



QUARTERLY REPORT

No. 1 of 2022

1

MAY 2022

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Foreword

Welcome to the first Quarterly Report of 2022 by the Water Advisory Body (the WAB).

▼
Paul McGowan *Chairperson*

In this report we highlight changes to five Performance Indicators in addition to the three new performance indicators that have been included in this Quarterly Report for the first time.

- ▶ Performance Indicator 6 - Unplanned Interruptions to Water Supply
- ▶ Performance Indicator 10 - Agglomerations with no Wastewater Treatment
- ▶ Performance Indicator 13 - Energy Consumption Targets

We use these Performance Indicators to monitor how well Irish Water is performing. We also review reports produced by the Environmental Protection Agency (“EPA”) and the Commission for Regulation of Utilities (“CRU”).

In December 2021, the EPA published the Drinking Water Quality in Public Supplies Report 2020 which provides an assessment of the drinking water quality provided by Irish Water in public water supplies. A summary of the key actions recommended for Irish Water is set out below.

The WAB notes that compliance with the microbiological and chemical standards for drinking water remains high at greater than 99.5%, which means the water in our public water supplies is safe to drink. While there has been good progress recently, drinking water treatment in many supplies is still not as robust as it needs to be to ensure the supply is resilient and safe into the future.

A handwritten signature in black ink, appearing to read 'Paul McGowan'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Paul McGowan
Chairperson of the Water Advisory Body

Executive Summary

This is the ninth quarterly report published by the WAB, and the first report of 2022.

The WAB was established on 1 June 2018. The purpose of the WAB is to advise the Minister on measures needed to improve the transparency and accountability of Irish Water and to report on a quarterly basis to an Oireachtas Committee on the performance by Irish Water in the implementation of its Strategic Funding Plan.

A set of performance indicators has been selected to represent the activity of Irish Water in relation to the performance of its functions. Data in respect of these indicators is collated and published as part of the Quarterly Reports of the WAB in order to provide objective information on Irish Water's performance. This information is relevant to Irish Water itself, to track its own performance over time, but also to further inform both the Minister for Housing, Local Government and Heritage and the Oireachtas on the performance of Irish Water.

A detailed explanation of each key performance indicator is available in Appendix 1.

The information published within this report is accurate as of 25 February 2022.

The following findings from the report are of note, with specific reference to the five Key Performance Indicators that have been updated since the last report and the three new performance indicators

Leakage

The Leakage metric measures separately the annual average volume of water lost per day on the public network pipes and on external customer supply pipes. Leaks can occur on the underground water pipeline system as assets deteriorate over time. Irish Water has put in place a new Leakage Management System to better estimate, monitor and identify leaks across the pipeline network.

Reducing the level of real water losses ensures that water sources are conserved, and that revenue is not spent on treating large quantities of drinking water that are ultimately lost and not used by customers. The WAB will use the leakage metric to measure the performance of Irish Water in ensuring as much water as possible delivered through its distribution network is not lost.

In place of reporting to the CRU on leakage¹, to date Irish Water has been providing a figure for ‘unaccounted-for-water’, which includes leakage among other elements. Once Irish Water has implemented its Leakage Management System, and one full year of data is available for review (i.e., the 2020 data), Irish Water will be able to report on leakage specifically. Once these reports are available, future WAB reports will provide comment on Irish Water’s performance against this metric.

By any measure, the amount of water lost on the water distribution network is unacceptable and needs to be a focus for Irish Water in the future. Irish Water acknowledges that leakage from its “water supply networks is at unacceptable levels and well above international norms”².

First Fix

Specific targets have not been set for Irish Water in respect of the First Fix Scheme. This is because availing of a leak investigation and possible First Fix requires a good level of customer engagement to meet any target.

There has been an increase in the number of leak repairs completed since the first six months of 2020 and an increase in the total savings in Megalitres/day estimated by Irish Water as a result of both Irish Water and customer leak repairs since then. This increase is as a result of Irish Water’s efforts in contacting customers to avail of the First Fix Scheme and the issuing of constant flow alarm (CFA) notification letters to properties.

Overall, however, there has been a general decline in the number of leak repairs completed under the scheme since mid-2016. This coincides with the suspension and eventual abolition of domestic water charges. Additionally, Irish Water’s First Fix Scheme operations were impacted by Covid-19 restrictions. Future WAB reports will continue to monitor the rate of First Fix repairs by Irish Water and customers.

Remedial Action List (Water)

The EPA requires Irish Water to have an action plan in place to remediate the drinking water supplies that are currently included on the Remedial Action List. Future WAB reports will monitor the progress of Irish Water in meeting the targets they have set to remediate those 52 water supplies through the quarterly updates of the Remedial Action List. The WAB will also monitor the number of new drinking water supplies that are put on to the list in any quarter. The number of supplies on the Remedial Action List has decreased at the end of Quarter 4 2021 by three supplies since the end of Quarter 3.

Lead service connections replaced

During Quarter 4 2021, Irish Water replaced 3,152 lead service connections. The target for 2021 was 1,500 replacements, the target for the five-year term of Revenue Control Period 3 (2020-2024) is to replace 13,231 lead connections.

1 Leakage as defined in the CRU decision on Irish Water Performance Assessment Framework 2020-2024 Metric Review and Target Setting paper “...as the annual average volume of water lost per day on the public network and on the customer side.”

2 Source: Water Services Strategic Plan (WSSP) - A Plan for the Future of Water Services.

The WAB notes that progress has slowed significantly when compared to the progress made during 2019. Replacement of lead connections recommenced in Quarter 3 2020 following restrictions imposed due to COVID 19 and a stimulus package from Government during 2020 allowed some additional funding to be allocated towards lead connection replacements towards the end of 2020.

The WAB also notes that Irish Water has continued to encounter difficulties in accessing shared and backyard service replacements, as some homeowners have refused to sign the necessary consent forms for works to be carried out on private property. Irish Water continues to engage with these homeowners to get these consent forms signed. Irish Water's target of 1,500 replacements during 2021 is lower because they planned to concentrate efforts on back yard services, which can be more complex and more expensive to replace. However, at the end of Quarter 4 2021, Irish Water had replaced 5,900 connections which was ahead of the target for 2021, mainly due to more public side connections being replaced. Irish Water expects to have additional budget for lead replacements for 2022.

Boil Water Notices

When Irish Water took charge of water supplies in 2014 it set a target to eliminate all boil water notices that were in place at that time. This target was achieved and while no specific future targets have been set, Irish Water is working to continue reducing the number of people affected by boil water notices. At the end of Quarter 4 2021, 16,069 people were on boil water notices which is a further increase on the population on boil water notices at the end of the previous quarter (7,029 people). The WAB notes with concern the increase in the number of people on a boil water notice at the end of Quarter 4 2021.

Three new Key Performance Indicators.

The WAB has decided to include additional key performance indicators for inclusion in the WAB quarterly reports from 2022.

Three new indicators, detailed below, have been included in this quarterly report to provide further objective information on Irish Water's performance.

Performance Indicator 6 - Unplanned Interruptions to Water Supply

This metric monitors Irish Water's performance in delivering a continuous supply of clean drinking water to the homes and businesses that it serves. Unplanned interruptions to water supply are mainly caused by a burst water mains pipe and/or blockages on the network.

The WAB has not previously reported on this metric, however, this metric has been monitored under the Irish Water Performance Assessment Framework of Irish Water's overall performance carried out by the CRU.

Performance Indicator 10 - Agglomerations with no Wastewater Treatment

This metric intends to capture Irish Water's performance in reducing the number of agglomerations which discharge untreated wastewater into the environment. Monitoring this metric would assist in ensuring that Irish Water uses the revenue it receives to deliver improvements and increased compliance with European and Irish law while providing service to customers.

The WAB has not previously reported on this metric, however, this metric has been monitored under the Irish Water Performance Assessment Framework of Irish Water's overall performance carried out by the CRU.

Performance Indicator 13 - Energy Consumption Targets

This metric monitors Irish Water's Total Primary Energy Requirement in GWh (Gigawatt hours). Energy efficiency targets encourage the development and implementation of efficiency strategies and policies. Irish Water is the largest consumer of electricity in the public sector in Ireland. As a public body, it is obligated to improve its energy efficiency as set out in the Climate Action Plan 2021.

As this metric's targets are new and has yet to be reported on, the WAB is unable to comment on Irish Water's performance against this metric at this time. The WAB will monitor and report on Irish Water's performance in reducing its energy consumption as it is of importance to customers and helps the Irish government's commitment to deliver a secure, low carbon future.

Other Developments

Drinking Water Quality in Public Supplies Report 2020

On 10th December 2021, the EPA published the **Drinking Water Quality in Public Supplies Report 2020** which provides an assessment of the drinking water quality provided by Irish Water in public water supplies.

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. Compliance with the microbiological and chemical standards for drinking water remains high at greater than 99.5%, which means the water in our public water supplies is safe to drink. While there has been good progress recently, drinking water treatment in many supplies is still not as robust as it needs to be to ensure the supply is resilient and safe into the future.

Summary of key actions recommended for Irish Water

- ▶ Complete upgrades to resolve issues with the drinking water supplies on the Remedial Action List, without further delays, to ensure risks to drinking water quality are addressed.
- ▶ Progress the assessments of disinfection systems, including rechecking of the chlorine contact times, to ensure drinking water is adequately disinfected and free from bacteria. Critical alarms and monitors must be functioning at all times.
- ▶ Substantially progress drinking water safety plan assessments to identify risks at drinking water supplies to safeguard the long-term security of water supplies and mitigate the risk.
- ▶ Expedite lead connection replacements. The Department of Housing, Planning and Local Government needs to publish the progress report on the national lead strategy.

The WAB notes the concerns expressed by the EPA that supplies on the Remedial Action List need to be completed without further delays; that the replacement of lead connections should be accelerated; and that assessments of disinfection systems and drinking water safety plans are prioritised to ensure safe drinking water supplies today and secure water supplies for the future.

Part 1

Introduction

The Water Advisory Body (the WAB) is established under statute. The WAB consists of five members:



▼
Paul McGowan *Chairperson*



▼
Martin Sisk



▼
Miriam McDonald



▼
Donal Purcell



▼
Michelle Minihan

Improving the transparency and accountability of Irish Water

Our overall function is to advise the Minister on the measures needed to improve the transparency and accountability of Irish Water for the purpose of increasing the confidence of members of the public in Irish Water. The WAB's functions are set out in the Water Services Act 2017.

Irish Water's Strategic Funding Plan is a public document and available on Irish Water's website www.water.ie. This report sets out the WAB's view on how Irish Water is performing against its own Strategic Funding Plan. Each report is prepared for the Oireachtas and is published on the WAB's website - www.wateradvisorybody.ie.

Performance Indicators in this Report

The WAB has chosen a set of performance indicators to provide a broad view of Irish Water's performance, that are a useful reflector of performance that can be used to monitor Irish Water's performance. The WAB will keep these performance indicators under review to make sure that they remain relevant and continue to be good measures of performance. In the accompanying appendix, we explain each indicator and why it is important.

There are some areas of interest to the WAB where data are not available. These include cost reduction and efficiency improvements, procurement, remuneration and staffing policies of Irish Water. They also include Irish Water's performance in terms of responsiveness to the needs of communities and enterprises.

The absence of data requires the WAB to take a different approach to measuring performance in these areas. For example, in relation to procurement, remuneration and staffing policies Irish Water commissioned an independent audit on procurement, reporting directly to the WAB. The "Review of Irish Waters procurement and contract policies and procedures to ensure compliance against PD02 and PD03" covered procurement policies and procedures with the full report available at <https://wateradvisorybody.ie/other-publications/>

Irish Water's Responsiveness to the Needs of Communities and Enterprises

The WAB is currently investigating Irish Water's performance in this area. WAB has commissioned local surveys to determine views of Irish Water customers in relation to communications from and contact with Irish Water. These local surveys will seek to establish the views of customers on communication and contact by Irish Water in terms of clarity, timeliness, efficiency, professionalism, ease of next steps, contact and overall experience. The WAB intends to publish and comment on the findings of these surveys in Quarter 2 2022.

Part 2

Key Performance Indicators

The WAB has selected thirteen performance indicators, each measuring the performance of Irish Water under a different heading.

These headings are:

- ▶ infrastructure delivery and leakage reductions (6 indicators);
- ▶ improvements in water quality (4 indicators); and
- ▶ the responsiveness of Irish Water to the needs of communities and enterprise (2 indicators).
- ▶ Energy and Emissions (1 indicator).

This report displays each of the thirteen performance indicators. A commentary is provided only on those performance indicators which have been updated in this Quarterly Report. Where available, the targets that Irish Water is working to in relation to each indicator are also set out.

For each indicator, the Appendix to this report includes a brief explanation of the indicator and the reason why the indicator is important.

The WAB will continue to refine indicators to ensure they remain a useful measure of the performance of Irish Water.

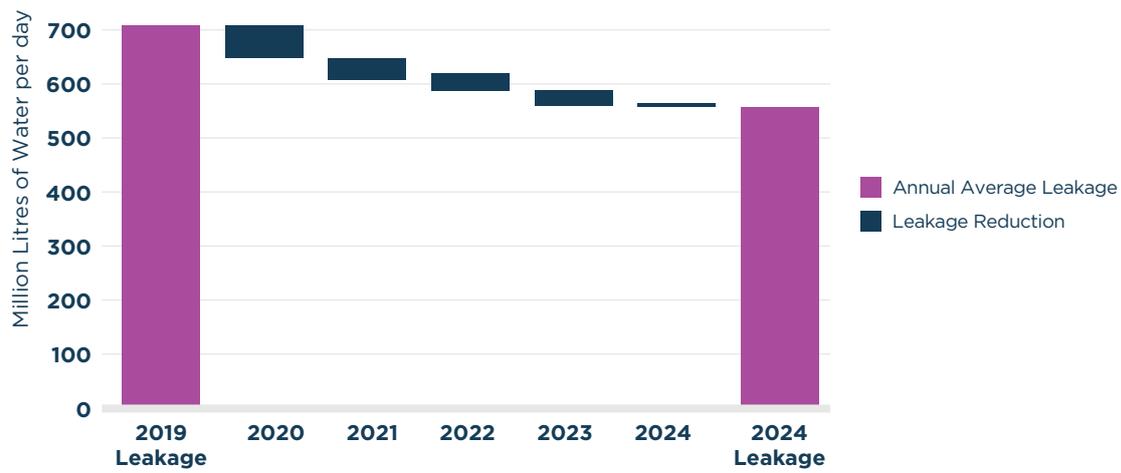
2.1 Infrastructure Delivery and Leakage Reductions Indicators

This metric separately monitors the amount of water lost on the public network pipes and the amount of water lost on customer supply pipes.

2.1.1 Performance Indicator 1 - Leakage

Figure 1

Public Side Leakage Reduction



The following leakage reduction targets have been placed on Irish Water to be achieved by the end of 2024:

- ▶ 161 million litres of water per day of water lost on the public network
- ▶ 15 million litres of water per day of water lost on customer supply pipes³

In setting annual targets, Irish Water is to follow the targets as set out in Figure 1 for reducing public side leakage. Separately, a straight-line target has been placed on Irish Water to reduce the annual average amount of water leaking on customer supply pipes by 3 million litres of water per day, in each of the years 2020 to 2024.⁴

³ The customer supply pipes refer to only the 'external' customer supply pipes, which is the customer supply pipe that is outside of the customer home but within the boundary of the customer property.

⁴ For more information, please see the Irish Water Performance Assessment Framework: Metric Review and 2020-2024 Target Setting Decision paper.

Commentary

In place of reporting to the CRU on leakage⁵, to date Irish Water has been providing a figure for ‘unaccounted-for-water’, which includes leakage among other elements. Once Irish Water has implemented its Leakage Management System, and one full year of data is available for review (i.e., the 2020 data), Irish Water will be able to report on leakage specifically. Once these reports are available, future WAB reports will provide comment on Irish Water’s performance against this metric.

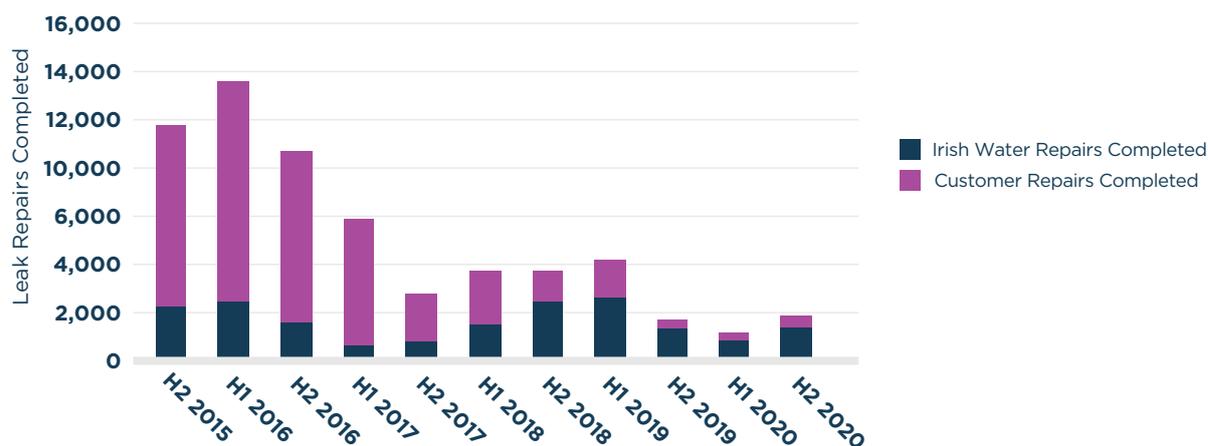
By any measure, the amount of water lost on the water distribution network is unacceptable and needs to be a focus for Irish Water in the future. Irish Water acknowledges that leakage from its “water supply networks is at unacceptable levels and well above international norms”⁶.

2.1.2 Performance Indicator 2 - First Fix Scheme

This metric has been updated in this report and is based on information valid up to the end of 2020.

Figure 2

Combined total of Irish Water and Customer Leak Repairs completed half-yearly.

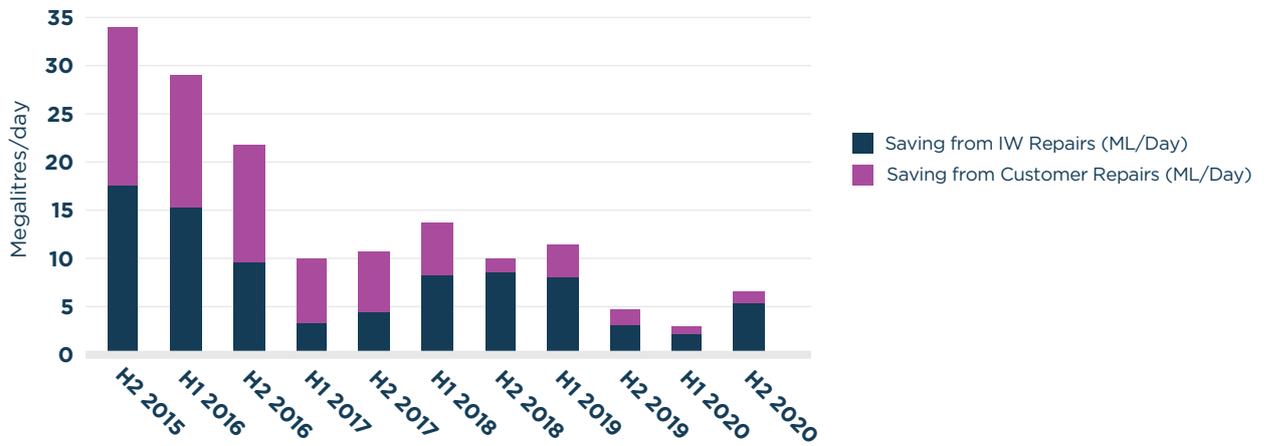


5 Leakage as defined in the CRU decision on Irish Water Performance Assessment Framework 2020-2024 Metric Review and Target Setting paper “...as the annual average volume of water lost per day on the public network and on the customer side.”

6 Source: Water Services Strategic Plan (WSSP) - A Plan for the Future of Water Services.

Figure 3

Combined total Savings in Megalitres/day of Irish Water and Customer Leak Repairs completed half-yearly.



Commentary

Figure 4

Irish Water and Customer Leak Repairs completed half-yearly.

July to December 2020		Cumulative First Fix Scheme Total (July 2015 - July 2020)	
Location of Leak	Number Completed	Location of Leak	Number Completed
External Leak Repairs (Irish Water Repair)	1,453	External Leak Repairs (Irish Water Repair)	19,599
Internal Leak Repairs (Customer Repair)	488	Internal Leak Repairs (Customer Repair)	43,968
Total	1,941	Total	63,567

Specific targets have not been set for Irish Water in respect of the First Fix Scheme. This is because availing of a leak investigation and possible First Fix requires a good level of customer engagement to meet any target.

Figure 2 shows an increase in the number of leak repairs completed in the second half of 2020 compared to the first half of the year. Figure 3 shows an increase in the total savings in Megalitres/day estimated by Irish Water as a result of both Irish Water and customer leak repairs in the same period. This increase is as a result of Irish Water’s efforts in contacting customers to avail of the First Fix Scheme and the issuing of constant flow alarm (CFA) notification letters to properties.

Overall, Figures 1 and 2 demonstrate a general decline in the number of leak repairs completed under the scheme since mid-2016. This coincides with the suspension and eventual abolition of domestic water charges. Additionally, Irish Water’s First Fix Scheme operations were impacted by Covid-19 restrictions. Future WAB reports will continue to monitor the rate of First Fix repairs by Irish Water and customers.

2.1.3 Performance Indicator 3 - Remedial Action List (Water)

This Performance Metric has been updated in this report and is based on information valid up to the end of Quarter 4 2021.

Figure 5 shows the population served by drinking water supplies included on the list from Quarter 1 2018 to end Quarter 4 2021. The figures had been showing show a general downward trend in both the number of drinking water supplies on the list and the population that these supplies serve: however, the addition of the Leixlip supply to the Quarter 3 2019 Remedial Action List changed this.

Under normal circumstances, the WAB would expect a continual reduction in the number of supplies on the Remedial Action List.

Figure 5

Population Served by Supplies on the Remedial Action List.



Commentary

At the end of Quarter 4 2021 the Remedial Action List contained 52 water supplies, which is a decrease of three supplies since the end of Quarter 3. The most recent supplies removed from the Remedial Action List (Quarter 4 2021) were Roundwood, Enniskerry, Wicklow Regional, Bray, Greystones/Windgates/Tempolecarrig, Kilmacanogue and Newtown Newcastle Kilcoole – all seven supplies could be removed following completion of the new water treatment plant at Vartry. Three other supplies at Schull, Leap and Abbeyleix were also removed from the Remedial Action List at the end of Quarter 4 2021. Seven supplies were added to the Remedial Action List including Aughacasla (Co. Kerry), Castletownbere (Co. Cork), Mitchelstown North (Co. Cork), Milford (Co. Donegal), North East Regional (Co. Roscommon), Wexford Town and Trim (Co. Meath). The decrease in the population served by supplies on the Remedial Action List from Quarter 3 2021 to Quarter 4 2021 was 80,464 consumers. The number of supplies on the Remedial Action List has decreased this quarter, reversing the upward trend over the last three quarters.

One supply already on the Remedial Action List had additional categories added to them – Drumcondrath (Co. Meath) for inadequate treatment for *Cryptosporidium*.

The WAB welcomes the removal of ten supplies from the Remedial Action List since its last quarterly report, in particular the significant development of the completion of the new water treatment plant at Vartry in December 2021. However, the WAB also notes there are now 52 supplies on the Remedial Action List, which is an increase from 48 supplies at the end of 2020. The WAB notes the EPA's concerns that seven supplies were added at the end of Quarter 4 2021 to the Remedial Action List, five of which were for persistent Trihalomethanes exceedances.

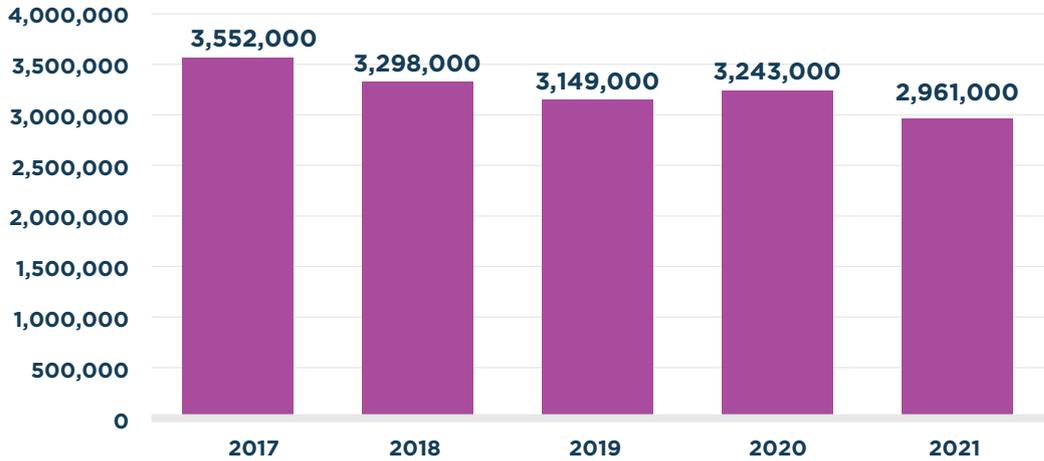
Future WAB reports will monitor the progress of Irish Water in identifying dates by which supplies on the Remedial Action List will be addressed and in meeting the targets they have set to remediate those water supplies through the quarterly updates of the Remedial Action List. The WAB will also monitor the number of new drinking water supplies that are put on to the list in any quarter. The WAB expects that COVID-19 restrictions will continue to have some impact on the dates for supplies on the Remedial Action List and will continue to monitor Irish Water's progress to assess and address these delays in subsequent reports.

2.1.4 Performance Indicator 4 - Priority Urban Area List (Wastewater)

This metric has not been updated in this report. It was last updated in the Water Advisory Body Quarterly Report No.2 of 2021.

Figure 6

Population equivalent served by priority areas.



2.1.5 Performance Indicator 5 - Lead service connections replaced

This Performance Metric has been updated in this report and is based on information valid up to the end of Quarter 4 2021.

Figure 7

Total lead connections replaced (cumulative)



Commentary

Irish Water has an annual target for replacements which, again this year, was significantly and substantially reduced from the 2019 target. The target for 2021 is 1,500 replacements, with a target of 13,231 for the entirety of Revenue Control period 3⁷. During Quarter 4 2021, Irish Water replaced 3,152 lead service connections.

Figure 7 above shows that the rate of progress of lead connection replacements up to end of Quarter 4 2021, which demonstrates that progress has slowed significantly when compared to the progress made during since 2019. Replacement of lead connections recommenced in Quarter 3 2020 following the lifting of restrictions imposed due to COVID 19 and provision of a stimulus package from Government during 2020. This allowed some additional funding to be allocated towards lead connection replacements towards the end of 2020.

Irish Water has continued to encounter difficulties in accessing shared and backyard service replacements, as some homeowners have refused to sign the necessary consent forms for works to be carried out on private property. Irish Water continues to engage with these homeowners to get consent forms signed. Irish Water's target of 1,500 replacements during 2021 is lower because it planned to concentrate efforts on back yard services, which can be more complex and more expensive to replace. However, at the end of Quarter 4 2021, Irish Water had replaced 5,900 connections which was ahead of the target for 2021, mainly due to more public side connections being replaced. Irish Water expects to have additional budget for lead replacements for 2022.

2.1.6 Performance Indicator 6 - Unplanned Interruptions to Water Supply

This metric monitors the number of properties experiencing unplanned interruptions to their supply for greater than 12 and 24 hours.

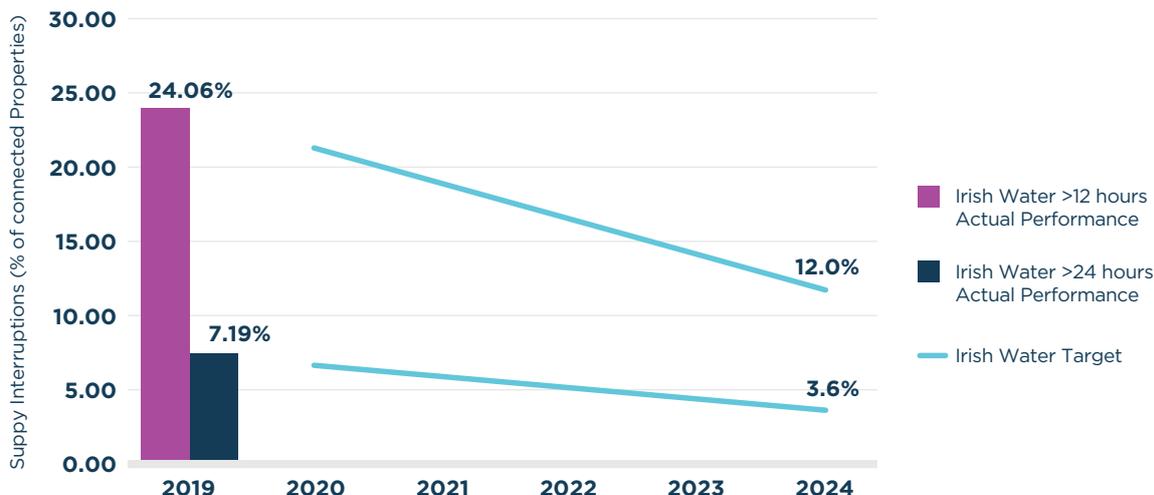
Figure 8

Number of Estimated Properties Experiencing an Unplanned Interruption to Supply.

Unplanned Interruption	Quarter 3 2019	Quarter 4 2019	Quarter 1 2020	Quarter 2 2020	Total
>12 Hours	220,984	74,570	53,105	84,050	432,709
>24 Hours	35,043	31,889	35,076	27,281	129,289

7 <https://www.cru.ie/wp-content/uploads/2019/07/CRU19148-Irish-Water-Revenue-Control-3-Decision-Paper.pdf>

Figure 9
Unplanned Interruptions to Supply 2020 - 2024 Target.



At a minimum, Irish Water has been set the following targets:

- ▶ less than 12% of connected properties should experience an unplanned interruption for greater than 12 hours by end 2024 based on the ‘revised estimated number of properties’; **and**
- ▶ less than 3% of connected properties should experience an unplanned interruption for greater than 24 hours by end 2024 based on the ‘revised estimated number of properties’.

Commentary

As this is a new metric to the WAB Report, the WAB has not reported on this metric to date. However, this metric has been monitored by the CRU under the Irish Water Performance Assessment.

The data presented in Figure 8 shows the following:

- ▶ **Unplanned interruptions in excess of 12hrs:** From Quarter 3 2019 - Quarter 2 2020, 403,709 properties experienced an unplanned interruption for greater than 12 hours. This represents 24% of connected properties.
- ▶ **Unplanned interruptions in excess of 24hrs:** From Quarter 3 2019 to Quarter 2 2020, 129,289 properties experienced an unplanned interruption to supply that lasted greater than 24 hours. This represents 7% of connected properties.

Irish Water has reported that a number of factors may have influenced the numbers of properties impacted by unplanned interruptions, including Covid-19 related works delays and process improvements by Irish Water.

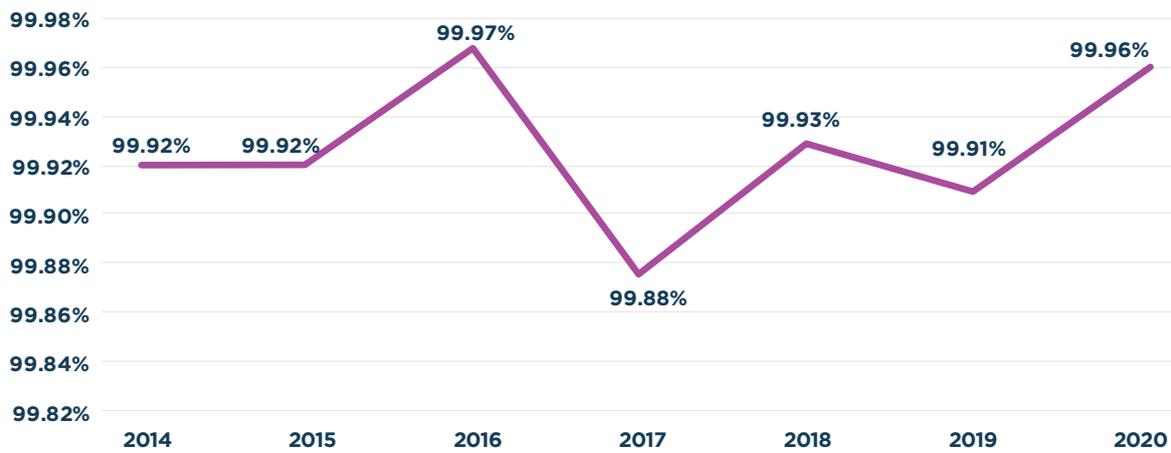
2.2 Improvements in Water Quality, including the elimination of Boil water notices

2.2.1 Performance Indicator 7 - Overall compliance with microbiological indicators for drinking water

This Performance Metric has been not been updated in this report and is based on information valid up to the end of Quarter 3 2021.

Figure 10

Percentage of Samples complying with the E.coli Standard



2.2.2 Performance Indicator 8 - Boil Water Notices

This Performance Metric has been updated in this report and is based on information valid up to the end of Quarter 3 2021.

Figure 11

Boil water notices at the end of each quarter

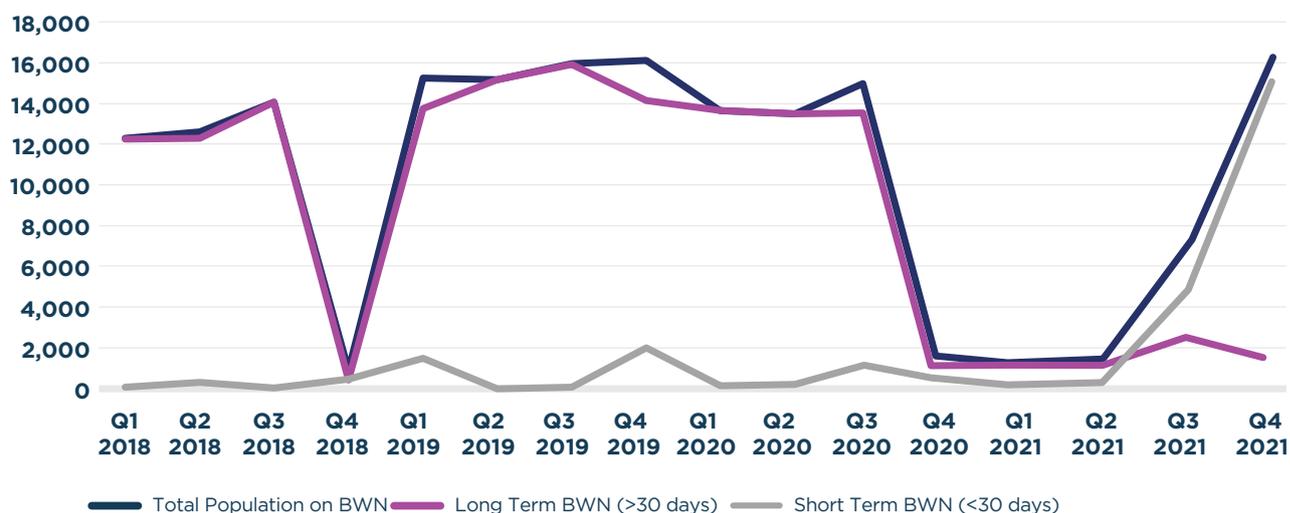


Figure 11 shows the total population on boil water notices **at the end of** Quarter 4 2021. The graph also shows how long those boil water notices have been in place by showing the population on boil water notices for less than thirty days and the population on boil water notices for more than thirty days.

Commentary

Under normal circumstances the WAB expects that no consumer should be on a long-term Boil Water Notice. Boil water notices should be kept at low levels and for as short a period as possible.

At the end of Quarter 4 2021, 16,069 people were on boil water notices which is a further increase on the population on boil water notices at the end of the previous quarter (7,029 people). The WAB notes with concern the increase in the number of people on a boil water notice at the end of Quarter 4 2021.

Approx. half of all the boil water notices issued during 2021 were issued during Quarter 4, 2021. Some of the larger areas affected by boil water notices during Quarter 4 included Wexford Town (two separate notices), Gorey, Whitegate (two separate notices), Longford Central and part of the Vartry public water supply. The WAB will continue to monitor the number of people affected by short term boil water notices, particularly for supplies where notices need to be put in place on more than one occasion.

At the end of Quarter 4 2021, 10 of the 17 boil water notices (serving 1,230 people) were in place for more than 30 days. This means that the solution to fix the problem with the plant could not be addressed quickly and requires significant investment by Irish Water. The WAB notes with continuing concern the trends for long term boil water notices highlighted by the EPA. It will continue to monitor Irish Water’s progress in this area and ensuring that boil water notices remain in place for as short a period of time as possible.

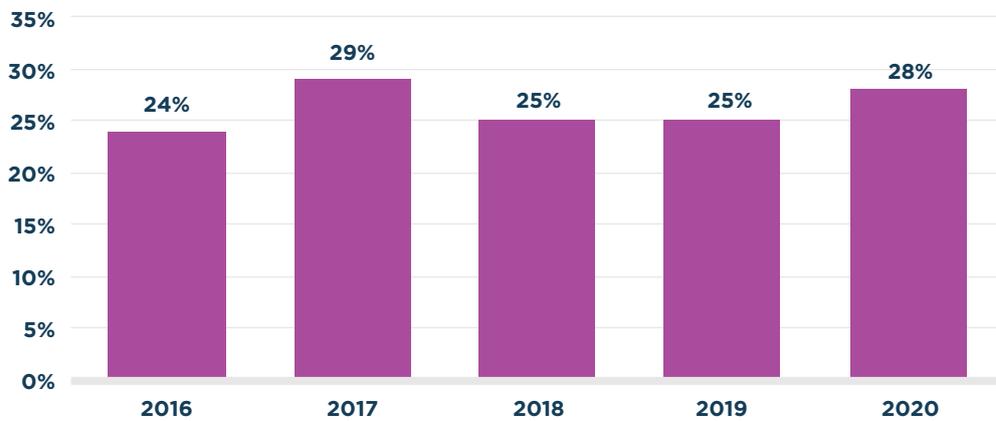
When Irish Water took charge of water supplies in 2014 it set a target to eliminate all boil water notices that were in place at that time. This target was achieved and while no specific future targets have been set, Irish Water is working to continue reducing the number of people affected by boil water notices.

2.2.3 Performance Indicator 9 - Compliance of Urban Waste Water Treatment (UWWT); Plants with Environmental Protection Agency discharge licences

This metric has not been updated in this report. This metric was last updated in the Water Advisory Body Quarterly Report No.2 of 2021.

Figure 12

Percentage of Population served by compliant Urban Waste Water Treatment plants (by population equivalent)



2.2.4 Performance Indicator 10 - Agglomerations with no Wastewater Treatment

This metric monitors the number of agglomerations⁸ with no wastewater treatment or preliminary treatment only.

Figure 13

Agglomerations with No Treatment or Preliminary Treatment Only Targets.



A target of zero agglomerations with no treatment or preliminary treatment only has been placed on Irish Water by end 2024, in line with the annual targets set out in Figure 13.

Commentary

As this is a new metric to the WAB Report, the WAB has not reported on this metric to date, however, this metric has been monitored under the Irish Water Performance Assessment Framework.

In 2013, there were 50 agglomerations in Ireland discharging untreated wastewater into the environment. Between 2014 and 2019, Irish Water had completed work at a total of 15 sites to reduce this number to 35. The WAB is of the view that a discharge of untreated wastewater is an environmental concern for a wide range of stakeholders across Ireland and is not acceptable. The WAB will continue to monitor Irish Water’s performance against this metric.

8 A wastewater agglomeration is an area where the population or economic activities (or both) are sufficiently concentrated for wastewater to be collected and brought to a treatment plant.

2.3 Responsiveness to the needs of Communities and Enterprise

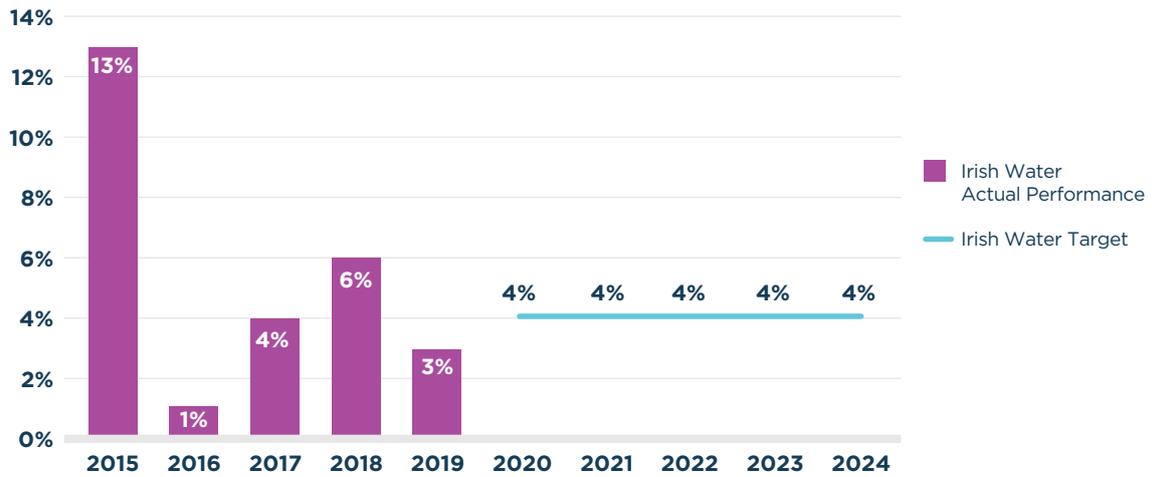
This metric has not been updated in this report. This metric was last updated in the Water Advisory Body Quarterly Report No.3 of 2020.

2.3.1 Performance Indicator 11 – Ease of Contact

There are 3 separate metrics within the Ease of Contact performance indicator:

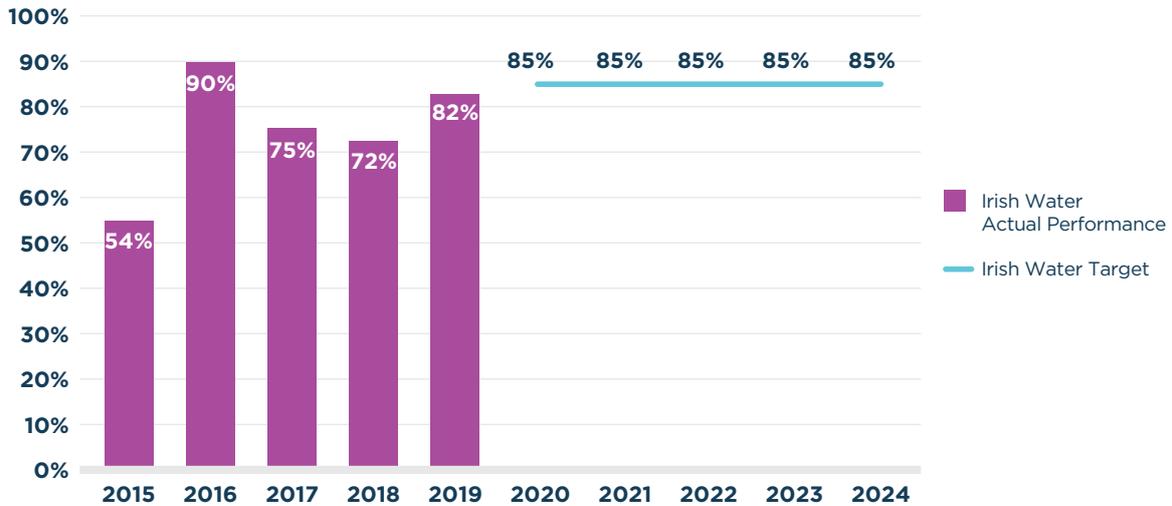
Figure 14

Call Abandonment Rate



The Call Abandonment Rate metric is the percentage of calls that are abandoned while a caller is waiting in the queue to speak to an agent. It is designed to incentivise Irish Water to shorten the length of time customers may spend in the queue. A target call abandonment rate of 4% or less has been placed on Irish Water for each of the years 2020-2024.

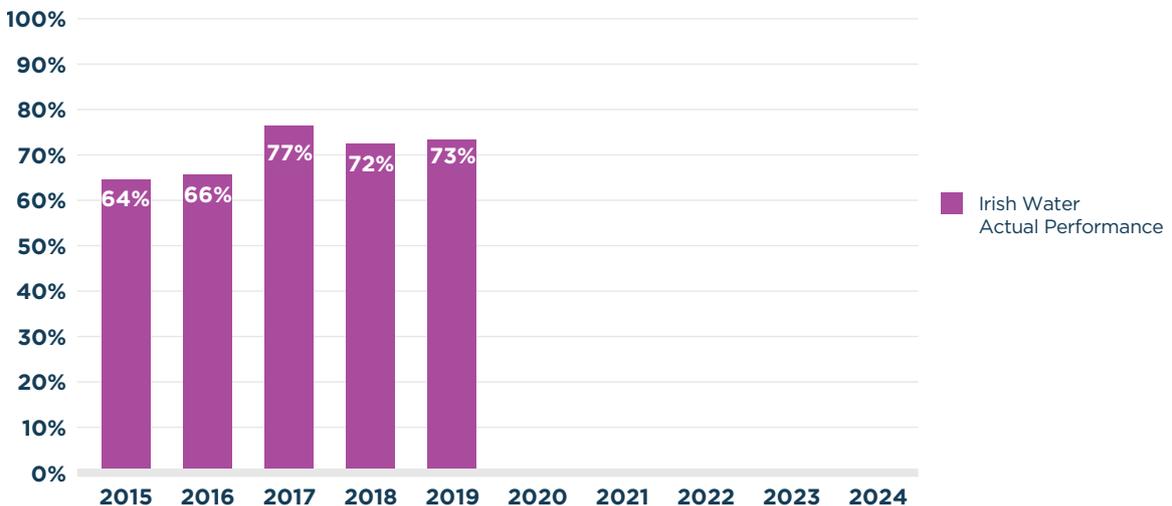
Figure 15
Speed of Telephone Response.



The Speed of telephone response by Irish Water measures the percentage of calls that enter a queue to speak to an agent which are answered within 20 seconds.

A target of at least 85% of calls answered by an agent within 20 seconds of being in the queue has been placed on Irish Water for each of the years 2020-2024.

Figure 16
Customer Satisfaction Survey.



The Customer Satisfaction metric measures customer satisfaction levels of their experience dealing with Irish Water through phone contact. No specific incremental customer satisfaction score targets have been placed on Irish Water over the period 2020-2024. Irish Water’s performance (under the current survey method) is required to improve in 2020 over that achieved in 2019 and continue to do so. CRU has proposed that a new survey approach is implemented in the future which may allow comparison with other Irish and UK utilities, and against which targets will be set.

2.3.2 Performance Indicator 12 - Irish Water Customer Complaints management

This metric has not been updated in this report. This metric was last updated in the Water Advisory Body Quarterly Report No.3 of 2020.

The number of complaints Irish Water receives is monitored in two ways. They are:

- ▶ the percentage of complaints that are responded to within five working days, with either a resolution or an outline plan of the proposed resolution; and
- ▶ the percentage of complaints to which a final decision is issued within two months.

Figure 17

Response to Complaints within 5 working days⁹



A target of 100% of complaints to be responded to within 5 working days, either with a resolution or an outline plan of the proposed resolution has been placed on Irish Water for each of the years 2020-2024.

⁹ Please note that for complaints responded to within five days, data in 2018 is provided by Irish Water from Quarter 2 - Quarter 4 only.

Figure 18

Response to Complaints (with Final Decision) within 2 months.



A target of 100% of complaints to be issued a final decision within 2 months has been placed on Irish Water for each of the years 2020-2024.

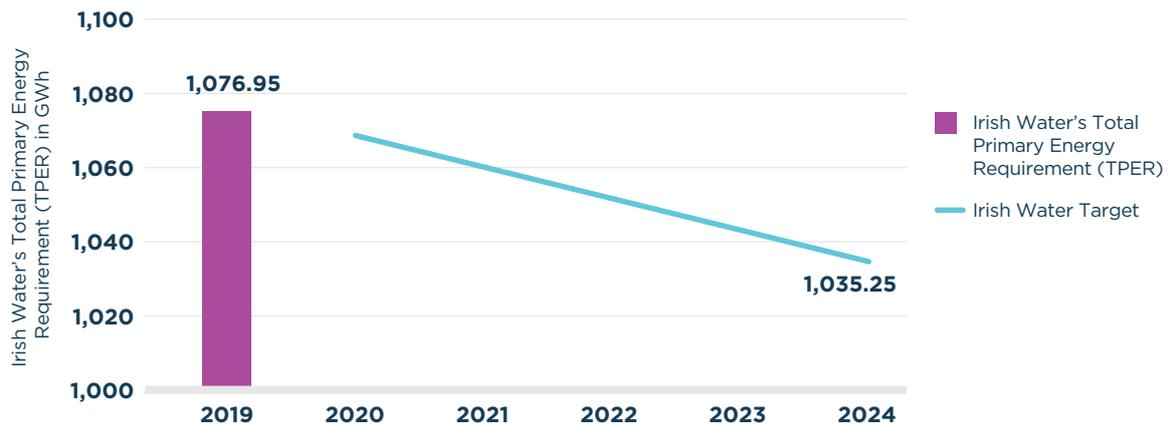
2.4 Energy and Emissions

2.4.1 Performance Indicator 13 - Energy Consumption Targets

This metric monitors Irish Water’s Total Primary Energy Requirement in Gigawatt hours.

A minimum target reduction of 40.71 Gigawatt hours in Total Primary Energy Requirement (TPER) has been placed on Irish Water by end 2024.

Figure 19
Energy Consumption Targets.



Commentary

As this metric’s targets are new and has yet to be reported on, the WAB is unable to comment on Irish Water’s performance against this metric at this time.

Part 3

Key Events

3.1 Drinking Water Quality in Public Supplies Report 2020

On 10th December 2021, the EPA published the **Drinking Water Quality in Public Supplies Report 2020** which provides an assessment of the drinking water quality provided by Irish Water in public water supplies.

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. Compliance with the microbiological and chemical standards for drinking water remains high at greater than 99.5%, which means the water in our public water supplies is safe to drink. While there has been good progress recently, drinking water treatment in many supplies is still not as robust as it needs to be to ensure the supply is resilient and safe into the future.

The EPA has identified a priority list of “at-risk” drinking water supplies, the Remedial Action List (RAL), that must be improved to ensure that water supplies continue to be safe to drink and are also secure in the future. The list includes supplies such as Cork City (serving over 90,000 people), Longford Central (around 17,000), and Corofin, Co. Clare (around 1,300). Irish Water is making progress in resolving issues and the number of priority supplies has reduced from 77 to 46 over the past four years. Some of the key achievements in 2020 include the completion of upgrades at Staleen (serving over 70,000 people), Lough Talt (over 12,500), and Ballyhooly (around 1,200) water treatment plants.

While Irish Water continues to make progress with a net reduction in supplies on the Remedial Action List, the EPA has serious concerns about the time it takes to implement improvements. Of the 46 supplies on the Remedial Action List at the end of 2020, almost half will now take longer to complete than was anticipated at the end of 2019, for example, Clonmel-Poulavanogue. At the end of 2018, Irish Water said this supply was due to be completed in December 2020; it now has a completion date of December 2026. A supply may be placed on the Remedial Action List if it cannot consistently be ensured that the drinking water is free from bacteria, protozoan organisms or chemical substances, and that the treatment plant is operated effectively and correctly. People can become ill from drinking inadequately treated water and this can be very severe, particularly in vulnerable people, such as the young and the elderly.

Drinking Water Priorities and Challenges

Ensure that water is free from bacteria. Irish Water continues to undertake upgrades to disinfection systems across the country to ensure the quality of drinking water is safeguarded and free from bacteria. In light of EPA audit findings, Irish Water needs to review all Disinfection Programme assessments to ensure disinfection contact time is adequate to protect public health.

Ensure that water is free of protozoan organisms. While the number of detections of *Cryptosporidium/Giardia* has reduced by one third since 2019, the EPA is concerned that protozoan organisms are still being detected in treated water due to a failure to manage treatment processes properly. It is critical that Irish Water puts the appropriate control measures in place to ensure the correct operation of treatment processes. An example of where this was achieved is Leixlip Water Treatment Plant, which supplies over 590,000 people. This supply was removed from the Remedial Action List in July 2021 following filter upgrades and the installation of ultraviolet disinfection.

Ensure that water is free of chemical substances. The number of supplies failing to meet the trihalomethane standard continues to decrease each year. However, more work is required to address the remaining sites that continue to have Trihalomethanes exceedances. In addition, the European Commission has issued a Reasoned Opinion¹⁰ with regard to Ireland's poor record of compliance with the trihalomethane standard. Another cause for concern is the increase in the number of supplies where pesticides were detected. The challenge is to engage with multiple stakeholders in a catchment to prevent this problem at the source.

Ensure that water treatment plants are operated effectively and correctly. While it is an essential step to have all required infrastructure in place, a water treatment plant must also be managed and operated effectively and correctly and 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.

Boil notices continued to be a feature of life affecting 74,955 consumers during 2020, with nearly two-thirds of the notices in place for more than 30 days. Assessments and improvements under Irish Water's National Disinfection Programme have not proved sufficiently robust to mitigate the need for boil notices.

There was limited progress by Irish Water in 2020 to replace lead connections with only 1.5% of connections replaced compared to 8% in 2019. At the 2020 replacement rate it will take decades for Irish Water to remove all lead connections. Another cause for concern is that the Department of Housing, Planning and Local Government has not yet published a progress report on the National Lead Strategy. This limited progress is concerning given the forthcoming reduced limit for lead in the new Drinking Water Directive.

¹⁰ Infringement case number 2017/4007

Irish Water has begun using Drinking Water Safety Plans to identify the risks on our public water supplies. These will also serve to improve the long-term security of supplies. It will take substantial investment over many years to improve the security of supplies, but adopting the Drinking Water Safety Plan approach should allow Irish Water to target actions to address the greatest risks. The new Drinking Water Directive (EU) 2020/2184 is to be transposed into Irish law by January 2023 and it is anticipated that this will put the requirement for Drinking Water Safety Plans on a statutory footing.

Summary of key actions recommended for Irish Water

- ▶ Complete upgrades to resolve issues with the drinking water supplies on the Remedial Action List, without further delays, to ensure risks to drinking water quality are addressed.
- ▶ Progress the assessments of disinfection systems, including rechecking of the chlorine contact times, to ensure drinking water is adequately disinfected and free from bacteria. Critical alarms and monitors must be functioning at all times.
- ▶ Substantially progress drinking water safety plan assessments to identify risks at drinking water supplies to safeguard the long-term security of water supplies and mitigate the risk.
- ▶ Expedite lead connection replacements. The Department of Housing, Planning and Local Government needs to publish the progress report on the national lead strategy.

The WAB notes the concerns expressed by the EPA that supplies on the Remedial Action List need to be completed without further delays; that the replacement of lead connections should be accelerated; and that assessments of disinfection systems and drinking water safety plans are prioritised to ensure safe drinking water supplies today and secure water supplies for the future.

3.2 Major Projects

Vartry Regional Water Supply Scheme

Aim: To provide a new treatment plant, upgrades to the Vartry reservoir and replacement of the Vartry tunnel to help to ensure a safe and sustainable water supply in north Wicklow and South Dublin.

Update: Irish Water completed and commissioned the new treatment plant at Vartry during 2021.

Part 4

WAB's Commentary on Key Performance Indicators and Conclusions

Below we summarise the WAB's comments on each metric which has been updated in this report.

Number	Indicator	WAB Commentary
Performance indicator 1	Leakage	<p>In place of reporting to the CRU on leakage¹¹, to date Irish Water has been providing a figure for 'unaccounted-for-water', which includes leakage among other elements. Once Irish Water has implemented its Leakage Management System, and one full year of data is available for review (i.e., the 2020 data), Irish Water will be able to report on leakage specifically. Once these reports are available, future WAB reports will provide comment on Irish Water's performance against this metric.</p> <p>By any measure, the amount of water lost on the water distribution network is unacceptable and needs to be a focus for Irish Water in the future. Irish Water acknowledges that leakage from its "water supply networks is at unacceptable levels and well above international norms"¹².</p>

11 Leakage as defined in the Commission for Regulation of Utilities decision on Irish Water Performance Assessment Framework 2020-2024 Metric Review and Target Setting paper "...as the annual average volume of water lost per day on the public network and on the customer side."

12 Source: Water Services Strategic Plan (WSSP) - A Plan for the Future of Water Services.

Number	Indicator	WAB Commentary
Performance indicator 2	First Fix Scheme	<p>Specific targets have not been set for Irish Water in respect of the First Fix Scheme. This is because availing of a leak investigation and possible First Fix requires a good level of customer engagement to meet any target.</p> <p>There has been an increase in the number of leak repairs completed since the first half of 2020 and an increase in the total savings in Megalitres/day estimated by Irish Water as a result of both Irish Water and customer leak repairs since the first half of 2020. This increase is as a result of Irish Water's efforts in contacting customers to avail of the First Fix Scheme and the issuing of constant flow alarm (CFA) notification letters to properties.</p> <p>Overall, there has been a general decline in the number of leak repairs completed under the scheme since mid-2016. This coincides with the suspension and eventual abolition of domestic water charges. Additionally, Irish Water's First Fix Scheme operations were impacted by Covid-19 restrictions. Future WAB reports will continue to monitor the rate of First Fix repairs by Irish Water and customers.</p>
Performance indicator 3	Remedial Action List (Water)	<p>The EPA requires Irish Water to have an action plan in place to remediate the drinking water supplies that are currently included on the Remedial Action List. Future WAB reports will monitor the progress of Irish Water in meeting the targets it has set to remediate those 52 water supplies through the quarterly updates of the Remedial Action List. The WAB will also monitor the number of new drinking water supplies that are put on to the list in any quarter.</p>

Number	Indicator	WAB Commentary
Performance indicator 5	Lead service connections replaced	<p>During Quarter 4 2021, Irish Water replaced 3,152 lead service connections. The target for 2021 was 1,500 replacements, the target for the five-year term of Revenue Control Period 3 (2020-2024) is to replace 13,231 lead connections</p> <p>The WAB notes that progress has slowed significantly when compared to the progress made during 2019. Replacement of lead connections recommenced in Quarter 3 2020 following restrictions imposed due to COVID 19 and a stimulus package from Government during 2020 allowed some additional funding to be allocated towards lead connection replacements towards the end of 2020.</p> <p>The WAB also notes that Irish Water has continued to encounter difficulties in accessing shared and backyard service replacements, as some homeowners have refused to sign the necessary consent forms for works to be carried out on private property. Irish Water continues to engage with these homeowners to get consent forms signed. Irish Water’s target of 1,500 replacements during 2021 is lower because it planned to concentrate efforts on back yard services, which can be more complex and more expensive to replace. However, at the end of Quarter 4 2021, Irish Water had replaced 5,900 connections which was ahead of the target for 2021, mainly due to more public side connections being replaced. Irish Water expect to have additional budget for lead replacements for 2022.</p>

Number	Indicator	WAB Commentary
Performance indicator 6	Unplanned Interruptions to Water Supply	<p>As this is a new metric to the WAB Report, the WAB has not reported on this metric to date. However, this metric has been monitored under the Irish Water Performance Assessment.</p> <p>The data presented shows the following:</p> <ul style="list-style-type: none"> ▶ Unplanned interruptions in excess of 12hrs: From Quarter 3 2019 – Quarter 2 2020, 403,709 properties experienced an unplanned interruption for greater than 12 hours. This represents 24% of connected properties. ▶ Unplanned interruptions in excess of 24hrs: From Quarter 3 2019 to Quarter 2 2020, 129,289 properties experienced an unplanned interruption to supply that lasted greater than 24 hours. This represents 7% of connected properties. <p>Irish Water has reported that a number of factors may have influenced the numbers of properties impacted by unplanned interruptions, including Covid-19 related works delays and process improvements by Irish Water.</p>
Performance indicator 8	Boil Water Notices	<p>When Irish Water took charge of water supplies in 2014 it set a target to eliminate all boil water notices that were in place at that time. This target was achieved and while no specific future targets have been set, Irish Water is working to continue reducing the number of people affected by boil water notices. The WAB notes the EPA's concerns that 10 of the 17 notices in place at the end of Quarter 4 2021 were on "long term" boil water notices, which means the notice was in place for more than 30 days.</p>

Number	Indicator	WAB Commentary
Performance indicator 10	Agglomerations with no Wastewater Treatment	<p>As this is a new metric to the WAB Report, the WAB has not reported on it to date, however, this metric has been monitored under the Irish Water Performance Assessment Framework.</p> <p>In 2013, there were 50 agglomerations in Ireland discharging untreated wastewater into the environment. Between 2014 and 2019, Irish Water had completed work at a total of 15 sites to reduce this number to 35. The WAB is of the view that a discharge of untreated wastewater is an environmental concern for a wide range of stakeholders across Ireland and is not acceptable. The WAB will continue to monitor Irish Water's performance against this metric.</p>
Performance indicator 13	Energy Consumption Targets	As this metric's targets are new and have yet to be reported on, the WAB is unable to comment on Irish Water's performance against this metric at this time.

In this report five metrics have been updated since WAB published its last report (WAB Quarterly Report No.4 of 2021).

In addition three new performance indicators have been added to the WAB report:

- ▶ Performance Indicator 6 - Unplanned Interruptions to Water Supply
- ▶ Performance Indicator 10 - Agglomerations with no Wastewater Treatment
- ▶ Performance Indicator 13 - Energy Consumption Targets

It continues to be the WAB's view that the management and improvement of the drinking and waste water infrastructure and network requires significant and sustained action, across a range of areas.

It is also its view that increasing public confidence in Irish Water is dependent on visible action in areas such as waste water treatment, water quality, and leakage.

Glossary of Terms

Agglomeration - an agglomeration is an urban settlement (village, town or city area) which is connected through a pipe network to a wastewater treatment plant.

Chlorination - Water chlorination is the process of adding chlorine or chlorine compounds such as sodium hypochlorite to water. In particular, chlorination is used to prevent the spread of waterborne diseases.

Cryptosporidium - A disease-causing protozoon widely found in surface water sources.

E.Coli - Coliforms, specifically Escherichia coli (E. coli), are the universal indicator microorganisms of faecal contamination of water. These bacteria, which are of definite faecal origin (human and animal), are excreted in vast numbers and their presence in a water supply is proof that faecal contamination has occurred and is a definite indication that pathogens may be present.

Gigawatt hours (“GWh”) - A measure of energy volume.

Million litres of water per day (“MLD”) - A measure of water volume per day.

Pathogen - Microorganisms that can cause disease in humans, other organisms or animals and plants. They may be bacteria, viruses, or protozoa and are found in sewage, in runoff from animals, farms or rural areas populated with domestic and/or wild animals, and in water.

Population Equivalent - in waste-water treatment the population equivalent is a reference that describes the specific load of a wastewater treatment plant.

Remuneration - Reward for employment in the form of pay, salary, or wage, including allowances, benefits (such as company car, medical plan, pension plan), bonuses, cash incentives, and monetary value of the noncash incentives.

Trihalomethanes - Trihalomethanes are a group of four chemicals formed, along with other disinfection by-products, when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water.

Trunk Mains - Trunk water supply pipelines deliver bulk water from one part of the system to another, often aided by pumping. As such, trunk mains are larger in diameter than reticulation mains, are not networked and have fluctuating pressures.

Turbidity - Turbidity is a measure of the degree to which the water loses its transparency due to the presence of suspended particulates. The more total suspended solids in the water, the murkier it seems and the higher the turbidity. Turbidity is considered as a good measure of the quality of water.

