

Wellington Water regional review and outlook

A regional perspective on the work of your water services entity

He wai, he wai

He wai herenga tangata

He wai herenga whenua

He wairua

He waiora

Tihei, mauri ora!

It is water, water that joins us, water
necessitates the land, the soul of life, life
forever. 'Tis the breath of life!

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, and protection from the impacts of flooding, as well as resilience to major natural events.

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About this document

Wellington Water prepares many different reports for our council clients and officers, and for regulators and other key stakeholders.

Most of these are for special purposes – financial, risk, specific projects – and go directly to the offices and officers directly concerned with that area of our work.

Some are intended for wider audiences, and are designed to provide both an overview of performance and the context of the work environment – often pulling together strands that appear in specialized reports.

Owing to timing, there can sometimes be slight differences in the data used in comprehensive reports vs what appears in specialized report. Fully audited updates appear in our Half Year and Full Year (Annual) report.

We aim to publish most of our information and advisory papers on our website.

Keeping you informed through regular reports and dashboards

Report	Purpose	Timing
Regional review and outlook	Strategic, regional look at three waters activity	Month after quarter end
Risk Dashboard	Updates on critical risks, for governance. Some council specific versions	Quarterly updates
Council performance	Council-specific update on key performance indicators, mostly non-financial	Two months after quarter end
Opex / Capex financial dashboard	Summarise progress against budgets, highlight programme risk	Within 10 days of month end
Programme management dashboards	Updates on capital investment programmes and major projects	Monthly
Customer Operations Group report	Summary of operational activity including repairs	Monthly
Half year report	Summary of company performance, including financial	End of February
Annual Report	Full financial and company report	End of September

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What we do: Our Strategic Pathway.

Our goal for water is that it be restored to a state of purity that supports life throughout its cycle from hilltop to sea, mai uta ki tai, and back again.

As a regional water services provider, this involves working across the multiple catchments and communities of our owners, to ensure they are prioritising investments in the things that will improve outcomes for water and deliver incremental benefits; in short, doing the right things at the right time.

The investment priorities for our councils are

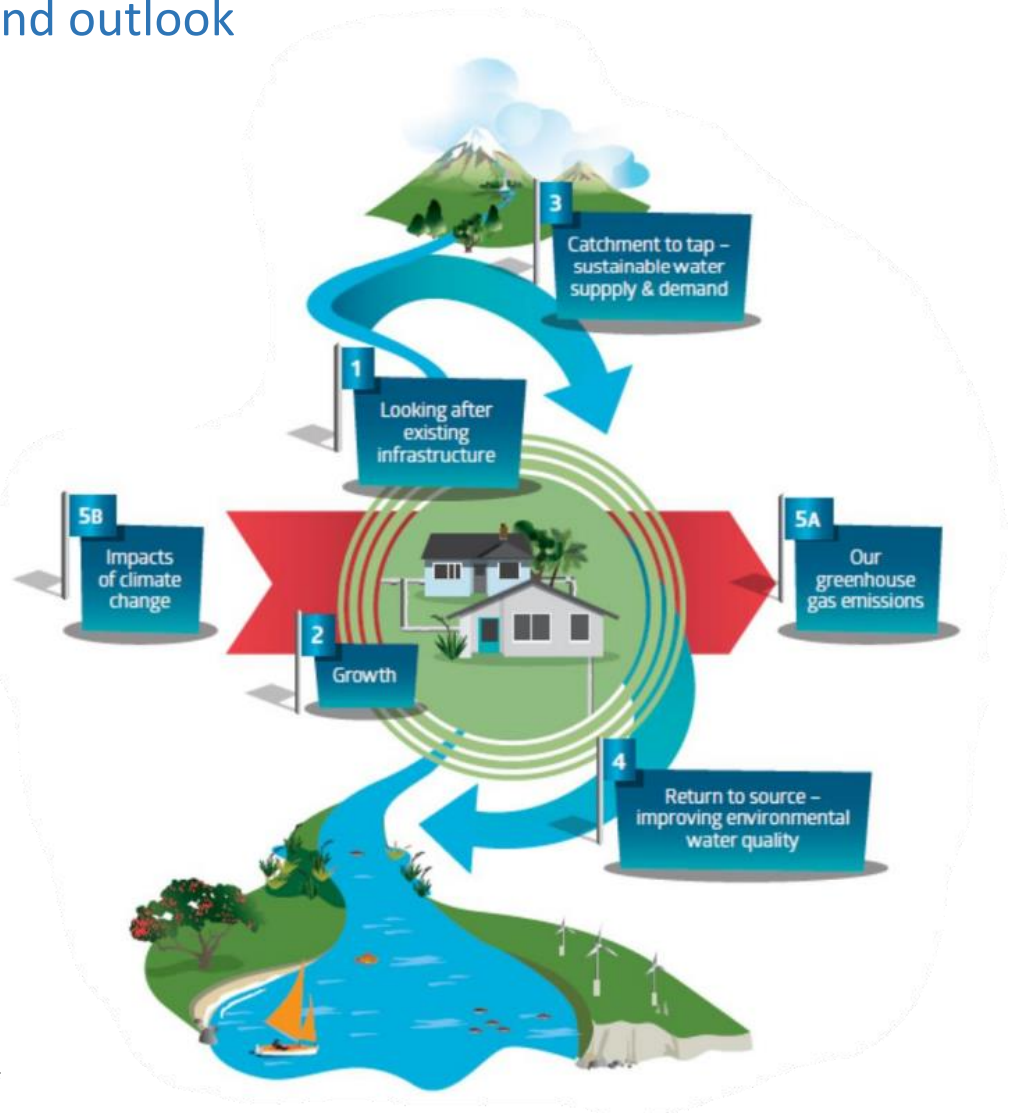
1. – to maintain existing infrastructure
2. – enabling the growth of our communities
3. – ensuring the supply of drinking water meets demand
4. – improving the quality of water in the environment
5. – reducing carbon emissions to support carbon zero targets

Our work is designed to ensure the three waters networks are increasingly resilient to natural events and climate change impacts.

Within those strategic areas, our company's role is to deliver safe and fluoridated drinking water*, operate and carry out agreed programmes of work on the networks and provide planning and advisory services.

Doing this work successfully means we will build trust in us by our partners and stakeholders: iwi / mana whenua; councils; communities and individual customers, as well as regulators such as Taumata Arowai, Ministry of Health and Greater Wellington Regional Council. This makes service delivery more efficient and effective – helping all of us along the pathway.

Wellington Water and our wider supplier whanau comprise up to 700 people. We work to our values of mana, whanau, and tangata tiaki.



This illustration from our Regional Investment Challenges report for the Water Committee represents investment in customers and water as central to outcomes in shared catchments. Also important: standards for these outcomes are increasing; achievement is underpinned by existing assets.

Q3 (Jan-Mar 2023)

Customer outcomes

There were no major incidents affecting drinking water quality or supply during the quarter.

Watering restrictions introduced at base level with the advent of Daylight Saving, then increased to Level 2, sprinkler ban, were lifted with end of Daylight Saving.

Total demand – that is, all water supplied to distribution reservoirs – remains historically high. Leaks are putting pressure on the system, and the risk of exceeding consented limits for extraction – especially from the Waiwhetu Aquifer – is growing.

We had no incidents of wastewater affecting human health. Treatment plant bypasses due to rain and equipment issues continue to be a matter for concern, and we are working with Veolia to address these in the Wellington urban area.

There were no habitable floors affected by flooding in the quarter. The region got off relatively lightly compared to others affected by Cyclone Gabrielle.

Water treated and delivered:

16,193 million litres

(Q3 last year: 15,865 million litres)

Customer satisfaction:

64%

Leaks repaired:

2,222

(This is a record number of repairs, but customer sentiment analysis suggests that as we get to some long-standing leaks, we are capturing the dissatisfaction around how long it's taking)

Backlog of repairs:

5,259

(Including storm and waste water)

Wastewater network overflows (dry weather):

194

(These are caused by blockages, but a single blockage can result in more than overflow)

Te mana o te wai.

As a water services operator we give effect to Te Mana o Te Wai.

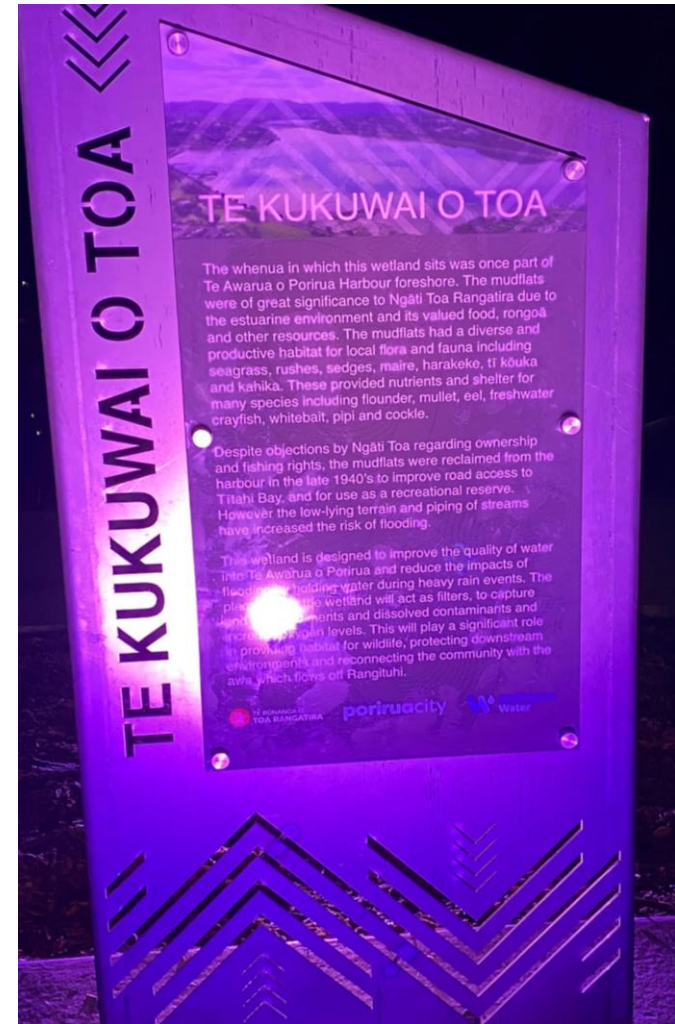
This involves understanding what that means for our iwi partners, and applying the knowledge they share in doing our work – planning and delivering improvements, operating and maintaining the three waters networks.

We've worked with leadership at Ngati Toa Rangatira and Taranaki Whānui to ensure we're aligning strategic priorities and investment with their views.

Iwi representation at Water Committee

The Water Committee sets direction for the company through our Statement of Intent and monitoring progress on the regional strategic priorities. It is made up of a representative from each council, and two iwi partners – Ngāti Toa Rangatira and Taranaki Whānui. Councils have also endorsed an application from Ngati Kahungunu to join the Committee, and we look forward to that increased involvement and participation.

Our view is that Iwi mana whenua views, knowledge and participation will only improve our approaches to delivering better outcomes for water. There is a long way to go for us before we are “giving effect to Te Mana o Te Wai” as required by legislation, but with our partners' support we feel we are under way on this journey.



The information stele at Te Kukuwai o Toa, the wetland developed as part of a stormwater management programme in central Porirua, records the history of the land and its significance to mana whenua, Ngāti Toa Rangatira. Including these connections to the planning and design of three waters work we see as part of restoring the mana and mauri of water.

Maintaining existing infrastructure.

Maintaining existing assets means ensuring they're able to do the work they're supposed to and renewing them as they reach the end of their economic life.

This involves a mix of both operational and capital works. The challenge we're facing is that historical underinvestment in renewals has increased the burden on operational activity, such as repairing leaks. This puts pressure on other operational tasks such as proactive testing, assessment and replacement – which only aggravates the problem of unplanned outages.

For this year, with the high reactive work-load and construction inflation costs, we're expecting operational costs to be above what was budgeted by about 5% across the region – but even meeting that has meant paring back some non-essential activity.



Using remotely operated CCTV equipment such as this is vital to understanding the condition of underground assets, both in making emergency repairs, and to help with long term planning

Digging into catchment renewals

Catchment renewals are what we describe as a programme of pipe refurbishments done in a single area where we are having known problems, but that might include pipes that have not yet failed.

The principle is that it is more efficient, and will lead to better customer outcomes - i.e. be better value – than only repairing a single pipe. The thinking is that if one pipe has failed more than once or twice, and there are others of a similar age and material in the vicinity, then let's renew or replace those as well.

Fixing pipes that haven't yet broken is actually an ideal outcome of advanced asset management practice. If you are replacing an asset that is near the end of its useful life, *before* it has caused trouble, then you are saving your customers a lot of bother. Not to mention the reduced risk to staff and others created by the urgency of a reactive repair.

We trialled catchment renewals of wastewater pipes in Karori, using the Government's Stimulus Fund allocation for three waters. Among other learnings, we found the cost efficiencies of this proactive work brought unit rates (for example, the cost per metre of pipe laid) were around half of normal rates

We're currently using this approach to carry out renewals in Lower Hutt and Titahi Bay.

Another benefit of the catchment approach is it creates the opportunity to work with councils on pavement and roading re-surfacing programmes so we all look much more joined up.

Enabling growth.

Enabling growth is a critical function for councils, as it requires the planning and input of so many parties.

Our role naturally focuses on ensuring networks have the three waters services necessary to meet planned growth. We do this via growth studies which bring together input from councils and planners, other infrastructure, mana whenua and communities.

There is a lot going on, even aside from significant 3rd party projects including Let's Get Welly Moving, Riverlink, Infrastructure Acceleration Fund projects in the Hutt Valley and Te Aranga Alliance for housing in Porirua.

Coordinating with these groups offers the opportunity to move or renew assets, or at the very least to ensure that critical assets are protected. On the other hand, late notice of what's being delivered can derail the team's work programme.

Day to day work for the team involves providing input into regulatory consenting and development applications. One of the key challenges we have is with applications to build over or near critical assets, which as you can imagine is likely to increase with intensification and urban redevelopment.

We recognise that councils are under a lot of pressure to meet timelines for developers, and meeting levels of service with respect to these is a priority for us in the coming quarter; along with further detailed work on growth studies and process improvement.

A priority for next quarter will be working with SWDC on the capacity of the Martinborough WWTP to enable new connections without negatively impacting the environment.



Work underway in the construction of the Taranaki Street Pumping Station. This project is part of the wider CBD wastewater network renewal programme in Wellington City, that will enable growth in the CBD as well as protect te Whanganui a Tara.

Sustainable water supply and demand

The level of demand we are placing on our water sources remains a concern. The average daily demand for Quarter 3 was a record high at 180 million litres a day, with an estimated loss per day of 80 million litres.

This works out at 394 litres a day on a per capita basis; in South Wairarapa the figure was 600 litres per person per day.

This isn't sustainable with our current systems, both in terms of our ability to produce and distribute these volumes over extended periods, and with regard to the amount of water we are taking from source. Our most recent modelling shows that the risk to our ability to meet demand will be acute next summer.

Reducing loss through leaks and reducing actual usage during peak demand periods are two key areas we can work on to reduce this risk, and we continue to evaluate options in leak management.

We encourage people to report leaks, and any changes in leak status, as it helps ensure we are prioritising appropriately. We have made the right call in prioritising large volume leaks, although it has contributed to the median repair times extending to about 28 days. We have proactively surveyed 625km of pipe so far this year, detecting 969 leaks including 227 on private pipes.

As well as pipe renewal programmes, activity to address this risk includes pressure management, use of smart meters and area meters, education campaigns, and source management planning. Ahead of next summer, we intend also to target known problem areas, especially service connections, in our renewal programmes.

Brooklyn zone sweep

The Brooklyn supply zone had a sharp increase in minimum night flows during February (see graph below).

With connections supplying water to 2,616 homes and 8,512 people at high pressure, we made it a priority to understand what had driven this change.

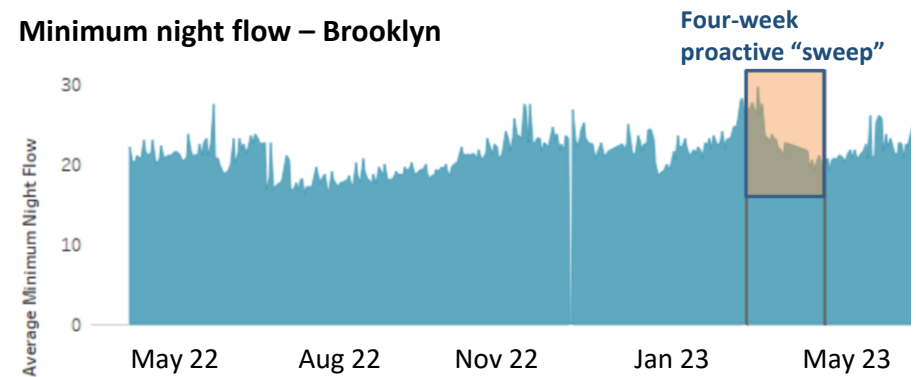
Outcome

Proactive leak detection and repair saw water loss fall by over a third - 34% - over a four-week period, or about 270 litres per connection per day.

This was achieved even though this team fixed 25 leaks out of over a 100 reported.

It demonstrates the value of using data to triage and prioritise repairs in a resource constrained environment – supporting the crews on the ground to achieve better results.

Minimum night flow – Brooklyn



Improved environmental water quality

We are in the process of submitting resource consent applications for discharges from the stormwater and wastewater networks of the Hutt Valley, Porirua and Wellington,

These applications represent a step change in the way we manage stormwater and wastewater and are required for us to legally operate both networks. They are also a big step towards achieving Te Ika ro Wai; restoring the balance of water, the environment, and people. By improving the performance and operation of both networks, we can reduce the amount of contaminants entering water bodies – rivers, streams and harbours.

The resource consent applications are for network discharges: the stormwater that comes from pipes, and overflows that come from the wastewater network. A single, “global” consent will cover stormwater in the metropolitan region. Three applications will be lodged for wastewater, which will consent wet-weather overflows (those caused when high rainfall overwhelms the system) for the four cities Wellington, Porirua, Hutt City and Upper Hutt. These consents cover discharges across the pipe network, but don’t cover treatment plant operations (these are managed through separate resource consents).

This work will help manage the issue of contamination of water and the environment and is part of the response to water reform and national water quality policies. They also support mana whenua aspirations.

Investment needs in the areas these consents cover have been fed into the investment planning process. They will need to be prioritised alongside other strategic areas such as looking after existing infrastructure, supporting growth and ensuring a sustainable water supply. We expect to be coming to councils over the coming months to have these conversations.



A wastewater manhole lid is pushed up from its base by an excess of water in the pipes. Rainwater enters wastewater pipes through faults and through connections to the stormwater network, built as a way to divert wastewater from houses in case of a blockage. These network discharges will be addressed over time, under new consents being drafted.

Know your pipes

Leaking private wastewater connections can be a source of chronic contamination of urban streams. Work on the proactive detection and support for repair of leaking private wastewater pipes helps prioritise renewals to improve water quality. This work is continuing in Porirua, Hutt City and Wellington. So far over 270 faults have been identified.

Reducing our carbon emissions.

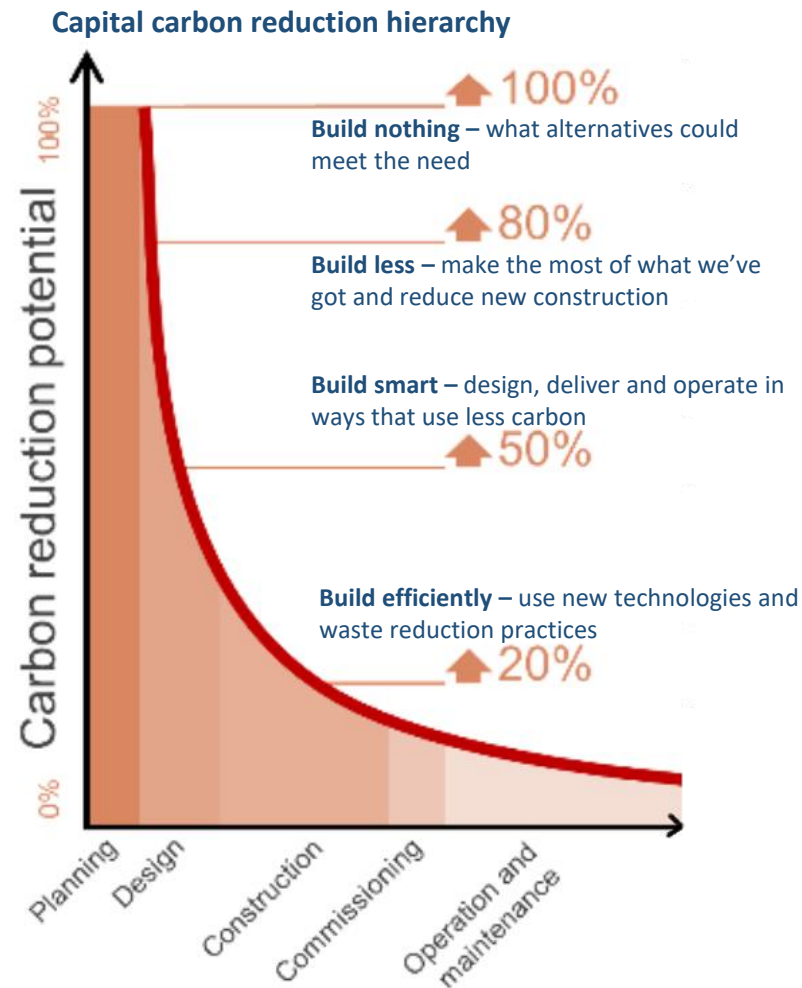
The Zero Carbon Act sets the target for New Zealand of achieving net zero carbon dioxide emissions, and a significant reduction in methane emissions by 2050. Interim five-yearly carbon emission budgets will be used to transition the economy to this net zero position. Reducing emissions generated in the operation of water services in line with this national direction is one of the region's five strategic priority areas for investment; however it has received very little funding due to the pressing challenges faced in the other priority areas.

The Carbon Programme has been structured into capital and operational carbon (including Wellington Water operations). Benchmarking work shows that operational emissions doubled in the past five years and are forecast to increase by another 10 per cent by 2050. Two of the biggest sources of emissions in this area come from the byproducts (sludge) of water treatment, and power requirements to pump water.

Capital carbon is that generated by the construction of assets and offers our best opportunity to achieve carbon reduction. Experience overseas shows the innovative thinking required to reduce carbon can create cost savings as well, if we incorporate it into the entire value chain

We've developed a roadmap to share with council climate and help inform the discussion on investment priorities in the workshops intended for May-June. There are two scenarios – broadly speaking, do all the well understood activity, which would require additional investment but would not be likely to achieve the target reductions; or invest in it a level that would create a step change.

We are developing tools to support improved reporting and visibility of carbon produced in our capital delivery programme.



Research supports this representation of the most effective ways of reducing carbon emissions in a capital delivery programme. The greatest reductions are achieved by thinking smart – challenging the root causes of the need or finding alternatives; and making the most of what we already have. These principles underpin other strategic investment priorities: Looking After Existing Assets and reducing demand for water.

Delivery update: Capex

We are now in the last quarter of year two of the three year programme set in the 2021-24 long term plan.

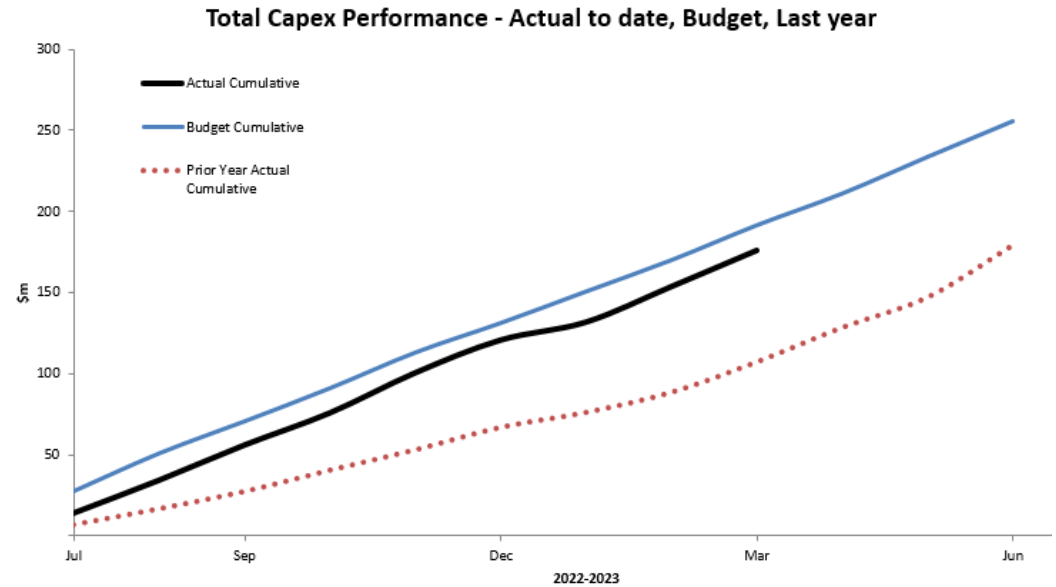
The sustained uplift in delivery that we aimed for across the region, which allowed our suppliers to build capacity over time, has us on track for a full year figure in the vicinity of \$240 million, some 40% above what was achieved last year.

At the end of March, the spend was \$176m, just under the total for the whole of last year which was itself an over 30% lift on the previous year.

Most of the remainder of the programme for the current year had been awarded to contractors by the end of March.

Having flexibility is important to completing investment programmes, as from time to time circumstances will prevent or hold up a project that is set to go. Overprogramming, or having more work on the books ready to go than we expect to deliver, is part of this process.

Six projects will account for nearly \$100m of this year's total spend, indicating the increasing importance of major projects in achieving better water service delivery. The Major Projects team has 35 projects on its books, with 14 in construction in this year.



The black line tracks our actual progress against the year's budget (in blue) and compares to last year's actual progress (red dots).

The estimated range for next year's (2023-24) programme is \$265m-\$365m.



An artist's impression of the completed Whakawhirinaki pipe bridge over Te Awa Kairangi, with connections to bike and pedestrian pathways. Work on this project is now under way.

Delivery update

Operational Expenditure (Opex)

Operational cost pressures remain a key focus for us and council officers. We have worked hard with council officers to manage budgets down, while still doing the vital work of managing aging networks.

The full year combined forecast is an 8% or \$6.5 million overspend of a \$113m budget. As at the end of March, actual expenditure is 3% over budget. This has partly been helped by the re-allocation of funding away from planned, proactive maintenance – without this, the overspend would be higher.

At a high level the overspend has been due to increased input costs. For treatment plants this has been for chemicals and electricity, and the high level of demand (usage and leakage) has meant we have had to treat more water. In the network materials and labour have mainly led to the increase.

There have been a few unforeseen and unbudgeted major operational failures that have impacted some of our councils.

Previous years have shown that the overspend will increase relative to budget towards the year end. We will keep a close eye on the trends and work with council teams to manage costs and risks.

We have also taken a sharp pencil to our own internal costs to keep the overhead within the management fee budget, and are back on track to meet our target.

Treatment plants

Drinking water treatment plants continue to provide safe drinking water for consumers. We flagged to our client councils last year that as Taumata Arowai developed its regulatory regime, new rules may affect our compliance in some areas. This situation showed up in bacterial compliance at Waterloo treatment plant, and in UV equipment maintenance activities at Waterloo and Gear Island treatment plants. The regulator is satisfied with our response to these self identified areas for improvement.

In South Wairarapa, significant work remains to be done to address source water risks for drinking water.

We operate eight wastewater treatments; four serving metropolitan areas and four for South Wairarapa . Moa Point, Seaview and Martinborough plants are or have exceeded consent condition limits over the year to date, and we are making progress in bringing each of these plants into compliance.

Relationship and regulator update.

Relationships

Serving six councils and working with four iwi, along with several regulators and accountable to customers and the wider public for the work we do makes us a very relationship-focused organisation.

We manage key relationships with our client councils through a regular series of individual and group meetings with council officers, who provide guidance on council requirements and priorities to help shape our advice and reporting. This is particularly important given our environment of constraints on funding, increasing requirements for investment and response, and broader economic and social challenges such as inflation and labour shortages. We collaborate with officers on work that we share with councillors, such as investment planning, progress updates on strategic priorities, the impacts of any performance or operational matters.

Communities and ratepayers are interested in the decisions and plans for where and how investment in water services will be made, so we also work with councils to publish these plans and documents on our website.

We are working hard to develop relationships with iwi mana whenua, and in the past quarter supported the Water Committee in its invitation to Rangitāne o Wairarapa to join the Committee.

Recognising the many demands on iwi for consultation and engagement, we are in discussion with iwi representatives to find ways to better support them participation in various aspects of our work, from planning to delivery. We are also having kōrero with different groups as we work towards establishing an approach to Māori data sovereignty

Regulators and compliance

We feel our relationships with the Ministry of Health (fluoride) and Taumata Arowai (water services regulation) are representative of the levels of trust we seek. Taumata Arowai is still coming up to speed with the scope of its role and is relying on larger entities to complete required reporting on their own initiative. They are therefore more interested in our internal auditing processes and approaches, as evidence of the right sort of culture for self management.

With most of the eight wastewater treatment plants we oversee operating near capacity, we are expecting more instances of non-compliance. To manage this situation with Greater Wellington Regional Council (resource consents) requires us to demonstrate clear and funded responses.

Elsewhere across the business we continue to identify and work on areas of improvement. High drinking water losses raise a number of flags, with respect to giving effect to Te Mana o te Wai and drought risk.

Backflow prevention management is a key risk. Additional resource in this area will see a programme of activity developed to address this.



Backflow prevention valves protect against the risk of contaminated water from end users entering the public water supply due to a sudden drop in pressure. They must be inspected annually.

People

People

Ensuring a positive transition experience remains the focus for our leadership. This is to help ensure that talent is not lost to the company, our clients or the sector. We are keen to see that any uncertainty over reform does not translate to uncertainty about careers, prompting people to leave seek to move.

We're working closely with the National Transition Unit's people workstream leads to provide assurance and resources to help mitigate these concerns and encourage people to stay with water. The NTU has provided us with a suite of development offerings for staff oriented around career development and change, and five Te Mana O Te Wai modules.

Twenty new staff were recruited into the front-line Customer Operations Group in the past quarter and we are working on a campaign to recruit water and drainage servicepeople, using learnings from conversations with our staff about what they value and enjoy about their work.

Health and Safety

Safety is one of the strongest rating areas in staff engagement, and over the past quarter we saw a strong uptick in the number of proactive safety reports. These mainly note evidence of good practice or suggestions from improvement both of which provide opportunities to lift performance across our supplier whānau. We recorded 789 proactive reports, and 149 reactive reports of incidents or near-hit events.

Operational managers will be focusing on safe practice in the front line, where the pressure resulting from significant backlogs of work has the potential to lead to short-cuts or poor practice.

Senior leaders and Board members carried out a total of nearly 20 visits to sites for health and safety observations over the past three months. These will continue this quarter with a critical risk focus on service strikes and mental wellbeing. The latter is increasingly recognised as a risk factor to physical health on worksites.



Working around underground services in complex locations has been a feature of the project to duplicate part of the wastewater main to Seaview Treatment Plant. GM of Network Strategy and Planning Julie Alexander (right) observes proceedings.

Getting ready for reform

2024-34 Investment Planning

Under the Water Services Entities Act 2022, investment planning in water services was being undertaken by the NTU, who are responsible for developing the asset management plans for the future water services entities.

The reset of water services reform included the signal that council LTPs for 2024-34 would now include three waters investment.

Prior to the reset, the Wellington Water Committee had asked that Wellington Water maintain a regional view of investment and support councils to provide feedback on the NTU's asset management plan. We have set out the high level challenges and the nature of investment choices the region faces to address the five strategic priorities, and were planning to engage with each council on their specific context and issues.

This process of 2024-34 Investment Planning will continue, with the aim being to support councils to develop their own programmes for inclusion in LTPs, as well as the NTU with the asset management plan for the re-sized entity for this region.

The data we are using is the same for both the development of the entity AMP, and to support the 2024-34 Investment Planning process.

Changes to water services reform announced on April 13 included establishing 10 entities, not four, with all councils expected to transition by 1 July 2026. Staff pathways into the new entities are not expected to change as a result of the reform programme reset.

Including water investment in six council LTPs will mean additional work for our team to support compliance with the required approach for consultation on these documents. This includes audit requirements and assessing the impact on growth strategies, deliverability and additional engagement with councils.

We are keen to keep working with councils to understand their expectations, as well as those of the NTU, around timeframes and content, so we can do our best to provide you with robust risk-based advice and our view on what needs to be funded, with an overlay of what is deliverable.