

# Watercare Services Limited – Quarterly Report

Quarter ended 30 September 2017



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## **EXECUTIVE SUMMARY**

During the quarter, Watercare continued to strengthen engagement with customers and other stakeholders. We hosted a very successful developer relationship forum as well as a number of fantastic cultural events to celebrate Te Wiki o te reo Māori, including our inaugural Te Waiata Off, where we hosted over 150 people in our Newmarket office.

### **Financial Performance**

Year to date revenue was \$161m. The result is \$10m favourable to budget primarily due to infrastructure growth charge revenue \$2.8m, vested asset revenue \$5.9m, water and wastewater revenue \$1.7m with volumes 0.75% higher than budget. This has been partially offset by new developments revenue, which is unfavourable \$0.5m.

### **Section 17A Reviews**

During the quarter, Watercare worked with the Value for Money team at Auckland Council to assist with the section 17A reviews into Three Waters and Communications and Engagement. Various meetings and workshops have been held with the Value for Money team regarding the water and wastewater services provided by Watercare, as well as insights into how our Communications and Engagement team operates.

### **Western Isthmus Water Quality Improvement Programme**

Following the Auckland Councillor and Watercare Board workshop on 20 September, Watercare and Auckland Council Healthy Waters staff have now begun the process of socialising with the Local Boards the proposal for the Western Central Isthmus water quality improvement programme.

### **2017 Annual Report**

Watercare published its 2017 Annual Report on 30 September 2017. The Annual Report is publicly available on the Watercare website.

## STRATEGIC PRIORITIES AND FOCUS AREAS DURING THE QUARTER

### 1. Customer Focus



- We understand our customer needs and deliver value
- We consistently provide exceptional products and services
- We are trusted by our customers who understand our purpose and value our service

#### 1.1 Post “Tasman Tempest” Update

Over the last quarter, Watercare has continued to make progress on improving the sustainable production output of the Ardmore water treatment plant. Key progress actions include:

- A portable centrifuge is operating to assist in addressing the higher solids levels at the increased flows.
- The design for the upgrade to the sludge dewatering system is in progress, including the procurement of a new filter press (greater reliability and higher capacity).
- The installation of UV Dosing on ‘A’ Block Filtered Water, which will allow us to treat water with more turbidity.
- Grass hydro-seeding of high risk, unstable areas within the Hunua Ranges is ongoing.

These improvements will be completed by late 2018, due to long delivery lead times on major equipment. The quality of the raw water has also improved such that we can reliably get 300MLD up from 220MLD post the Tasman Tempest from the Ardmore WTP.

#### 1.2 Developer relationship forum

During September 2017, Watercare hosted 50 major developers at our Newmarket Offices and provided them with information on how we are delivering essential infrastructure to support growth in Auckland, including what we have underway and planned across the region. These included capital projects such as Hunua 4 Watermain, the Central Interceptor and the Glendowie Branch Sewer upgrade.

The forum also featured a presentation on the Tāmaki Regeneration Project, a major brownfields redevelopment project currently underway in Tamaki. Watercare have a strategic partnership with TRC (Tamaki Regeneration Company) to help them deliver housing in the area. The forum was interactive and the feedback received was invaluable and will allow Watercare to refocus the way we provide services and to the development community.

#### 1.3 Inflow and Infiltration

Watercare is continuing its inflow and infiltration programme to educate its customers on the adverse effects of wastewater overflows to the environment when rain water is able to enter its sewerage system. The programme also undertakes assessments on individual properties to identify if downpipes are incorrectly connected to the wastewater system or gulley traps are not at the correct height.

To date, over 6,000 properties have been inspected in Mellons Bay, Pukekohe and Te Atatu Peninsula, with more than 120 defects identified. Watercare is monitoring the progress made on correcting the defects in these areas, and is also liaising with Auckland Council. The Council ensures property owners remedy the defects.

Oneroa on Waiheke Island is one of the target catchments over the next quarter.



*Inflow and Infiltration team investigating a manhole.*

#### **1.4 Watercare Assistance to North Shore Hospital**

In July, the North Shore Hospital had a significant private water main failure, which had the potential to significantly impact on Hospital operations. Waitemata District Health Board (WDHB) requested assistance from Watercare to resolve the issue. Watercare's staff and contractors responded with urgency and assisted the Hospital in returning to normal operations by repairing the failed water pipes. The WDHB have formally expressed their thanks to Watercare and Downer for the assistance provided in this matter.

#### **1.5 YouTube**

Watercare has started posting videos produced in-house on YouTube. The videos showcase all of Watercare's major infrastructure projects, as well as the "Day In The Life Of" video series, which also appear on the Watercare website.

#### **1.6 Tapped In**

Watercare sends a customer newsletter, Tapped In, with its invoices to help inform customers about Watercare's activities. The primary focus of the Winter issue of Tapped In was on the growing concern that wet wipes and similar products should not be flushed down the sewers as these cause blockages in private drains as well as in Watercare sewers. In addition to the costs incurred as a result of these blockages, the blockages result in wastewater overflows to receiving environments such as beaches and waterways.



In September, the Spring Tapped In focused on educating customers on ways to reduce their water use and how they can register for the free water audit service provided by Watercare in partnership with EcoMatters. This ties into the 2017-2020 Auckland Water Efficiency Strategy.



*Shanta Patel, from Mt Albert, and her family are reducing their water use after completing a free water audit.*

## **1.7 Water Utility Consumer Assistance Trust (WUCAT)**

Over the last quarter, the Trust has increased training to Watercare’s customer-facing teams so they are better placed to assist and refer a customer in hardship to WUCAT. Since then, the number of applications lodged in the first quarter of the 2017/18 financial year (46, compared to 26 in the first quarter of 2016/17 and 34 in 2015/16) indicate that these efforts are helping to increase awareness of the Trust’s service.

Watercare also plans to promote WUCAT’s services in future Tapped In editions, the hard-copy newsletter that is delivered to all of Watercare’s customers.

The Trust’s administrator also engages regularly with the various Citizens Advisory Bureaus across Auckland (particularly those areas where most of the Trust’s applicants reside) and distributes brochures and information material about WUCAT. Information about WUCAT’s services is also available at local board offices and libraries.

The majority of applications are received from customers in West and South Auckland (Te Atatu, Glen Eden, Henderson, Massey, Ranui, Mangere, Otara, Papatoetoe and Manurewa).

The Trust’s administrator works very closely with Work and Income and other budgeting services to exchange referrals for potential applicants.

## 2. Business Excellence

- We have a safe and engaged team
- We are a commercially-savvy business
- We are responsible stewards of our assets
- We continually strive for process excellence



### 2.1 Health & Safety

At the end of September 2017, the rolling 12 month Lost Time Injury Frequency Rate (LTIFR) for employees is 4.17 per million hours, below the Statement of Intent target of  $\leq 5$ . The rolling 12 month Total Recordable Injury Frequency Rate (TRIFR) has decreased to 13.69 per million hours, below the Statement of Intent target of  $\leq 20$ .

During the quarter, Watercare was audited by Telarc against AS/NZS4801:2001 with no non-conformances raised. The assessment report noted the growth and improvements that have occurred in the Watercare health and safety management systems since the previous assessment was conducted. The management health and safety training programmes Watercare runs were commended as a 'Leading and Governing' initiative. The report also recognised management's continual improvement initiatives since the last visit.

### 2.2 People and Capability

In addition to the safety leadership work, a broader Watercare Leadership and coaching framework has been launched and initial training has commenced with Watercare's people leaders. Work has also commenced on an overarching learning strategy & competency framework for the organisation.

Further engagement has occurred with youth and graduates through Watercare's presence at Job Fest and Engineering & Tech Week, as well as through continued involvement with the #BuildAKL campaign. Watercare's objective is to raise awareness about the range of roles within the organisation and ensure Watercare is "top of mind" with these groups as a potential employer.

Watercare is also seeking to understand what resonates with these and other targeted demographic groups. Watercare was recently named as a nominee in two categories at the Young at Heart Awards being held in November, namely the School Engagement and Work Experience Award and the Maori and Pasifika Diversity Award.

### 2.3 Robotic process automation

As noted last quarter, Watercare has been trialling robotic process automation technology to automate business processes that are resource-intensive and span multiple business systems. The trial was very successful and during the current quarter, Watercare implemented three bots to focus on processing high volume, low complexity transactions. Further analysis is being conducted to identify candidate processes that lend themselves to automation.

### 2.4 Innovative pressure loggers help to protect our CBD pipes

Watercare has been trialling advanced pressure sensors in Auckland's CBD for the past year. Developed by Visenti, a Singapore-based company, these devices are able to sense the minutest impacts on our network pipes in real-time – up to 256 readings per second – which means the team is alerted to any leak, break or contact with our pipes as it happens.

In September, one of the contractors working on the City Rail Link project near Britomart grazed a Watercare pipe. Watercare was alerted to the 'event' immediately and was able to dispatch a crew to investigate.

The technology detects changes in pressure as well. As part of their fire drills, the Parnell Fire Station uses hydrants. After noticing frequent water hammers (surges in pressure caused when water changes direction suddenly), which would damage our pipes in the long-run, Watercare visited the station with a request that the valves be turned on and off slowly during drills.

The data provided by these loggers is very useful in identifying pipes for proactive renewals too.

The trial includes 15 loggers, providing coverage for about 95 per cent of the CBD. Instead of a typical battery, the loggers use solar power to recharge, an add-on requested by Watercare. The technology helps manage water losses in the network and also helps reduce non-revenue water by proactive management of leaks and bursts.

## 2.5 Cyber Security

No cyber intrusions were identified during the quarter. However, Watercare remains vigilant and continuously works to update and enhance its cyber security capability and in turn, reduce its risk profile.

## 2.6 New Biological Nutrient Removal Facility at Mangere Wastewater Treatment Plant

The September, commissioning began of the new Biological Nutrient Removal (BNR) facility at the Mangere Wastewater Treatment Plant.

The facility is now undergoing through testing, before opening in January 2018. The new facility comprises a four-stage treatment reactor, two 52-metre diameter clarifiers and the associated pump stations, pipes, process and blower facilities, which will give the Mangere plant the capacity to treat wastewater from an additional 250,000 people as Auckland's population grows.



*A bird's eye view of the BNR during construction.*



### 3 Fully Sustainable

- We are a socially-responsible business
- We protect and enhance our natural environment
- We meet all our legal and regulatory obligations



#### 3.1 Huia Water Treatment Plant Replacement – Community Engagement

As reported previously, the Huia water treatment plant is over 90 years old and needs to be replaced with a more advanced and higher capacity facility.

The Manuka Road site was chosen as the preferred site in May, and in June/July a Community Liaison Group was formed to undertake consultation with stakeholders. The CLG has 15 members made up of interested locals and representatives of interest groups including Forest and Bird, the Tree Council and the Waitakere Ranges Protection Society.

Over the last quarter, the CLG has met four times. The major item discussed was the integrity of the ecological surveys that are to be undertaken and how these could be scrutinised by independent ecologists. This concern has now been resolved by the appointment of a second ecological expert. In the meantime, the ecologists and land surveyors have started surveying the sites to provide the base information required to design the layout of the plant and ancillary facilities on the sites. The ecological surveys are programmed to take several months as there is a need to survey the presence of bats and other hard-to-find fauna. Once this information is obtained, the next step will involve designing the layout of the plant in a manner that minimises the effects of the facility on the surrounding natural and physical environment. This is when the CLG will have the greatest input.

The CLG has raised other issues including heritage, traffic, archaeological, noise, effects on the existing tracks and reserves, and chlorine. It is intended to work through these issues with the CLG over the coming months.

The intention is to lodge the required Outline Plan of Works and resource consents in early 2018.

In the meantime, an appeal has been lodged with the Environment Court by the Titirangi Protection Group and others. The appellants are questioning the validity of the designation under section 310 of the Resource Management Act, which applies to the three sites. The appeal was heard on 25 October 2017 with a decision expected before Christmas.

#### 3.2 Auckland's Waters Strategy

During the quarter, Auckland Council has commenced the development of an Auckland's Waters Strategy that covers the "six waters": drinking water, wastewater, stormwater, estuarine and marine water, natural water bodies (streams and lakes), and groundwater/aquifers.

The Auckland's Water Strategy will align with the Auckland Plan and Unitary Plan and be used by Council, Watercare and Healthy Waters, and also the other CCOs.

The strategy would also be applicable to other consent holders and those relying on permitted activity status to undertake activities that impact on one of the six waters. Watercare is represented on the Programme Control Group by Mark Bourne and on the Executive Steering Group by Martin Smith.

#### 3.3 Auckland Regional Water Efficiency Strategy

The 2017-2020 Auckland Water Efficiency Strategy was finalised during the quarter. The aim of this document is to explain water use in Auckland and set out the initiatives to progress towards the 2025 region-wide water efficiency target. The water efficiency gains are segmented into four strategies: municipal, residential, non-

residential water efficiency, as well as network leakage. The municipal strategy showcases the initiatives of Auckland Council and CCOs.

The Strategy will see Watercare’s commitment to water efficiency extend into new areas, including piloting showerhead retrofits and a water efficiency scheme for new building developments.

This document updates and replaces the 2013-2016 Auckland Regional Demand Management Plan and represents the first time the plan has taken a Council family approach. The change in title reflects that the Strategy will also encompass infrastructure-related issues. Additionally, feedback we received suggested that “Water efficiency” speaks to Aucklanders more than “Demand management”.

The document will be launched externally in November 2017. Watercare will then start planning and implementing the 17 initiatives listed in the strategy document.

### **3.4 Super Microbes – A New Zealand First**

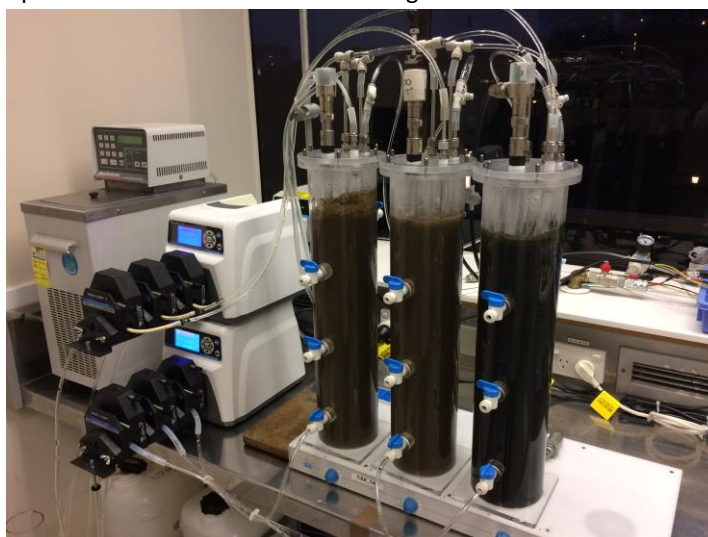
Watercare is undertaking a super microbes trial – an initiative that is part of a 10-year transformation programme to make the Mangere and Rosedale wastewater treatment plants energy neutral. By 2026, these two plants will produce more power than they consume, enabling Watercare to sell surplus power back to the grid.

The trial involves the wastewater technology team cultivating a family of “super microbes” (anammox bacteria), which are used in a biological process called “Deammonification”. The microbes convert ammonia to nitrogen without the need for organic carbon and use 60 per cent less oxygen (which results in less sludge produced and less waste, using half the amount of energy). Energy-neutral plants generally have this process because using less oxygen saves a lot of energy.

Watercare has partnered with Auckland University to develop a local strain of anammox bacteria, so we can determine whether we can adopt the process at our treatment plants. The University has built a three-litre mini reactor and they are now intensively cultivating sludge from the treatment plants. If the microbes can be grown in the minireactor, the next step will be to test the process further with a larger pilot reactor at Mangere next year. If this pilot project is successful, the ultimate plan is to use the deammonification process in Watercare’s reactor clarifiers by “seeding” the bacteria from a sidestream reactor, and also share the technology with other water utilities around the country.

New Zealand’s strict biosecurity laws have added to the complexity of this trial. Most countries already using the deammonification process can accelerate it by exchanging the seed to cultivate the anammox microbes. However, restrictions from the Ministry of Primary Industries currently prevent Watercare from doing this.

This is a first for New Zealand and Watercare is working with water utilities in the US, including DC Water in Washington and Hampton Roads Sanitation District in Virginia.



### **3.5 Energy efficiency**

Energy efficiency work is ongoing at Watercare. Milestones over the last quarter include the finalisation of the Water Services Association of Australia benchmark on energy efficiency across 245 wastewater treatment plants in Australia and New Zealand. Auckland was the only New Zealand city represented and Watercare's Rosedale and Mangere were ranked 5th and 12th respectively (out of 22) in the "Type 1" category. Watercare is now using the performance criteria recommended for Type 1 plants as the efficiency targets at these two plants.

Over the quarter, Watercare has also undertaken an energy audit of its Laboratory and of the Onehunga and Waikato water treatment plants. We are also reviewing pump efficiency and installing electric vehicle charging stations in the basement of Watercare House in Newmarket.

### **3.6 Relocation of Army Bay Lizards**

The Army Bay Wastewater Treatment Plant is undergoing a \$31 million upgrade to replace the outfall pipeline and upgrade facilities including a pump station. Over the last quarter, Watercare has worked with ecologists to install pitfall traps and lizard shelters throughout the work site. Following a spring trapping period, Watercare will then work with the excavators to strip back the vegetation to capture any remaining lizards that evaded the initial trapping effort. The process is carefully regulated and has also involved consultation with Iwi.



### **3.7 SafeSwim Programme**

Auckland Council's SafeSwim programme forecast model was developed in partnership with Watercare. The Safeswim programme provides the public with updates, in real-time, of the potential health risks that may arise from swimming at beaches after rain events. The updates will be available via an Auckland Council website.

Over the last quarter, it was in the testing phase and the programme went live on 1 November 2017.

## HIGHLIGHTS FOR THE LAST QUARTER

### 1. Water New Zealand Conference Awards

Watercare's people and projects were recognised with three awards at the Water New Zealand conference in Hamilton in September.

- Hunua 4 won the Project Award for sections 1 to 10 of what will be a 31-kilometre watermain connecting the Redoubt Rd and Khyber Pass reservoirs.
  - The judges noted *"This is a major project that has increased the resilience of Auckland's water supply network and helped provide much-needed capacity for Auckland to grow. It took 20 years from the initial need being identified to the commissioning stage at a total cost of \$302 million. Despite the challenges of constructing a major pipeline through a complex urban landscape, the project was delivered on time, within budget and to a high quality. It's also provided valuable lessons that can be transferred to other projects throughout New Zealand in the future"*.
- Rosedale relief process controller, Daemn Hunter, won the Opus Trainee of the Year award.
- The Central Interceptor team was also recognised as runner up in the Hynds Paper of the Year award for its 16-page report on "innovations from planning through detailed design".
  - The judges applauded the "excellent summary" of the work done to date and the motivations for the Central Interceptor.

### 2. Section 17A Reviews

During the quarter, Watercare started work with the Value for Money team at Auckland Council to assist with the section 17A reviews into Three Waters and Communications and Engagement. Various meetings and workshops have been held with the Value for Money team regarding the water and wastewater services provided by Watercare, as well as insights into how our Communications and Engagement team operates.

### 3. Strategic consents

During the quarter, the following progress was made in relation to Watercare's strategic consents:

- Waiuku/Clarks Beach WWTP - A new sub regional wastewater treatment plant is proposed to be built on Watercare land at Waiuku to service growth within the Waiuku, Clarks Beach and Kingseat communities. The proposal includes a new discharge through a diffuser structure mid channel of the Waiuku River. A consent application was lodged with Auckland Council in June 2016. The proposal includes a biological membrane filtration treatment technology which will treat wastewater to a very high level. The Auckland Council officers report supported the proposal, subject to conditions. Watercare engaged with Ngati Te Ata and Nagti Tamaoho on cultural matters related to the proposal. A hearing for the project was held in October 2017 and a decision is expected in December 2017. To meet short term growth within the Special Housing Areas, a small, temporary pre-fabricated treatment plant is being procured for the existing Clarks Beach WWTP.
- Waikato - To optimise existing assets, a water harvesting consent was been obtained for the Waikato Water Treatment Plant. This allows an additional 25,000m<sup>3</sup> per day (over and above the current consent of 150,000m<sup>3</sup> per day) to be abstracted when river flows are above median level. This will allow greater utilisation from this source and provide the opportunity to increase storage in the dam water source system.
- Pukekohe WWTP – The Pukekohe WWTP hearing was held on 29 – 31 August 2017. The proposal included an upgrade to an advanced Membrane Bioreactor technology plant that discharges to the Parker Lane Stream. The proposal was developed based on feedback from Te Taniwha O Waikato, who provided a Cultural Impact Assessment in support for the hearing. The consent decision was recently released by

Waiato Regional Council granting Watercare a consent for 35 years subject to conditions. No appeals were lodged.

- Wellsford Wastewater Treatment Plant - A discharge consent was lodged in February 2017, and five submissions were received. Consent conditions are currently being finalised along with the Auckland Council Officers report. A decision on whether a hearing is required is expected before Christmas.
- Waiuku Ground Water Supply – Consents were granted in 2012, however due to growth, new consent applications were lodged in September 2015 and were granted during the quarter

#### **4. Western Isthmus Water Quality Improvement Programme**

During the quarter, Watercare and Auckland Council continued to work together to progress the Western Isthmus Water Quality Improvement Programme. This culminated in a workshop with the Council Governing Body and Watercare Board on 20 September 2017, where the options were discussed.

Following the meeting, the Watercare Board approved, in principal, the technical recommendations:

- Constructing a new 4.5m diameter tunnel from the proposed Central Interceptor termination point at Western Springs through to Grey Lynn
- Constructing new wastewater infrastructure to enable growth
- Constructing new stormwater enhancements to enable separation of the combined networks.

There are still a number of issues to be worked through including the funding and governance of the recommendations.

In the meantime, Watercare and Auckland Council Healthy Waters staff have now began the process of socialising with the Local Boards the proposal for the Western Central Isthmus Water Quality Improvement Programme.

#### **5. Water Authority of Fiji Government**

The Watercare liaison programme, with the Water Authority of Fiji (WAF), is continuing. In early September 2017, the CEO and four members of the executive team toured Watercare's offices and sites. Key areas of review during the visit were Watercare's approach to creating a strong culture and values, latest procurement innovations, the new Watercare organisational structure, approaches to managing extreme weather events, building an effective workforce, and estate optimisation. The WAF team were taken on a site visit to the Lower Nihotupu Lake to review the operation of the ultrasonic system currently being trialled by Watercare to reduce algae bloom. The WAF team formally expressed their thanks to Watercare and are keen to continue with the liaison programme.





## 6. Maori Language Week

During the quarter, Watercare celebrated Maori Language Week, which included a range of activities, including the Mangere Mountain Challenge for Watercare staff. On 13 September 2017, Watercare hosted 150 visitors in The Hub, Newmarket, for an inaugural Waiata-off. Teams came from BNZ, ASB, Air NZ, Auckland Council, KPMG, Panuku, the Independent Māori Statutory Board, Auckland Transport, Vodafone, Jasmax and Boffa Miskell. Watercare's team was Nga Korimako. ASB won the event and it was a huge success.

Watercare has recently been nominated as a finalist in the Government Category of 2017 Ngā Tohu Reo Māori, Māori Language Awards, which will be held at Te Papa Tongarewa in late November.



*Vodafone's Waiata Team*



*Watercare's Jada MacFie*



*Supreme Award Winners – ASB Bank Team*



*Auckland Transport's Waiata Team*



*Rob Fisher presenting Supreme Award to ASB Bank Team*

## **FUTURE OUTLOOK**

### **1. Housing Infrastructure Fund (HIF)**

In July 2017, Auckland Council was awarded \$300m for the North West area, Redhills and Whenuapai. Over the last quarter, Watercare has supported Council in the completion of the Strategic Business Case for the servicing of Redhills and Whenuapai South, which will be submitted to MBIE in November. In parallel, Watercare is continuing to carry out further design work on the sizing and staging of wastewater solutions. This work will inform a full business case for the necessary wastewater infrastructure, which will be presented to the Watercare Board in February 2018 for approval. Once approved, Watercare's wastewater solution will feed into the Council Group's Detailed Business Case for the Redhills and Whenuapai South Area, which is due to be submitted to the MBIE at the end of the first quarter of 2018.

### **2. Mayoral Housing Taskforce**

Watercare is a member of the Council Steering Group overseeing implementation of the recommendations on the Mayoral Housing Taskforce report. Areas of Watercare input include the water and wastewater infrastructure funding policies and pricing arrangements, and work with the region-wide technical standards.

### **3. Section 17A Review – Procurement and Parks and Open Spaces**

Over the next quarter, Watercare will continue to work with Auckland Council's "Value for Money" team, who are now conducting a review into "Parks and Open Spaces" and "Procurement".

### **4. Implementation of Water Efficiency Strategy**

The Auckland Regional Water Efficiency Strategy has been finalised and will be released publicly in October 2017.

## **INFRASTRUCTURE PROJECT UPDATES**

### **1. Hunua No. 4 Watermain**

Section 11 of the Hunua No 4 watermain is the last section of a watermain stretching 31km from Redoubt Road to the Khyber Pass Road reservoirs increasing resilience to the water transmission network. Geotechnical testing is complete, preliminary design is nearing completion and the consent application is being finalised. Negotiations are nearing completion for construction-related property purchase. Construction is planned to commence in June 2018 and be completed by June 2020.

### **2. Army Bay Wastewater Treatment Plant Outfall Replacement and UV Plant Upgrade**

This project will increase the outfall capacity of the plant from the current 300l/s to 1900l/s catering for growth in the Hibiscus Coast area. The design build solution will see a new trenchless technology, direct pipe, being introduced into the New Zealand market. The Tunnel Boring Machine has been manufactured in Germany and will arrive in December 2017. Drilling commences in February 2018. Completion is due to occur in December 2018.

### **3. Wairau Eastern Rising Main**

The construction for the replacement of the Wairau Eastern Rising Main section along Wairau Road is underway with the first two tunnelling sections completed. This project provides a duplicate rising main from the Wairau Wastewater Pump Station. The contractor is utilising a trenchless technology, pipe jacking, for the majority of the route to minimise disruption along this heavily trafficked corridor. Overall completion is now scheduled for October 2018.

### **4. Pukekohe Trunk Sewer**

This trunk sewer is being upgraded to accommodate growth in the area and reduce overflows. The construction is progressing well with the Pukekohe and Buckland Pump stations, the Pukekohe trunk sewer and the Buckland rising main completed with commissioning underway. While there has been considerable work on the local roads, the construction works impacting Buckland Road and Parker Lane Rd have mostly been completed, with only minor localised works now remaining in the roads.

### **5. Upper Glen Eden Storage Tank and Branch Sewer Upgrade**

This new storage tank and sewer upgrade is to accommodate growth and reduce overflows. The storage tank construction is complete. The construction of the associated pipelines are nearing completion despite poor ground conditions hampering progress. The works are scheduled to be completed by the end of the year.

### **6. Warkworth Wells Water Treatment Plant**

This project aims to provide a new source of water and associated treatment plant due to population growth projections and pressure on surface water supply in Warkworth. Construction is well under way with site civil, building, process and mechanical works well advanced. The new water treatment plant is expected to be operational in early 2018.

## **7. Collingwood and Franklin Road Wastewater and Stormwater Sewer Separation and water supply renewal**

This project involved the installation of new water mains for Franklin Road and wastewater separation in Franklin Road and Collingwood Road. The wastewater and storm water separation is a joint project with Auckland Council Healthy Waters, funded 50/50 by Watercare and Healthy Waters and involves the targeted wastewater and storm water separation works for 76 properties. This project has been successfully completed with the exception of 3 properties.

In addition to the water, wastewater and storm water upgrades, other infrastructure asset owners (Auckland Transport, Vector and Chorus) are concurrently upgrading assets in these roads. All parties have successfully worked together in a collaborative fashion to ensure this project was a success for the home owners and the local community.

## **8. North Harbour 2 Watermain and Northern Interceptor**

The North Harbour 2 Watermain is a 33km trunk main from the proposed Huia water treatment plant to Albany reservoirs serving Auckland's north. The opportunity is being taken to advance works to avoid impact with other developments in the Hobsonville area and this is being prepared for early 2018. Close co-operation continues with other major infrastructure projects which are being undertaken at Westgate, Hobsonville and the Northern Corridor, particularly with the NZ Transport Authority. The Greenhithe Bridge Watermain Duplication project is currently in tender stage, with construction also estimated to begin in 2018. The future stages of the watermain will be phased as required.

The Northern Interceptor will cater for growth in the area and enable wastewater flows which otherwise go to the Mangere Wastewater treatment plant to be directed to the Rosedale Wastewater treatment plant. The future works will be phased with growth over several decades. Phase 1, a pipeline from Hobsonville to Rosedale is currently in tender stage, with construction estimated to commence in 2018. Some early works are underway in Schnapper Rock in close association with the Auckland Council North Shore Memorial Park development.

The procurement of the current stages of these projects are being conducted jointly to leverage process efficiency and scale benefits for both Watercare and the construction market.

## **9. Wynyard Quarter Pump Station and Rising Main**

The Wynyard Quarter pump station and rising main will provide additional wastewater capacity to service new residential and commercial developments in the area. Construction of the pump station commenced in November 2016. Secant piling, excavation and concrete lining for the wet well/storage tank is complete. Concrete works for the control building is complete with internal works progressing. The rising main is being constructed in stages. It is complete in Pakenham St West, and in Halsey St from Pakenham St to the middle of Fanshawe St. Construction in Halsey St, south of Fanshawe St, has been completed with the exception of final connections to the Orakei Main Sewer and the previously completed Fanshawe St section. The whole scheme is expected to be commissioned by the end of 2017.

## **10. Central Interceptor**

Following Board approval in May 2017 the delivery team has continued to develop the project. Over the last quarter, the detailed design has been completed and market communications regarding the procurement process and timeframes have been picked up by a number of national and international magazines, including The Tunnelling Journal (UK based), the North American Tunnelling Journal and Trenchless Australia. Watercare continued to obtain consent under the Local Government Act Section 181 from 1085 property owners, where the tunnel passes under their property. This is on target for completion by 31 December 2017. Request for Proposal documents are being developed, in advance of being issued in April 2018. The Request for Expressions of Interest (REOI) was released to the market in October followed by an industry briefing on the project. The REOI are due for submission to Watercare in late November 2017.

## **11. Mangere WWTP BNR Upgrade**

Upgrade of the existing plant was required to provide for growth and to improve water quality in the Manukau Harbour. Construction and pre-commissioning of the new biological nutrient removal (BNR) plant was successfully completed in September 2017. The plant for additional 250,000 people will be brought into service over the next few months.

## **12. Rosedale WWTP Upgrade**

The liquid and solid streams of the Rosedale plant are being progressively upgrade to cater for growth. The design for the liquid stream upgrade is complete with the construction tender released to market in October.

The design of the solid stream upgrade will commence in November with construction currently programmed to commence in July 2018. The overall plant upgrade is due to be completed by 2020.

## **13. Pukekohe East Reservoir**

This reservoir is being constructed to increase the resilience of the water supply system to North Franklin and Auckland. The major design build package is currently out to tender with construction due to commence in 2018 and be completed in 2021.



## FINANCIAL RESPONSIBILITY

- We are a minimum-cost service provider
- We are financially stable over the long term



### Financial Performance

\$'m	FY18 Q1 YTD Actual	FY18 Q1 YTD Budget	Variance YTD Favourable/ (unfavourable)
<b>Operational</b>			
Revenue	161	151	10
Expenditure excluding depreciation	76	73	(3)
Depreciation and amortisation	53	55	2
Capital Expenditure	72	86	14
Net borrowings - AC	1,301	1,309	8
Net borrowings – External	316	316	-

#### Revenue

Year to date revenue was \$161m. The result is \$10m favourable to budget primarily due to infrastructure growth charge revenue favourable \$2.8m, vested asset revenue favourable \$5.9m, water and wastewater revenue favourable \$1.7m with volumes 0.75% higher than budget. This was partially offset by new developments revenue, unfavourable \$0.5m.

#### Expenditure

Operating expenses were \$76m, being \$3m unfavourable to budget. This comprised \$1.9m for asset operating costs, professional services, and net labour due to lower labour capitalisations/recoveries as well as interest expense of \$0.7m as a result of less capitalised interest due to lower capital expenditure.

#### Depreciation and amortisation

Depreciation and amortisation is \$2m favourable to budget.

#### Capital expenditure

Capital expenditure is under budget by \$14m (16%) due primarily to:

- Timing delays as a result of extended contract negotiations, further assessment of alternate construction methodologies, and dependencies on other projects;
- Project efficiencies and favourable contract negotiations which have reduced forecast spend including the Pukekohe Wastewater Rising Main and Massey/Swanson Siphon Replacements; and
- Reprioritisation of some electrical and control system projects resulting in a deferral of budgeted projects including Mangere Digester Electrical Upgrade and Network SCADA System projects.

The underspend has not impacted on Watercare's overall risk profile.

#### Borrowings

Overall net borrowings were \$8m below budget due primarily to lower capital expenditure.

## **Water Utility Consumer Assistance Trust (WUCAT)**

When the Trust approves hardship relief, it enters into an understanding with the customer as to how the customer will “earn” the relief. Often the customer agrees to pay their monthly bill for (say) six months, at the end of which all outstanding debt or arrears at the date the arrangement was entered into is agreed to be written off.

Most customers satisfy their obligation and the old debt is written off. Some customers, however, do not meet their obligations and therefore no write off occurs. At any point in time there will be a number of customers in the process of satisfying their side of the arrangement.

Anyone, whether tenant or landlord, is eligible to apply for assistance as long as there is an outstanding debt with Watercare. However, sometimes the Trust is unable to help the applicants because their landlord or property manager has paid off the debt to Watercare and is trying to collect from their tenants.

Details of the results of the Trust and the WUCAT meetings held during the quarter are set out in Appendix A.

## PERFORMANCE MEASURES

Measure	2017/18 Target	Jul 2017	Aug 2017	Sept 2017
The extent to which the local authority's drinking water supply complies with part 4 of the drinking-water standards (bacteria compliance criteria)	100%	100%	100%	100%
The extent to which the local authority's drinking water supply complies with part 5 of the drinking-water standards (protozoal compliance criteria)	100%	100%	100%	100%
Average number of wet weather overflows per discharge location	≤ 2 overflows per year per engineered overflow point	Annual Measure	Annual Measure	Annual Measure
The number of dry weather overflows from the territorial authority's sewerage system, expressed per 1000 sewerage connections to that sewerage system	≤10	0.4	0.5	0.5
Compliance with the territorial authority's resource consents for discharge from its sewerage system measured by the number of: a) abatement notices b) infringement notices c) enforcement orders d) convictions received by the territorial authority in relation to those resource consents	a) ≤2 b) ≤2 c) ≤2 d) ≤2	0	0	0
Median response time for attendance for urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site.	≤ 60 mins	41 mins	44 mins	47 mins
Median response time for resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption	≤ 5 hours	2.7 hours	2.7 hours	2.7 hours
Median response time for attendance for non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site	≤ 3 days	1.0 days	1.1 days	1.4 days
Median response time for resolution of non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption	≤ 6 days	2.1 days	2.0 days	2.3 days
Percentage of customers surveyed satisfied with Watercare's delivery of water and wastewater services	≥80%	82.8%	83.4%	83.7%
The total number of complaints received by the local authority about any of the following: a) drinking water clarity b) drinking water taste c) drinking water odour d) drinking water pressure or flow e) continuity of supply f) the local authority's response to any of these issues expressed per 1000 connections to the local	≤ 10	5.4	5.3	5.1

Measure	2017/18 Target	Jul 2017	Aug 2017	Sept 2017
authority's networked reticulation system				
Attendance at sewerage overflows resulting from blockages or other faults: median response time for attendance - from the time that the territorial authority receives notification to the time that service personnel reach the site	≤ 60 mins	51 mins	51 mins	51 mins
Attendance at sewerage overflows resulting from blockages or other faults: median response time for resolution - from the time that the territorial authority receives notification to the time that service personnel confirm resolution of the blockage or other fault	≤ 5 hours	3.2 hours	3.2 hours	3.2 hours
The total number of complaints received by the territorial authority about any of the following: a) sewerage odour b) sewerage system faults c) sewerage system blockages d) the territorial authority's response to issues with its sewerage system expressed per 1000 connections to the territorial authority's sewerage system	≤ 50	23.5	23.1	22.6
Percentage of complaints being 'closed and resolved' within 10 working days (12 month rolling average)	≥95%	98.9%	99.9%	99.4%
Percentage of the 19 lwi groups throughout Auckland that Watercare have entered into a Memorandum of Understanding with (target for end of FY16/17)	≥60%	Annual Measure	Annual measure	Annual measure
Lost-time injury frequency rate per million hours worked (12 month rolling average)	≤5	2.4	4.19	4.17
Percentage of voluntary leavers relative to number of permanent staff (12 month rolling average)	≤12%	12.38%	11.88%	11.19%
Total recordable injury frequency rate per million hours worked (12 month rolling average)	<20	13.81	15.44	13.69
Minimum funds flow from operations to interest cover (FFO) before any price adjustment	≥2.5	4.53	4.10	4.05
Percentage of household expenditure on water supply services relative to the average household income	≤1.5%	0.89%	0.85%	0.85%
The average consumption of drinking water per day per resident (gross PCC) (12 month rolling average)	272 + / - 2.5%	272	272	273
The percentage of real water loss from the local authority's networked reticulation system (rolling 12 month average)	≤13%	12.0%	Two-month lag on data sourced from meter readings	Two-month lag on data sourced from meter readings

## CONTRIBUTION TO MĀORI OUTCOMES

During the quarter, Watercare celebrated Maori Language Week, which included a range of activities, including the Mangere Mountain Challenge for Watercare staff. On 13 September 2017, Watercare hosted 150 visitors in The Hub for an inaugural Waiata-off. Teams came from BNZ, ASB, Air NZ, Auckland Council, KPMG, Panuku, the Independent Māori Statutory Board, Auckland Transport, Vodafone, Jasmx and Boffa Miskell. Watercare’s team was Nga Korimako. ASB won the event and it was a huge success.

Initiative - Water Supply and Wastewater	How it contributes to Māori outcomes	Progress	Q1 Spend
<p>Mana Whenua Kaitiaki Forum</p> <p>Māori knowledge and world views are respected and its validity and value acknowledged</p>	<p>MO3 Rangatiratanga self-determination</p> <p>MO4 Te Tiriti o Waitangi/the Treaty of Waitangi</p> <p>MO7 Mātauranga Māori – Māori knowledge wisdom</p> <p>MO8 Mana Whenua – customary authority</p>	<p>One bimonthly hui was held this quarter with two scheduled for the following quarter. The principal matters discussed related to the Manukau Hydrodynamic Model with a detailed technical presentation and progress on MWKF Governance Plan and MWKF Kaitiaki Plan.</p> <p>Initial engagement with Watercare’s People and Capabilities team.</p> <p>Preliminary discussions on proposed Council Joint Working Group on water sources for Tāmaki Makaurau.</p>	\$49,942
<p>Iwi Engagement on Watercare Projects</p> <p>Robust engagement framework for Iwi Authority resource management staff to be actively involved in the planning and operational performance of water and wastewater infrastructure</p>	<p>MO1 Kaitiakitanga – guardianship including stewardship</p> <p>MO2 Mātauranga Māori – Māori knowledge wisdom</p> <p>Waahi tapu –sacred ancestral sites and places of significance to iwi, hapū and whānau</p> <p>MO7 Mātauranga Māori – Māori knowledge wisdom</p>	<p>Engagement with Mana Whenua at all levels has been strong. There were two major cultural activities – Te Wiki o te reo Māori and Te Waiata Off, hosted during that same week, as well as many other cultural activities.</p> <p>The Pukekohe Wastewater Treatment Plant Upgrade has been consented with no mana whenua or community appeals. The result of no appeals reflects the intensive engagement and relationship of the parties during the current reporting quarter with successful outcome in this quarter.</p> <p>Similar mahi has also resulted in a positive hearing for the SW Sub-Regional Clark’s Beach Outfall where Watercare’s closing submissions are to be heard in this quarter. This application is particularly significant because of the cultural and ecological significance of the Waiuku Channel/Clark’s Beach area and the wider Manukau Harbour. The application has strengthened the relationship between Watercare and mana whenua and the nature of that engagement.</p> <p>Watercare continues to work to identify opportunities for engagement with mana whenua, such as highlighting the</p>	\$347,328



		<p>Watercare employment process through its regular bi-monthly MWKF- Kaitiaki Managers' Group.</p> <p>Further research has continued on Watercare's Māori Responsiveness Plan. Watercare during this quarter was audited by PWC against Te Toa Takitini and Māori Outcomes guidelines in projects, commissioned by the Independent Māori Statutory Board.</p>	
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## KEY LOCAL BOARD ISSUES

In July, the Mangere Otahuhu Local Board joined Watercare staff for a site visit to the BNR expansion at the Mangere Wastewater Treatment Plant. Information from the visit was shared with local media and the local board also received a video and information, which were later posted on the local board's Facebook page.

The Kaipatiki Local Board was briefed on the Wairau Road wastewater upgrades. Representatives of the local board joined Watercare and the contractor for a media opportunity related to the drilling machine.

Media items on the Glen Eden Wastewater Project, Fred Thomas Drive Pump Station, Army Bay wastewater outfall replacement and Wynyard wastewater pump station were all shared with the relevant local boards and Councillors.

A wastewater overflow response in Warkworth was brought to the attention of the local board, particularly as the cause was found to be local fat oils and grease from residents and businesses. Information on Watercare's response, along with the safe disposal of fats oils and greases, was shared with the local board.

Minutes of the Huia water treatment plant replacement community liaison group meetings continue to be shared with relevant Councillors and local board members.

In August, Watercare staff joined representatives of the Franklin Local Board in Beachlands for a community meeting on local wastewater issues. The meeting followed distribution of a 'Pohutakawa Coast Matters' newsletter which outlined information on the local wastewater network.

A presentation on the Manukau Harbour Hydrodynamic model was provided to the Manukau Harbour Forum and was well received. The presentation was also given to Council's Rural Advisory Panel.

The Chair of the Kaipatiki Local Board contributed to a short video on the Wairau Road pipeline works on 18 August. Watercare's short project videos and YouTube channel are also being shared with the relevant local boards.

Watercare also joined Veolia for a workshop with the Papakura Local Board. Opportunities to improve information sharing was discussed. A follow up meeting is planned for early 2018.

During September, Watercare and Auckland Council Parks worked with the Albert-Eden and Puketapapa Local Board to progress the land owner approvals and easements for the associated works in parks. Good progress continues to be made and further updates will occur with the Whau and Mangere Otahuhu Local Boards.

Local Board briefings were held with the Rodney, Henderson-Massey, Kaipatiki and Howick Local Boards to provide updates on projects underway within the local board areas as well as matters of interest.

Representatives of the Waitakere Ranges Local Board continue to attend the community liaison group meetings established for the Huia Water Treatment Plant Replacement Project.

Watercare and Auckland Council Healthy Waters staff also began the process of socialising with the local boards the proposal for the Western Central Isthmus water quality improvement programme along with the proposed process for incorporating public consultation into the upcoming LTP consultation process.

## **QUARTERLY RISK MANAGEMENT UPDATE**

### **Risk Management Governance**

Watercare has an established risk management policy and framework which follows the guidance of the ISO 31000 risk management standard. Risks are therefore identified and evaluated using likelihood and consequence scores, and ranked. The highest ranked and significant emerging risks are reviewed by senior management and the Board via management and Board level reporting.

There have been no substantial changes to Watercare's risk in the reporting period. The potential impact of global warming on Watercare's risk profile has long been recognised and a separate risk category has been added to the Enterprise Risks to highlight the short and long term issues which will remain under active management.

The Internal Audit function produces an annual plan which is approved by Watercare's Audit and Risk Committee and there is quarterly reporting by management against the plan for the Committee.

The Audit and Risk Committee maintains oversight of progress by management in implementing the recommendations arising from Internal Audit's work. The Committee is satisfied that all matters raised are being addressed by management.

### **Disclosures**

The Watercare Executive Management Team regularly gives consideration as to the possibility of events that would trigger a requirement for continuous disclosure. There were no such events during the reporting period.

## Appendix A – WUCAT and Restrictions

Summary for the Water Utility Consumer Assistance Trust since 2011/12 start			
Financial year	Trust approved applications (includes WSL additional write offs)		\$000's
June 2012	33		\$29
June 2013	172		\$196
June 2014	123		\$114
June 2015	150		\$149
June 2016	118		\$90
June 2017	115		\$97
June 2018 (YTD)	46		\$46
<b>Total</b>	<b>757</b>		<b>\$721</b>
Summary of WUCAT Arrangement Approvals			
No. of Arrangements Entered Into	No. of Arrangements Fully Satisfied	No. of Arrangements Still Being Met	No. of Arrangements Lapsed Unfulfilled
757	579	86	92
Amount of Relief Approved \$	Amount of Relief Fully Earned \$	Relief Yet to be Fully Earned \$	Relief Voided due to Lapsed Unfulfilled Arrangement \$
\$721	\$562K	\$95K	\$64K

The results of the last 3 WUCAT meetings have seen 46 applicants successfully complete the budget process and have \$46K of hardship relief approved by the Trust.

WUCAT Summary last 3 meetings		
Month	Trust approved applications	\$000's
April 2017	15	\$15
May 2017	19	\$18
June 2017	12	\$13
<b>Total</b>	<b>46</b>	<b>\$46</b>

### Restrictions

The status of restrictions as at 30 September 2017 was as follows:

Restriction Summary Year ending	Commercial		Residential		Total	
	Restriction	De-restriction	Restriction	De-restriction	Restriction	De-restriction
30 June 2012	1		5		6	0
30 June 2013	13	11	6	4	19	15
30 June 2014	20	20	17	14	37	34
30 June 2015	31	30	53	39	84	69
30 June 2016	8	9	16	17	24	26
30 June 2017	15	11	19	13	34	24
30 June 2018 (YTD)	7	4	19	8	26	12
<b>TOTAL</b>	<b>95</b>	<b>85</b>	<b>135</b>	<b>95</b>	<b>230</b>	<b>180</b>
Restrictions Currently	10		35		45	