

Watercare Services Limited - Quarterly Report

Quarter ended 31 March 2017



Glen Eden Storage Tank



TABLE OF CONTENTS

Executive Summary	3
Strategic Priorities and Focus Areas During the Quarter	4
Highlights for the Last Quarter	8
Future Outlook.....	10
Infrastructure Project Updates	11
Financial Responsibility	13
Performance Measures	15
Contribution to Māori Outcomes	17
Key Local Board Issues	18
Quarterly Risk Management Update	19
Appendix A – “Tasman Tempest”	20
Appendix B – WUCAT and Restrictions	30

EXECUTIVE SUMMARY

The “Tasman Tempest” weather event brought extreme rainfall across the region during the quarter (from 7 - 12 March 2017). The weather event impacted significantly on Watercare’s operations, in particular the water supply system. At no time during or post the weather event was there any compromise of quality of the water supply or risk to public health, and Watercare continued to meet its commitment to provide “Aa” grade water. During the period, Watercare urged Aucklanders to voluntarily reduce their water use by 20 litres per person per day. Watercare was very pleased with the response to the “Save 20” campaign, and is very thankful to everyone in Auckland for their support. The “Save20” campaign ceased on 3 April. Process improvements are being investigated to further improve the resilience of the water supply system to handle any future events of a similar nature to the “Tasman Tempest”. Following the “Save 20” campaign, water and wastewater revenue was below budget. Watercare has commissioned a review of its performance during the “Tasman Tempest”.

Watercare continued to strengthen engagement with customers and other stakeholders during the reporting period including continuing to work with developers and working on the “Consenting Made Easy” with Auckland Council and the CCOs.

Watercare continues to meet and work closely with Local Boards, community groups and associations to provide project updates and notifications regarding significant operational activity and approvals for works in local parks that require Local Board approval.

Financial Performance

Year to date revenue was \$457m. The result was \$26m favourable to budget primarily due to infrastructure growth charge revenue being favourable by \$9.7m due to increased construction activity, vested asset revenue favourable by \$16.7m, new developments revenue favourable by \$1.2m and water and wastewater revenue favourable by \$0.7m. This has been partially offset by other revenue, which was unfavourable by \$2.3m mainly due to the reduction in FY16 subvention revenue from Auckland Council relating to Watercare’s tax losses.

As indicated above, during March, water and wastewater revenue was below budget by \$2 million due to the reduced water usage as a result of the request to the public to reduce water usage following the “Tasman Tempest” weather event.

Non-Financial Performance

Watercare met 22 out of the 23 current Statement of Intent performance measures throughout the third quarter. The percentage of real water loss was 13.2% (target 13%). Watercare has an ongoing programme of leak detection focusing on minimising water losses.

Risk Management

The “Tasman Tempest” saw unprecedented levels of silt in the raw water entering the Ardmore Water Treatment Plant, which impacted production of potable water. In addition, other plants, principally Waikato, were impacted.

Risks regarding the deterioration of raw water quality affecting treatment processes and potentially compromising compliance with Drinking Water Standards for New Zealand are captured in Watercare’s Water Safety Plans (WSPs). These WSPs have been approved by the Auckland Regional Public Health Service – Drinking Water Assessment Unit based on compliance with legislation and guidance provided by the Ministry of Health. At no time during the five-day period or post was there any compromise of water quality being supplied to our 440,000 customers.

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 "Tasman Tempest"

The "Tasman Tempest" weather event brought extreme rainfall across the region during the quarter (from 7 - 12 March 2017). The weather event impacted significantly on Watercare's operations, in particular the water supply system. At no time during or post the weather event was there any compromise of quality of the water supply or risk to public health, and Watercare continued to meet its commitment to provide "Aa" grade water.

During the period, Watercare urged Aucklanders to voluntarily reduce their water use by 20 litres per person per day. Watercare was very pleased with the response to the "Save 20" campaign, and is very thankful to everyone in Auckland for their support. The "Save20" campaign ceased on 3 April.

Process improvements are being investigated to further improve the resilience of the water supply system to handle any future events of a similar nature to the "Tasman Tempest".

We have set out further detail about the weather event in Appendix A of this report for information.

Lessons Learnt

With the peak of the incident now behind us, reviews of the event have been commissioned with a view to learning what worked well, along with areas for improvement and change. These will explore Watercare's assets, systems, communications, processes and resources with a view to identifying gaps and opportunities. The review findings will be shared with Auckland Council at a later date.

With climate change and as weather patterns change, the resilience of the water and wastewater infrastructure will increasingly be tested. As a learning organisation, we take the opportunity from all incidents to review organisational risks, the consequences and efficient and cost-effective means by which we can reduce adverse impacts on our services to our customers.

1.2 High Wind Event

A high wind event on the evening of 21 January resulted in multiple power failures at numerous facilities across the region. Despite there being lengthy power outages, Watercare staff utilised standby generators to ensure there were no service disruptions to customers. Despite the efforts, there were four overflows from Wastewater Transmission pump stations for a limited period. The incident placed significant demands on Watercare staff, and Watercare's external service providers, All performed to an exceptional standard.



1.3 Consenting Made Easy

Watercare is continuing to work with Auckland Council as part of the “Consenting Made Easy” project. The project is focussed on streamlining and improving the consenting process for developers and customers.

Under the New Zealand Health and Safety at Work Act 2015, Watercare, as the owner of water and wastewater assets, is required to ensure all works undertaken by developers on its assets are done safely and in compliance with standards. Whilst it is necessary to provide convenient and streamlined services for developers and customers, it is also important to ensure that the responsibilities of individual organisations with respect to health and safety obligations are safeguarded.

1.4 Working with Developers

Watercare continues to work closely with developers to ensure their needs are understood, anticipated and met to achieve the housing needs for Auckland. By way of an example, Watercare is working alongside Fletcher Living to ensure that there is capacity in the water supply and wastewater networks to service their developments. Key developments include the Moire Road SHA, Red Beach, and Three Kings developments which are in various stages of their planning and construction.

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 Huia Water Treatment Plant Replacement

The Huia Water Treatment Plant is over 90 years old and it is required to be replaced with a more advanced and higher capacity facility by 2023. Watercare owns a site opposite the current water treatment plant that is designated for this purpose. However, the Unitary Plan has placed an overlay that requires Watercare to consider other options.

Huia Water Treatment Plant option assessment reports have been completed and the short list option report prepared. Consultation on the three short-listed options (with two sub options within Parker Road) commenced in February. There is no legal requirement for Watercare to consult on options prior to making applications for resource consents. However, Watercare undertakes these consultations to engage with and obtain community feedback to inform itself prior to selecting on option. There has been concern expressed by the Oratia community about the short listing of the Parker Road options. This has led to increased media coverage, and Local Board and Councillor interest in the project. More detailed specialist technical, social, environmental and cultural evaluations are now being undertaken on the short-listed options. Successful community open days were held in early April and included a tour of Huia Water Treatment Plant which over 320 people attended. This provided a chance for a close-up look at Watercare’s ageing Huia Water Treatment Plant and to talk to staff about options to replace the facility. Tours left every 30 minutes and went non-stop both days over seven hours. Guides passed on historical information, explained how the plant operated and talked about the water treatment process itself.

All of the information gathered through the consultation process, and the further investigations, will support the process to determine the preferred location for the replacement water treatment plant. The Board of Watercare will be presented with the recommendation from Watercare and independent technical experts for the preferred location at the May Board meeting. A decision will be made on the preferred site for the replacement water treatment plant.

2.2 Employee survey

Watercare consistently and periodically undertakes staff surveys to determine the level of engagement and to obtain feedback for improved performance, leadership and teamwork in the organisation. During the period, Watercare launched a new employee survey tool. Employees have provided their feedback, and the results have been collated, and are currently being cascaded throughout Watercare. Following this benchmark survey, “pulse” surveys will be conducted on a regular basis to monitor improvements.

2.3 Section 57 Review

The agenda for the Appointments and Performance Committee meeting of 1 February 2017 indicated a requirement for Watercare to report against section 57 of LGACA. The agenda sets out that the proposed timing is for initial findings to be reported by September 2017. Given this indication in the agenda, during the quarter Watercare has proceeded to progress with a section 57 review, and will submit its review to Auckland Council before September 2017.

2.4 Compliance with the Holidays Act 2003

In our previous Quarterly Reports for quarter one and quarter two we noted that Watercare had commissioned Ernst & Young to carry out an in-depth review of our compliance with the Holidays Act 2003. The review concluded that Watercare’s payroll system had not been configured to comply with some aspects of the Act and, therefore, payments relating to sick pay, bereavement leave, alternative holidays, and public holidays had been miscalculated for some staff.

The Holidays Act 2003 is relatively straightforward with regard to calculating holiday pay and entitlements for workers with a regular working pattern but its application is complex when staff have a variable working pattern. The corrective payments required are therefore higher where Watercare’s staff carry out shift, casual and on-call work.

Recalculations of the payrolls were completed in December 2016.

All arrears due to current employees were paid in February and early March following recalculations of Watercare’s obligations under the Holidays Act 2003. Watercare has written to all former employees and placed public notices for them to contact Watercare in case they are owed money.

A number of former employees who were made aware of our Holidays Act process by current employees have already registered and received the payments owing to them.

The Mayor’s Office, Stephen Town and the Chief Executives of all of the CCO’s were advised on 31 March 2017 of Watercare’s intention to contact former employees and place an advertisement in the New Zealand Herald concerning monies due to former employees as a result of recalculations of leave entitlements under the Holidays Act.

2.5 IPENZ Engineers New Zealand

Watercare employs a number of professionals, including over 130 qualified engineers. Watercare has been able to retain its Professional Development Partner quality status for another two years after an assessment review by IPENZ Engineers New Zealand. This allows Watercare to attract and retain talented professional engineers and maintain an employer of choice for the industry.

2.6 Youth Pledge

Watercare has made a public commitment under the Youth Pledge to courses of action that attract and develop youth into sustainable career pathways. This will help to enhance the local economy and reduce the dependence upon benefits. Watercare agreed to be a partner level participant in year-long #BuildAKL youth recruitment campaign designed to raise awareness about jobs in the sector, from entry-level jobs to apprenticeships and skilled jobs requiring qualifications. During the quarter, Watercare hosted two young people and provided job experience for six weeks - two weeks beyond

the standard four week rotation after they indicated that they wished to experience deeper understanding of what Watercare did for the community.

2.7 Smart Seeds

Along with Auckland Council, Auckland Transport, Regional Facilities Auckland and other local government organisations throughout New Zealand, Watercare has signed up for the Smart Seeds programme. The annual innovation programme encourages young professionals to tackle complex city challenges. The programme challenges people in the first 10 years of their professional career to solve some of our cities' most complex challenges. Run over a 10-week period, participants are split into five teams to solve five different challenges.

2.8 Employee Recruitment and Retention

Watercare is focussed on building greater diversity and inclusiveness in our workplace. Diversity of approach and thought, where reflective of the diversity of our community, will enable us to better understand and anticipate the needs of customers and other stakeholders. A number of internal initiatives are underway in relation to this, including consciously engaging in targeted brand awareness activity to raise Watercare's profile with alternative labour sources, women, young people and various ethnic groups.

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 Demand management

During the quarter, Watercare has been working on updating the 2013-2016 Auckland regional water demand management plan. The 2017-2020 plan will determine the programme of initiatives to progress towards the 2025 Auckland Plan target of reducing gross per capita water use. These initiatives will target network management, metering, technology, education and services to customer. With the profound response from Auckland Council and other CCO staff to the "Save20" campaign, it was opportune to request that they were invited to join in the preparation of the demand management initiatives for the plan. Watercare invited Auckland Council and CCOs staff to a brainstorming session on 19 April 2017. The session was successful, and was attended by several teams from Auckland Council, as well as sustainability staff from Panuku Development Auckland and Auckland Transport. The session confirmed the alignment of the demand management plan with other objectives and programmes led by Auckland Council.

3.2 Climate Change

Watercare is currently preparing a climate change strategy, and continues to incorporate climate change considerations in its decisions. Watercare will continue to work with the Auckland Council group to ensure alignment of objectives and programmes with this climate change strategy.

As reported in our last Quarterly Report, NIWA provided, at nil cost, a climate scientist to work with Watercare on secondment during the quarter. The intention of the secondment was to highlight the linkages between weather and climate variability and water demand, water supply and water quality. This will assist in jointly developing a plan for new prediction tools in the future if required.

HIGHLIGHTS FOR THE LAST QUARTER

1. Strategic consents

During January, there were various consents granted for the North Harbour 2 Watermain with favourable conditions. However, in February, an appeal was made to the Environment Court by Stride Holding in relation to the resource conditions as they related to construction activities on road reserve adjacent to their land. A decision is currently pending.

In February, Watercare was granted a consent for an additional 25ML/d abstraction from the Waikato river when the river flows are above median.

Watercare received the Environment Court's favourable interim decision for the Pukekohe East Reservoirs consents.

During March, consents for the pump stations, transfer pipeline, discharge structure and discharges were granted for the Northern Sub-Regional Wastewater Servicing Project (Warkworth and Snells Beach) with acceptable conditions.

The new consent for the Omaha Wastewater Treatment Plant discharge was granted for a 35 year term with acceptable conditions.

2. Statement of Intent

Watercare's 2017-20 Statement of Intent was submitted to Auckland Council on 1 March 2017, and is under revision following receipt of the response from Auckland Council.

3. Tauranga City Council

Watercare hosted visitors from Tauranga City Council to discuss opportunities for sharing knowledge and learnings.

4. Gippsland Water, Western Port Water and Queensland Urban Utilities

Paul Clark (GM Customer & Communication) from Gippsland Water and Gareth Kennedy (GM Customer & Community) from Western Port Water visited Auckland on 8 February 2017. Queensland Urban Utilities also visited Watercare during the quarter. These visits provide Watercare with the opportunity to mutually share knowledge and learnings with industry peers.

5. Water Authority Fiji

Three representatives from Water Authority Fiji (WAF) (sponsored by LGNZ and part of the WAF/Watercare Liaison Program) visited Watercare in February for training in water supply modelling and analysis. Training included a series of specific modelling sessions over the week with additional input from the broader planning team on pump station design considerations, project prioritisation, non-revenue water and a site visit to the Waitākere.

6. Central Auckland Stormwater and Wastewater Network Optimisation Programme

As reported previously, in response to the Mayor's Letter of Expectation, Watercare has established a Steering Group for this work with joint representation from Auckland Council and Watercare.

There are three main objectives of the Central Auckland Network Optimisation Programme (CANOPy), summarised as follows:

- Develop integrated strategies for the provision of stormwater and wastewater services in the Central Auckland area for the draft 2018 Long Term Plan (LTP);
- Jointly support consultation on this strategy with the wider community, and;
- Demonstrate exemplar behaviour of collaboration within the Council family.

The project operates under four key principles, summarised below.

1. Each organisation's governance arrangements will not be compromised;
2. The value capture of benefits and/or services will be fairly and equitably distributed between Auckland Council and Watercare, particularly around inflow and infiltration, the Watercare network discharge consent and the combined sewer network and flood mitigation;
3. The parties will work collaboratively together to develop the integrated strategy, and;
4. Any technical solutions will be supported by robust evidence for inclusion in a business case to the respective governing bodies.

The CANOPY team is a joint group of technical specialists from Watercare and Auckland Council's stormwater department, Healthy Waters, using a toolbox of solution options to provide capacity for growth whilst reducing the frequency of overflows from the combined network overflow structures.

The toolbox of solutions for each individual catchment includes combined network separation, storage tanks, wastewater and stormwater conveyance pipes and operational controls to improve the quality of urban streams and the Waitematā Harbour. Costs of the options will be evaluated and assessed to inform Watercare and Healthy Waters inputs to Council's LTP.

A draft report will be presented to Watercare and Council Chief Executives' in June 2017 for internal discussion. Watercare will then reconvene the International Review Panel (IRP) to consider the recommendations in the context of the IRP's September 2016 report "Review of the Central Interceptor and Combined Sewerage Areas". The agreed programmes of work will be included within the Auckland Council 2018 Long Term Plan; external consultation material is being formalised towards the end of 2017.

7. Auckland Council Parks

A protocol was signed in March between Watercare and Auckland Council Parks covering investigations, planning and consenting activities within parks.

8. Urban Development Authorities

During the quarter, the Government released the "Urban Development Authorities – Discussion Document" which empowers nationally or locally significant urban development projects to access more enabling development powers and land use rules. Watercare has been working with Auckland Council during the quarter in relation to the submission in response to this Discussion Document.

FUTURE OUTLOOK

1. Resilience

Following the weather events experienced in March / April, Watercare has identified a number of short term improvements at the three major Water Treatment Plants (Ardmore, Waikato and Huia) which will provide additional resilience for continued operation during extreme weather events. Investigations into these improvements have commenced, with the improvements at Ardmore WTP having the highest priority. The intent is that Ardmore WTP will be fully available ahead of the 2017/18 summer period.

Longer term, alternate water sources have been identified in case Watercare is unsuccessful in obtaining an increased Waikato River take. All these sources have significant capital and operating cost increases over the option of the Waikato River.

2. Section 17A Review

Watercare is looking forward to participating in the “cost effectiveness” reviews.

3. Water levels

Given the weather events experienced in early to mid-March, the Total System Storage is extremely high and the risk of shortfall for the coming year is negligible.

4. Office of the Auditor General’s draft 2017/18 Annual Plan

The leadership team of the Office of the Auditor General (OAG) have advised that the water theme for the draft 2017/18 Annual Plan with a focus on stormwater management which is Auckland Council’s responsibility. The proposed programme topics that the OAG intend to focus on will be included in the draft Annual Plan and include:

- Security of drinking water supply sources.
- Optimising demand and supply for drinking water.
- Progress on freshwater quality management since 2011.
- Management of stormwater networks to reduce the effect of flooding.

INFRASTRUCTURE PROJECT UPDATES

1. Hunua 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. The route is challenging and runs along Manukau Road, SH1 and Khyber Pass Road. To minimise disruption along these roads, construction will be undertaken by tunnelling. The design of section 11 is progressing and detailed planning for further geotechnical investigations and contamination testing is complete. Consultation with stakeholders and landowners has begun and negotiations are ongoing with AMA/NZTA regarding access to the motorway corridor for the tunnel. 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

The contract for the upgrade of the Army Bay WWTP Outfall and UV Plant Upgrade has been let. 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. Tenders were sought from two pre-qualified contractors, with expertise in coastal marine pipelines, who had been involved in an early contractor involvement process. The design build solution will see a new trenchless technology, direct pipe, being introduced into the New Zealand market. This provides further endorsement of the approach of seeking market innovation in areas where construction techniques can add significant value and influence to the overall outcome of the project. Construction is expected to commence late in 2017, following the approval of the design, with overall completion in December 2018.

3. Wairau Eastern Rising Main

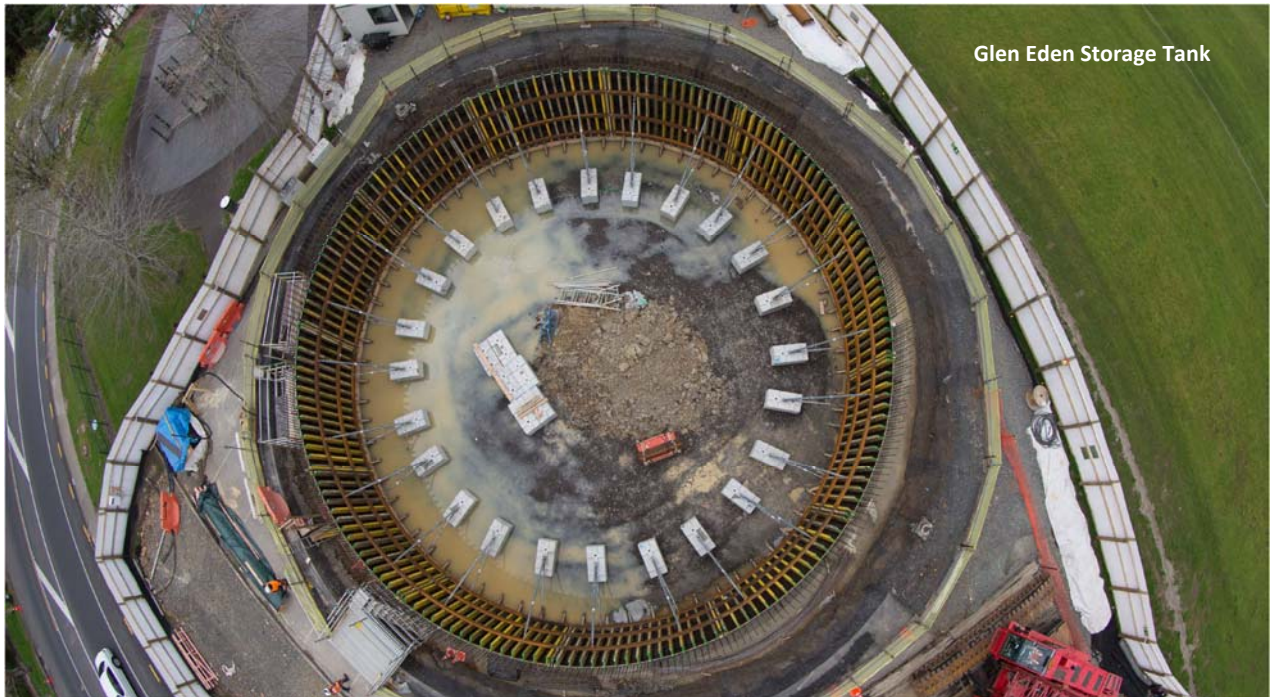
The contract for the replacement of the Wairau Eastern Rising Main section along Wairau Road has been let. This project provides a duplicate rising main from the Wairau Wastewater Pump Station. The contractor will utilise a trenchless technology, pipe jacking, for the majority of the route to minimise disruption along this heavily trafficked corridor. The tunnelling machine for this project has been ordered and construction on site is due to commence in late May following the receipt of resource consents, with overall completion in June 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 heading towards completion in the third quarter of this year. 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 construction works are well progressed with the shell of the tank nearing completion. The proposed public open day had to be cancelled due to bad weather and the opportunities to reschedule this are being investigated. The construction of three sections of the pipeline along Glendale Rd have been completed but poor ground conditions are hampering progress of the remaining sections, the construction of the pipeline in Sherrybrook Reserve is approximately 50% complete and all works are scheduled to be completed by the end of the year.



6. Collingwood and Franklin Road Sewer and Stormwater Separation and water supply renewal

The section between Wellington St and Victoria West St has been completed and handed over to Vector to finalise their electrical network. The wastewater pipeline in Collingwood St is nearing completion. A quarter of all the private networks inside properties have been successfully completed. The construction has started on the water mains along Franklin Rd from Wellington St toward Ponsonby Rd. On-going co-operation between Watercare, Healthy Waters, Vector, Auckland Transport and other stakeholders is continuing to the benefit of the project and the public.

7. North Harbour 2 Watermain and Northern Interceptor

The designation for Phase 2 of the Northern Interceptor was approved in March. 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 designation hearing for the future phases of the Northern Interceptor was held in March 2017 and the decision on the Notice of Requirement is due April 2017. This will complete the protection of the route for this critical infrastructure. The resource consents for the future works will be completed nearer the time of construction which is phased over several decades. The Phase 2 resource consent may proceed this year to meet the growing need of north-western development.

The resource consents for the North Harbour 2 Watermain were granted in January and with the consented Greenhithe Bridge Duplication secure the consents for the entire 33km route of this pipeline. In February, an appeal to The Environment Court was made related to construction activities, the Court has put the appeal on hold until 14 June. Watercare continue to work with appellants in relation to this. The opportunity is being taken to advance works to avoid impact with other developments in the Hobsonville and Schnapper Rock areas. Close co-operation continues with other major infrastructure projects which are being undertaken at Westgate, Hobsonville and the Northern Corridor.

FINANCIAL RESPONSIBILITY

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



Financial Performance

\$'m	FY17 Q3 YTD Actual	FY17 Q3 YTD Budget	Variance YTD
Operational			
Revenue	457	431	26
AC funding	-	-	-
Expenditure excluding depreciation	217	223	6
Depreciation and amortisation	171	170	(1)
Capital Expenditure	223	252	29
Net borrowings - AC	1,307	1,322	15
Net borrowings - External	306	302	(4)

Revenue

Year to date revenue was \$457m. The result is \$26m favourable to budget primarily due to infrastructure growth charge revenue favourable by \$9.7m due to increased construction activity, vested asset revenue favourable by \$16.7m, new developments revenue favourable by \$1.2m and water & wastewater revenue favourable by \$0.7m. This has been partially offset by other revenue, which is unfavourable by \$2.3m mainly due to the reduction in FY16 subvention revenue from Auckland Council.

In the month of March, water and wastewater revenue was below budget by \$2 million due to the reduced water usage as a result of the request to the public to reduce water usage following the Hunua weather event.

Expenditure

Operating expenses were \$217m, \$6m favourable to budget with favourable variances for asset operating costs, maintenance costs, professional services and general overheads. These were partially offset with higher labour costs. Interest expense is \$0.3m favourable.

Depreciation and amortisation

Depreciation and amortisation was \$0.8m unfavourable mainly due to accelerated depreciation on assets identified for disposal.

Capital expenditure

Capital expenditure was under budget by \$29m (12%) primarily due to:

- Timing delays as a result of extended contract negotiations, further assessment of alternate construction methodologies, and dependencies on other projects;
- Delays to projects in construction primarily due to the weather events during the period significantly impacting on operations which resulted in delays to planned shut downs and required resources to be re-allocated to priority operational issues. Additionally, some projects have been affected by wet weather events which have had an impact on the rate of construction;

- Project efficiencies identified which have reduced forecast spend including the Rosedale Expansion project; and
- Reprioritisation of IS initiatives resulting in a deferral of budgeted projects.

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

Borrowings

Overall net borrowings were \$11m below budget due primarily to the beneath budget capital expenditure, offset partially by a higher debt at the beginning of the year than assumed when the budget was set.

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 this might be that 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.

The details of the results of the Trust and the WUCAT meetings held during the quarter are set out in Appendix B.

PERFORMANCE MEASURES

Measure	2016/17 Target	Jan 2017	Feb 2017	Mar 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	0.03	0.03	0.03
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	42 mins	41 mins	41 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	3.2 hours	3.0 hours	2.9 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	1.4 days	1.2 days	1.1 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	3.1 days	2.9 days	2.3 days
Percentage of customers surveyed satisfied with Watercare's delivery of water and wastewater services	≥80%	81.8%	82.1%	82.2%
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 authority's networked reticulation system	≤ 10	6.1	6.0	5.8

Measure	2016/17 Target	Jan 2017	Feb 2017	Mar 2017
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	49 mins	49 mins	49 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	3.0 hours	3.0 hours	3.1 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	22.1	22.1	23.2
Percentage of complaints being 'closed and resolved' within 10 working days (12 month rolling average)	≥95%	94.6%	95.9%	96.9%
Percentage of the 19 Iwi groups throughout Auckland that Watercare have entered into a Memorandum of Understanding with (target for end of FY16/17)	≥60%	15.7%	15.7%	15.7%
Lost-time injury frequency rate per million hours worked (12 month rolling average)	≤5	1.87	2.47	1.82
Percentage of voluntary leavers relative to number of permanent staff (12 month rolling average)	≤12%	11.31%	10.67%	10.04%
Total recordable injury frequency rate per million hours worked (12 month rolling average)	<20	14.31	12.95	10.93
Minimum funds flow from operations to interest cover (FFO) before any price adjustment	≥2.5	3.95	4.02	3.99
Percentage of household expenditure on water supply services relative to the average household income	≤1.5%	0.88%	0.89%	0.89%
The average consumption of drinking water per day per resident (gross PCC) (12 month rolling average)	272 + / - 2.5%	272	271	271
The percentage of real water loss from the local authority's networked reticulation system (rolling 12 month average)	≤13%	13.2%	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 the focus continues to be on formalising and re-invigorating friendship relationships and engagement with the 19 mana whenua entities by the preparation and making contact with those mana whenua who do not have a formal relationship agreement with Watercare.

Initiative - Water Supply and Wastewater	How it contributes to Māori outcomes	Progress	Q3 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>Currently the Mana Whenua Kaitiaki Manager's Group meets bi-monthly. There has been a focus on correctly developing the individual relationship of Mana Whenua with Watercare by formalising the relationship through individual relationship agreements that support and are in alignment with the Mana Whenua Kaitiaki Forum Relationship Agreement 23 November 2012 that addresses regional issues affecting Mana Whenua.</p> <p>The last meeting was held on 9 February 2017.</p>	\$34,660
<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>Mana Whenua are seeking higher quality delivery outcomes for the environment from Watercare projects. Following significant engagement with local Mana Whenua, consents have been granted for Warkworth, Snells Beach and Omaha. Other projects have also received good support from Mana Whenua. Of particular note has been engagement in the Kaipara area at hapū level.</p>	\$249,721

KEY LOCAL BOARD ISSUES

During the quarter, Watercare, Auckland Transport, NZTA, Auckland Council Parks and the Upper Harbour Local Board continued to work collaboratively on a joint initiative to develop a shared use bridge associated with the Albany to Pinehill watermain project and the Northern Motorway Corridor improvements. Several joint meetings have been held with the local board and final landowner approval for the project in Spencer Road Reserve is pending. This project represents an excellent example of the different agencies working to together for mutual benefit of the community.

Waitematā Local Board requested a debrief in response to the NZ Herald articles on wastewater overflows from the combined stormwater and wastewater network. The meeting was constructive and Local Board members have been invited to join Watercare in Newmarket for a more comprehensive briefing including information on the regional network discharge consent.

Watercare also liaised with a number of local boards in response to network blockages from fats, oils, grease and wet wipes. The Chair of the Maungakiekie Tamaki Local Board also contributed a statement to a "Glen Innes" matters newsletter which was sent to 3,000 households reminding people about how to care for wastewater drains and local waterways.

Rodney Local Board was notified of the very low level herbicide detection in Warkworth water supply prior to a media release. Public health was not at risk.

The Waitākere Ranges Local Board was provided with information on the Western Water Strategy and Huia Water Treatment Plant replacement in preparation for public information evenings later in February.

Watercare has begun consultation on the replacement of the ageing Huia Water Treatment Plant. Waitākere Ranges Local Board members and western ward Councillors joined Watercare at public meetings in Oratia and Titirangi. Watercare listened to feedback and answered questions. The views of the community were expressed and feedback continues to be collated as part of the final assessment process before a final decision is notified. Following the meetings, Watercare attended a subsequent debrief at a Local Board workshop where we also clarified information that Exhibition Drive was not being put up for sale to developers.

Local Board members and staff were notified in advance of Watercare's request for Aucklanders to each save 20 litres of water in response to limited treatment capacity at Ardmore Water Treatment Plant, the result of extreme weather and sediment laden water.

A range of wastewater overflow escalations were responded to in response to public enquiries to Local Board member. Consultation on the regional network discharge consent continued with presentations to the Howick and Maungakiekie Tamaki Local Boards.

QUARTERLY RISK MANAGEMENT UPDATE

As reported above, the “Tasman Tempest” storm event of 7 and 8 March 2017 saw unprecedented levels of silt in the raw water entering the Ardmore Water Treatment Plant, which impacted production of potable water. In addition other plants, (principally Waikato) were impacted, and this combined impact on the water supply and treatment increased the risk that Watercare would not be able to supply sufficient quantities of treated water to meet demand. In the worst case a ‘boil water notice’ would have been required if we had been forced to supply partially treated water to meet demand.

Risks regarding the deterioration of raw water quality affecting treatment processes and potentially compromising compliance with Drinking Water Standards for New Zealand are captured in Watercare’s Water Safety Plans (WSPs). These WSPs have been approved by the Auckland Regional Public Health Service – Drinking Water Assessment Unit based on compliance with legislation and guidance provided by the Ministry of Health.

At an Enterprise Risk level, water production sufficient to meet 3 day peak demand is now recognised as a more acute risk, while the raw water in the Hunua dams remain heavily silted. The risk recognises the increased likelihood of production impacts should further silt enter the dams in the Hunuas, or other sources degrade as well.

It should be noted that at no time during or post the weather event was there any compromise of quality or risk to public health, and we continued to meet our commitment to provide “Aa” grade water. Actions designed to mitigate the impact of the degraded water over the short to medium term are underway and will ensure that Watercare can meet the higher seasonal demand which will occur from November 2017 onwards. Hydro seeding has been undertaken on the slopes which were subject to significant erosion during the “Tasman Tempest”.

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, with the exception of the matter noted immediately above. 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 disclosure. There were no such events during the reporting period.

Appendix A – “Tasman Tempest”

The information set out in relation to the weather events is the best available information as at 20 March 2017. The information set out, including the figures, may change following verification and validation of data.

The “Tasman Tempest” which brought extreme rainfall across the region from 7 - 12 March 2017 impacted significantly on Watercare’s operation, in particular the water supply system.

Watercare received from MetService a weather forecast on 7 March which indicated five-day accumulated rainfall totals 110-200mm, and a risk of thunderstorms in the Hunua Ranges. As part of Standard Operating Procedures for high rainfall events, system checking (e.g. generator and fuel availability) was completed across our operating sites.

Rainfall commenced at approximately 3:30pm on 7 March 2017 (Tuesday). It intensified such that by midday on 8 March, 200-250mm of rain had been experienced in the Hunua Ranges. This was followed by a further band of heavy rain across Auckland on 10 - 11 March (Friday - Saturday), and with a final heavy localised downpour in West Auckland on 12 March (Sunday).

To put this level of rainfall in perspective, a comparison with other significant rainfall events has been done using data from the Trig rain gauge in the Hunua Ranges. It is the largest short term rainfall event that has been experienced for many years.

Duration	Cumulative Rainfall (mm)		
	Tasman Tempest	Cyclone Wilma	Cyclone Bola
	7 - 12 March 2017	29 - 30 January 2011	6 - 9 March 1988
12 hours	225	154	
1 Day	247	159	96
2 Day	248	159	145
3 Day	278	159	205
4 Day	353	163	229
5 Day	368	163	268

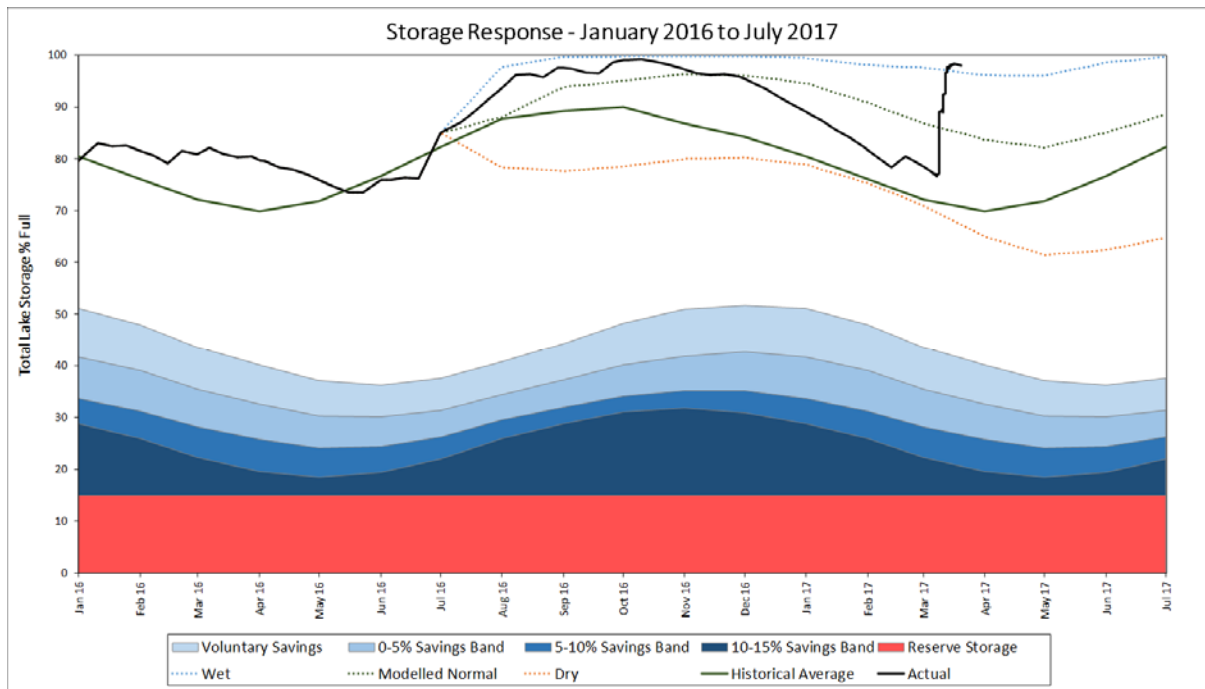
Impact of Weather Events on Operations

This rainfall resulted in a significant impact on our operations (along with widespread flooding in other parts of Auckland). These are detailed in the following sections.

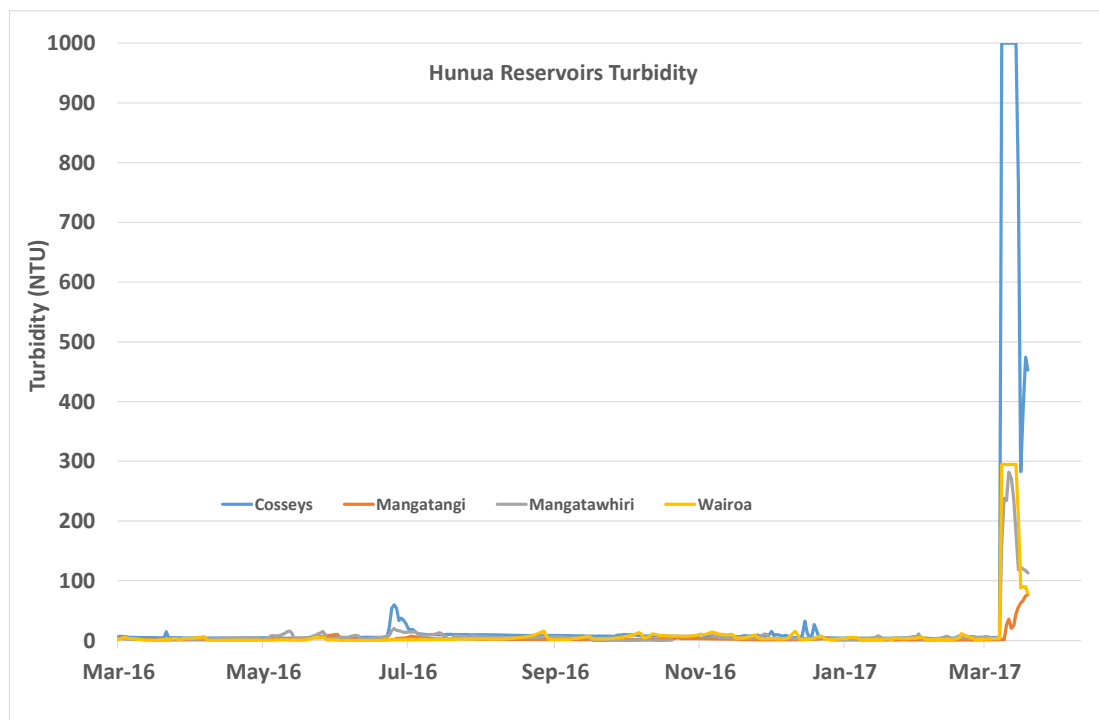
A. Water Supply

The rainfall resulted in an increase in Total Metropolitan System Storage (Waitākere and Hunua Reservoirs) from 76.6% to 98.2%, which is an increase of 20,600,000m³.

A number of the lakes began to spill, with a peak spill volume of 17m³/s recorded at Cosseys Dam. This has been attributed to exacerbating the flooding experienced at Clevedon, but the opposite is true. As none of the reservoirs were full at the start of this event, the capture of a significant volume effectively reduced the peak flow at Clevedon by half.



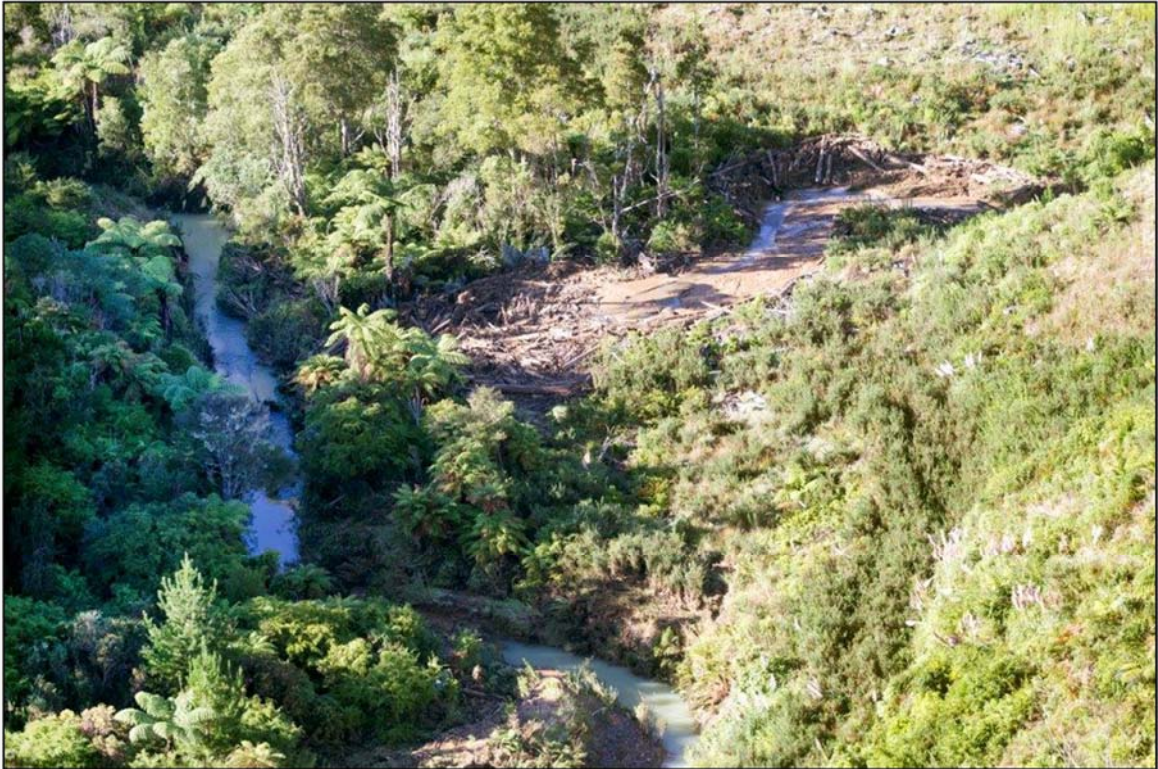
The intensity of rainfall resulted in major slips throughout the Hunua catchments, which caused significant sediment and colloidal (clays) runoff into the reservoirs. This rapidly increased the turbidity (cloudiness) of the water available for abstraction.



In the Hunua's, Cosseys Dam was the most significantly impacted, which has the greatest area of commercial forestry in the catchment.



Southern reservoirs, before (top) and after (below) the “Tasman Tempest”



Slip adjacent to tributary into Cosseys Reservoir





Slips in the catchment

Previous rainfall events (e.g. Cyclone Wilma) had an impact on the water sources, as has past forestry activity in the Hunuwas, but not anywhere near the extent of this event, particularly around the level of colloidal material in the water. The Ardmore Water Treatment Plant (WTP) has previously coped with water quality following such events.

The initial lower level of rainfall on 7 - 8 March (Tuesday & Wednesday) in the Western catchments resulted in a minor increase of turbidity in those areas, but the rainfall on Friday and Saturday resulted in a significant deterioration of water quality, with an increase in the levels of organics in the Waitākere lakes.

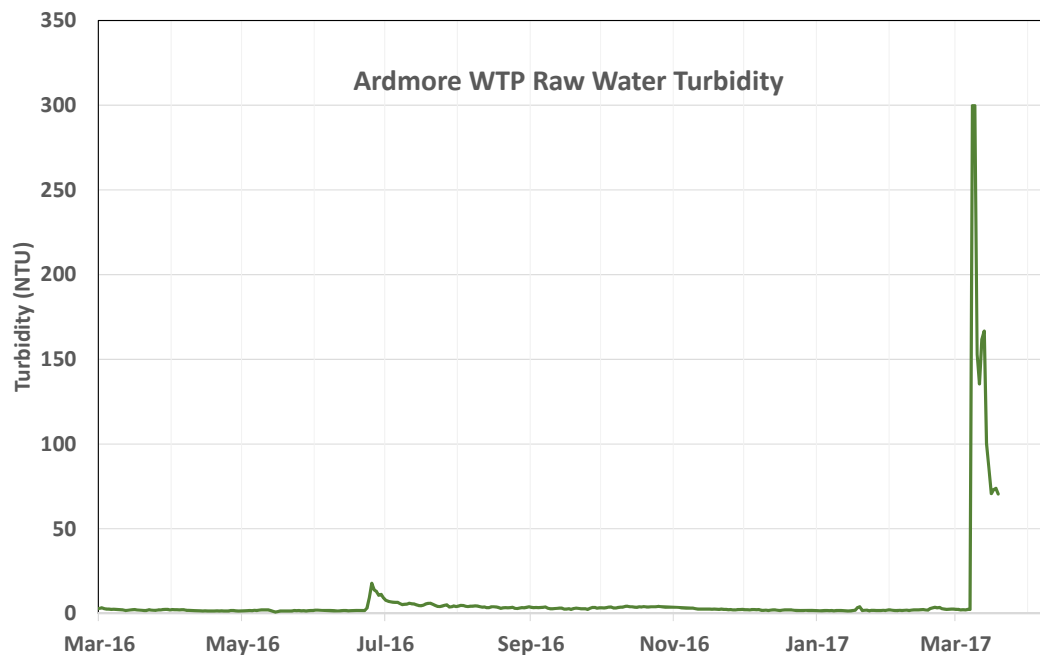
The Waikato River also experienced a major increase in organics to record levels over the week following the rainfall. It is thought that this was a result of runoff from farms, discharges from the shallow lakes adjacent to the river and the impact of the Waipa River which normally carries a higher silt load than the Waikato River. The Waipa River discharges to the Waikato River at Ngaruawahia.

Before the impact on the WTPs is discussed, it is worthwhile to document the maximum and sustainable capacity of the Metropolitan WTPs.

WTP	Capacity (MLD)	
	Peak	Sustainable
Ardmore	350	330
Waikato	150	135
Huia	126	110
Onehunga	17	17
Waitākere	16	13
Total	659	605

While demand dropped during the bad weather, the daily water demand prior to the event was in the range of 450MLD. Without the Ardmore WTP, the sustainable WTP capacity drops to 275MLD, well below the level of daily demand experienced at any time throughout the year.

This rapid change in Hunua raw water quality (refer chart) had an immediate impact on the performance of Ardmore WTP. Normal raw water turbidities are in the range 2-5 Nephelometric Turbidity Unit (NTU), with 14NTU considered high. Compare this with turbidities in excess of 300NTU created during the “Tasman Tempest” in the reservoirs.



At approximately 0630hrs on 8 March (Wednesday), contingency measures began to be implemented to protect the operation of the Ardmore WTP. Measures included:

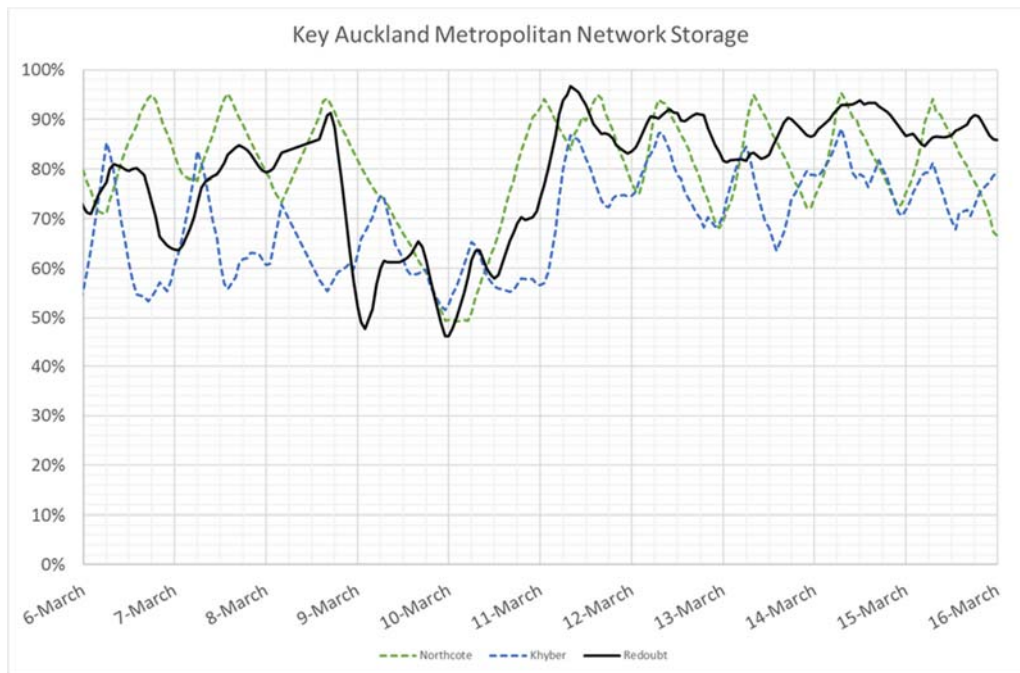
- proactively isolating filters before performance standards were breached;
- reducing flows from Ardmore WTP;
- transferring the majority of the incoming flow to Mangatangi Dam;
- maximising production from other WTPs;
- maximising treated water reservoir levels; and
- optimising and continually testing coagulation processes.

However at 1530hrs on 8 March (Wednesday), it was apparent that the WTP could no longer treat the incoming water to the required standard and the raw water conditions were continuing to rapidly deteriorate. A decision was made to place the WTP in a “clarified to waste” mode of operation, essentially reducing output to 0MLD and an incident declared.



The WTP was restarted at 0200hrs on 9 March (Thursday), with a flow of 140MLD achieved by 0300hrs. This operation continued with significant manual intervention until 1600hrs on 9 March (Thursday), when due to further deterioration of raw water quality, the WTP had to be placed back into “clarified to waste” mode in order to protect treated water quality.

In order to meet demand with no production from the Ardmore WTP, treated water reservoir storage was used. There are a number of key reservoirs that provide a check of the reservoir storage, but the most critical reservoir is the Redoubt Rd complex. The fragility of the situation over this period is shown by the reduction in reservoir levels particularly on 10 March 2017.



At midnight on 9 March (Thursday), it was becoming apparent that without an immediate restoration at Ardmore WTP, there would be insufficient water to meet the coming morning peak demand period and partially treated water would need to be introduced into supply, which would necessitate a “Boil Water” notice being issued. Water Supply staff managed to get the WTP to produce 100 MLD by 0300hrs on 10 March (Friday). This stopped treated water reservoirs reducing to unsustainable levels. The capacity was increased, such that at midday on 10 March the Ardmore WTP was operating at 175MLD, which enabled reservoir levels to be restored sufficiently that the peak demand periods could continue to be met.

Since 10 March, there have been no further outages at the Ardmore WTP and the sustainable capacity has been increased to 230MLD as of 31 March. There were major impacts on the operation of the Waikato and Waitākere WTPs and some of the non-metropolitan WTPs due to a deterioration in water quality, but these were managed.

It is important to stress that throughout the period of 7 -12 March 2017 and since, Auckland continued to receive “Aa” grade treated water.

B. Wastewater

The impact on the wastewater treatment system related to increased flows into the system and on the Waste Water Treatment Plants (WWTPs).

The first rainfall event was not significant due to the rainfall primarily falling in non-serviced areas. Where overflows occurred in the Transmission system, these were at Engineered Overflow Points (EOPs), and Standard Operating Procedures were followed around clean up when the overflows ceased.

The rainfall event on 10 March had a much more pronounced impact, as it fell more within the operating area. There was an increased level of overflows from EOPs, some of significant duration, along with significant flows to all WWTP.

During the “Tasman Tempest”, the Mangere WWTP consistently met its stringent resource consent conditions.

Being the largest and most advanced of its kind in New Zealand, the plant is designed to operate successfully during high rainfall events. The plant met all compliance requirements during the period of heavy rainfall between 8 March and 13 March. This means there was no adverse effect on the receiving environment.

All flows entering the plant between 8 March and 13 March were treated and there were no plant bypasses. The plant is built to handle flows of 16.5 cubic metres per second, and this was not exceeded.

All flows between 8 March and 13 March received at least three stages of treatment. This includes preliminary screening, primary sedimentation and full UV treatment, which kills pathogens that have the potential to harm human health. This is fully compliant with our consent requirements.

To provide some context, at flows of up to nine cubic metres per second, the Mangere Wastewater Treatment Plant offers advanced wastewater treatment, with flows going through five stages of treatment. This is considered advanced by world standards.

At flows higher than nine cubic metres per second, which we experience during extreme weather events due to the high volume of stormwater entering the system, we offer at least three stages of treatment – preliminary screening, primary sedimentation and UV disinfection.

Most wastewater treatment plants around the world only provide up to three stages of treatment. This includes many of the treatment plants in Australia, including the large plants in Sydney. This means that by world standards, three stages of treatment is full treatment.

On 8 March, the Mangere Wastewater Treatment Plant had a total incoming flow of 711,510 cubic metres. For 22 hours on this day, the flow rate exceeded nine cubic metres per second, which resulted in 93,305 cubic metres of diluted wastewater receiving three stages of treatment (considered full treatment) instead of the longer five stages.

During the 10 March and 13 March rain event, the flow rate exceeded nine cubic metres per second for 60 hours. During this time, 671,231 cubic metres of diluted wastewater received three stages of treatment instead of the longer five stages.

C. Networks

The first rainfall event had minor impact in the Northern and Central networks, with a low level of wastewater pump station overflows recorded. In the Southern area there were 44 pump station overflows recorded and the Kawakawa Bay pump station stopped operating after flooding. Mitigation measures were implemented to prevent service disruption to the affected customers. The pump station was returned to service on 9 March (Thursday).

The rainfall from 10 March (Friday) had a major impact on Networks. There were 362 wastewater overflows and 174 pump station overflows recorded from 10 March (Friday) to 12 March (Sunday). A limited number of overflows caused property damage. The most dramatic impact was in New Lynn where the stormwater system was overwhelmed which resulted in the footpath/road collapse/building undermining in Great North Road. This broke the watermain, and it was subsequently capped at both ends while Auckland Transport confirm how the road would be repaired. Customers continued to receive supply.



***Storm flooding resulted in Watercare water assets being damaged
Great North Road, New Lynn***

D. Faults Service

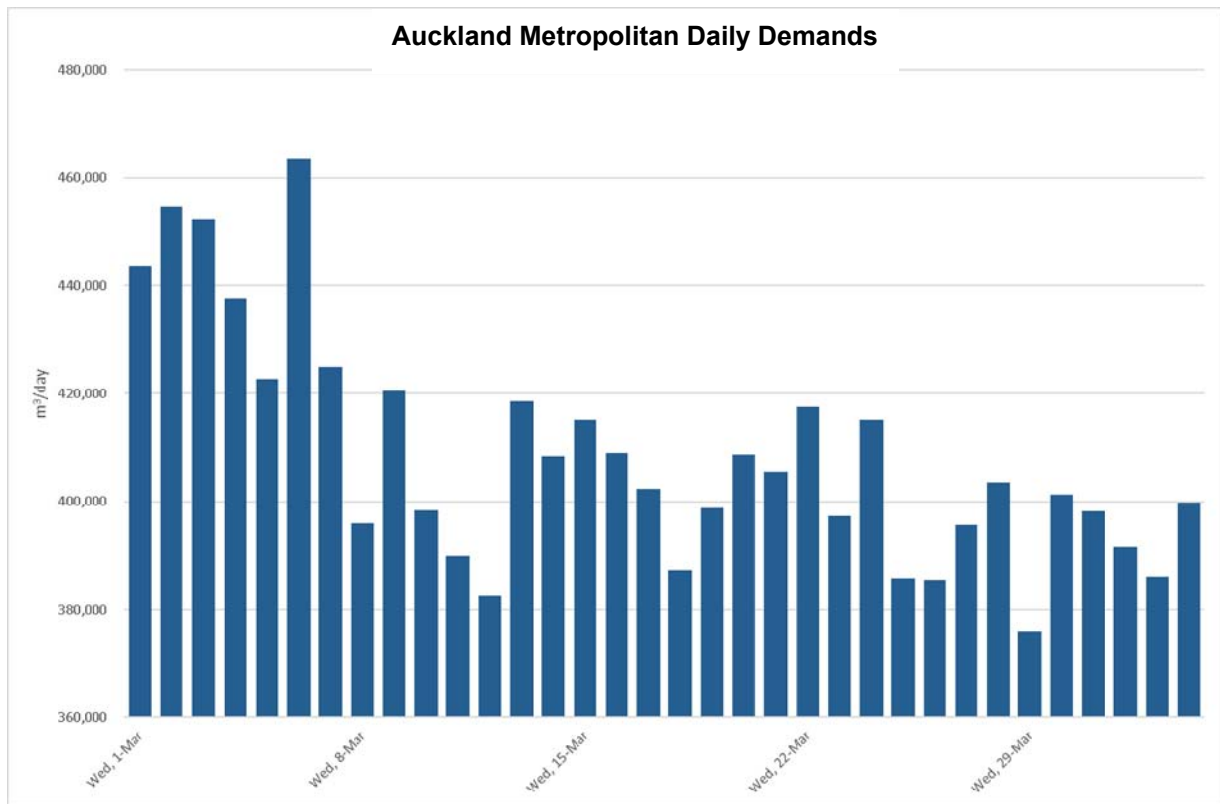
The rainfall from 10 March (Friday) – 12 March (Sunday) resulted in a massive increase in calls to the Faults service. Over that weekend, 1,777 calls (normal average 190 per day) and 200 written enquiries (normal average 30 per weekend) were received. Extra resources were sourced to assist with the call volume. Calls on Monday were at about twice the normal level, with 10% of calls being customers calling back to follow up on an issue.

E. Communications

As the incident developed, it became apparent that ongoing operation of the water supply system was problematic, and that partially treated water from Ardmore WTP might be required to meet demand. As stated previously, this would have required a “Boil Water” notice to be issued. An extensive communications plan was implemented, covering customers, stakeholders, media and staff to advise of this issue, and what they could do to prevent this from occurring (reduce demand). The first public notification occurred in the afternoon of 10 March (Friday) at a media conference, and since then there has been widespread media coverage. The Chief Executive and other senior staff appeared frequently on both television and radio shows.

At the heart of the plan was the request to “Save 20”. This was a call for the public to save 20 litres of water per person per day by being more efficient in their everyday use of water. The examples given were taking a shorter shower by 2 minutes, and not leaving the tap running while brushing ones teeth. Advertisements ran on the radio and print media, along with public noticeboards and electronic signboards around Auckland.

The requirement for this programme was to reduce daily water demand to 400ML, which was in line with the then current sustainable capacity of the WTPs. The public responded well to this and a noticeable drop in daily demand was recorded.



Stakeholders briefing sessions were held frequently, with representatives from Auckland Regional Public Health Service, Civil Defence, Veolia and Auckland Council. The Chief Executive provided ongoing briefings to the Board, Local and Central Government.

We worked with our large customers to identify measures they could take to reduce water demand, along with discussing the implications of a “Boil Water” notice on their operations.

Appendix B – 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
(YTD) June 2017	80	\$68
Total	676	\$646

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
676	511	78	87

Amount of Relief Approved \$	Amount of Relief Fully Earned \$	Relief Yet to be Fully Earned \$	Relief Voided due to Lapsed Unfulfilled Arrangement \$
\$646k	\$530k	\$56K	\$60k

The results of the last 3 WUCAT meetings have seen 26 applicants successfully complete the budget process and have \$20.5k of hardship relief approved by the Trust.

WUCAT Summary last 3 meetings		
Month	Trust approved applications	\$000's
January 2017	0	\$0.0
February 2017	17	\$15.7
March 2017	9	\$4.8
Total	26	\$20.5

Restrictions

The status of restrictions as at 31 March 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
(YTD) 30 June 2017	7	3	10	8	17	11
TOTAL	80	73	107	82	187	155
Restrictions Currently	7		25		32	