Three Waters

Quarterly Report

January to March 2025

ccc.govt.nz/water-and-drainage

Christchurch City Council

Contents

Wastewater treatment ponds.

Executive summary

Our latest Three Waters Quarterly Report provides an update on our ongoing efforts to deliver safe and reliable water services to Christchurch residents.

This quarter, our focus was on managing the water supply and wastewater systems during the warm summer season. We were able to meet our customers' water demand without needing to impose any water restrictions across the district. The preparation carried out ahead of summer, the excellent work by our Operations Teams, and a few well-timed rainfalls contributed to ensuring a safe and sufficient water supply for both residents and visitors.

Local Water Done Well

The future of water delivery in Christchurch was also a focus this quarter with significant work undertaken on the Council's response to the Government's Local Water Done Well reforms.

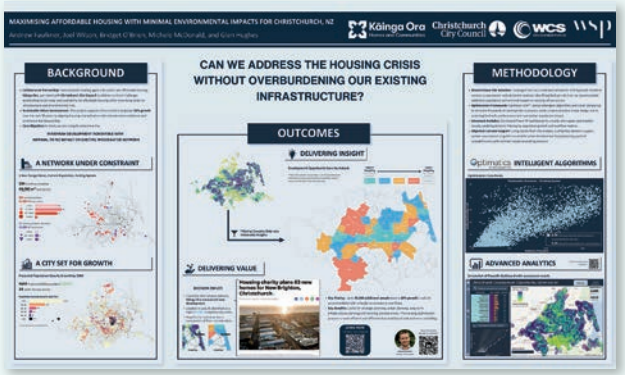
Our teams contributed to the development of an Interim Business Case assessing three potential models for the future delivery of water services. Public consultation on those models started in March. Our teams have also been actively engaged in providing feedback on the comprehensive Local Government (Water Services) Bill.

We won an award!

In collaboration with Kāinga Ora, Christchurch City Council has been working on a project to accelerate the availability of build-ready land for affordable housing, while minimising the strain on infrastructure and reducing environmental risks. The project successfully determined the maximum level of development achievable with minimal or no impact on the existing wastewater network.

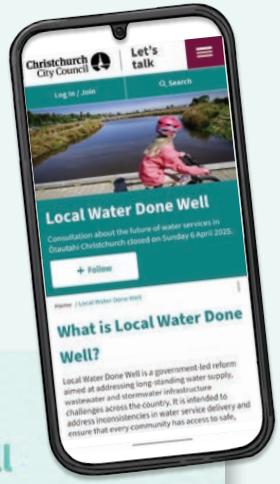
The project was awarded Best Poster at the International Conference on Water Management Modelling held in Toronto in March.

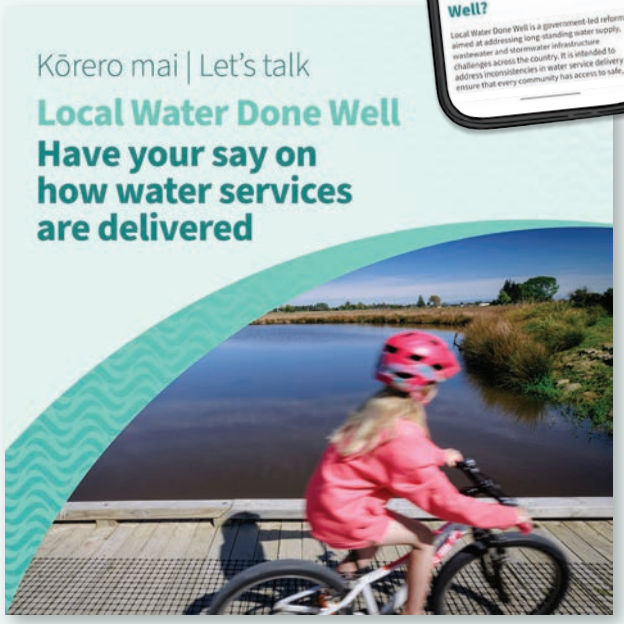
A big shout-out to our Water & Wastewater Asset Planning Team for their continued efforts in shaping resilient networks that help make Christchurch a great place to live!



Maximising Affordable Housing with Minimal Environmental Impacts poster.

Local Water Done Well consultation 7 March to 6 April.





More detailed Three Waters project and financial information is available in reports from the Health and Safety Committee, PMO and finance.

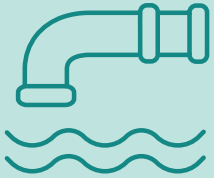
A snapshot of our network

We're responsible for more than you might think...

Our three waters network

Christchurch City Council owns and operates the city's water supply, wastewater and stormwater network.

Water supply

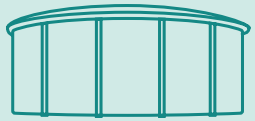


Wastewater

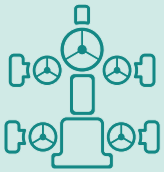
Stormwater

Strengthening our networks

Pump stations



Reservoirs



Well heads

Pipes

Treatment plants

Drainage

Helping our communities

Education

Community engagement

Flood control

Customer service

Growth planning

Incident response

Looking after our environment

Waterways

Stormwater basins

Wetlands lake openings

Our water supply network

Christchurch City Council owns and operates a network of wells, intakes, treatment plants, reservoirs and pipes that deliver water to our residents. We do regular testing and maintenance to make sure our water is safe, and we're also carrying out upgrades to comply with the Government's drinking water rules.

What we did, in numbers – January to March 2025

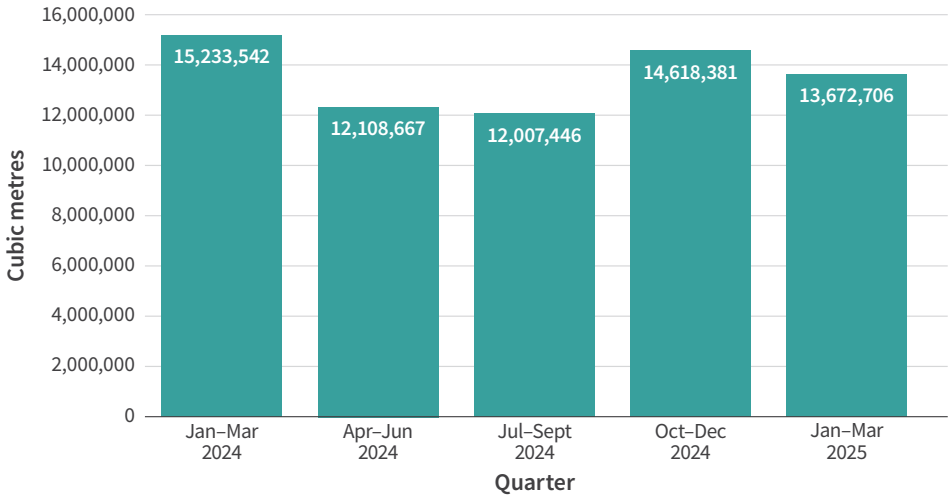
99% (397 out of 401)
of water supply resource consent conditions are compliant.

13,672,706m³
Water supplied across the district

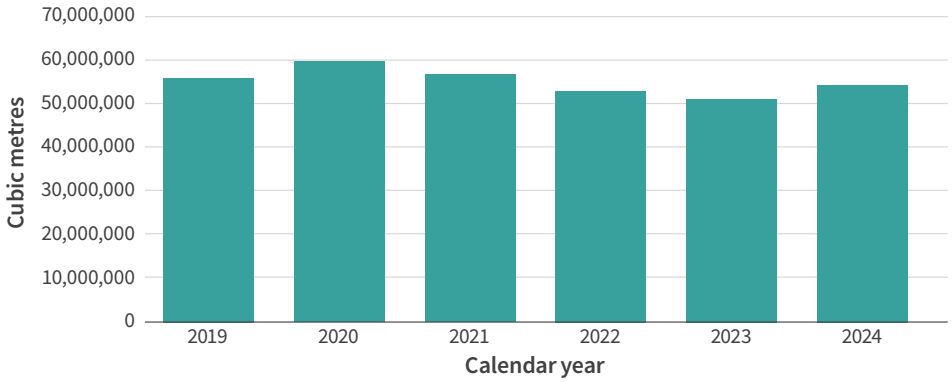
How much we water each quarter

Quarter	Year	Water supplied (m³)	
		Christchurch	Banks Peninsula
January – March	2024	15,077,156	156,386
April – June	2024	12,002,194	106,473
July – September	2024	11,911,761	95,686
October – December	2024	14,492,641	125,740
January – March	2025	13,556,104	116,602

Water supplied in Christchurch and Banks Peninsula per quarter



Year on year – how we compare

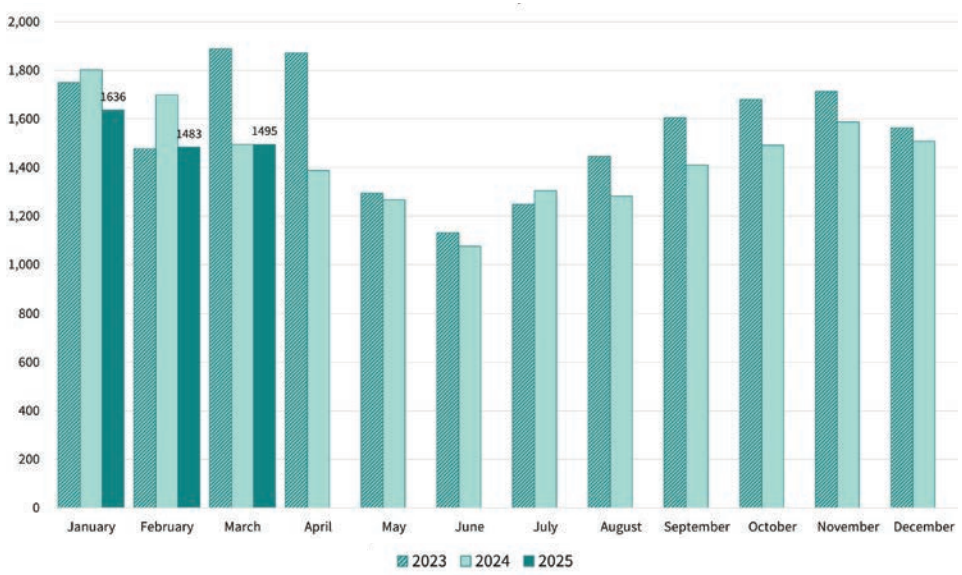


12 incidents
reported to the Water Services Authority – Taumata Arowai (more about this on page 10).

Diving into the data

4614
Water leaks repaired

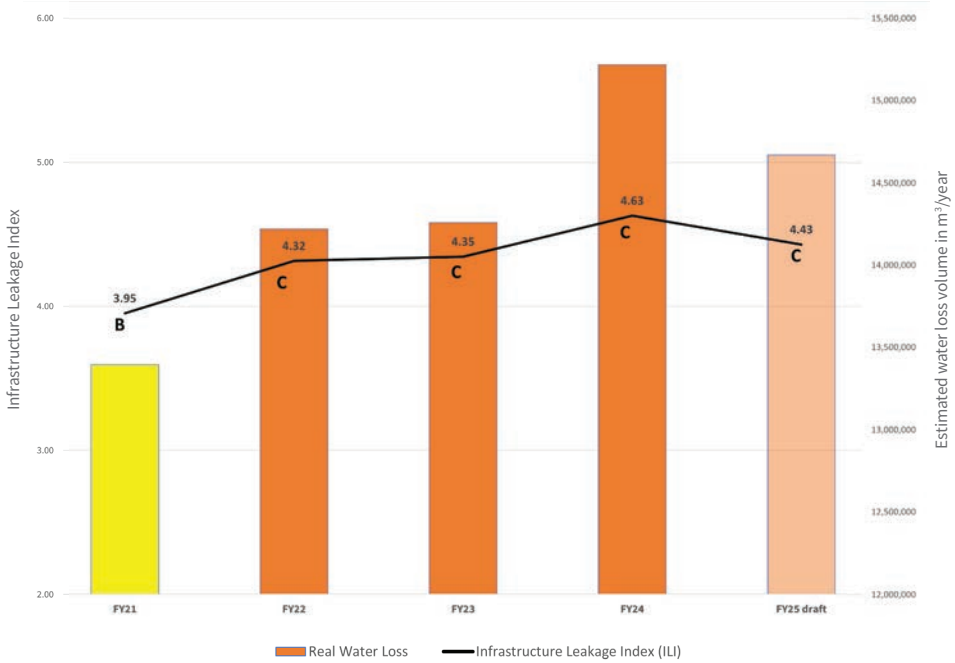
A year of repairs



We are seeing a reduction in the estimated real water losses since 2024:

FY24 = 15,219,840m³/year

FY25 (draft) = 14,670,012m³/year



The water loss management efforts implemented last year have led to a reduced water loss volume (FY to date) and a lower infrastructure leakage index at an overall Category C.

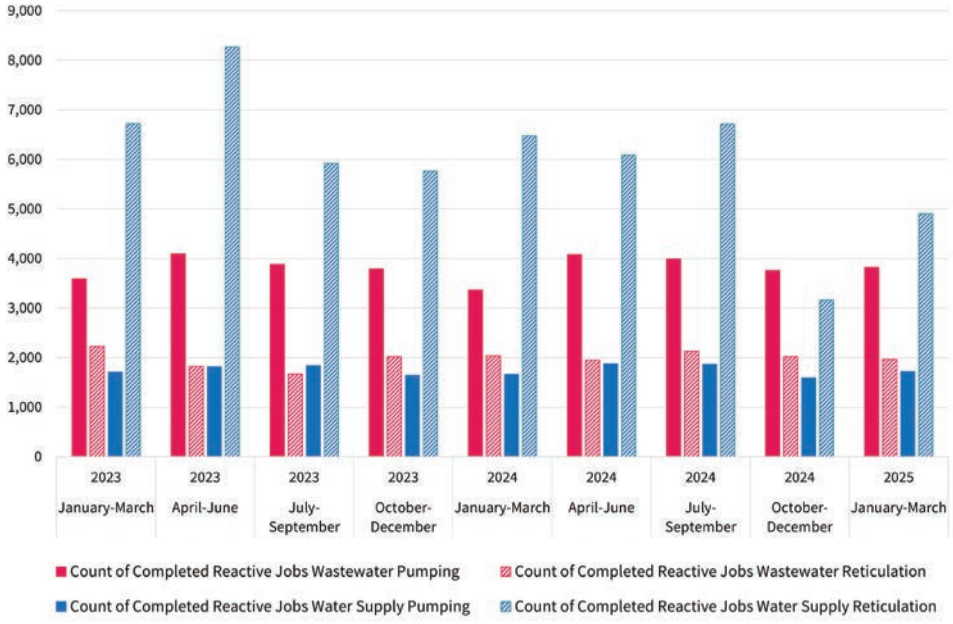
Diving into the data (continued)

Reactive maintenance

Most of our three waters maintenance costs are incurred via two maintenance contracts with Citycare Water. One contract is for water and wastewater and the other is for land drainage which incorporates stormwater and flood protection activities.

The overall number of jobs is reducing, and we have particularly seen a reduction in water supply reticulation jobs.

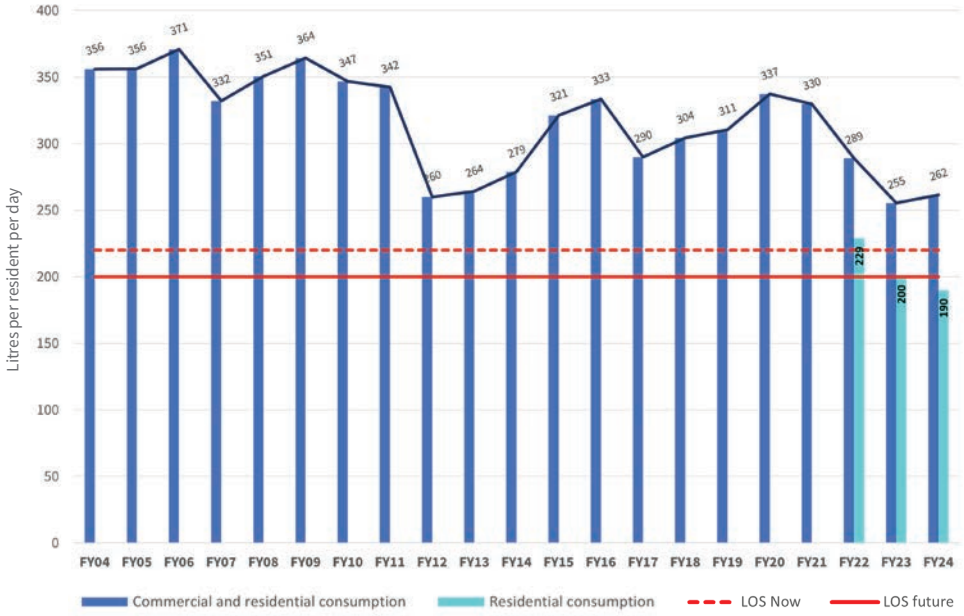
Quantity of reactive maintenance jobs



Water consumption

The Council encourages residents to use less water through excess water use charging and education. While these have an impact on customer behaviour there are also other factors, including rainfall and temperature, which have an impact. This graph shows average drinking water consumption rates (average litres per resident per day).

Average consumption of drinking water in litres per resident per day

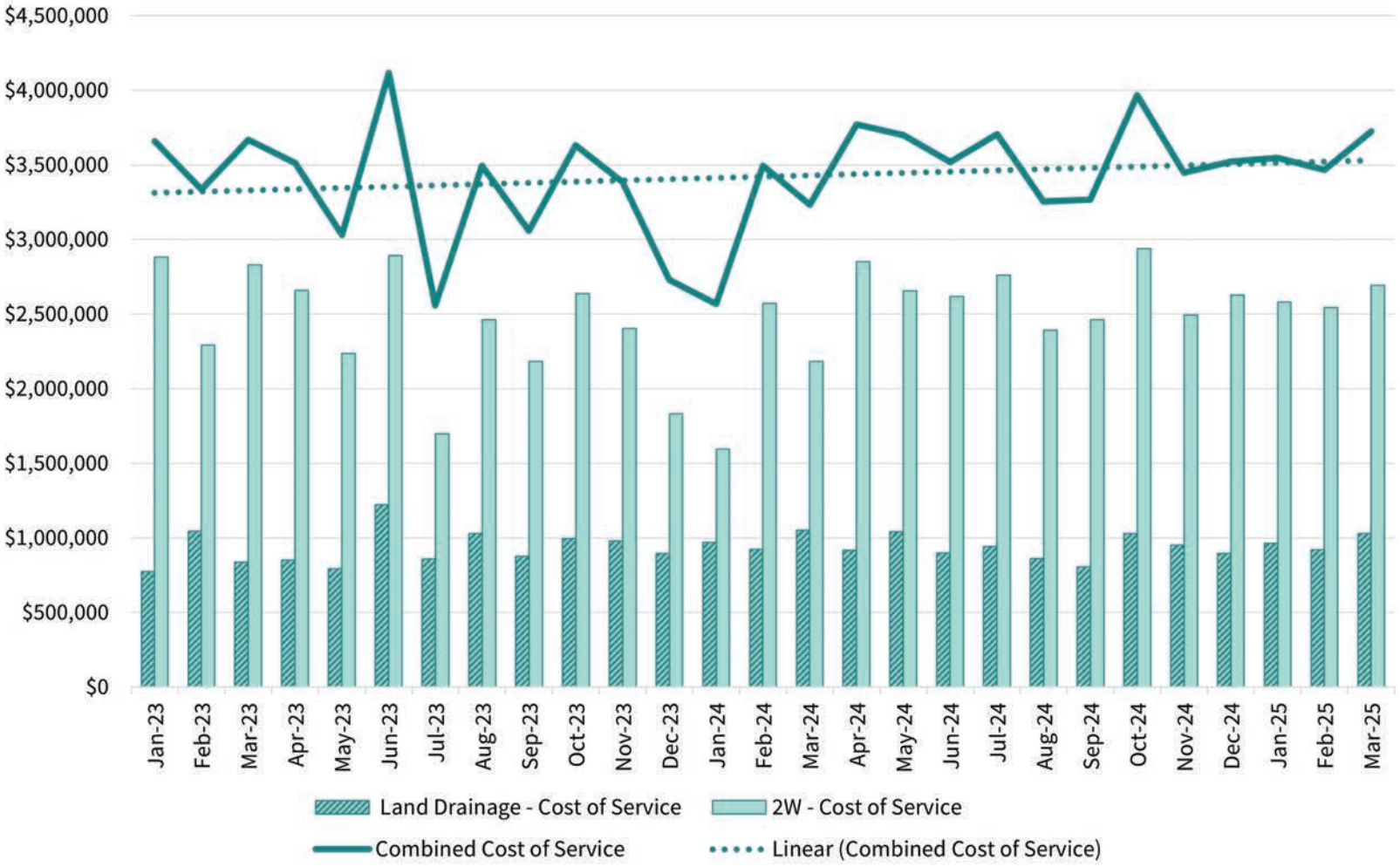


This graph shows the Christchurch urban water consumption, based on a standard calculation that subtracts water losses from the total supply and divides the result by the number of people served. Thanks to better water meter data pursuant to the introduction of excess water use charges we can now separate our commercial use, giving a clearer picture of residential water consumption.

How much we're spending

Our monthly spend is relatively consistent and the increases are consistent with inflation.

3W maintenance contracts – monthly spend



This spend also includes reactive renewals which are capital expenditure. As this work is reactive it is very hard to estimate the amount of the spend that will be capital versus operational. An additional $2.8m in operational maintenance budget is currently included in the 2026 Annual Plan to allow for this.

Drinking water compliance

We manage a high-quality and safe water supply network, which we monitor closely so we can quickly respond to any issues. Christchurch and Banks Peninsula water supplies are chlorinated to meet New Zealand drinking water laws. We're also working on additional upgrades to our water supply network to ensure we meet all Government rules and regulations.

While we upgrade our water supply network there are areas where our water supply isn't compliant. However, the requirement to treat our water with chlorine means our water has an extra level of protection against contamination. Many of the non-compliances will be resolved once we have completed upgrades to assets or completed longer term testing to confirm the quality of our water.

While we acknowledge that our water supply has non-compliances, we're focused on doing the work needed to achieve compliance while continuing to provide safe drinking water.

The Drinking Water Quality Assurance Rules include a range of rules, the most significant of which relate to the source (S rules), distribution (D rules) and treatment of water (T rules), which are key to making our supply compliant. Here's how we're tracking:

There are other non-compliances that aren't related to the S, D and T rules. These will also be resolved over time.

Here's how we're tracking:

S Source rules relate to the quality of water at its source.

We expect to be able to demonstrate Class 1 status for most of the city's water supply, which would mean some treatment barriers for protozoa aren't required.

99% of the class 1 sampling programme

is completed with the remainder of the programme on track to be completed by April 2025.

115 sources and 43 treatment plants

across the Christchurch and Brooklands-Kainga supplies are now classified as Class 1 and are therefore protozoa compliant.

For water sources that don't meet the Class 1 status criteria we have work under way to make the supplies compliant. This includes:

- The Christchurch Supply (including Brooklands/ Kainga) has 128 registered sources. 8 cannot be classified as Class 1 (Tanner Pump Station and Main Pumps)
- The Banks Peninsula supply has 5 registered sources. Only Birdlings Flat well could be classified as Class 1.

D Distribution rules relate to water in the distribution network.

They require a low level of chlorine to be present in water distributed across our network from treatment plant to tap.

14/17 distribution zones

were compliant during the quarter.

T Treatment rules relate to protection against bacteria and protozoa.

We're non-compliant with these rules while we upgrade our water supply, but have other protections in place to keep our water safe.

To achieve compliance, we need to install continuous water quality monitoring as well as complete some treatment plant upgrades in Banks Peninsula and Christchurch.

The quarter ahead

April to June 2025

We are working hard to finish our Class 1 programme by the end of April. This will ensure we can demonstrate protozoa compliance in most water treatment plants across Christchurch.

We're working with Water Services Authority - Taumata Arowai, ESR and Environment Canterbury on research into viruses in groundwater. We're hopeful this research could inform future changes to the Drinking Water Quality Assurance Rules requirements in relation to groundwater. We have collected over 80 water samples from Christchurch, Selwyn and Waimakariri districts. The research is going well, with no indication of human viral contamination in any of these samples. There are around 30 samples still to collect and analyse over the next months to complete the study.

In April consultation will close on the Council's response to the Local Water Done Well reforms. The Mayor and councillors will then consider submissions and hear oral presentations during the hearings. In June the Council will make a decision on which model to include in its Water Services Delivery Plan, which must be finalised and submitted to the Department of Internal Affairs by 3 September.

Quarterly water supply controllable non-compliances

We test the water regularly to ensure it is safe to drink. When we do have controllable non-compliances, we take immediate action to assure the water supply and notify the Water Services Authority – Taumata Arowai.

Controllable non-compliances are those we can control and avoid by improving our processes and procedures. To reduce the amount of these, we analyse the cause and undertake an action plan so they don't happen again.

These are the controllable non-compliances recorded during the last quarter:

Supply details	Drinking Water Safety, Compliance or Sufficiency Category	Date	Details	How was it resolved
CHR009 Christchurch	Service was interrupted >8hrs	03/02/2025 15/02/2025 20/02/2025	Pipe breaks left some properties without water for more than 8 hours due to complexity of the repairs (closeness to a power cable, tree roots, broken sewer).	Pipe were repaired as soon as possible.
BRO013 Brooklands/ Kainga	Water is non-compliant	20/01/2025	FAC in the distribution was measured to be lower than 0.1 mg/L.	System was flushed.
	Water is non-compliant	15/03/2025	FAC in water leaving the treatment plant was measured to be higher than 5 mg/L for a short period.	The FAC continuous analyser was recently installed and shows FAC spikes at plant's start up. We are working on adjusting the parameters at the plant.
AKA001 Akaroa	Water is non-compliant	14/03/2025	FAC in the distribution was measured to be lower than 0.2 mg/L.	System was flushed.
BIR001 Birdlings Flat	Water is non-compliant	06/03/2025	pH of water leaving the treatment plant was measured to be 8.13 (requirement is pH<8).	Treatment was adjusted, however these spikes can happen as source water pH is close to 8.
DUV001 Duvauchelle	Water is non-compliant	03/01/2025	Dichloroacetic acid in the distribution was measured to be 0.06mg/l (MAV is 0.05mg/l).	Media filter operation was reviewed. Assessment and review of plant operation during high UVT and turbidity at source (e.g. during rainy days).
	Water is non-compliant	07/01/2025	FAC in the distribution was measured to be lower than 0.2 mg/L.	System was flushed and dose was increased at the site.
	Water is non-compliant	07/03/2025	pH of water leaving the treatment plant was measured to be slightly higher than 8 (requirement is pH<8).	System was adjusted. The projected plant upgrade will address this issue.
WAI138 Wainui	Water is non-compliant	31/03/2025	FAC in water leaving the treatment plant was measured to be less than 0.5 mg/L (indicating non-compliance with rule T2.19).	Treatment was adjusted. The projected plant upgrade will address this issue.

Our wastewater network

Christchurch City Council maintains wastewater systems to provide the community with a safe and healthy environment through the appropriate treatment and discharge of wastewater.

What we did, in numbers – January to March 2025

97%
(722 out of 747)
of wastewater resource consent conditions are compliant.

4 wastewater overflows
during this quarter.

For comparison, in 2024 we had a total of 15 overflows (2 wet weather and 13 dry weather).

Weather conditions	Number of overflows	Cause
Wet weather	2	High rainfall
Dry weather	2	Fat blockage

Non-compliance figures – January to March 2025

We didn't have new significant non-compliances recorded during the quarter.

The quarter ahead

January to March 2025

The Water Services Authority – Taumata Arowai is consulting on a set of proposed wastewater environmental performance standards, and we will submit our feedback.

Christchurch Wastewater Treatment Plant

We work hard to keep the damaged Christchurch Wastewater Treatment Plant operating, while keeping odours to a minimum for residents.

The demolition of the fire-damaged trickling filters was completed in March 2025. The site is now ready for construction of the Activated Sludge Reactor. While the site will be quiet for a few months, there is plenty going on behind the scenes. Our team is busy finalising the design for the reactor. We're also working towards selecting a contractor and awarding a contract.

Essential repairs to two of the Christchurch Wastewater Treatment Plant's four clarifiers were carried out in March. Work to repair leaks in Clarifiers 3 and 4 went well and our team was able to complete this work to schedule and successfully return the temporary activated sludge plant to service.

Looking ahead we are preparing for the ponds to transition to winter mode. As temperatures cool down, the biology of the ponds changes. This can result in a short-term increase in odour coming from the ponds during this transition period from summer into winter. While occasional odour events may occur over the winter period, we're not anticipating them to be strong or persistent. This is because monitoring of pond health since the fire (in November 2021) has shown a slow but consistent improvement.

We are also preparing for our first meeting with neighbours of the plant on 1 April.

Clarifier before repairs

Clarifier – after repairs

Clarifier – after repairs

Monitoring and ops

13 million tons
total treated wastewater.

892
webpage views.

1525 MWh
electricity generated from waste.

6
e-newsletters.

0 times
H_2S went over 0.03ppm.

3
school visits.

Our stormwater network

Our stormwater system is being continually maintained and improved to make the city a safer and healthier place to live. The network includes open drains, pipes, pump stations, stopbanks, basins and more.

What we did, in numbers – January to March 2025

99%
(1059 out of 1060)
of stormwater resource consent conditions are compliant.

The first event for the treatment performance monitoring of N°1 Drain Floating Wetland and Bells Creek Stormfilter were completed. We will continue working on capturing more rain events to be able to assess the performance of these treatment devices.

Ōtūkaikino and Ōpāwaho Heathcote Stormwater Management Plans were certified by ECan. This means we can start implementation.

In January, Environment Canterbury (ECan) granted our change of conditions application for the Comprehensive Stormwater Network Discharge Consent (CSNDC).

Under new condition 42(a), the Council can now exclude non-compliant building sites from using the CSNDC. These sites will be referred to ECan, where they will likely need to obtain their own construction stormwater consents, resulting in significant costs and delays. Hopefully, these new conditions will be a good deterrent and provide us with a stronger compliance tool for managing problematic construction sites, and minimise the sediment sent to our waterways.

NOTE: During 2024 our team undertook 400 Erosion and Sediment Control (ESC) audits to construction sites. We have handed these back to the RMA Compliance Team at start of 2025 and built them their own ESC auditing app to streamline the process. The RMA Compliance Team undertook 42 audits using the app during this quarter.

We submitted our 6-monthly report to Mahaanui Kurataiao (MKT).

We operate the stormwater network under a resource consent from Environment Canterbury. We didn't have new significant non-compliances recorded during the last quarter.

The quarter ahead
April to June 2025

This quarter we're working towards the completion of Te Pātaka o Rākaihautū Banks Peninsula Stormwater Management Plan. Consultation is open from 17 April to 17 June. We're also aiming to achieve the certification of the Huritini/Halswell Stormwater Management Plan.


Ōtūkaikino Creek


Ōpāwaho Heathcote River

Te Roto o Wairewa – Lake Forsyth: opening to the sea

Every year, under an MOU with Wairewa Rūnanga, we artificially open Lake Forsyth to the sea. This is part of efforts to control the lake water level and improve water health. The lake is also a significant tuna fishery for Ngāi Tahu.

We had planned an opening specifically to allow for tuna migration, however wet weather brought this forward by one week. This was due to the lake water rising to a level that required an immediate opening for flood control under our resource consent. The lake was opened to the sea on Friday 21 March after a day and a half of gravel moving work by Citycare.

The opening only lasted three days due to a southerly change. Luckily, this was long enough for a lot of the tuna to get out to sea. Following the outlet closing, the beach stayed low and narrow for a few days more, so it is likely more tuna were able to climb out over the gravel as the beach reformed.

The Community Waterways Partnership (CWP)

The Community Waterways Partnership supports the development of community-based initiatives to improve the ecological health, indigenous biodiversity, cultural, and amenity value of our urban waterways. The Partnership involves Christchurch City Council, Canterbury Regional Council, Department of Conservation, Ministry for the Environment, Canterbury District Health Board, universities, schools, industry representatives, river care and other community groups.

What we did

An Action Plan has now been drafted and put out to the partners for feedback. This plan identifies goals, objectives and actions to achieve the outcomes within the charter for the next three years.

Ōpāwaho-Heathcote River Network: Wheelie bin latch trial results: In 2024, the Ōpāwaho-Heathcote River Network (ŌHRN) ran a trial, funded by the Community Waterways Partnership, to determine the efficacy of wheelie bin lid latches at keeping lids closed when bins are toppled over in the wind. As a result of this project, Christchurch City Council has now approved the provision of wheelie bin latches. By July 2025 the Council will stock these bin latches along with supporting information at Council community hubs at a substantially discounted rate. This is a great example of how we can work together on meaningful projects that benefit the community.

The CWP supported Te Whatu Ora, along with CWP partners and members of the community to host the **Linwood Waterways Celebration Day,** which included a variety of stalls based around the theme of caring for Linwood waterways. The event was an opportunity to connect people to their local environment, raise awareness and collect community views on aspirations for the waterways and surrounding area. The event was attended by 166 students from Linwood Avenue School, as well as an estimated 200 people from the local community. Ideas for enhancing the park, and a local mural were collected and several people signed up to take part in future working bees and join the central working group. The event has enhanced relationships between community members, the school, and different Council departments, including the local library.

Ilam School took part in a waterways education field day in March which was run in collaboration with CWP partner organisation the University of Canterbury. The school is undergoing a year-long inquiry into their local environment and has asked the CWP to support their learning and actions. The teacher shared their appreciation of this field day, saying: *"You certainly made the day a very special one for 45 young people and several adults. We're extremely grateful to you all for your tremendous support—it was truly an amazing day of learning!"*

Linwood Waterways Celebration Day

What people are telling us

During this quarter water supply was the second most common service request category after wheelie bins.

Our team received a total of

7693
service requests
related to water and drainage.

The most common requests related to:

water leaks
4705

water meter boxes
746

water supply
589

new residential water connections
405

surface water not draining or being blocked
225

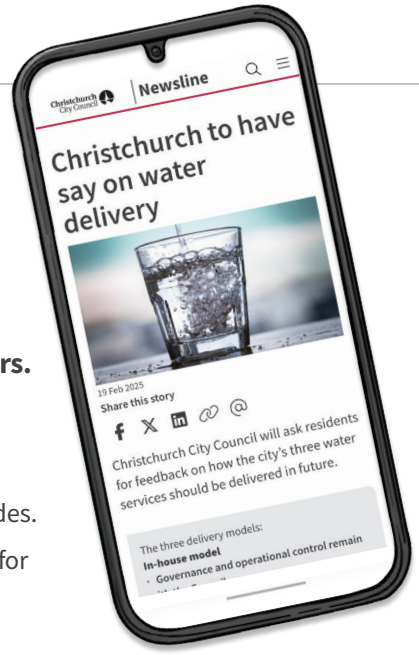
Reaching our communities

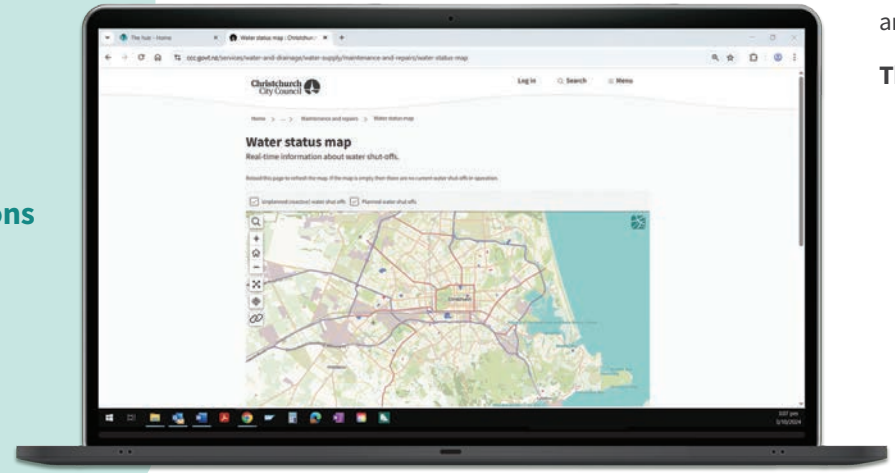
During the last quarter:

We published 6 Newsline stories related to Three Waters.

The stories covered:

- Three stories on the Council's response to Local Water Done Well.
- The final push for Te Kaha Streets water and road infrastructure upgrades.
- Council plans to investigate the impact of law changes on alternatives for Akaroa treated wastewater disposal.
- The first river wetland opening in the Ōtākaro Avon River Corridor.





We had 76,310 views across our water webpages.

This represented **3.22%** of total views across the website, and **33,455 less views** than the previous quarter.

The top five pages were:

1. Water Reporter - used by residents to check their water use: **21,719 views.**
2. Three waters asset network map showing where three waters assets are located: **9348 views.**
3. The water status map showing real-time water shut-off information: **6467 views.**
4. Water charges page with useful information: **5131 views.**
5. Our floor level map for building and resource consents, flood risk and property information: **2909 views.**