





Sir Matiu Rei prepares to ink a memorandum of partnership between Ngati Toa iwi and Wellington Water. The agreement formalises the intention of the two parties to work closely on water-related matters in the iwi's rohe, and acknowledges the interest of mana whenua in the work and customer outcomes of the three waters. Looking on are (left to right) Taku Parai, Matthew Solomon and Colin Crampton.

Other cover images, clockwise from top right; Kura Moehu at Owhiro Bay (page 8); David Bassett (left) and Chris Laidlaw at the new UV treatment facility (p5); the harbour drilling barge Tuhura; carbon filter material unloaded at Te Marua (p7).

Have you got what it takes? See page 12.



Public interest in water issues surfaces in election campaigns

The lead-up to the election saw unprecedented public focus on water quality and quantity, fuelled in part by the release of WaterNZ's first national survey on public attitudes to water. Among other findings, the survey highlighted that nearly nine of out 10 New Zealanders are concerned about water quality, and almost as many (86%) about water shortages.

While it remains to be seen what light will emerge from that heat, it seems almost certain that regulatory change is on the way. Among the 51 recommendations from the second stage of the inquiry into water contamination in Havelock North, several focus on accountability, including the establishment of a national drinking water regulator. And whether or not these recommendations are followed, there will be increased scrutiny of our performance. We welcome this, and are seeking to be further engaged in what will be a continuing discussion about water supply management in New Zealand

Elsewhere, our market conditions remained relatively stable. Good weather enabled the successful completion on the fast track project to provide UV treatment of aquifer water, while a busy construction sector keeps pricing firm. Our improved project scheduling, that gives contractors a clearer picture of upcoming work, means we have some flexibility when tender prices get too high.

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New connection applications

Last year (2016)



This year (2017)





An opinion piece from a Christchurch journalist captures the concerns many people have about environmental degradation and drinking water quality.

Water NZ national survey highlights public concern

Water New Zealand commissioned the country’s first national survey of consumer attitudes to Water last year, and released the results in September, about a month before the general election and in the midst of national debate about charging for commercial water use – especially water bottling.

The survey report covered five areas:

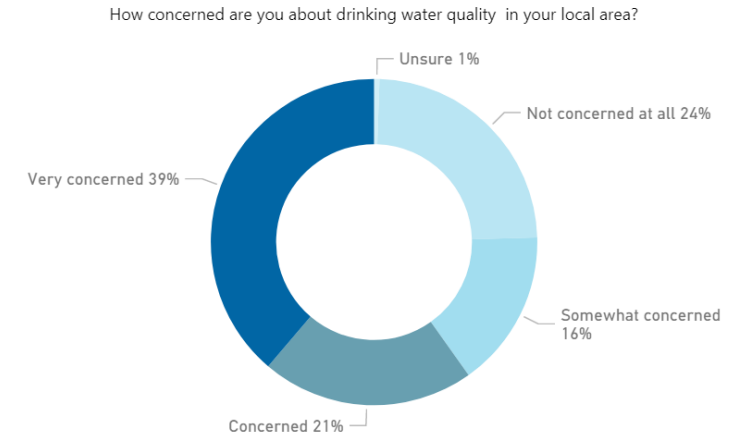
1. Water use and efficiency
2. Price of Water
3. Customer Experience
4. Future of Water
5. Healthy Waterways



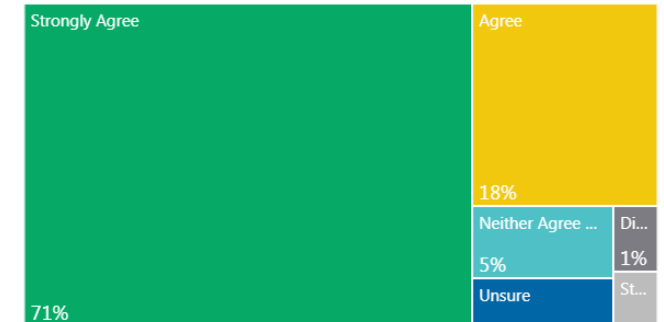
Water NZ CEO
John Pfahlert

Given water’s importance, most results were not especially surprising. People are concerned about water quality, that people should be fairly charged for its use, and about the impacts of climate change.

A couple of things that did make us sit up were that half of respondents are not convinced local and national governments are working together well with regard to the future of water – suggesting we need to share more about what we are doing. [Full survey here](#)



Do you think there should be a cost when taking water from the environment for bottled water and similar industries?



Thinking of the local and national governments, do they adequately plan for future water needs?



Scottish Water lads pop over to share customer intel

Brian Hunter and Mark McEwen, customer service managers for Scottish Water, spent a week at Wellington Water sharing their journey towards customer service excellence.

Scottish Water provides the three waters service for the whole of Scotland. It was created by the amalgamation over time of a dozen regional boards to three authorities, then a single organisation serving over 5 million people and 156,000 businesses.

This model was found to be the best solution to ensure people received the same level of service regardless of where they lived, and to help deal with infrastructure renewal challenges that were beyond some of the smaller administrative areas.

Since establishment, Scottish Water has been on journey to improve customer service and satisfaction. From a middling customer service performance among utilities, they are now at the top of the field and looking to benchmark themselves across all industries. They have established a business unit to share their experience with other utilities keen to improve their performance.

Scottish Water's journey helped clarify the business benefits that derive from focusing on customer service, through improved efficiency (delivering what customers want), better processes, improved staff engagement, and reduced costs of complaint handling.

Key behaviours we picked up from Scottish Water's way:

1. *Actively listen to understand customers views and issues*
2. *Engage with our customers by taking ownership of issues, showing empathy and providing a high standard of basic courtesies*
3. *Figure out what we can do about particular issues and ensure everybody is clear about what can and can't be done*
4. *Take action and then check back in with the customer we have delivered what we said we would.*



Mark McEwen (in pink), GM Customer Service, and Brian Hunter, customer service manager, spent a week sharing customer service insights with staff from Wellington Water.

They left behind a wealth of material and a strong appreciation of the value of customer focus as a pathway to business improvement



Quick work brings full treatment on line for summer

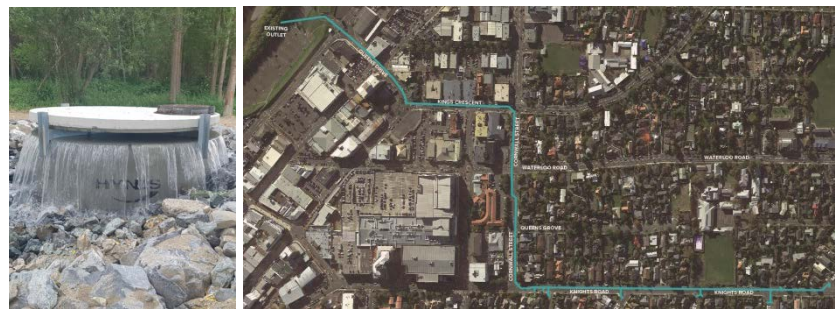
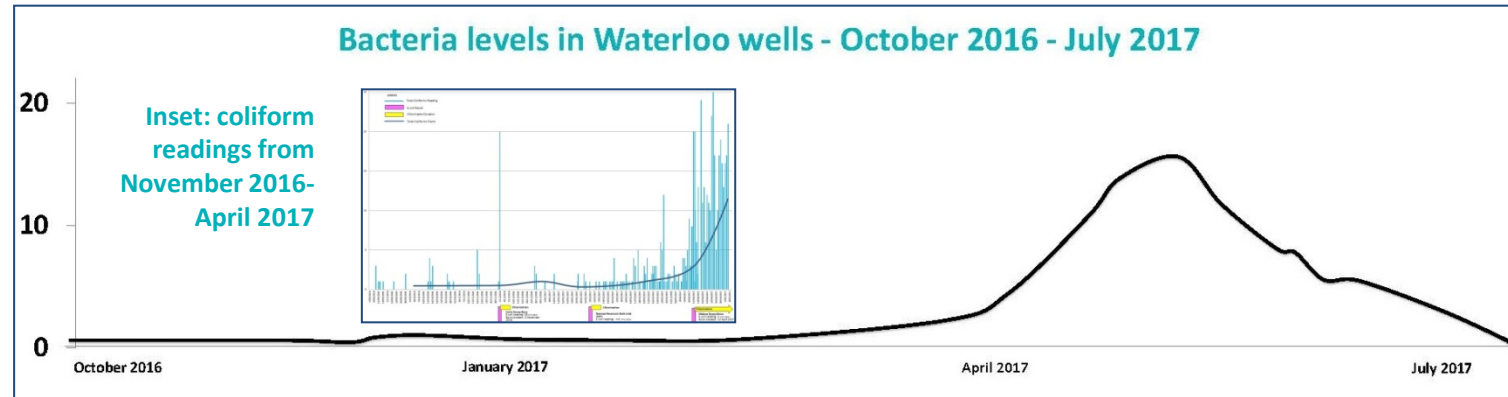
Following the decisions by Greater Wellington Regional Council and Hutt City Council to maintain chlorination and introduce UV treatment of water from the Waiwhetu aquifer, we began a fast-track process to get this treatment in place in time for the summer.

The project went very well. We had two contractors working on installing a pipeline to carry non-treatable water to a discharge point at the Hutt River, a third working on upgrading the well pumps and chambers, and a fourth working on the UV treatment units themselves, installing pipework made by Wellington Water's bulk water team.

It was a great effort by all involved to get the work done before Christmas, and only made possible by the highly collaborative support from colleagues at the Hutt City and regional councils.

Right: Why we needed to act. The data showed something had changed in the aquifer. This meant we had to accept that it was no longer a secure source.

Below: An overview of the UV Treatment project



The blue line on the satellite map shows the path of the diversion pipeline from Knights Road to the outfall, above left. UV treatment takes place in the white containers, shown right, with treated water pumped into the network from there. At the treatment site, contractor representatives share a laugh with Wellington Water's Colin Crampton (left) and Hutt City Council's John Gloag (third from right).

Our water is safe to drink

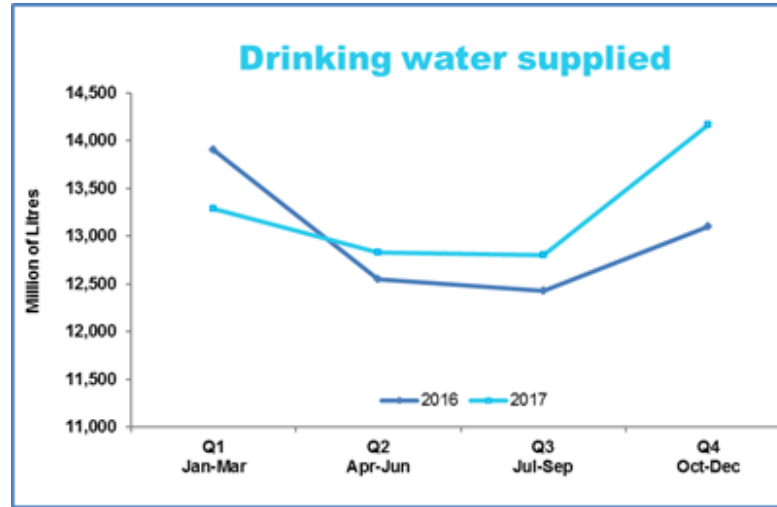
Quick response to climate U-turn

After what seemed like months on end of rain, rain and more rain November dawned clear and warm. Then it just kept on going, and a great start to summer suddenly began ringing alarm bells with our supply team.

The third driest November on record caught us on the hop, because at the same time as water demand shot up to over 200 million litres a day, we were working on two of our three main treatment facilities.

This meant we had a limited ability to supply safe water. In 97 out of a 100 Novembers, no one would have noticed. But as beautiful day followed beautiful day, and our storage lake levels began to drop, we had to accept the inevitable.

We recommended a move to the next level of watering restrictions, a ban on sprinklers and other irrigation systems. Almost immediately, demand dropped to our 160 MLD target and below.



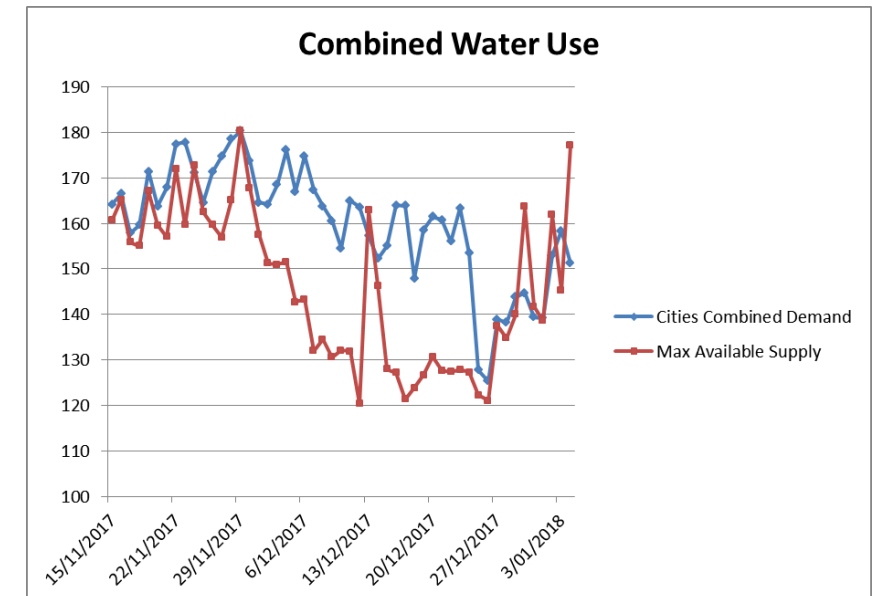
Total water supplied to the four cities is tracking considerably above last year.

14,169 million litres

of safe drinking water was delivered to 145,000 connections in the period October to December. In the same quarter last year we delivered 13,103 million litres.

The impact of publicity on watering restrictions can be seen in the downward trend in consumption from the end of November.

The Christmas business shutdown and holiday exodus, along with a bit of rain, gave us the breathing space we needed to begin recovering lake water supplies.



OUTCOME
1

Our water is safe to drink

Better filters to improve water taste and odour

New filtration material has been put in place at Te Marua Water Treatment Plant, to improve the quality of drinking water supplied from the Stuart Macaskill storage lakes.

The material comprises carbon granules which host bacteria that remove organic compounds in water. This biological process is widely used in treating surface water in Europe, and we saw it as a way to reduce the impact of compounds that can affect taste and odour, as well as reduce the potential risk of toxins from algae.

The filters are in fact large tanks, filled with the carbon granules, through which the water flows.



Carbon granules are dropped into filtration tanks at Te Marua, Upper Hutt.

The tanks took 750 m3 of carbon to fill, with material sourced from Australia.

The activation of the filters is itself an organic process, and will take 12-14 months to complete, once tests have been carried out.

Service goal performance – Safe and healthy water

| Customer Outcome | Service Goal | Aspirational Direction | YTD Status | Quarterly Status | | | |
|------------------------|--|------------------------|------------|------------------|----|----|----|
| | | | | Q1 | Q2 | Q3 | Q4 |
| Safe and Healthy Water | We provide safe and healthy drinking water | Stay the same | | | | | |
| | We operate and manage assets that are safe for our suppliers, people and customers | Stay the same | | | | | |
| | We provide an appropriate region-wide fire-fighting water supply to maintain public safety | Stay the same | | | | | |
| | We minimise public health risks associated with wastewater and stormwater | Stay the same | | | | | |

As a result of the increased bacteria levels recorded in the aquifer wells, the aquifer was no longer classified as 'secure'. This meant our historical water testing regime did not comply with Drinking Water standards, and as such, we were issued a non-compliance notice by Regional Public Health. Our water testing regime ensured water delivered was safe, and was adapted as a result of the earthquake.

All drinking water treatment and distribution systems are now fully compliant. We did receive a number of complaints and queries relating to the chlorination of aquifer water.

Wastewater pipe leak puts team under pressure

When the news came through on a July Monday morning that a leak had been identified on one of Wellington city's major wastewater pipes, we began a rapid response process to identify and carry out a solution that would minimise the risk of harm to people and the environmental.

We had to work quickly. The leak was from a valve in a concrete chamber, which meant that we could contain it using sucker trucks. But the pipe was under pressure. The split could worsen at any time – and by Tuesday it was doing exactly that.

The longer we spent deciding how best to fix the problem, the greater the risk we'd end up with the least desirable option; scrambling to repair a pipe in the midst of an uncontrolled discharge to the sea.

To cycle quickly through the options – repair or replace, who could do what, who and what was available now, impacts, costs and viability – we set up a project team comprised of engineering, operational and construction representatives.

As the plan began to take shape, we kept key stakeholders in the loop with what the plan was and what the likely impacts could be.



Shortly after 2am on the following Friday morning, we began cutting out the damaged section of pipe. In the end about 600 cubic metres of wastewater had to be discharged to sea – less than a third the volume we had expected.

Of course, this was still a disappointment, as it goes directly against one of our main network customer outcomes. So we were grateful for the support and understanding of the Taranaki Whanui, who laid down a rāhui on the affected coastal area before the work began.

Clockwise from left: Onsite signs formed part of the comms mix to keep stakeholders informed; new pipework is lowered into the chamber; one of the fleet of 14 trucks used to reduce the discharge; Kura Moeahu, Taranaki Whanui, addresses Tangaora at Owhiro during the rāhui ceremony.

Our CFO, Audrey Scheurich, attended the ceremony and came away with these impressions:

The laying down of the rāhui was brief but felt quite intense – those present from the iwi were speaking with passion and the sea was responding with reasonably big swells crashing on the rocks and a howling southerly wind. Afterwards a member of the public who had been standing back asked us what was happening – while Gary was explaining, I could see the initial look of concern and horror when she realised there was going to be wastewater going into the sea. But by the time we had finished the conversation she was congratulating us for 'doing it properly and doing the best you can'.

We are respectful of the environment

Signs good for summer swimming

What the mass of data here boils down to is that while it's so far so good with respect to water quality at major swimming beaches, we still have a lot of work to do to improve outcomes in freshwater quality, especially in Porirua.

On the flipside, we're pretty happy to have recorded a quarter with zero discharge events (overflows) from any of the four treatment plants serving the four cities – the first time in recent memory (six-plus years!) that we can recall this happening.

DRY WEATHER NETWORK OVERFLOWS

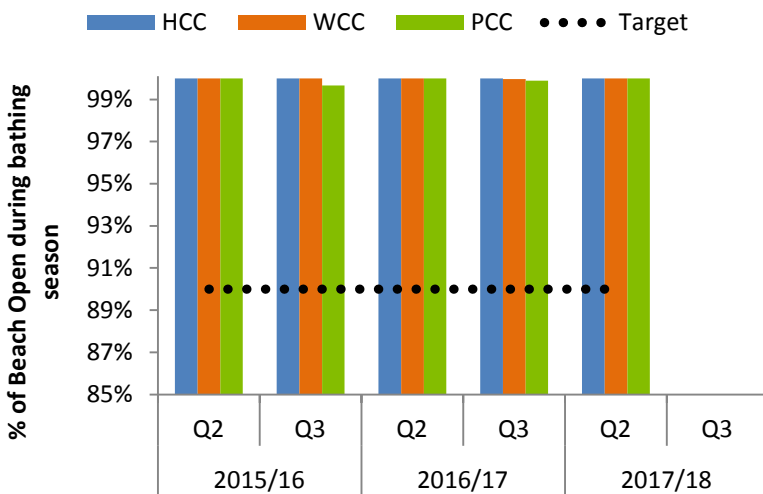


Image: TVNZ

Dry weather overflows are usually a result of a blockage or equipment failure. They can pose a bigger health risk than in wet weather, when there's plenty of rainwater to dilute the flow, and people are less likely to be in the affected environment. There were a total of nine dry weather overflow events from July to December 2017.

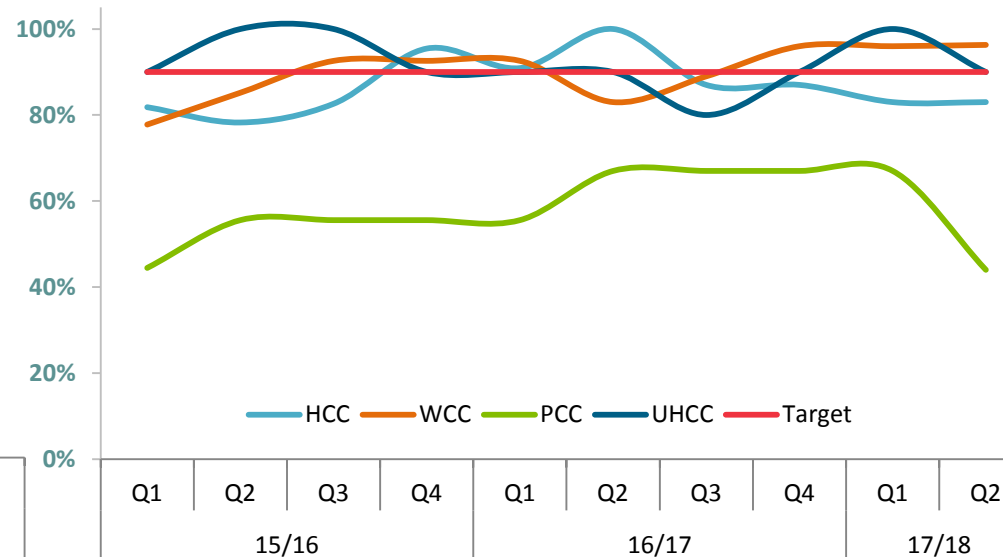
HARBOUR QUALITY

Target: Each monitored beach is suitable for recreational use 90% of the days during bathing season (1 Nov - 31 Mar). Beach closures and wet/dry E.coli trend



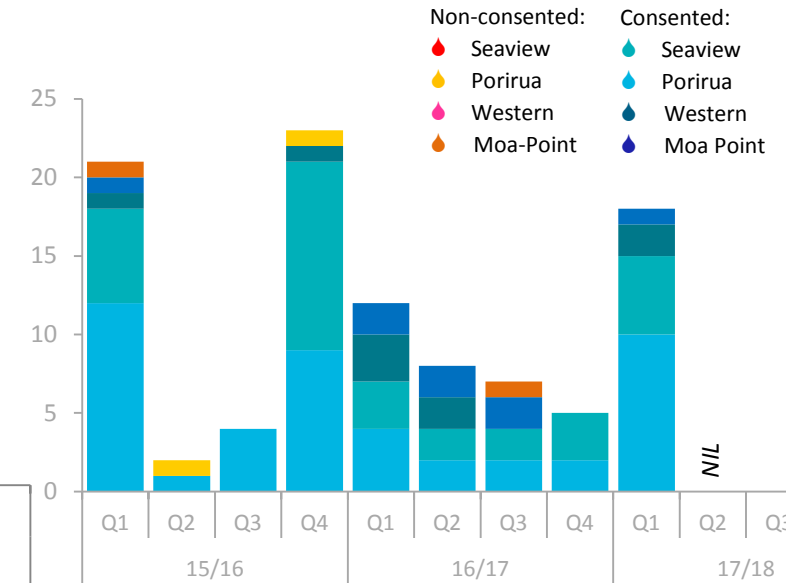
FRESH WATER QUALITY: % of sites compliant

Target: 90% of all freshwater sites have a rolling 12 month median less than or equal to 1000cfu/100ml3



DISCHARGE EVENTS FROM TREATMENT PLANTS

Target: Nil non-consented overflow from treatment plants



We are respectful of the environment

OUTCOME

2

Waterfront pipe work improves harbour quality

While no one likes the thought of wastewater from an overflow making its way into a stream or harbour, in practice one of the main causes of poor water quality is constantly leaking wastewater pipes.

Early in December, contractors G P Friel Ltd completed installing over 100 metres of half-metre diameter wastewater pipe down the middle of one of the busiest commuter streets in Wellington.

The trench was over three metres deep in parts, and under two metres of water at high tide. At times six pumps were running to manage the

volume of water flowing in at high tide, and to divert the existing wastewater flow.

“Good traffic management was key to delivering this project,” reports Dave Philipson of GP Friel. With a lane closure required, early engagement with the roading team at Wellington City Council and ongoing liaison helped minimise disruption and keep traffic flowing.

“The lane closure was not only the safest solution for drivers and our operatives, it also provided productivity benefits that allowed us to reduce the overall length of the construction,” says Dave.



Victoria Street road traffic management in action

Service goal performance – Respectful of the environment

We actively seek to avoid or mitigate the effects of our activities through resource consent processes, and are also heavily involved in the formulation of national, regional and local planning policy to help improve long term environmental outcomes. The effects of some of these changes are yet unknown so contribute to this goal being amber.

Overflows continue to be a challenge and a focus for us, while community environmental education initiatives aim to improve awareness of the impact individual behaviour can have.

| Customer Outcome | Service Goal | Aspirational Direction | YTD Status | Quarterly Status | | | |
|-------------------------------|--|------------------------|---|---|---|---|---|
| | | | | Q1 | Q2 | Q3 | Q4 |
| Respectful of the environment |  We manage the use of resources in a sustainable way | Improve |  |  |  |  |  |
| |  We will enhance the health of our waterways and the ocean | Improve |  |  |  |  |  |
| |  We influence people's behaviour so they are respectful of the environment | Improve |  |  |  |  |  |
| |  We ensure the impact of water services is for the good of the natural and built environment* | Improve |  |  |  |  |  |

Consenting process begins for central Wellington reservoir

The process of seeking consents to build a 35 million-litre highly resilient reservoir to service Wellington's central business district, Newtown, and Mount Cook got under way with community days.

The preferred site for the new concrete reservoir is in the Prince of Wales Park. Upon completion, the reservoir will be almost undetectable; it'll be completely buried and the area will be re-landscaped. The reservoir will improve the resilience of Wellington's water supply by providing additional emergency water storage for communities and major water users. Extra water storage will also allow Wellington Water to carry out essential maintenance, repair and upgrade works of other reservoirs with minimal risk of disruption to local water supply.

Engaging with the community and stakeholders is a key feature of developing the reservoir. More than 60 people attended two community open days to

find how construction of the reservoir could impact residents and the local environment.

"The park is home to a range of wildlife and native plants and is a popular walking and recreational spot for locals, so people are understandably concerned about how the construction process and the completed reservoir might impact their neighbourhood," says project director, Ulvi Salayev.

Specialist investigations include assessing the impact construction of the reservoir could have on noise and vibration, traffic, sediment and dust, ecology and recreation. Investigation findings will be shared with community at future open days.

Oral submissions to the independent hearings commissioner will take place in March,

You can read more about the proposed reservoir on our website: www.wellingtonwater.co.nz/POW-reservoir.



At the open day outlining some of the features of the Prince of Wales Reservoir project.

Community resilience work takes shape

A planned approach to increasing the strength of the Wellington region’s response to a major earthquake is behind the joint central-local government project Community Water Supply Resilience. There are three core, interdependent elements to the approach, which use service levels to help set goals and measure progress.

1. Home supply, Day 0-7

People must store drinking water at home, against the likelihood of losing supply. The target here is that everyone has access to 20 litres per day, for at least 7 days.

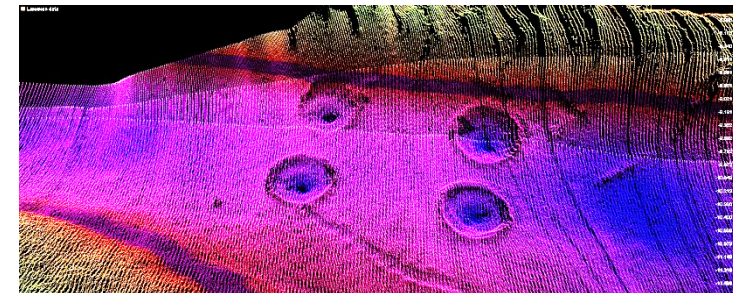
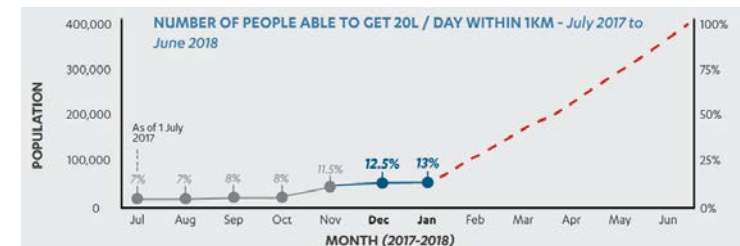
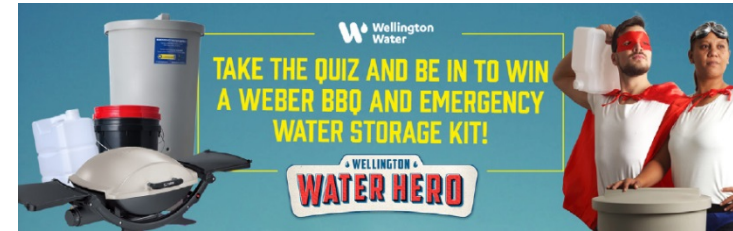
2. Community supply, Day 8+

From Day 8, Community Water Stations will be operational. These will supply a guaranteed 20 litres per person per day until network supply is restored. We intend that no one will have to walk more than 1km (500m in hilly areas) to get safe water.

3. Bulk Supply, Day 30+

At the moment, studies indicate it could take up to 100 days to restore bulk water supply operations to normal. This will need to happen before we can start to repair local pipework. We want to bring this down to 30 days – but these are pretty big projects

Below: Over 2,500 people took part in an online and personal quiz that invited people to test their preparedness, in return for a chance to win some cool (and hot) prizes; tracking the roll out of the community water stations - suggesting a busy time to come for the team; ‘leave only footprints’ – impressions left by the ‘feet’ of the tuhura barge near the Taranak Wharf.



Resilient networks that support our economy

Summer heat could be behind rise in leak reports

The third driest November on record, and the driest January, affected more than just storage lake levels.

A record breaking 2140 leaks were reported in December 2017 across the region - 622 more than in December 2016 and 894 more than Dec 2015.

We usually see an uptick in leaks and leak reporting over extended dry periods. This is due to the ground drying out in dry weather, which results in movement around pipes. This puts added stress on weak points and so increases the chance of failure.

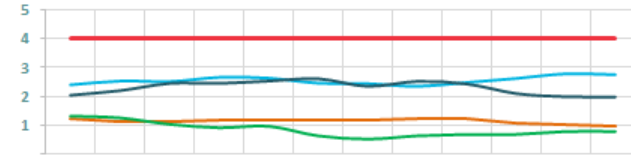
And of course leaks are more obvious than when it's wet.

The increase meant that some leaks were taking longer to get to than we and our customers would like, as our team had to prioritise major leaks first.

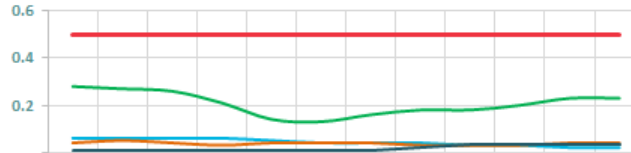
THREE-WATERS NETWORK AVAILABLE TO CUSTOMERS

Rolling 12 months of data

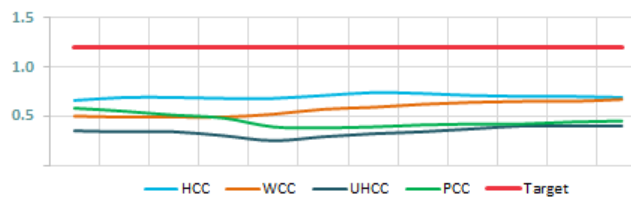
Water reticulation unplanned supply cuts per 1000 connections



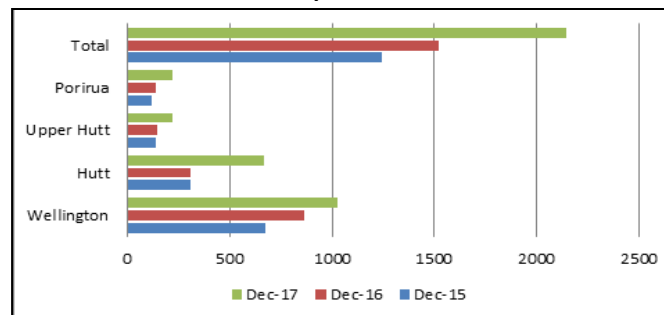
Stormwater pipeline blockages per km of pipeline



Wastewater reticulation pipeline blockages per km



December leaks reported 2015-2017



Service goal performance – Resilient networks support our economy

| Customer Outcome | Service Goal | Aspirational Direction | YTD Status | Quarterly Status | | | |
|---|---|------------------------|------------|------------------|--------|------|------|
| | | | | Q1 | Q2 | Q3 | Q4 |
| Resilient networks support our economy* | We minimise the impact of flooding on people's lives and proactively plan for the impacts of climate change | Improve | Yellow | Yellow | Yellow | Grey | Grey |
| | We provide three water networks that are resilient to shocks and stresses | Improve | Red | Red | Red | Grey | Grey |
| | We plan to meet future growth and manage demand* | Improve | Yellow | Yellow | Yellow | Grey | Grey |
| | We provide reliable services to customers | Stay the same | Green | Green | Green | Grey | Grey |

The overall reliability of our three waters services will be compromised during significant natural events. This includes flooding from high intensity wet weather events.

We are investigating and investing to improve our performance. Our ability to respond is being lifted through the Community Infrastructure Resilience project which will deliver substantial improvements by June 2018.

We are also investing in resilient networks under Towards 80-30-80 – the water supply resilience strategy and an associated wastewater resilience strategy is being drafted.

Despite the leaks, network reliability remains well within target performance levels.

Four words: People first, every time

We've spent quite a bit of time with our supplier health and safety forum, and our entire staff, working on a vision statement for our health and safety culture.

Getting the words right is a big deal. There's no point trying to build a culture around a slogan that no one relates to because they can't see where it's come from.

With feedback from staff we landed on People first, every time as a guiding principle for how we approach the work we do.

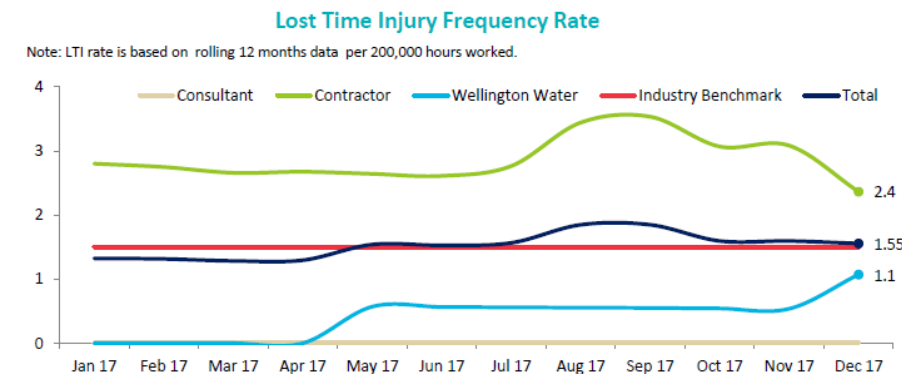
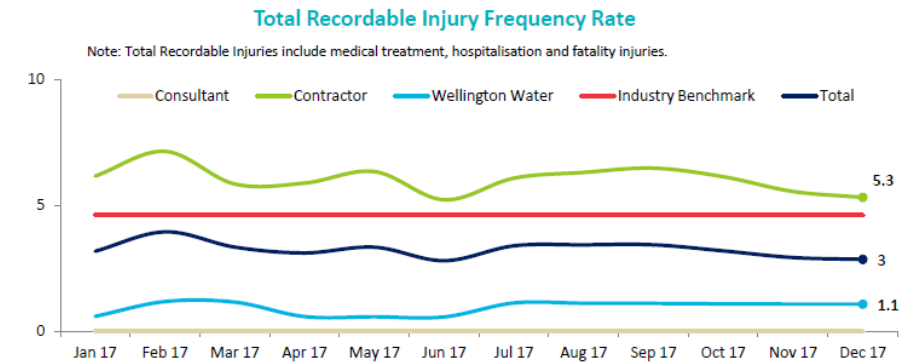
We incorporated a lot of the feedback we received into a set of behaviours that help show what "people first" looks like; Looking after your mates; knowing who you're working with; speaking up. Then though the programme of quarterly chats on key issues that our CE facilitates, we explored what each of these means to us.

Design team earns national award



Mark O'Sullivan and John Cook, from our Operations team, celebrate Wellington Water winning the Veolia Health and Safety Innovation award at the Water New Zealand conference. The award was for Safety in Design, a process to incorporate safety considerations into project design throughout the project lifecycle. The initiative was led by Tom Jolly of our in-house design team with input from across Wellington Water and our suppliers.

Overall injury at work indicators continue to improve for our contractors, which is really pleasing to see. A staff member suffered a back injury at work during the recent quarter; our initial findings suggest we can learn from this at process, behavioural and cultural levels.



Service strikes a focus for reducing harm

One of most frustrating things for people to see is a torrent of water gushing from the ground while a bunch of people in hi-viz clothing are standing round seemingly doing nothing.

The picture to the right is one of the reasons why our team cannot just launch straight into digging up a leak. Underground service corridors – the space where all the telecoms, gas, electricity and water conduits need to fit – can get pretty crowded, especially in central business areas.

For safety's sake, not to mention the added inconvenience of another service outage on top of water supply, we need to be sure the right people are on hand when we're excavating to access pipes.

We've taken extra steps to ensure our team do the right thing and wait for services to be correctly identified and located before work starts – which can be just as hard on those itching to get in and fix a burst as it is for people who's water is affected.



During work to find telecommunications (medium diameter white) and gas (yellow) conduits prior to working on the water supply pipe (large diameter blue), contractors Action Civil found eight other pipes (four white and four orange) that were not identified on plans or on the road mark-out. Recording this information for future work, and sharing it among different service providers, helps to reduce the risk of injury and service interruption in future.



A burst pipe on Aotea Quay provides an impromptu car wash, until we can shut down the water, and safely excavate to repair the pipe.

Service delivery strategy moves ahead with competitive dialogue

Our service delivery strategy is shorthand for looking at how we can provide the best service for the best price for our customers and client councils.

This means looking closely at the work we do from end-to-end – a phrase that’s particularly apt for the provision and collection of water! Of course, we work with a lot of different businesses in providing those services. Our service delivery strategy has led us through an in-depth look at the work we do in-house, what we outsource, and how we manage that work.

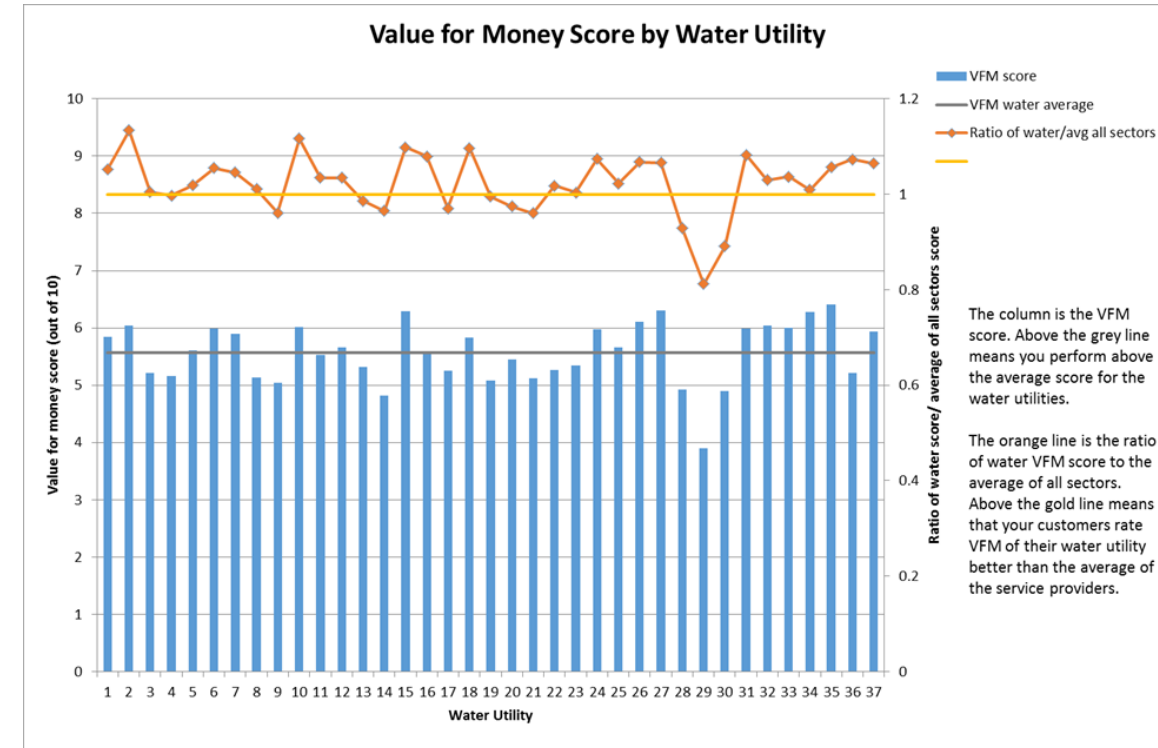
Currently, we’re working with potential providers to design our first response and maintenance services. This is one of the main customer-facing aspects of our work, as it is these service-people who turn up to fix burst pipes and respond to calls about leaks and blockages. This contract is currently held by City Care. They, along with Fulton Hogan and Downers, are joining with us in a competitive dialogue process.

Competitive dialogue is a way in which multiple parties work together to co-develop the requirements of a service provision agreement, which each competing party then bids to win.

It’s ideal for this area of our work, as we want to be much more customer focused – but we don’t yet know what that might look like or how it can work.

The competing parties will workshop with us on these matters, then we’ll be able to refine what we’re asking them to bid on. Only one party will win – but all participants will learn from the process.

We expect to have a tender document prepared by mid-year, then begin working with the successful party towards the contract start in 2019. At this stage, what we are most clear about is that the end result will be a seamless alliance between Wellington Water and our service provider.



The Water Services Association of Australia (WSAA, affectionately known as “Waza”) carried out a survey of more than 30 water utilities in Australia and a couple in New Zealand, on what their customers thought about the value for money of the service they received. Wellington Water is number 35.

We’re keen to increase awareness among our communities of the value they receive from their investment in water services they make through councils. It will be interesting to see, if we achieve this increased awareness, what effect that has on the perception of value for money.

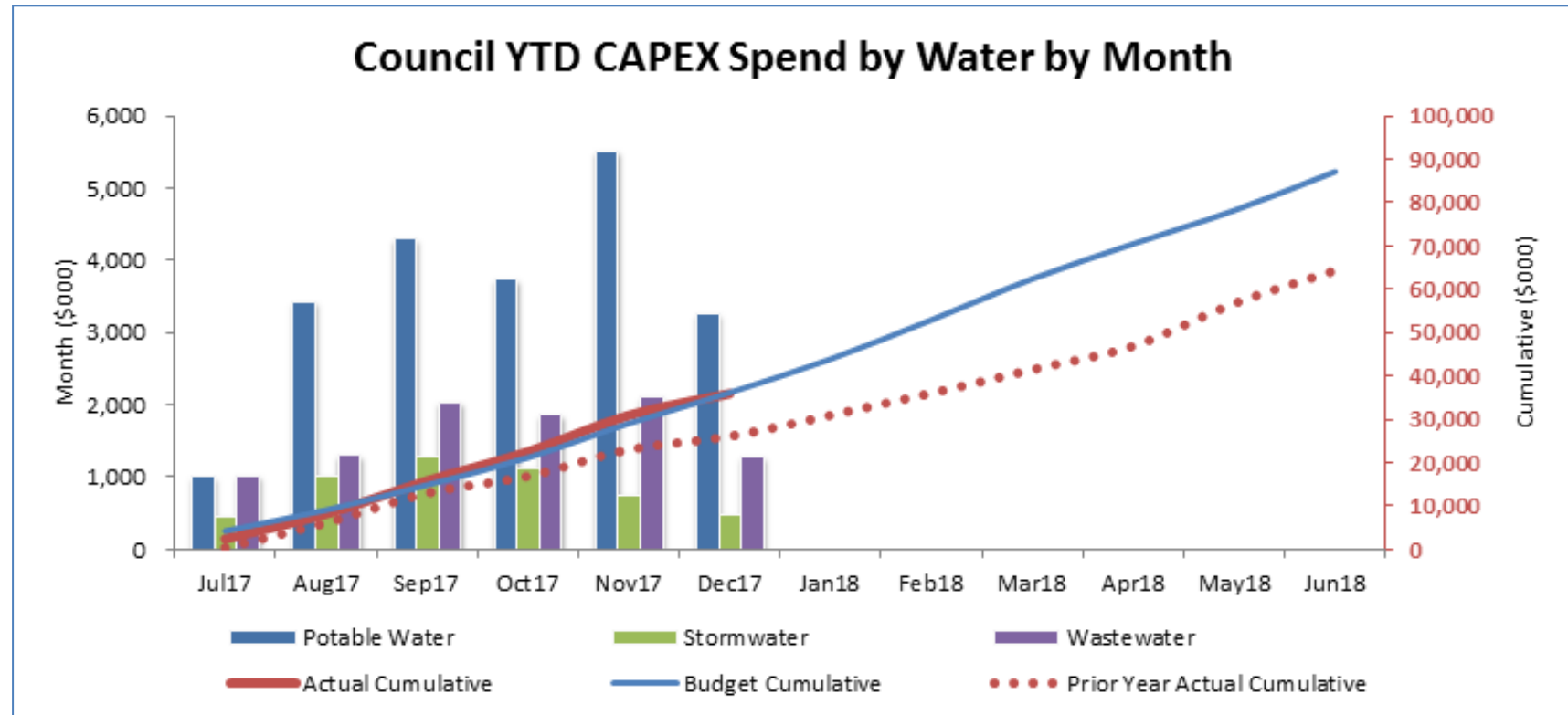
All major projects on track for tender by end January

Besides the Knights Road pipeline and well chambers, we've had some other sensitive projects under way, notably a three month upgrade of wastewater pipes in Wellington's Victoria Street. Despite taking out parking and an entire lane in this busy road, there were no complaints about the work.

As of January 2018 we are within 1% of forecast expenditure, and \$10 million ahead of last year's expenditure at the same point. We are tracking to delivery over 95% of planned project activities across the region compared with under 90% last year. This improvement is a result of a strong focus on programme financials and risk management and well as programme planning.

Some interesting work coming up includes a three month project that will impact traffic on Waterloo Quay, and helicoptering in some material for work on Asquith Terrace, in Brooklyn.

We have also reprioritised some work within Porirua's programme to invest in priority areas of the network in order to improve network reliability and performance



The work our programme team has put into smoothing the capital expenditure programme is shown in the actual cumulative spend against budget.

Schools, media and Monopoly help get the messages across on wise water use



Shelley (left) from the online learning group Learnz chats to Nicola from Wellington Water, about using water more responsibly. Over 3,000 users (which includes classes) have had more than 15,000 sessions (user interactions) with the material Learnz filmed with us. More at wellingtonwater.co.nz/education

Megan offers a family pool pass to a slightly dubious Toby, who found one of Megan's painted rocks in a Lower Hutt park. Toby's mum and brother helped seal the exchange.

Looking vaguely like a pair of shades under a threatening sky the Stuart Macaskill lakes are a great topic of conversation amongst water geeks in summer. How full are they? How long will they last? How much water is going in or out? Is there algae in there? For the record, when full, the lakes hold about 3.3 billion litres of useable water. Supplementing aquifer supplies of 80 million litres a day, to meet total demand of 160 million litres a day, when full they'd last about 40 rainless days.



Wellington Water landed a spot on the Wellington version of Monopoly – as the water utility. We were able to get a couple of key messages into the Chance and Community Chest cards, reminding people about the importance of storing emergency water at home, and the perils of flushing wet wipes.



Strong media coverage – could we say saturation? – helped make a big difference to the impact of the sprinkler ban, introduced on November 29.

