



Wellington Water Quarterly Overview

An overview of the work Wellington Water has delivered for its council owners in the region.

Quarter 1, 2023-24: July – September 2023

About this document

Wellington Water prepares several regular reports for our council owners, regulators and other key stakeholders.

Most of these are for special purposes – financial, risk, specific projects – and go directly to the relevant council officers.

This document is intended for a wider audience. It provides an overview of our working environment, activity and performance, from a regional perspective.

It is prepared alongside and sometimes in advance of other reporting, so there can be slight differences in the data used in this versus detailed technical reports.

This report will be made publicly available and published on our website. Where possible, we aim to publish most of our information and advisory papers on our website:

wellingtonwater.co.nz

As a regional water services provider, Wellington Water is focused on restoring balance among the needs of water, people and the environment.

We do this through applying our council owners' investment in five strategic areas:



Looking after existing assets



Enabling growth



Ensuring sustainable supply and demand



Improving water quality



Resilience to climate change

These strategic investment areas underpin our ability to deliver customer outcomes: safe drinking water, water that is safe to enter the environment, protection from the impacts of flooding, and resilience to major natural events.

Regional strategy and delivery

Wellington Water's direction is towards Te Ika Rō Wai, where the needs of water, the environment and people are in balance. Te Ika Rō Wai can be understood as the fish in the water. For fish to thrive, the water they swim in needs to be pure. If we carry out our role well, and care for water at every stage as it passes back to the environment, this will restore and support manaakitanga, the ability of mana whenua to provide for people and to care for the environment.

The region faces big challenges in achieving this balance. These include the amount of water consumed by people and lost through leaks; and the quality of water that leaves networks and returns to the environment, in both planned and unplanned discharges.

Our role is to provide investment advice to councils to maintain and develop their assets. We also operate their networks and develop and deliver programmes of work to renew and replace the aging assets in the region. We create value for our shareholding councils by aligning this work with regional priorities, and through procurement and delivery models that individual councils could not achieve independently.

This year we are preparing advice for councils for their long-term plans. The process has been complicated by water reform, and the need to build asset management knowledge and programmes within the National Transition Unit and entity establishment teams.

Core delivery focus areas

We are focused on delivering our core services. Keeping to the core for us means:

1. Sufficient water supply for our communities
2. Safe drinking water
3. Removing and treating wastewater before returning it to the environment
4. Stormwater risks and impact are managed

In a time where all our council owners are facing inflationary pressures and financial constraints, we are acutely aware of every dollar we are provided by councils and ratepayers. Therefore, we prioritise our work carefully to ensure that we are applying resources and people on the right things (e.g., our core services) and to the areas needed most.

Underpinning these core areas of delivery is our ongoing programme of planned maintenance and reactive responses to network outages, and our capital delivery programme which aims to replace and renew as many of the aging assets in our region as possible before they reach the end of their operational lives.

Our ability to deliver hinges on our people. We continue to take care of our people during a time of change and sector reform. This means we are committed to ensuring our people, and the people in our supplier whanau are engaged, informed and supported.

Delivery highlights for Q1

-  15,691 million litres safe drinking water delivered to Wellington metropolitan region
-  385 million litres safe drinking water delivered to South Wairarapa
-  15,759 million litres of wastewater was treated at the Wellington metropolitan treatment plants. This number is higher than the amount of water supplied. This is due to extra water entering the network through pipe and connection faults.
-  405 million litres of wastewater was treated at the South Wairarapa treatment plants. This number is higher than the amount of water supplied. This is due to extra water entering the network through pipe and connection faults.
-  0 habitable floors flooded. Habitable floors flooded is a measurement required by the Department of Internal Affairs. We can only report the incidents we know of – not every incidence is reported to us or councils.

Supporting long-term planning for 2024-34

As the region's water services provider, we provide our council owners with investment advice on their water assets in the region. We do this through the annual planning process and the long-term planning process. Through this, Councils then make decisions on what to fund.

Our approach is to provide councils with investment advice based on best practice and achieving the best water outcomes for communities and the environment. Our investment advice is also based on the strategic priorities set by the Wellington Water Committee for the region. We then work through a process with each of our councils based on their priorities and what they can afford. This includes advice on the risks and consequences of not investing. This quarter there has been a lot of activity for the 2024-2034 Long-Term Planning and this process is underway for all our councils.

Principles to guide our advice

This LTP, we have applied the following principles to providing our investment advice:



Regional approach based on the region's five strategic priorities and the principles of Te Mana o te Wai



Be clear on risks of under investment



Use data and evidence to support the auditing of LTPs



Work with councils in a constructive manner



Continue to engage with mana whenua to determine their priorities for investment

Our 2024-2034 Long-Term Planning advice

We have provided councils with **three levels of capex investment advice** for the region:

1

\$30 billion over 30 years - the total capital investment needed to deliver on all of the region's strategic priorities (unconstrained).

2

\$7.6 billion over 10 years - this is our **recommended level** of capital investment based on the maximum that can be delivered (a 30% uplift of work year on year for the next 10 years).

3

\$2.8 billion baseline programme – basic level of capital investment to keep the lights on but won't improve the region's water assets to a sustainable and manageable level.

By the end of September, we had mostly engaged with each council on their priorities and provided high level options based on levels 1-3 above. While we are still working through the LTP process, early signals are that the recommended level of investment is unaffordable and councils will likely fund closer to the baseline programme. The likely levels of funding will exacerbate the region's critical risks and create new ones. Of particular concern is the ability to supply water to communities in the coming summers and the longer-term costs of deferring this investment now. Lower levels of investment will also impact Te Mana o te Wai and the wider environment. We will continue to work with councils to refine our advice and to optimise final programmes.

Providing a sufficient supply of drinking water

Ours and our councils' ability to provide a sustainable supply of drinking water remains at risk. Water use across the cities in metropolitan Wellington is at an all-time high. The network is old with increasing leaks (around 45% leaks regionally), people are using a lot of water, and population growth is adding to the issue.

This quarter we continued to monitor and raise this risk with our councils. When looking at the water supply risk we have two situations we are trying to manage at the same time: the immediate risk of not having enough water this summer and the long-term challenges of ensuring there is sufficient water for future years.

Immediate risk this summer

This summer we are predicting that if we see an average summer (no significant rainfall) then our councils will have to put in place tighter water restrictions for longer periods of time to avoid the risk of an acute water shortage (e.g. asking people to significantly reduce their indoor water use).

We are unable to materially reduce this risk this summer within our current level of funding and resources and the constraints of the aging network. We are doing all we can to optimise our activities and have put in place four key workstreams to respond to this summer (see diagram on the right) but this work won't help us to avoid a water shortage risk. Instead, this is about preparing for the potential of an acute water shortage and doing what we can to reduce the impact on the public as much as possible.

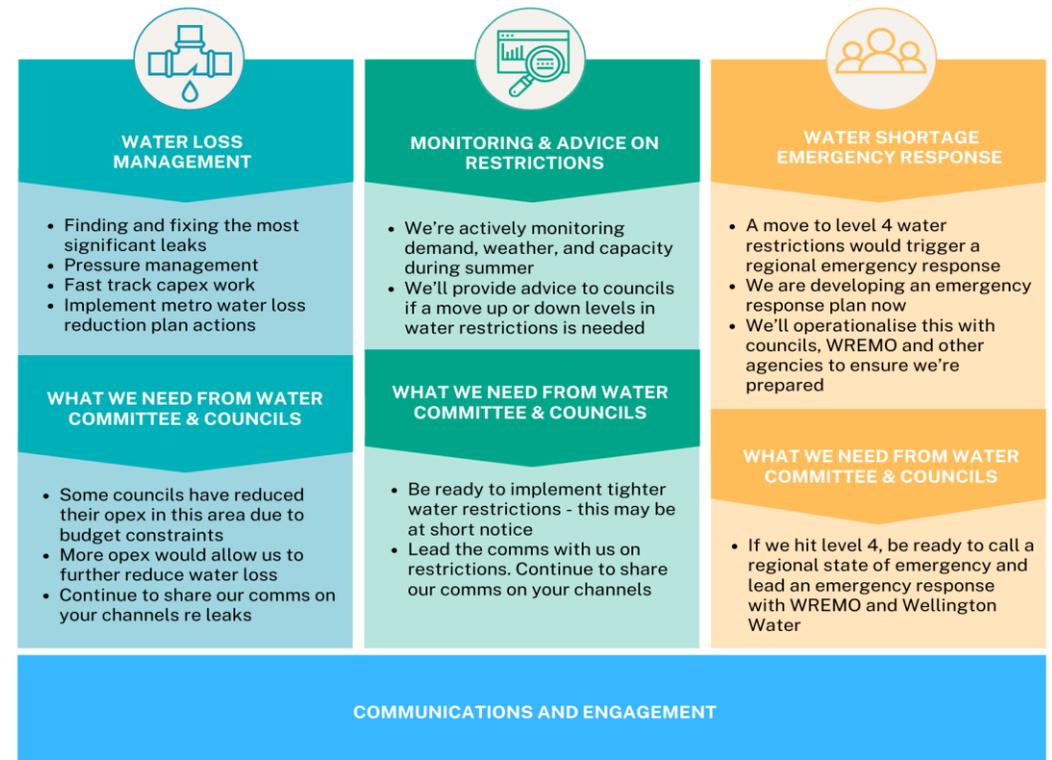
Long-term challenges

Significant investment and decisions are needed now by our councils to avoid carrying the ongoing risk of water shortages in future years. In September the Water Committee called a regional Water Shortage Summit with all councils to agree a regional direction on next steps to tackle the long-term challenges we are facing around a sustainable supply of water for future years. Three key actions were recommended by Wellington Water at the Summit:

1. Continued increased investment into finding and fixing leaks, managing water loss and replacing old infrastructure
2. Investment in smart meters across the metropolitan Wellington region
3. Build another storage lake

The majority of attendees at the Summit agreed for these actions to be considered in councils' LTP process.

Our response to this summer's risk (23/24)



Providing safe and fluoridated drinking water

Drinking water compliance

We have continued to provide the region with safe drinking water this quarter, however the water at the Waterloo Water Treatment plant remains non-compliant with the new chlorine rules that were introduced by Taumata Arowai late last year. This impacts up to 800 Lower Hutt households.

Meeting the new rules would require us to either increase the chlorine concentration at the plant (this could result in a significant change to the taste of the water or cause skin irritation) or significant investment from councils for network upgrades to increase contact time between the chlorine and the water.

In the meantime, the water remains safe to drink and we are awaiting a decision from Taumata Arowai on our and our councils' request for an exemption, which we expect to receive soon.

As previously reported, all water treatment plants in South Wairarapa remain non-compliant and significant investment is needed to bring these plants into compliance.



Operator monitoring the raw water sampling at the Waterloo Water Treatment Plant

Fluoridating the drinking water

We continue to focus on the importance of providing fluoridated water to the metropolitan Wellington region. The Waterloo, Wainuiomata and Te Mārua Water Treatment Plants have all been reliably meeting the Ministry of Health's (MoH) recommended fluoride levels (0.7-1.0ppm, 95% of the time) this quarter.

The only Water Treatment Plant that hasn't met MoH's guidelines this quarter is Gear Island where we have achieved between 80%-92% of the recommended fluoride levels. This is due to ongoing and unforeseen issues with commissioning of the new fluoride facility and further equipment upgrades being needed.

At the very end of this quarter, we identified some health and safety concerns at the Waterloo Water Treatment Plant associated with loading the fluoride powder into the fluoride facility. As a result of this we turned off the fluoride facility at Waterloo while we worked to ensure the health and safety of our people. These issues have now been resolved, though this will impact our ability to meet the MoH recommended levels for Q2.

Throughout the quarter we continued to notify the public via our website and our social media channels every time there was a fluoride outage. This included occurrences where a fluoride facility was turned off for 4 consecutive days or more, where we implemented our usual escalation process to councils, our Board, the Water Committee and the regulator.

Removing and treating wastewater

The Moa Point, Western, and Seaview Wastewater Treatment Plants became non-compliant at times during the quarter. This is due to capacity, mechanical, and environmental factors.

Moa Point Wastewater Treatment Plant

At Moa Point we are seeing higher daily average concentration of solids in the wastewater. This is as a result of ongoing mechanical issues at the sludge dewatering plant at Carey's Gully. There are also issues with the inlet pumping station but work to repair this is underway.

Western Wastewater Treatment Plant

For the Western Wastewater Treatment Plant there has been unusually high levels of solids coming into the plant due to maintenance work carried out to upgrade the Karori Tunnel. However, this work has now been completed and we are already seeing the level of solids coming into the plant has returned to the usual levels.

Seaview Wastewater Treatment Plant

The Seaview Plant became non-compliant in September due to a higher level of bacteria in the wastewater. This is in part due to the UV system not working as efficiently as it should. We're stepping up the maintenance and frequency of the cleaning of UV equipment. Non-compliant trade waste coming into the plant is suspected to also be a factor and we are working with Hutt City Council to investigate.

Porirua Wastewater Treatment Plant

The Porirua Plant was compliant this quarter but in September there was one unconsented discharge of wastewater that had been fully treated but had not gone through the final UV treatment. This was caused by an afterhours power outage which shut the UV equipment off.

South Wairarapa Wastewater Treatment Plants

All South Wairarapa wastewater treatment plants continue to deal with significant performance issues. They all require significant investment to return to full compliance or to avoid further instances of non-compliance.

Compliance status for the region's wastewater treatment plants – Q1

Wastewater Plant	Jul	Aug	Sep
Moa Pt			
Western			
Seaview			
Porirua			
Featherston			
Greytown			
Lake Ferry			
Martinborough			

 Compliant

 Compliant but with noted issues

 Not compliant

Increasing transparency around network overflows

As part of our commitment to transparency, we have started publishing information about [wastewater overflows from the network on our website](#). This will be updated monthly and reflects network overflows recorded at selected, monitored sites across the metropolitan region. It is not representative of all network overflows, but we are working on providing the public with a more accurate picture of this.

Managing stormwater risks and impacts

Monitoring and management of the stormwater network

The increasing impacts of climate change continue to be seen around the country with the far North experiencing more flooding and heavy rainfall recently as a result of cyclone Lola. This is a growing reminder for us in our region that we too are vulnerable to the impacts of climate change and that we need to be vigilant to ensure we are resilient.

Wellington Water has a proactive programme of monitoring the stormwater system throughout the year, particularly in advance of heavy rainfall. We monitor the weather patterns and if a storm is forecasted, we send crews to inspect stormwater culverts, inlets and outlets as well as any known flooding hotspots ahead of any weather event to reduce the number of blockages in the network that could cause surface flooding.

Annually across the region we inspect: 991 inlets, outlets, and flap gates; 815 known flooding hotspots; and 26 culverts.

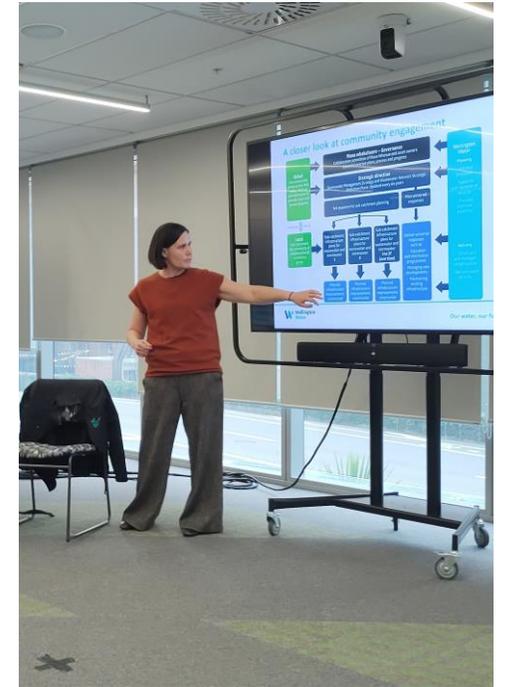
Network discharges programme – global consents for stormwater discharges and wet weather wastewater overflows

The proposed approach to longer-term planning to reduce pollution from the stormwater and wastewater networks has been getting a positive response from community representatives. We've been discussing the approach set out in the global resource consent applications, which cover the Hutt Valley, Porirua and Wellington, at a series of meetings with representatives of residents' associations and stream groups (e.g. Friends of Waiwhetū Stream). Those attending have an interest in local waterways so are supportive of actions and investment that will reduce contamination.

The next step is setting up an interim community engagement group to provide input into pilot strategic reduction plans.



A Wellington Water crew clearing the stormwater culvert near James Street, Plimmerton



Wellington Water's Angela Penfold outlines the consent framework at a meeting in Wellington

Delivery of the region's capital works programme

We continued to make good progress in our Capital Works Programme this quarter.

At the end of September 2023, spend on the capital delivery programme was \$68m at a regional programme level. This is an increase of \$12m or 21% on the same period last financial year. The expected capital delivery range for the region is \$233-328m for the year, and we are forecasting \$267m.

We have made a commitment to the Water Committee to track and report on the kilometres of pipe we have laid on a quarterly basis. To do this, we have improved the way we are collating this information and methodology for calculating kilometres of pipe laid. For Q1 we have laid 6.6 kilometres of pipe across the region against a quarterly target of 5 kilometres.

We also applied this new methodology to last year's results, and we are pleased that this shows a better result for last year of around 29 kilometres of pipe laid.

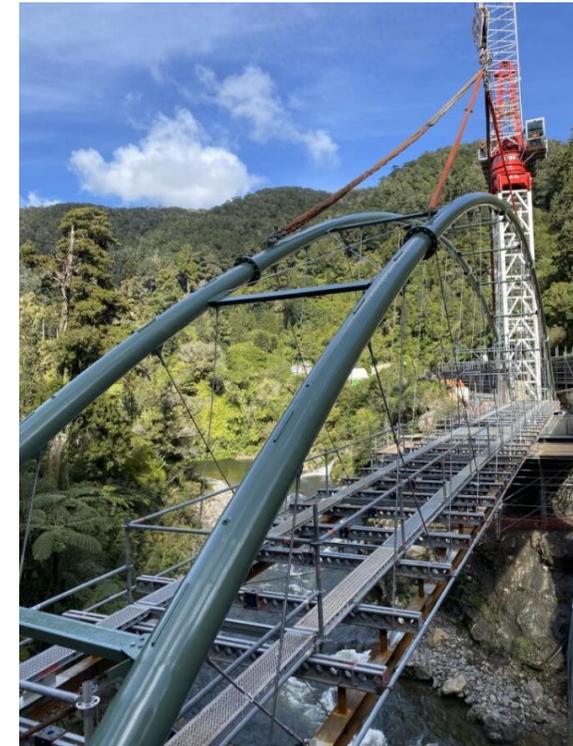
KMs of pipe for this quarter

FY 23/24 - Q1			
Council	Total Metres - Mains and service	Metres of main pipes	Laterals or service pipes(Meters laid minus mains)
GWRC	212	212	0
HCC	3226.29	2165.49	1060.8
PCC	622	527	95
SWDC	98	98	0
UHCC	863.77	347.7	516.07
WCC	1584	1315	269
Total	6606.06	4665.19	1940.87

FY 23/24 - Q1			
Water Type	Total Metres - Mains and service	Metres of main pipes	Laterals or service pipes(Meters laid minus mains)
Water	3792.5	3080.8	711.7
Stormwater	39	39	0
Wastewater	2774.56	1545.39	1229.17
Total	6606.06	4665.19	1940.87

Delivery across the Capital Works Programme for the quarter has included the completion of the construction and commissioning of the wastewater pipe for Barber Grove and the installation of the pre-fabricated Network Arch Bridge at Kaitoke (Flume Bridge replacement).

Below is a photo of the Kaitoke Network Arch Bridge being lifted into place



Operational network maintenance

Finding and fixing leaks

We continue with our programme of work to find and fix the most significant leaks (those losing the most water and that have the most impact to public supply and/or safety) across the region. But due to an aging network we are seeing an increasing number of leaks and a growing backlog of work. Simply put, there are more leaks out there than we can fix within current resources. Hence, we continue to prioritise the most significant leaks first to make best use of the resources we have available. Here's how we're doing (as at 6 November, 2023):



3,082 leaks fixed this financial year (from 1 July 2023)



3,593 confirmed open leaks jobs



Proactively surveyed **926km** of the network for leaks since 1 July 2023

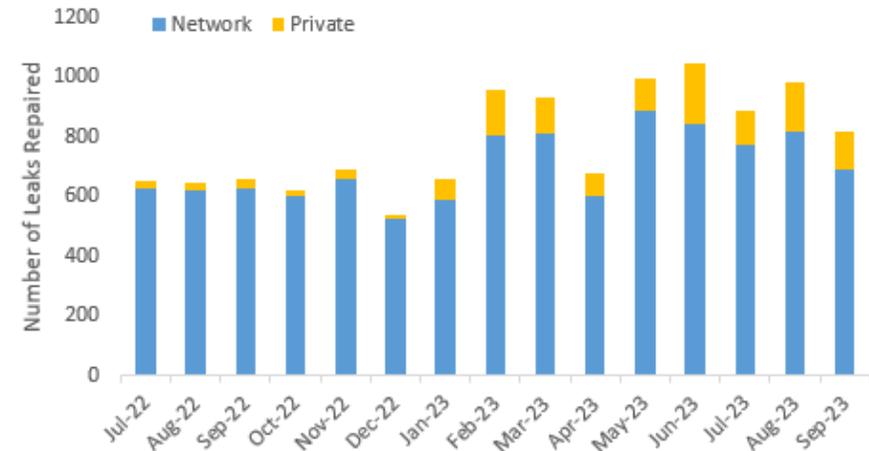


8,042 leaks fixed last financial year

We continue to update the public and our councils on our programme to find and fix leaks on a weekly basis. You can find this information on our [website](#).

Public and private leaks repaired across the region

Overall, regionally we have seen an increase in the number of leaks (public network and private) that have been found and fixed, however some of our councils have reduced their opex in this area due to budget constraints and we are starting to see a drop in leak repairs in the quarter as a result.



Customer satisfaction scores

Every month we survey a sample of customers who have had contact with us and ask them to rate the service they have received. Our target is to achieve a minimum 70% customer satisfaction rating of satisfied or higher. This quarter we achieved an average rating of 65%, which is up 5% from the previous quarter. Although not welcome, a lower customer satisfaction score is expected with the increasing number of leaks and growing backlog of work we are dealing with across the region.

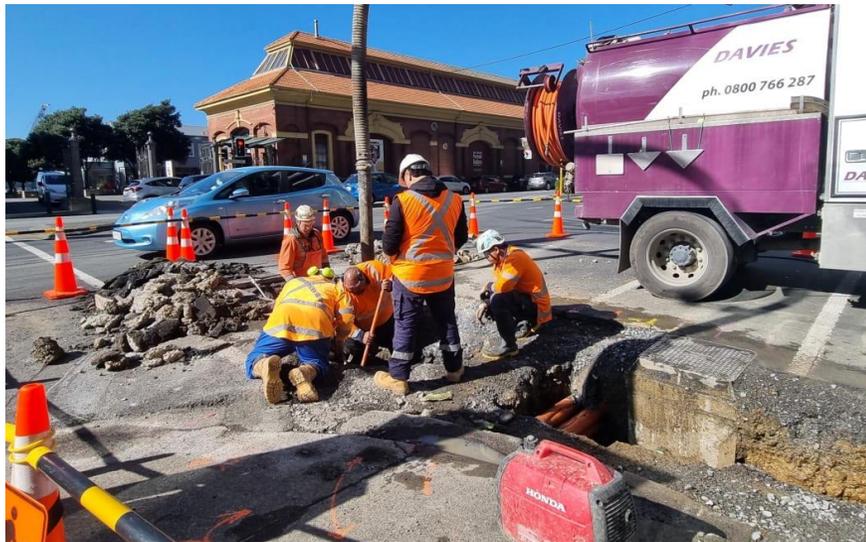
Ready to respond when needed

A core service we provide to our councils is the ability to respond to unexpected outages as they occur on the network. When dealing with an aging network where many assets are near or past the end of their operational lives, we are continuing to see a high frequency of service interruptions, whether it's through leaks, bursts or other unplanned events. The value of our model is that we have crews ready to respond to these events when they occur, including the resources to communicate and engage with those in the community that are impacted by these events.

This quarter we mobilised our crews to respond to a total of **82 significant network outages** across the region, on behalf of our councils.

Customhouse Quay drinking water outage

A significant outage of note this quarter is when a drinking water pipe burst in central Wellington City meaning many residents and business were without water for over 12 hours on 14 September. This caused significant disruption and at one point two lanes of Customhouse Quay was closed to allow crews to undertake the repair. Our crews worked around the clock to fix the pipe and we deployed water tankers to the area, as well as increased our communication and engagement with locals to ensure that everyone was aware of the outage and our response to fix the issue. Our call centre staff were also ready to respond to the increase in calls from customers, particularly ones from business owners who were concerned about the impact of the outage on their business.



*Crews busy repairing the burst water pipe on Customhouse Quay.
Photo: RNZ/Krystal Gibbens*

Our response



Up to **3 crews** on rotation, working throughout the repair



Around **75 customer enquiries** received and a **team of 4 dedicated** to carrying out proactive calls to businesses in the affected area



Team of 5 on the ground door knocking and providing affected businesses with information and support



10 social media updates over a 12-hour period, which reached over **23,000 people**



7 media enquires were responded to, resulting in coverage on all the main media outlets

Te Mana o te Wai

Our journey to restoring Te Mana me Te Mauri o te Wai

Te Mana me Te Mauri o te Wai are concepts that promote good outcomes for the mana and mauri of water from our work. We continue to further our work with our councils to ensure we are achieving these important outcomes in the region.

This quarter we celebrated the completion of the Duck Creek Wastewater Pump Station Upgrade in Porirua. The project involved installing underground storage tanks and connecting pipes that will significantly reduce the risk of wastewater overflows into nearby waterways, especially after heavy rain, helping restore water quality in Duck Creek and Te Awarua-o-Porirua.

We also made good progress on our work on the Donald Street Pump Station in Featherston, where crews are installing a new wastewater pump station which will increase capacity and efficiency in removing wastewater away from the eastern part of Featherston. This will also help reduce the number of wastewater overflows into the environment. Part of the project also includes a wastewater storage facility, which will give us a place to store wastewater if the pump station stops working or during a major event such as an earthquake.



The Duck Creek Project Team at the site of the completed upgrade of the Wastewater Pump Station



Donald St Pump Station in Featherston

Looking after our people

Staff engagement

Our engagement scores continue to remain steady, despite the uncertainty with water reform. Our employee engagement score continues to rise from 58% for the last financial year to 66% in Q1 (up 8%).

We also ask our people how supported and informed they are feeling about reforms. 67% of staff feel supported by the organisation through water reform but only 53% feel they understand water reform, which is unsurprising given the uncertainty associated with the general election.

Recruitment

The organisation has grown over the last 12 months, with an additional 46 Wellington Water staff. This is a 16% increase.

We are continuing to recruit for experienced and qualified people for crucial roles on the frontline, which remains a highly competitive market. This quarter we have been preparing a targeted recruitment drive for these roles.

Staff turnover continues to be steady at around 12%.

Health and Safety

Unfortunately this quarter we had five significant health and safety incidents. The most serious involved a worker being crushed by an excavator. These incidents were investigated and reviewed, with lessons learned shared widely across Wellington Water and our wider whānau.

While there is no clear link between the incidents, they have highlighted the high-risk nature of the work we do, and the continuing efforts required to manage our critical risks.

Mental health and wellbeing

Our wellbeing efforts have ramped up, with several initiatives occurring during Mental Health Awareness Week which were well received across the organisation. An effort was made to ensure our front-line operational workers were heavily involved in these.

Celebrating our people

Wellington Water is made up of hard-working people who are dedicated to delivering good water outcomes for our councils and communities. We think it's important to celebrate our people so every week we profile a member of our team and shine a light on the important mahi they do and why they do it. We call these 'Mahi Monday' and every Monday we publish a profile on our social media channels to share our people's stories with the public. Follow us on Facebook and X to find out more.



Recent Monday Mahi posts celebrating our people, featuring from left to right: Kerry Holtham—Trade Waste Technical Advisor, Alistair Forsyth—Manager Service Delivery and Maintenance (South), Chrissy Seabourne—Senior Developer (GIS), Ropeti Taito, Customer Informations and Resolutions Lead, Alicia Wilcock—Graduate Engineer.