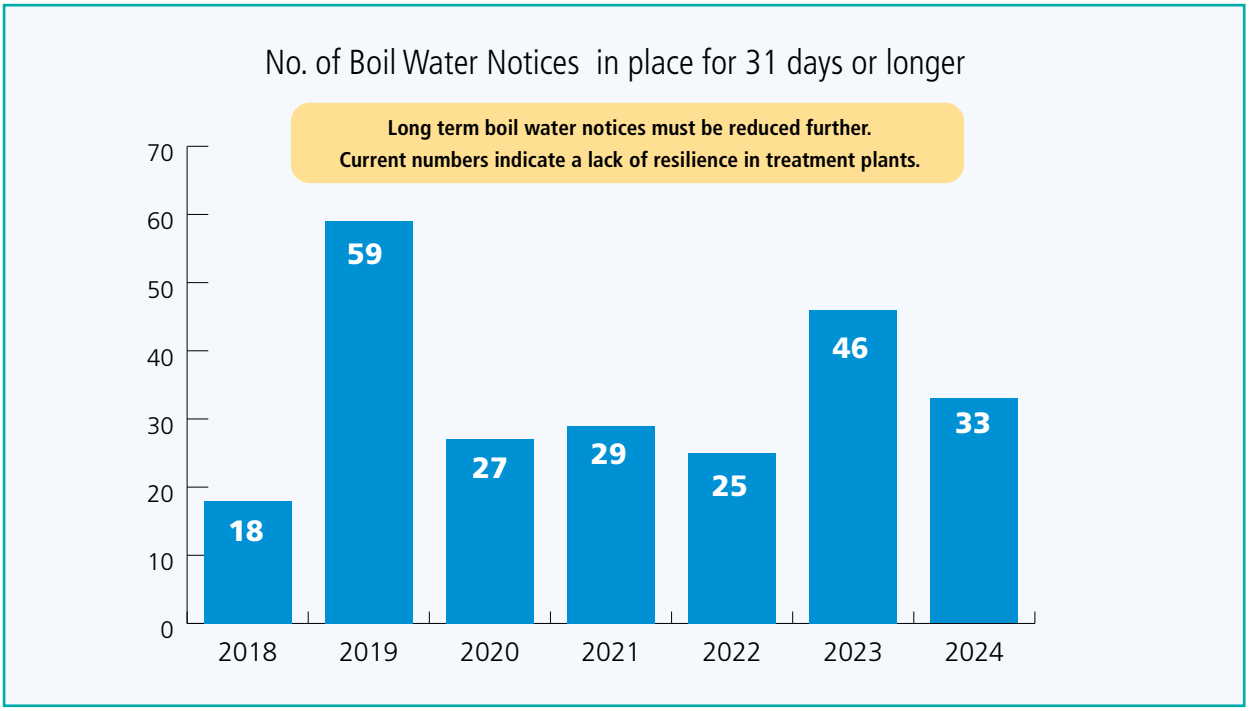


Figure 4.2: Long term Boil Water Notices from 2018 to 2024.

At the end of 2024, 17 BWNs were still in place affecting almost 25,000 people - including 2 long-standing BWNs (Baltrasna, Meath and Johnstown (South), Wicklow[32]).

While compliance with drinking water standards (chemical & microbiological parameters) has remained high over recent years, we are not seeing a consistently reducing trend of BWNs or long-term BWNs. While BWNs must be issued where they are required (they are essential to protect public health when supplies are compromised) - it is important to note that the EPA expects to see the number of BWNs, in particular long-term BWNs, reduce over the long-term.

This is expected as a result of the progression of Uisce Éireann's Disinfection Programme, and improved incident detection and management. The DWSP approach will serve Uisce Éireann in directing investment where it will deal with the most significant risks such as supplies listed on the RAL and supplies subject to BWNs and WRNs.

32 These are disputed supplies between Uisce Éireann and the local authority.

Box 6 Storms and their impact on water supplies

A number of named storms in 2024 and into 2025 resulted in significant impacts on the provision of safe drinking water to the public. Boil Water notices were required due to the impacts of:

- Storm Bert – November 2024
- Storm Darragh – December 2024
- Storm Eowyn – January 2025

These storms resulted in drinking water disruption in several different ways including:

- Power outages at a number of plants (particularly during Storm Eowyn) that resulted in water treatment processes being compromised.
- Extreme rainfall that resulted in high turbidity which some plants were not able to adequately treat

Figure – Met Eireann warning for Storm Bert November 2024

Nine BWNs issued in late January 2025 to public supplies, related directly to Storm Eowyn. These impacted almost 40,000 people.

Many other private supplies were also affected due to the same type of impacts detailed above.

It is expected that increasing intensity of weather events due to climate change will make consequences such as these more common.

The "*Fourth Climate Change Adaptation Scorecard Report 2024*"[33] specifically looks at adaptation and readiness for the impacts of climate change and puts 'Water Quality and Water Services Infrastructure' at a 'moderate' rating.

Water restriction notices - During 2024, 25 WRNs were in place on 20 supplies, affecting almost 21,000 people. This is a significant increase on 2023. It should be noted however, that one water restriction related to a short-lived fluoride dosing incident and made up the majority of people affected. The notice affected 19,000 of the 21,000 people in question for less than 5 hours and there was no actual parametric failure detected in the public network. The remaining 24 notices affected approx. 2,000 people (see Table 4.2 and *Appendix F, Table 2*). Seventeen of these notices were in place for more than 30 days.

33 Publications | Climate Change Advisory Council

Table 4.2: Water Restriction Notices from 2018 to 2024

Year	Number of notices in place	In place for > 30 days [34]	Total population affected during year
2018	15	7	14,600
2019	8	4	9,200
2020	17	10	4,200
2021	26	9	17,900
2022	10	7	8,700
2023	12	6	2,500
2024	25	17	21,000

Reasons for these notices include:

- Manganese or iron issues in 11 supplies. Manganese and iron are found naturally in many surface water and groundwater sources. Water passing through soil and rock can dissolve minerals containing manganese/iron. Water passing through iron pipes can also result in high iron which can compromise disinfection.
- A mix of nitrate, fluoride and turbidity/water quality and supply issues in others.

At the end of 2024, 8 WRNs were still in place affecting almost 130 people - along with a long-standing water restriction in Ballydermody, Co. Waterford[35].

Actions required

- Uisce Éireann must continue to progress its disinfection programme to minimise BWNs and WRNs.
- Uisce Éireann must better understand the factors leading to the issuing of BWNs generally and long-term BWNs in particular.
- Uisce Éireann must continue to improve its incident detection and management.
- Uisce Éireann should use the DWSP approach to build resilience in supplies.

34 As of 31/12/22.

35 This is a disputed supply between Uisce Éireann and the local authority.

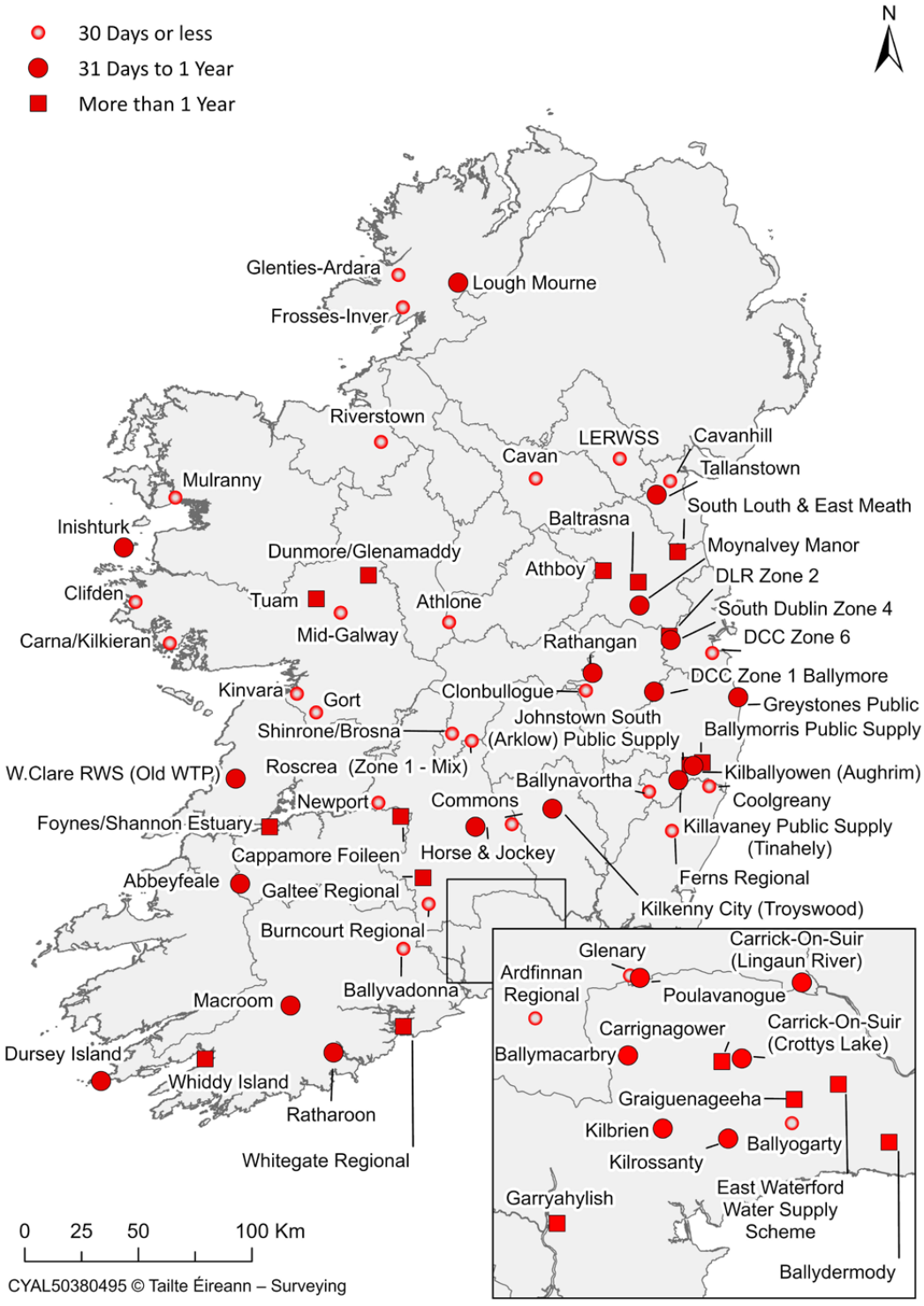


Figure 4.3: Supplies (incl. duration) with Boil Water/Water Restrictions in place during 2024

Reducing exposure to lead

The Irish Government published a *National Lead Strategy*[36] in June 2015. The strategy sets out actions to reduce people's exposure to lead from lead piping or connections in buildings and homes, and these actions are reported on by the Department of Housing, Planning and Local Government/Department of Health.

In May 2017, Uisce Éireann published its *Lead in Drinking Water Mitigation Plan*[37] which set out Uisce Éireann's plan to achieve the removal of all public side lead pipework (see Figure 4.4) by 2026. Uisce Éireann estimated that there were 180,000 lead service connections, comprising of 140,000 connections from water mains and 40,000 backyard service connections.

The new Drinking Water Directive (EU) 2020/2184 was transposed in 2023[38] and includes a reduction in the lead limit from 10 µg/l to 5 µg/l in January 2036. Sustained compliance with this limit cannot be guaranteed without the replacement of all lead connections.

Findings for 2024

The Department of Housing, Planning and Local Government/Department of Health has not yet published a report on progress with the National Lead Strategy, so the number and location of public buildings affected, the number of people exposed, and plans to remove lead are still not known. The National Lead Strategy assigns 7 action areas to a wide range of stakeholders. In the absence of the progress report, the EPA outlines its assessment of progress in Table 4.3 below.

Table 4.3: EPA assessment of progress with the 7 actions in the National Lead Strategy

Action	EPA progress assessment
1. Raising awareness Including: providing advice and information	**Broadly on track**
2. Water provider actions Including: removing lead pipes in public network	**Progressing - slowly**
3. Removing lead from housing stock Including: assessment of work needed, provision of grants and removal of pipes from households	**Progressing – very slowly**
4. Education Sector actions Including: assessment of work needed, provision of funding and removal of pipes from schools	**EPA unaware of significant progress**
5. Hospitals and Health Care actions Including: assessment of work needed, provision of funding and removal of pipes from HSE buildings	**EPA unaware of significant progress**

36 *https://www.gov.ie/en/publication/f76ee-national-lead-strategy-june-2015/*

37 Available at *https://www.water.ie/projects-plans/our-plans/lead-mitigation-plan/*

38 *European Union Drinking Water Regulations 2023, S.I 99 of 2023*

Action	EPA progress assessment
6. Other Public Body actions Including: assessment of work needed, funding and removal of pipes from other public buildings e.g. libraries/prisons	**EPA unaware of significant progress**
7. Research and Monitoring actions Including: monitoring strategy implementation, and sampling/research trials.	**Critically - no report on progress.** **Good progress however in some areas e.g. trials of o-Phosphate treatment.**

The necessity to finalise and publish this report has been highlighted in previous EPA reports. The continued lack of progress in this area is unsatisfactory and needs to be addressed.

The *Lead Remediation Grant Scheme* was changed during 2023. The grant is now easier for the public to get, and the level of financial support enhanced, and there has been a slight increase seen in the removal of lead pipes by householders during 2024 in comparison to 2023. While this is welcomed by the EPA, there were fewer than 250 household (private-side) lead replacements carried out in 2024[39]. This level of uptake by householders is very slow given the scale of the problem (i.e. an estimated total of 180,000 household lead service connections). Homeowners should avail of the grant to replace lead pipes in their properties.

The slow progress by Uisce Éireann in the removal of lead connections in the public network (public-side) continues. In 2024, Uisce Éireann replaced over 4,000 lead connections (over 9,500 in 2023), bringing the total number of replacements to approx. 65,000 out of approximately 180,000. It should be noted that the original target estimate of 180,000 was made a number of years ago and is likely to have been an overestimate. Nevertheless, at this rate, Uisce Éireann will not meet its commitment to remove all public-side lead pipework by 2026.

Orthophosphate (OP) dosing (see Box 7) to reduce the solubility of lead from pipework is in place at 12 water treatment plants (up from 10 in 2024) at the following supplies:

- Ballymacool - Co. Donegal
- Crolly - Co. Donegal
- Ardsbeg/Gortahork - Co. Donegal
- Inishowen - Co. Donegal
- Adamstown - Co. Waterford
- Portloman - Co. Westmeath
- Clareville - Co. Limerick
- Swinford - Co. Mayo
- Sandyhill - Westport, Co. Mayo
- Gort - Co. Galway
- Hacketstown - Co. Carlow
- Lough Talt – Co. Sligo

The 12 operational OP supplies serve over 97,700 properties. There are 12 additional plants where OP-dosing is installed but not yet operational – with a further number of supplies at varying stages of development from initial desktop assessment to construction. A dedicated Uisce Éireann team has been assigned to drive this issue.

39 as part of the UE Opt-in scheme - *Uisce Eireann Opt-in-Lead-Pipe-Replacement-Scheme*

Box 7 – Lead and orthophosphate dosing

When water comes in to contact with lead, particularly when it is left standing in a pipe for a period of time, the lead can dissolve into the water.

Lead is a proven health risk, and was used for pipework and plumbing in some houses built up to, and including, the 1970s..

Ortho-phosphate treatment is a corrective water treatment used to reduce the corrosion of lead pipes. Ortho-phosphate forms a protective coating inside lead pipes and fittings in customer's homes and businesses to help prevent lead from dissolving into drinking water

The most effective way to reduce your exposure to lead in drinking water is to replace lead piping. Lead Remediation Grant Scheme[40] can assist homeowners with this cost. However, Orthophosphate treatment is a proven interim method to reduce lead levels in drinking water.

The forthcoming reduced lead limit from the Drinking Water Directive, the slow rate of lead replacement, and the lack of updates under the National Lead Strategy, emphasises the need for more action on lead. These works must not be delayed further as they are the only sustainable way to reduce people's exposure to lead in drinking water.

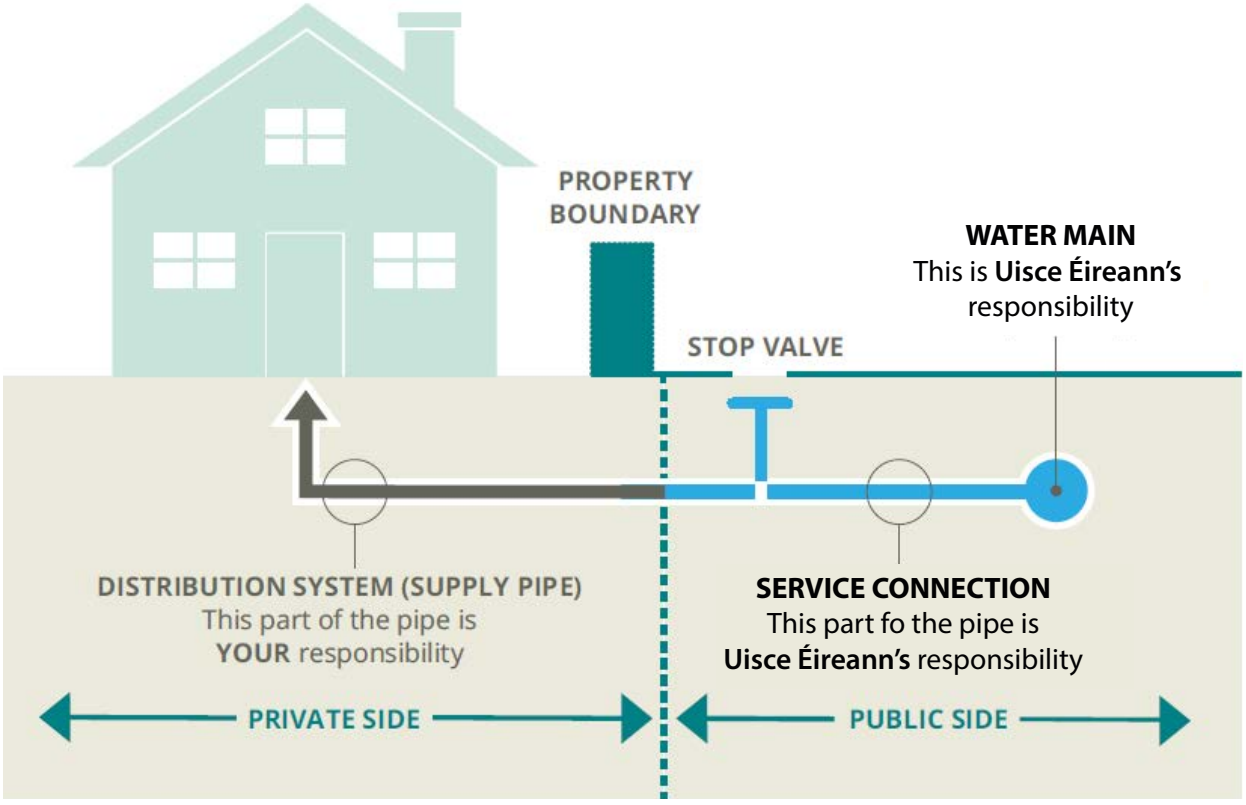


Figure 4.4: Responsibility for water distribution systems (*graphic courtesy of Uisce Éireann*)

40 gov.ie - Domestic Lead Remediation Grant Scheme

Actions required

- Progress to remove lead from drinking water networks by Uisce Éireann under their Mitigation Plan is too slow and must be accelerated.
- A report on progress by the Department of Housing, Local Government and Heritage/ Department of Health towards carrying out the actions within the National Lead Strategy and more specifically on assessments of lead pipework in public buildings and plans for removal is long overdue. The continued absence of progress reporting in this area is unsatisfactory. The EPA welcome the commitment to progressing this work in 2025.
- Uisce Éireann must continue to improve its incident detection and management.

Resilience of supplies - Drinking Water Safety Plans

The new Drinking Water Directive[41]/Irish regulations put the requirement for increasing the resilience of our water supply infrastructure on a statutory footing. It requires risk assessment of our drinking water supplies and infrastructure – known as Drinking Water Safety Plans. Requirements include putting a full water safety plan approach in place for supplies by January 2029. The plans are required to cover the whole water supply chain from source to tap.

Uisce Éireann are in the process of putting DWSP in place for all public supplies. Uisce Éireann uses DWSPs to identify and target the risks to our public water supplies and they are a proactive approach to ensuring that a water supply is not only **safe**, but also **secure**. This provides greater certainty for the consumer that their drinking water supply will remain safe to drink and is resilient. A DWSP identifies:

- all the things that could go wrong (hazards);
- how serious it would be if it did go wrong (severity); and
- how likely it is that it could go wrong (likelihood).

Where the findings of Drinking Water Safety Plans are implemented, this will serve to increase the resilience of these water supplies. This will address many of the issues raised in this report such as those arising in the catchment (e.g. pesticides/organic pollution of sources/bacterial contamination), in the plant itself (e.g. breakdown of chlorination disinfection/filtration problems/ THM generation) or in the network (e.g. inadequate secondary chlorination in the network or network contamination).

41 (EU) 2020/2184

This assessment is made at each step in the water supply process, from the water's source all the way to the consumer's tap. The aim is to identify, manage and mitigate risk. Uisce Éireann is assessing all public water supplies. Once risks are identified, actions must be taken to mitigate those risks. A national overview ensures the highest risks are dealt with first, under the relevant Uisce Éireann programmes.

The DWSPs produced by Uisce Éireann must, as a minimum, meet the standards set. Implementation of the DWSP approach is a proactive way to reduce or eliminate the risk of supplies ending up on the RAL. It also provides a robust structure to direct investment and develop infrastructure to deal with the highest risks in terms of the protection of public health.

Figure 4.5: EPA inspection of water treatment plant infrastructure

Findings for 2024

Uisce Éireann is committed to the Risk Assessment/Drinking Water Safety Plan approach. Uisce Éireann latest report shows they have substantially completed DWSPs for 225 water supply zones at the end of 2024 (from 212 in 2022) which supply over 85% of consumers (almost 3 million people). Information from these risk assessments can be used to identify supplies where improvements to resilience is needed. EPA welcomes this progress by Uisce Éireann in rolling out the DWSP approach in advance of it becoming a legal requirement. EPA also welcomes the continued building of a dedicated team to progress the DWSP approach within Uisce Éireann during 2024.

Actions required

- Uisce Éireann must continue to progress Drinking Water Safety Plan assessments to identify risks at drinking water supplies and to safeguard the long-term resilience of water supplies.
- Where risk assessments are complete, Uisce Éireann must ensure the highest risks identified are prioritised for action to improve the resilience of water supplies in a timely manner.

5. CONCLUDING REMARKS

The quality of drinking water in public supplies and public group water schemes remained very high in 2024, and the positive progress in resolving supplies on the Remedial Action List is welcomed. Progress on improving trihalomethane compliance in public supplies is also good news.

While our drinking water quality is high now, this is not guaranteed into the future unless Uisce Éireann take action to improve the resilience of our supplies - to avoid illness and protect public health.

Uisce Éireann must:

- Complete upgrades to resolve the drinking water supplies on the Remedial Action List to address issues such as trihalomethanes and *cryptosporidium* without delay;
- Implement the findings of the drinking water risk assessments;
- Ensure existing infrastructure is operated effectively.

Action on lead removal remains slow. The Department of Housing, Local Government and Heritage need to follow through on their commitment to progressing this work in 2025.

To implement the actions identified above, and to maintain high drinking water quality will require sustained national investment.

APPENDIX A REMEDIAL ACTION LIST AT THE END OF 2024

County	Supply	Population	Date supply put on RAL	Reason/Action proposed	Completion date for action plan
Carlow	Carlow North Regional	8,550	Q2 2021	Upgrade of water treatment plant	March 2025
Clare	West Clare RWS (New WTP)	9,056	Q3 2017	Action Programme being defined by Uisce Éireann	To be submitted by Uisce Éireann
Clare	West Clare RWS (Old WTP)	3,063	Q2 2021	Action Programme being defined by Uisce Éireann	To be submitted by Uisce Éireann
Cork	Castletownbere	2,347	Q4 2021	Installation of GAC for removal of organics to minimise THM formation.	March 2029
Cork	Glashaboy	23,115	Q1 2020	Upgrade of water treatment plant	September 2025
Cork	Macroom	4,194	Q4 2022	Upgrade water treatment plant	June 2026
Cork	Newmarket	9,733	Q2 2023	Installation of UV disinfection	December 2027
Cork	Whiddy Island	47	Q2 2022	Action Programme being defined by Uisce Éireann	To be submitted by Uisce Éireann
Cork	Whitegate Regional	9,504	Q1 2021	Upgrade of water treatment plant	June 2027
Donegal	Glenties-Ardara	3,459	2008	Installation of membrane filtration system to address the raw water colour,organic content, and minimise THM formation	September 2025
Donegal	Lettermacaward	2,237	Q2 2022	Upgrade of water treatment plant.	December 2024
Donegal	Milford	3,714	Q4 2021	Upgrade of filtration including GAC	June 2026
Galway	Inisboffin	156	Q2 2022	Upgrade of water treatment plant	June 2026

County	Supply	Population	Date supply put on RAL	Reason/Action proposed	Completion date for action plan
Kerry	An Mhin Aird No. 1	406	Q4 2024	Upgrade of water treatment plant	To be submitted by Uisce Éireann
Kerry	Cahersiveen	1,500	Q4 2019	Crypto risk: Installation of UV disinfection. THM risk: Installation of GAC post slow sand filtration.	EPA Direction required compliance with THM limit by December 2023. Uisce Éireann proposed completion date for THM and crypto risk is March 2025.
Kerry	Caragh Lake	1,871	2008	Upgrade of water treatment plant.	December 2025
Kerry	Kilgarvan	656	Q1 2021	Installation of GAC post slow sand filters	Works complete. Verification data being collected
Kerry	Listowel Regional Public Water Supply	14,905	Q2 2022	Action Programme being defined by Uisce Éireann	To be submitted by Uisce Éireann
Kerry	Lyreacrompane	2,488	Q2 2022	Develop new groundwater sources and upgrade of water treatment plant	December 2029
Kerry	Mid Kerry/Gearha (H) 300A	9,759	Q4 2023	Installation of UV	December 2028
Kildare	Barrow supply(SrowlandWTP) [1]	81,613	Q2 2022	Upgrade of Srowland WTP	December 2026
Kilkenny	South Kilkenny	6028	Q2 2023	Installation of UV disinfection	December 2029
Limerick	Adare	2097	Q2 2024	Rationalisation of supply	To be submitted by Uisce Éireann
Limerick	Foynes/Shannon Estuary PWS	6,986	Q4 2020	To be submitted by Uisce Éireann	EPA Direction required pesticides compliance by April 2023
Limerick	Limerick City Environs	115,087	Q2 2022	Action Programme being defined by Uisce Éireann	To be submitted by Uisce Éireann
Longford	Longford Central	17,343	Q1 2020	Action Programme being defined by Uisce Éireann	To be submitted by Uisce Éireann

County	Supply	Population	Date supply put on RAL	Reason/Action proposed	Completion date for action plan
Louth	Cavanhill	46,859	Q4 2023	To be submitted by Uisce Éireann	To be submitted by Uisce Éireann
Louth	Greenmount	3,836	Q2 2019	Upgrade of treatment facilities.	September 2028
Louth	Tallanstown	2,010	Q3 2019	Replacement of supply with Cavanhill PWS	EPA Direction required compliance by December 2020. Uisce Éireann has provided a proposed completion date of March 2025
Mayo	Clare Island	160	Q4 2023	Upgrade of water treatment plant	June 2026
Mayo	Louisburgh	824	Q3 2021	Abandon source and connect to Westport PWS (via Murrisk Group Water Scheme)	November 2028
Meath	Drumcondrath	1,168	Q3 2015	Develop new groundwater sources and upgrade water treatment plant	EPA Direction required compliance by June 2023. Uisce Éireann has a proposed completion date June 2026.
Meath	Navan - MidMeath Kilcarn PWS	10,400	2008	Rationalisation of supply	December 2028
Meath	Trim PWS	11,201	Q4 2021	Upgrade of water treatment plant	December 2026
Monaghan	Clones	2,685	Q4 2023	To be submitted by Uisce Éireann	To be submitted by Uisce Éireann
Roscommon	North East Regional	7,959	Q4 2021	Process review/optimisation/trial & network/ reservoir cleaning and scouring.	March 2025
Tipperary	Carrick-on-Suir (Lingaun River)	3,869	Q4 2023	Develop new groundwater sources	March 2027
Tipperary	Clonmel Poulavanogue	2,435	2008	Rationalisation of water treatment plant	December 2026
Tipperary	Galtee Regional	11,346	Q3 2019	Further upgrade of water treatment plant	March 2029

County	Supply	Population	Date supply put on RAL	Reason/Action proposed	Completion date for action plan
Tipperary	Kilcash	221	Q4 2022	Rationalisation of supply	June 2028
Tipperary	Roscrea	6,125	Q4 2022	Upgrade of water treatment plant.	March 2027
Tipperary	Templetuohy	802	Q4 2022	Upgrade of water treatment plant.	March 2029
Waterford	Dungarvan	12,717	Q3 2020	Construction of new water treatment plant	May 2029
Wexford	Enniscorthy	11,450	Q2 2022	Upgrade of water treatment plant.	June 2025
Wexford	Wexford Town	20,853	Q4 2021	Upgrade of water treatment plant	June 2025

APPENDIX B MONITORING AND COMPLIANCE SUMMARY FOR PUBLIC WATER SUPPLIES IN 2024

Parameter	Sum of No. of WSZ Monitored	Sum of No of WSZ with Exceedances	Sum of No. of Samples Analysed	Sum of No. of Samples Exceeding	% of WSZ Complying	% of Samples Complying
Microbiological						
E. coli	719	5	7902	5	99.30	99.94
Enterococci	719	14	7712	15	98.05	99.81
Chemical						
1,2-dichloroethane	646	0	1045	0	100.00	100.00
Antimony	646	1	1056	1	99.85	99.91
Arsenic	647	0	1058	0	100.00	100.00
Benzene	646	0	1045	0	100.00	100.00
Benzo(a)pyrene	646	0	1052	0	100.00	100.00
Boron	642	0	1045	0	100.00	100.00
Bromate	645	3	1054	3	99.53	99.72
Cadmium	646	0	1056	0	100.00	100.00
Chromium	646	0	1056	0	100.00	100.00
Copper	646	3	1046	3	99.54	99.71
Cyanide	645	0	1076	0	100.00	100.00
Fluoride	646	0	1059	14	100.00	98.68
Lead	646	14	1063	15	97.83	98.59
Mercury	646	0	1055	0	100.00	100.00
Nickel	646	2	1056	2	99.69	99.81
Nitrate	647	1	1096	1	99.85	99.91
Nitrite (at tap)	660	0	1214	0	100.00	100.00
PAH	646	0	1055	0	100.00	100.00
Pesticides - Total	646	0	1055	0	100.00	100.00
Selenium	646	0	1056	0	100.00	100.00

Parameter	Sum of No. of WSZ Monitored	Sum of No of WSZ with Exceedances	Sum of No. of Samples Analysed	Sum of No. of Samples Exceeding	% of WSZ Complying	% of Samples Complying
Tetrachloroethene & Trichloroethene	629	0	1022	0	100.00	100.00
Trihalomethanes (Total)	629	15	1022	16	97.62	98.43
Indicator						
Aluminium	662	19	6144	24	97.13	99.61
Ammonium	660	0	1232	0	100.00	100.00
Chloride	650	1	1059	1	99.85	99.91
Clostridium Perfringens	646	3	1153	3	99.54	99.74
Coliform Bacteria	719	43	7901	50	94.02	99.37
Colony Count @ 22°C	719	72	6886	91	89.99	98.68
Colour	719	32	7900	52	95.55	99.34
Conductivity	719	0	7897	0	100.00	100.00
Iron	719	38	7898	58	94.71	99.27
Manganese	660	6	1214	9	99.09	99.26
Odour	719	4	6766	9	99.44	99.87
pH	719	117	7899	271	83.73	96.57
Sodium	646	3	1055	3	99.54	99.72
Sulphate	646	0	1055	0	100.00	100.00
Taste	719	1	6763	1	99.86	99.99
Total Organic Carbon	646	6	1055	6	99.07	99.43
Turbidity (at tap)	719	8	7900	9	98.89	99.89

APPENDIX C MONITORING AND COMPLIANCE SUMMARY FOR PUBLIC GROUP WATER SUPPLIES IN 2024

Parameter	No. of Zones Monitored	No of Zones with Exceedances	% of Zones Complying	No. of Samples Analysed	No. of Samples Exceeding	% of Samples Complying
Microbiological						
E. coli	342	0	100.00	786	0	100.00
Enterococci	298	2	99.33	675	2	99.70
Chemical						
1,2-dichloroethane	154	0	100.00	154	0	100.00
Antimony	162	0	100.00	166	0	100.00
Arsenic	164	0	100.00	169	0	100.00
Benzene	156	0	100.00	156	0	100.00
Benzo(a)pyrene	156	0	100.00	156	0	100.00
Boron	158	0	100.00	161	0	100.00
Bromate	156	0	100.00	156	0	100.00
Cadmium	158	0	100.00	161	0	100.00
Chromium	162	0	100.00	167	0	100.00
Copper	164	0	100.00	173	0	100.00
Cyanide	155	0	100.00	155	0	100.00
Fluoride	148	0	100.00	150	0	100.00
Lead	179	0	100.00	188	0	100.00
Mercury	156	0	100.00	156	0	100.00
Nickel	162	0	100.00	166	0	100.00
Nitrate	182	0	100.00	185	0	100.00
Nitrite (at tap)	183	0	100.00	275	0	100.00
PAH	156	0	100.00	156	0	100.00
Pesticides - Total	144	0	100.00	144	0	100.00
Selenium	162	0	100.00	165	0	100.00

Parameter	No. of Zones Monitored	No of Zones with Exceedances	% of Zones Complying	No. of Samples Analysed	No. of Samples Exceeding	% of Samples Complying
Tetrachloroethene & Trichloroethene	156	0	100.00	156	0	100.00
Trihalomethanes(Total)	156	2	98.72	160	2	98.75
Indicator						
Aluminium	315	5	98.41	643	5	99.22
Ammonium	166	2	98.80	258	2	99.22
Chloride	156	0	100.00	159	0	100.00
Clostridium Perfringens	167	0	100.00	184	0	100.00
Coliform Bacteria	342	9	97.37	786	9	98.85
Colony Count @ 22°C	340	9	97.35	714	11	98.46
Colour	342	7	97.95	782	10	98.72
Conductivity	342	0	100.00	782	0	100.00
Iron	324	4	98.77	676	4	99.41
Manganese	182	6	96.70	201	6	97.01
Odour	342	0	100.00	776	0	100.00
pH	342	8	97.66	782	8	98.98
Sodium	178	0	100.00	187	0	100.00
Sulphate	156	0	100.00	159	0	100.00
Taste	342	0	100.00	772	0	100.00
Total Organic Carbon	156	4	97.44	156	4	97.44
Turbidity (at tap)	342	1	99.71	782	1	99.87

APPENDIX D1: DIRECTIONS ISSUED DURING 2024

WSZ County	Water Supply Zone Name	Direction Issued	Direction Deadline	Issue
Clare	West Clare RWS (Old WTP)	19/11/2024	28/02/2025	Trihalomethanes
Clare	West Clare RWS (New WTP)	19/11/2024	28/02/2025	Trihalomethanes
Cork	Newmarket	19/11/2024	31/01/2028	Cryptosporidium risk
Donegal	Milford	19/11/2024	30/06/2026	Trihalomethanes
Kerry	Mid Kerry - Gearha (H) 300A	19/11/2024	31/01/2029	Cryptosporidium risk
Kerry	Listowel Regional PWSS	19/11/2024	28/02/2025	Trihalomethanes
Kilkenny	South Kilkenny Environs PWS	19/11/2024	28/02/2025	Cryptosporidium risk
Limerick	Limerick City Environs PWS	19/11/2024	28/02/2025	Trihalomethanes
Longford	Longford Central	19/11/2024	28/02/2025	Trihalomethanes
Louth	Cavanhill	19/11/2024	28/02/2025	Trihalomethanes
Mayo	Clare Island PWS	19/11/2024	28/02/2025	Trihalomethanes
Meath	Navan-Mid Meath Kilcarn PWS	19/11/2024	30/06/2029	Trihalomethanes
Monaghan	Clones	19/11/2024	31/01/2025	Trihalomethanes
Tipperary	Roscrea RWSS (Zone 1 - Mix)	19/11/2024	30/04/2027	Cryptosporidium risk
Tipperary	Carrick-On-Suir (Lingaun River)	19/11/2024	30/04/2027	Cryptosporidium risk
Tipperary	Kilcash	19/11/2024	31/07/2028	Cryptosporidium risk
Tipperary	Thurles (Zone 1 - Mix)	19/11/2024	30/06/2026	Trihalomethanes
Tipperary	Clonmel Poulavanogue	19/11/2024	31/01/2027	Cryptosporidium risk
Tipperary	Nenagh RWSS	19/11/2024	28/02/2025	Trihalomethanes
Wexford	Enniscorthy	19/11/2024	31/07/2025	Cryptosporidium risk

APPENDIX D2 OTHER DIRECTIONS REMAINING OPEN AT THE END OF 2024

Water Supply Zone Name	County	Issue	Date for Compliance with Direction and current status
Drumcondrath	Meath	Trihalomethanes	**30/06/2023** Uisce Éireann has provided a proposed completion date of June 2026.
Aughrim Annacurra Public Supply	Wicklow	Trihalomethanes	**31/12/2023** Work has been completed and issue resolved by connection to a new supply. Removed from the RAL in 2024 and Direction closed in early 2025.
Cahersiveen PWS 017H	Kerry	Trihalomethanes	**31/12/2023** Uisce Éireann proposed completion date for THM and crypto issues is March 2025.
Clara/Ferbane PWS	Offaly	Trihalomethanes	**30/06/2024** Removed from the RAL in 2024 due to upgrade works and Direction closed in early 2025.
Fingal Zone 1	Dublin	Giardia/Crypto	**30/06/2023** Plant upgrade work has been completed and issues resolved and Direction closed in early 2025.
Foynes/Shannon Estuary PWS	Limerick	Pesticide exceedances	**30/04/2023** Deadline passed – Catchment work being done to achieve compliance
Tallanstown	Louth	Treatment plant issues	**31/12/2020** Deadline passed - Uisce Éireann has provided a proposed completion date of March 2025

APPENDIX E: PUBLIC GROUP SCHEMES TRIHALOMETHANE FAILURES IN 2024

County	Public group scheme name	Supplied by public scheme
Cavan County Council	CMM (Castlerahan, Mountnugent & Munterconnacht) Public GWS	Ballyjamesduff Regional Water Supply Scheme
Limerick City and County Council	Clorane Public GWS	Foynes Shannon Estuary

APPENDIX F: BOIL WATER AND WATER RESTRICTION NOTICES IN PLACE DURING 2024

Table 1: Boil Water Notices in place during 2024

County	Scheme Name	Reason	Date Notice Issued	Date Notice Lifted (N/L = not lifted as of 1/1/24)	Population Affected by Notice[42]
Cork	Ballyvadonna	E. coli	09/10/2024	23/10/2024	15
Cork	Whitegate Regional	Turbidity	18/10/2023	N/L	9011
Cork	Macroom	Raw Water Turbidity	27/08/2024	25/09/2024	0
Cork	Macroom	Raw Water Turbidity	30/09/2024	N/L	4194
Donegal	Frosses-Inver	Mechanical/Process issues	02/10/2024	08/10/2024	4474
Donegal	GLENTIES-ARDARA	Turbidity	07/12/2024	23/12/2024	3576
Galway	Carna/Kilkieran RWSS	Cryptosporidium	07/02/2024	14/02/2024	-
Galway	Carna/Kilkieran RWSS	Mechanical/Process issues	23/11/2024	02/12/2024	2294
Galway	Clifden	Supply issues	25/01/2024	02/02/2024	1578
Galway	Dunmore/Glenamaddy PWS	Turbidity	25/11/2024	13/12/2024	2133
Galway	Glenamaddy	Turbidity	25/11/2024	13/12/2024	896
Galway	Gort	Turbidity	30/11/2024	13/12/2024	2925
Galway	Tuam RWSS	Inadequate disinfection/Iron	30/03/2023	31/05/2024	170
Galway	Kinvara PWS	Maintenance	30/01/2024	02/02/2024	2162

42 Note that where multiple notices are issued for the same supply – the population affected is counted only once in total population affected figures to avoid duplication.

County	Scheme Name	Reason	Date Notice Issued	Date Notice Lifted (N/L = not lifted as of 1/1/24)	Population Affected by Notice[42]
Galway	Mid-Galway	Turbidity	24/11/2024	02/12/2024	7852
Galway	Tuam RWSS	Inadequate disinfection/Iron	03/08/2023	13/05/2024	46
Kilkenny	Kilkenny City (Troyswood) PWS	Supply issues	26/07/2024	N/L	22
Limerick	Foynes/Shannon Estuary PWS	Cryptosporidium	13/05/2023	N/L	6986
Limerick	Cappamore Foileen PWSS	Cryptosporidium	26/09/2023	N/L	2321
Mayo	Inishturk PGWS	Mechanical/Process issues	22/11/2024	16/12/2024	44
Mayo	Inishturk PGWS	Mechanical/Process issues	03/09/2024	18/10/2024	-
Meath	Baltrasna	E. coli	22/12/2014	N/L	9
Meath	Moynalvey Manor	Inadequate disinfection	17/10/2024	10/12/2024	51
Offaly	Clonbullogue PWS	Inadequate disinfection	04/04/2024	09/04/2024	798
Offaly	Shinrone/Brosna PWS	Ammonia	05/04/2024	09/04/2024	882
Sligo	Riverstown PWSS	UV system problem	23/10/2024	01/11/2024	647
Tipperary	Ardfinnan Regional	Supply issues	05/06/2024	14/06/2024	11348
Tipperary	Carrick-On-Suir (Lingaun River)	Inadequate disinfection	03/09/2024	07/10/2024	3869
Tipperary	Commons PWS	Turbidity	29/07/2024	02/08/2024	462
Tipperary	Glenary	inadequate disinfection	28/04/2024	03/05/2024	7533
Tipperary	Horse & Jockey PWS	Turbidity	03/09/2024	06/12/2024	626

County	Scheme Name	Reason	Date Notice Issued	Date Notice Lifted (N/L = not lifted as of 1/1/24)	Population Affected by Notice[42]
Tipperary	Newport RWSS	Mechanical/Process issues	19/11/2024	25/11/2024	8060
Tipperary	Newport RWSS	Turbidity	15/06/2024	21/06/2024	-
Tipperary	Roscrea RWSS (Zone 1 - Mix)	Ammonia	05/04/2024	09/04/2024	5000
Tipperary	Carrick-On-Suir (Crottys Lake)	Inadequate disinfection	25/11/2024	N/L	1937
Waterford	Garryahylish	Inadequate disinfection	22/12/2021	N/L	2
Waterford	Ballymacarbry	Turbidity	30/08/2024	06/11/2024	671
Waterford	Carrignagower	Inadequate disinfection	22/12/2021	09/04/2024	35
Waterford	Graiguenageeha	Inadequate disinfection	07/01/2022	26/04/2024	40
Waterford	Kilrossanty	Spillage	29/07/2024	29/08/2024	369
Waterford	Poulavanogue	Turbidity	09/08/2024	01/11/2024	84
Wexford	Ferns Regional	Cryptosporidium	28/06/2024	19/07/2024	1673
Wicklow	Johnstown South (Arklow) Public Supply	Inadequate disinfection	04/06/2015	N/L	6
Wicklow	Ballymorris Public Supply	Turbidity	18/07/2019	19/04/2024	17
Wicklow	Killavaney Public Supply (Tinahely)	E. coli	04/12/2023	29/10/2024	21
Donegal	Lough Mourne	E. coli	13/08/2024	18/09/2024	28
Dublin	DCC Zone 6	Inadequate disinfection	27/09/2024	01/10/2024	10
Dublin	DLR Zone 2	Inadequate disinfection	13/09/2023	N/L	-

County	Scheme Name	Reason	Date Notice Issued	Date Notice Lifted (N/L = not lifted as of 1/1/24)	Population Affected by Notice[42]
Dublin	DLR Zone 2	Inadequate disinfection	13/09/2023	N/L	4
Dublin	South Dublin Zone 4	Inadequate disinfection	07/10/2024	23/12/2024	1
Galway	Dunmore/Glenamaddy PWS	Lack of treatment	17/02/2022	N/L	1
Galway	Tuam RWSS	Inadequate disinfection/Iron	02/11/2024	03/12/2024	27
Kildare	Rathangan	Inadequate disinfection	11/04/2024	N/L	4
Meath	Athboy	Lack of treatment	24/02/2023	N/L	-
Meath	Athboy	Lack of treatment	24/02/2023	N/L	-
Meath	Athboy	Lack of treatment	24/02/2023	N/L	5
Monaghan	LERWSS	*E. coli*	23/04/2024	30/04/2024	5
Tipperary	Galtee Regional	Inadequate disinfection	09/06/2023	N/L	46
Wexford	Coolgreany	Inadequate disinfection	11/10/2024	15/10/2024	3

Table 2: Water Restriction Notices in place during 2024

County	Supply Name	Reason	Issued	Rescinded (N/L = not lifted as of 1/1/24)	Population Affected by Notice
Cavan	Cavan RWSS	Repairs/maintenance	02/09/2024	13/09/2024	450
Clare	W.Clare RWS (Old WTP)	Hydrocarbons	26/07/2024	N/L	3
Cork	Ratharoon	Bromate	28/06/2024	12/09/2024	8
Cork	Dursey Island	Supply issues	08/08/2024	N/L	20
Cork	Whiddy Island	Turbidity	19/08/2022	N/L	40
Dublin	DCC ZONE 1 BALLYMORE	Iron	02/08/2024	23/10/2024	3
Dublin	DCC ZONE 1 BALLYMORE	Aluminium	04/10/2024	06/11/2024	3
Dublin	DCC Zone 6	Iron	16/12/2024	N/L	1
Dublin	DCC ZONE 1 BALLYMORE	Iron	04/10/2024	06/11/2024	3
Dublin	DCC ZONE 1 BALLYMORE	Iron	04/10/2024	08/11/2024	3
Limerick	Abbeyfeale PWS	Iron	31/10/2024	N/L	50
Louth	Tallanstown	Ammonia	08/04/2024	10/05/2024	4
Louth	Tallanstown	Iron	05/01/2024	12/03/2024	-
Louth	South Louth & East Meath	Manganese	27/11/2023	N/L	3
Louth	Cavanhill	Manganese	31/05/2024	25/06/2024	3
Mayo	Mulranny PWS	Aluminium	08/01/2024	15/01/2024	664

County	Supply Name	Reason	Issued	Rescinded (N/L = not lifted as of 1/1/24)	Population Affected by Notice
Tipperary	Burncourt Regional	Turbidity	09/02/2024	21/02/2024	45
Waterford	Ballydermody	Nitrates	12/12/2013	N/L	2
Waterford	Kilbrien	Copper	08/07/2024	N/L	10
Waterford	Ballyogarty	Ballyogarty - Arsenic	29/07/2024	07/08/2024	552
Waterford	East Waterford Water Supply Scheme	Manganese	22/12/2022	04/12/2024	3
Westmeath	Athlone PWS	Fluoride	19/04/2024	19/04/2024	19019
Wicklow	Kilballyowen (Aughrim) Public Supply	Manganese	14/06/2024	25/07/2024	26
Wicklow	Greystones	Inadequate disinfection	15/03/2024	15/05/2024	46
Wicklow	Ballinavortha	Nitrates	19/09/2024	17/10/2024	5

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