

Long Term Plan 2018-28 Service Plan for Water Supply

Adopted by Council with the final Long Term Plan 2018-28 on 26 June 2018
Updated with Annual Plan 2019/20 adopted by Council 25 June 2019



Approvals		
Role	Name	Signature and date of sign-off
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Table of Contents

What does the overall Group of Activities do and why do we do it?	4
1. What does this activity deliver?	4
2. Why do we deliver this activity?.....	5
3. Specify Levels of Service	7
4. What levels of service do we propose to change from the current LTP and why?	18
5. How will the assets be managed to deliver the services?	18
6. What financial resources are needed?	19
7. How much capital expenditure will be spent, on what category of asset, and what are the key capital projects for this activity?	19
8. Are there any significant negative effects that this activity will create?	20
9. Does this Service Plan need to change as a result of a service delivery review?	22

What does the overall Group of Activities do and why do we do it?

Christchurch City Council builds, owns, operates and maintains water sources, networks and treatment plants to provide safe drinking (potable) water to the community. The service is focused on ensuring a reliable supply of safe drinking water to support healthy communities and a prosperous economy.

The service which includes the abstraction, treatment, storage and distribution of water is core business for the Council, required by the Local Government Act 2002 and the Health Act 1956.

Council implements these services for the community through planning, day to day operations, planned and reactive maintenance, repair and renewal of damaged infrastructure, building new infrastructure and implementing improvements to the system and measures its performance in terms of safety, quality and reliability.

1. What does this activity deliver?

The objective of the activity is to abstract, treat and distribute water in a way that protects public health without negative effects on the environment. This is physically delivered in the following ways:

- Provide a safe and reliable potable water supply
- Secure and protect water from contamination
- Monitor water quality for compliance with the Drinking-water Standards for New Zealand (DWSNZ)
- Plan, regulate, build, maintain, manage and renew water supply systems.

The Council supplies water to approximately 160,000 residential and business customers through seven urban water supply schemes and six rural water supply schemes, via 3,400 km of mains and sub-mains 35 reservoirs, 129 pump stations, 160 wells and 7 stream intakes and 7 water treatment plants. The water supply system is monitored and controlled by an extensive SCADA system; however costs of the SCADA system are provided through the Wastewater activity.

2. Why do we deliver this activity?

Providing good-quality water infrastructure that is efficient, effective and appropriate to present and anticipated future circumstances is one of the purposes of local government as set out in the Local Government Act 2002.

Providing a water supply that is safe to drink and sustainable is a fundamental requirement for safe and healthy urban communities. The community expects the Council to provide good quality, reliable water services in a cost-effective, equitable and sustainable manner.

This activity is also undertaken in accordance with:

- Drinking-water Standards for New Zealand (2005, revised 2008)
- Health Act 1956
- Resource Management Act 1991
- Health and Safety at Work Act 2015
- National Policy Statement on Urban Development Capacity 2016
- Water Supply, Wastewater and Stormwater Bylaw 2014

The Council must deliver the water supply service to comply with:

Safe drinking water standards: The Health Act 1956, as supported by the Drinking-Water Standards for New Zealand specifies standards for drinking water quality and securing a safe supply.

Abstraction of raw water: The Council is consented in terms of the Resource Management Act 1991 on the volume of water which it may sustainably take from a given water resource.

Water services assessments: The Local Government Act 2002 requires a territorial authority to assess, from a public health perspective, the adequacy of its water supply in light of health risks, quality of service, current and future demand and regulatory compliance with drinking water standards.

Fire flow: Although the New Zealand Fire Service Firefighting Water Supplies Code of Practice is not mandatory, the Council provides fire hydrants as part of its urban water reticulation system and aims to maintain the minimum expected water supply for firefighting at 25 litres per second with a resulting residual pressure of not less than 100 kilopascals (kPa).

Development capacity to meet demand: The National Policy Statement on Urban Development Capacity 2016 directs local authorities to provide sufficient development capacity for housing and business growth to meet demand, including the provision of adequate infrastructure for supporting greenfield sites or intensification of existing urban environments. The focus is on ensuring responsive and integrated planning to service urban growth areas. The Council must ensure that there is enough serviced development land for the next three years, and have serviced land or funding in the Long Term Plan to ensure that there is enough serviced development land for the next ten years.

The [Christchurch City Council Water Supply Strategy 2009-2039](#) provides the strategic framework for the water supply service.

The water supply service is critical for achieving and supporting Council's strategic directions, including:

- Safe and sustainable supply water supply and improved waterways including:
 - Communities are actively involved in programmes that promote water conservation, water quality and valuing our waterways
 - The quality and quantity of aquifer water provides high quality sustainable drinking water now and in the future
- Informed and proactive approaches to natural hazard risks
 - We manage and adapt to the impacts and consequences of natural hazards
 - Infrastructure is designed and built to withstand expected natural hazard risks
 - Partner with communities to minimise, mitigate, manage and adapt to natural hazard risks
 - Wide understanding of our natural hazard risks contributes to building community resilience.

There are several Community Outcomes that relate directly to the water supply service:

- Safe and healthy communities
- High quality drinking water
- Sustainable use of resources
- Modern and robust city infrastructure and facilities network.

3. Specify Levels of Service

The Levels of Service, Performance Measures and Performance Targets for the Water Supply activity are provided below. Shaded rows are the levels of service and performance measures to be included in the Long Term Plan. Non-shaded rows are non-LTP management level measures.

Performance Standards Levels of Service	Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28	
					Year 1	Year 2	Year 3		
					2018/19	2019/20	2020/21		
Supplying potable water to properties, through the provision of infrastructure to take, treat (where appropriate), store, deliver, maintain, manage and monitor the supply.									
12.0.1			12.0.1			12.0.1.13	12.0.1.13	12.0.1.13	12.0.1.13
12.1.1	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network	Resident satisfaction surveys	New target – no current performance		Target 1 Proportion of residents satisfied with reliability of water supplies: ≥ 85%	Target 1 Proportion of residents satisfied with reliability of water supplies: ≥ 85%	Target 1 Proportion of residents satisfied with reliability of water supplies: ≥ 85%	Target 1 Proportion of residents satisfied with reliability of water supplies: ≥ 80%
12.0.1			12.0.1			12.0.1.2	12.0.1.2	12.0.1.2	12.0.1.2
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network	Monthly Contractor reports giving the total number of unplanned interruptions to date in a year divided by the number of properties served multiplied by 1,000.	15.8 in 2015/16	Average of 7.8 in Water NZ National Performance Review 2015/16.	Target 2 Number of unplanned interruptions per 1,000 properties served per year: ≤ 16	Target 2 Number of unplanned interruptions per 1,000 properties served per year: ≤ 16	Target 2 Number of unplanned interruptions per 1,000 properties served per year: ≤ 16	Target 2 Number of unplanned interruptions per 1,000 properties served per year: ≤ 16

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
12.0.1			12.0.1			12.0.1.1	12.0.1.1	12.0.1.1	12.0.1.1
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network	Monthly Contractor reports giving the total number of unplanned interruptions longer than 4 hours from notification to resolution each week divided by weeks to date.	0.82 in 2015/16		12.0.1.1 Target 3 Weekly average of the number of unplanned interruptions of greater than 4 hours duration each year: ≤ 1	12.0.1.1 Target 3 Weekly average of the number of unplanned interruptions of greater than 4 hours duration each year: ≤ 1	12.0.1.1 Target 3 Weekly average of the number of unplanned interruptions of greater than 4 hours duration each year: ≤ 1	12.0.1.1 Target 3 Weekly average of the number of unplanned interruptions of greater than 4 hours duration each year: ≤ 1
12.0.1			12.0.1			12.0.1.7	12.0.1.7	12.0.1.7	12.0.1.7
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network. Department of Internal Affairs, Water Supply non-financial performance measure 4d	Number of complaints divided by the total number of properties connected to the water supply network divided by 1,000.	1.24 in 2015/16	Average of 4.17 in Water NZ National Performance Review 2015/16.	12.0.1.7 Target 4 Number of continuity of supply complaints per 1,000 properties served per year: ≤ 2	12.0.1.7 Target 4 Number of continuity of supply complaints per 1,000 properties served per year: ≤ 2	12.0.1.7 Target 4 Number of continuity of supply complaints per 1,000 properties served per year: ≤ 2	12.0.1.7 Target 4 Number of continuity of supply complaints per 1,000 properties served per year: ≤ 2
12.0.1			12.0.1			12.0.1.14	12.0.1.14	12.0.1.14	12.0.1.14
12.1.1 cont'd	Council operates water supplies in a reliable and	Community outcome: Modern and robust city infrastructure and facilities network	Resident satisfaction surveys	New targets – no current performance		12.0.1.14 Target 5 Proportion of residents satisfied with the	12.0.1.14 Target 5 Proportion of residents satisfied with the	12.0.1.14 Target 5 Proportion of residents satisfied with the	12.0.1.14 Target 5 Proportion of residents satisfied with the

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
	responsive manner					responsiveness of Council water supplies: ≥ 85%	responsiveness of Council water supplies: ≥ 85%	responsiveness of Council water supplies: ≥ 85%	responsiveness of Council water supplies: ≥ 80%
12.0.1			12.0.1			12.0.1.10	12.0.1.10	12.0.1.10	12.0.1.10
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, Water Supply non-financial performance measure 3a	The median response time measured from the time that the Council receives notification of the issue to the time that service personnel reach the site. Reported in monthly contract reports from the Contractor	0.6 hours in 2015/16	Average of 0.63 hours in Water NZ National Performance Review 2015/16.	Target 6 Median time from notification to attendance of urgent call-outs: ≤ 1 hour	Target 6 Median time from notification to attendance of urgent call-outs: ≤ 1 hour	Target 6 Median time from notification to attendance of urgent call-outs: ≤ 1 hour	Target 6 Median time from notification to attendance of urgent call-outs: ≤ 1 hour
12.0.1			12.0.1			12.0.1.12	12.0.1.12	12.0.1.12	12.0.1.12
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, Water Supply non-financial performance measure 3b	The median resolution time measured from the time that the Council receives notification of the issue to the time that service personnel confirm resolution of the issue.	1.7 hours in 2015/16	Average of 2.98 in Water NZ National Performance Review 2015/16.	Target 7 Median time from notification to resolution of urgent call-outs: ≤ 5 hours	Target 7 Median time from notification to resolution of urgent call-outs: ≤ 5 hours	Target 7 Median time from notification to resolution of urgent call-outs: ≤ 5 hours	Target 7 Median time from notification to resolution of urgent call-outs: ≤ 5 hours

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
			Reported in monthly contract reports from the Contractor.						
12.0.1			12.0.1			12.0.1.9	12.0.1.9	12.0.1.9	12.0.1.9
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, Water Supply non-financial performance measure 3c.	The median response time measured from the time that the Council receives notification of the issue to the time that service personnel reach the site. Reported in monthly contract reports from the Contractor.	4.6 hours in 2015/16	Average of 18 hours in Water NZ National Performance Review 2015/16.	Target 8 Median time from notification to attendance of non-urgent call-outs: ≤ 3 days	Target 8 Median time from notification to attendance of non-urgent call-outs: ≤ 3 days	Target 8 Median time from notification to attendance of non-urgent call-outs: ≤ 3 days	Target 8 Median time from notification to attendance of non-urgent call-outs: ≤ 3 days
12.0.1			12.0.1			12.0.1.11	12.0.1.11	12.0.1.11	12.0.1.11
12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, Water Supply non-financial performance measure 3d	The median resolution time measured from the time that the Council receives notification of the issue to the time that service personnel confirm resolution of the issue.	11.6 hours in 2015/16	Average of 29 hours in Water NZ National Performance Review 2015/16.	Target 9 Median time from notification to resolution of non-urgent call-outs: ≤ 4 days	Target 9 Median time from notification to resolution of non-urgent call-outs: ≤ 4 days	Target 9 Median time from notification to resolution of non-urgent call-outs: ≤ 4 days	Target 9 Median time from notification to resolution of non-urgent call-outs: ≤ 4 days

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
			Reported in monthly contract reports from the Contractor.						
12.0.1 12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, Water Supply non-financial performance measure 4c	12.0.1 The number of complaints about water flow or pressure received through the call centre, expressed per 1,000 properties connected to the Council's water supply system	1.77 in 2015/16	Average of 2.66 in Water NZ National Performance Review 2015/16.	12.0.1.8 Target 10 Number of pressure or flow complaints per 1,000 connections per year: ≤ 2	12.0.1.8 Target 10 Number of pressure or flow complaints per 1,000 connections per year: ≤ 2	12.0.1.8 Target 10 Number of pressure or flow complaints per 1,000 connections per year: ≤ 2	12.0.1.8 Target 10 Number of pressure or flow complaints per 1,000 connections per year: ≤ 2
12.0.1 12.1.1 cont'd	Council operates water supplies in a reliable and responsive manner	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, Water Supply non-financial performance measure 4e	12.0.1 The number of complaints about the Council's response to complaints received under 12.1.1 Target 4, 12.1.1 Target 10, 12.3.1 Target 2 and 12.3.1 Target 3 received through the call centre, expressed per 1,000 properties connected to the Council's water supply system	New LoS – no current performance		12.0.1.15 Target 11 Number of complaints regarding Council's response to complaints about drinking water taste, odour, pressure or flow, or continuity of supply per 1,000 properties	12.0.1.15 Target 11 Number of complaints regarding Council's response to complaints about drinking water taste, odour, pressure or flow, or continuity of supply per 1,000 properties	12.0.1.15 Target 11 Number of complaints regarding Council's response to complaints about drinking water taste, odour, pressure or flow, or continuity of supply per 1,000 properties	12.0.1.15 Target 11 Number of complaints regarding Council's response to complaints about drinking water taste, odour, pressure or flow, or continuity of supply per 1,000 properties

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
						connected to the Council's water supply system per year: ≤ 0.6	connected to the Council's water supply system per year: ≤ 0.6	connected to the Council's water supply system per year: ≤ 0.6	connected to the Council's water supply system per year: ≤ 0.6
12.0.2			12.0.2			12.0.2.2	12.0.2.2	12.0.2.2	12.0.2.2
12.2.1 cont'd	Council water supplies are safe to drink	Community outcome: Safe and healthy communities	Three Waters & Waste Technical Services team report on the number of properties assessed and required to install backflow prevention devices	106		Target 5 Number of highest risk properties assessed and required to install backflow prevention devices each year: ≥ 100	Target 5 Number of highest risk properties assessed and required to install backflow prevention devices each year: ≥ 100	Target 5 Number of highest risk properties assessed and required to install backflow prevention devices each year: ≥ 100	Target 5 Number of highest risk properties assessed and required to install backflow prevention devices each year: ≥ 100
12.0.2			12.0.2			12.0.2.9	12.0.2.9	12.0.2.9	12.0.2.9
12.2.1 cont'd	Council water supplies are safe to drink	Community outcome: Safe and healthy communities Department of Internal Affairs, Water Supply non-financial performance measure 1a	Report to the Drinking Water Assessor on compliance with the Drinking-water Standards for NZ	100% in 2015/16	96.8% of all supplies for >100 people, from Ministry of Health Annual Report on Drinking-water Quality 2014-2015	Target 6 Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%	Target 6 Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%	Target 6 Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%	Target 6 Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%
12.0.2			12.0.2			12.0.2.7	12.0.2.7	12.0.2.7	12.0.2.7

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
12.2.1 cont'd	Council water supplies are safe to drink	Community outcome: Safe and healthy communities Department of Internal Affairs, Water Supply non-financial performance measure 1a	Report to the Drinking Water Assessor on compliance with the Drinking-water Standards for NZ	100% in 2015/16	96.8% of all supplies for >100 people, from Ministry of Health Annual Report on Drinking-water Quality 2014-2015	Target 7 Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.5%	Target 7 Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%	Target 7 Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%	Target 7 Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: ≥ 99.8%
12.0.2 12.2.1 cont'd	Council water supplies are safe to drink	Community outcome: Safe and healthy communities Department of Internal Affairs, Water Supply non-financial performance measure 1b	12.0.2 Report to the Drinking Water Assessor on compliance with the Drinking-water Standards for NZ	76.6% in 2015/16	80% of all supplies for >100 people, from Ministry of Health Annual Report on Drinking-water Quality 2014-2015	12.0.2.10 Target 8 Proportion of urban residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 79%	12.0.2.10 Target 8 Proportion of urban residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 99.8%	12.0.2.10 Target 8 Proportion of urban residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 99.8%	12.0.2.10 Target 8 Proportion of urban residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 99.8%
12.0.2 12.2.1 cont'd	Council water supplies are safe to drink	Community outcome: Safe and healthy communities Department of Internal Affairs, Water Supply non-financial performance measure 1b	12.0.2 Report to the Drinking Water Assessor on compliance with the Drinking-water Standards for NZ	8.5% in 2015/16	80% of all supplies for >100 people, from Ministry of Health Annual Report on Drinking-water Quality 2014-2015	12.0.2.8 Target 9 Proportion of rural residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 8.5%	12.0.2.8 Target 9 Proportion of rural residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 8.5%	12.0.2.8 Target 9 Proportion of rural residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 19%	12.0.2.8 Target 9 Proportion of rural residents supplied water compliant with the DWSNZ protozoal compliance criteria: ≥ 19%

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
12.0.2			12.0.2			12.0.2.1	12.0.2.1	12.0.2.1	12.0.2.1
12.2.1 cont'd	Council water supplies are safe to drink	Community outcome: Safe and healthy communities	Three Waters & Waste Asset Management team report on water safety plans	100% in 2015/16	95% of all supplies for >100 people, from Ministry of Health Annual Report on Drinking-water Quality 2014-2015	Target 10 Proportion of water supply zones with a MoH approved Water Safety Plan: 100%	Target 10 Proportion of water supply zones with a MoH approved Water Safety Plan: 100%	Target 10 Proportion of water supply zones with a MoH approved Water Safety Plan: 100%	Target 10 Proportion of water supply zones with a MoH approved Water Safety Plan: 100%
12.0.2			12.0.2			12.0.2.19	12.0.2.19	12.0.2.19	12.0.2.19
12.3.1	Council provides high quality drinking water	Community outcome: high quality drinking water	Resident satisfaction survey	New LoS – no current performance		Target 1 Proportion of residents satisfied with quality of Council water supplies: ≥ 65%	Target 1 Proportion of residents satisfied with quality of Council water supplies: ≥ 70%	Target 1 Proportion of residents satisfied with quality of Council water supplies: ≥ 70%	Target 1 Proportion of residents satisfied with quality of Council water supplies: ≥ 85%
12.0.2			12.0.2			12.0.2.13	12.0.2.13	12.0.2.13	12.0.2.13
12.3.1 cont'd	Council provides high quality drinking water	Community outcome: high quality drinking water Department of Internal Affairs, Water Supply non-financial performance measure 4a	The number of complaints about water clarity received through the call centre, expressed per 1,000 properties connected to the Council's water supply system	0.63 in 2015/16	Average of 1.84 in Water NZ National Performance Review 2015/16	Target 2 Number of water clarity complaints per 1,000 connections per year: ≤ 1.0	Target 2 Number of water clarity complaints per 1,000 connections per year: ≤ 1.0	Target 2 Number of water clarity complaints per 1,000 connections per year: ≤ 1.0	Target 2 Number of water clarity complaints per 1,000 connections per year: ≤ 1.0

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
12.0.2			12.0.2			12.0.2.15	12.0.2.15	12.0.2.15	12.0.2.15
12.3.1 cont'd	Council provides high quality drinking water	Community outcome: high quality drinking water Department of Internal Affairs, Water Supply non-financial performance measure 4a	The number of complaints about water taste received through the call centre, expressed per 1,000 properties connected to the Council's water supply system	0.34 in 2015/16	Average of 0.21 in Water NZ National Performance Review 2015/16	Target 3 Number of water taste complaints per 1,000 connections per year: ≤ 0.5	Target 3 Number of water taste complaints per 1,000 connections per year: ≤ 0.5	Target 3 Number of water taste complaints per 1,000 connections per year: ≤ 0.5	Target 3 Number of water taste complaints per 1,000 connections per year: ≤ 0.5
12.0.2			12.0.2			12.0.2.14	12.0.2.14	12.0.2.14	12.0.2.14
12.3.1 cont'd	Council provides high quality drinking water	Community outcome: high quality drinking water Department of Internal Affairs, Water Supply non-financial performance measure 4	The number of complaints about water odour received through the call centre, expressed per 1,000 properties connected to the Council's water supply system	0.14 in 2015/16	Average of 0.50 in Water NZ National Performance Review 2015/16	Target 4 Number of water odour complaints per 1,000 connections per year: ≤ 0.5	Target 4 Number of water odour complaints per 1,000 connections per year: ≤ 0.5	Target 4 Number of water odour complaints per 1,000 connections per year: ≤ 0.5	Target 4 Number of water odour complaints per 1,000 connections per year: ≤ 0.5

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
12.0.9			12.0.9						
12.4.1	Council water supply networks and operations demonstrate environmental stewardship	Community outcome: sustainable use of resources	Total volume of water abstracted from resource consent compliance reports to ECan.	50.76 in 2015/16	Average of 12 in Water NZ National Performance Review 2015/16.	Target 1 Total volume of water abstracted for urban water supplies in millions of cubic metres per year: ≤ 55	Target 1 Total volume of water abstracted for urban water supplies in millions of cubic metres per year: ≤ 55	Target 1 Total volume of water abstracted for urban water supplies in millions of cubic metres per year: ≤ 55	Target 1 Total volume of water abstracted for urban water supplies in millions of cubic metres per year: ≤ 55
12.0.7			12.0.7						
12.4.1 cont'd	Council water supply networks and operations demonstrate environmental stewardship	Community outcome: sustainable use of resources Department of Internal Affairs, Water Supply non-financial performance measure 5	Total volume of water abstracted minus the leakage from the public network divided by the total population served by Council's water supply networks	272 in 2015/16	Average of 321 in Water NZ National Performance Review 2015/16	Target 2 Average consumption of drinking water per day in litres per resident per day: ≤ 298	Target 2 Average consumption of drinking water per day in litres per resident per day: ≤ 298	Target 2 Average consumption of drinking water per day in litres per resident per day: ≤ 298	Target 2 Average consumption of drinking water per day in litres per resident per day: ≤ 298
12.0.6			12.0.6						
12.4.1 cont'd	Council water supply networks and operations demonstrate environmental stewardship	Community outcome: sustainable use of resources Department of Internal Affairs, Water Supply non-	Calculated from night time flow measurement and total water abstraction	11.7% in 2015/16	Average of 24% in Water NZ National Performance Review 2015/16	Target 3 Percentage of real water loss from Council's water supply network: ≤ 15.0%	Target 3 Percentage of real water loss from Council's water supply network: ≤ 15.0%	Target 3 Percentage of real water loss from Council's water supply network: ≤ 15.0%	Target 3 Percentage of real water loss from Council's water supply network: ≤ 15.0%

Performance Standards Levels of Service		Results	Method of Measurement	Current Performance	Benchmarks	Future Performance (targets)			Future Performance (targets) by Year 10 2027/28
						Year 1	Year 2	Year 3	
						2018/19	2019/20	2020/21	
		financial performance measure 2							
12.0.5			12.0.5			12.0.5	12.0.5	12.0.5	12.0.5
12.4.1	Council water supply networks and operations demonstrate environmental stewardship	Community outcome: sustainable use of resources	Number of infringement notices received in relation to resource consents for water supply	0 in 2015/16		Target 4 Number of infringement notices for major or persistent breaches of resource consents regarding the operation of the water supply network, as reported by ECan or Council: 0	Target 4 Number of infringement notices for major or persistent breaches of resource consents regarding the operation of the water supply network, as reported by ECan or Council: 0	Target 4 Number of infringement notices for major or persistent breaches of resource consents regarding the operation of the water supply network, as reported by ECan or Council: 0	Target 4 Number of infringement notices for major or persistent breaches of resource consents regarding the operation of the water supply network, as reported by ECan or Council: 0
12.0.4			12.0.4			12.0.4	12.0.4	12.0.4	12.0.4
12.4.1 cont'd	Council water supply networks and operations demonstrate environmental stewardship	Community outcome: sustainable use of resources	Total power used from all water supply pump stations divided by total volume of water pumped	0.29 in 2015/16	Average of 3.37 for water supply energy consumption in Water NZ National Performance Review 2015/16	Target 5 Annual average power (kWh of electricity) used to pump each cubic metre of water: 0.35	Target 5 Annual average power (kWh of electricity) used to pump each cubic metre of water: 0.35	Target 5 Annual average power (kWh of electricity) used to pump each cubic metre of water: 0.35	Target 5 Annual average power (kWh of electricity) used to pump each cubic metre of water: 0.35

4. What levels of service do we propose to change from the current LTP and why?

To review changes to levels of service between those adopted for the Amended Long Term Plan 2016-25 (Annual Plan 2017/18) and the draft Long Term Plan 2018-28, refer to [section 4 of the draft Service Plan](#).

Changes in Levels of Service adopted in Annual Plan 2019/20.

LOS Number	Proposed Change	Rationale
NON-LTP 12.0.2.4 NON-LTP 12.0.2.5 NON-LTP 12.0.2.6 NON-LTP 12.0.2.18	Delete this level of service target	MoH risk gradings are outdated, voluntary and are only provided at the request of the water supplier. It has historically been included in service plans to demonstrate and drive progress to improve the quality of our water supplies (including driving the well-deepening programme in the North West zone which is now largely complete). However, we now feel these targets are redundant. We have other targets for delivering water that is compliant with bacterial and protozoal requirements of the drinking water standards that demonstrate and drive progress to improve the quality of our water supplies. We do not propose to add any new targets for secure well heads. Our well heads need to be secure to achieve protozoal compliance for Christchurch, and we already have a target for this (12.0.2.10, Proportion of urban residents supplied water compliant with the DWSNZ protozoal compliance criteria : $\geq 79\%$).

5. How will the assets be managed to deliver the services?

The water supply service is managed according to best practice to ensure that Council complies with its statutory obligations and can achieve the levels of service expected by the community. Council staff and its operations and maintenance contractors manage the water supply service in the following way:

Plan: assess current supply and demand, determine future needs and identify, evaluate and recommend options to achieve an optimal water supply service

Regulate: issue standards, specifications and bylaws to ensure that the water supply service is safe and reliable and enforce adherence through Council's consent processes

Build: design, specify and procure contractors to build new assets

Operate: ensure that water infrastructure is operated efficiently and effectively

Maintain: perform planned maintenance for a reliable and compliant service

Repair and renew: repair assets when required; review asset condition in the context of condition, age, material, maintenance, etc. and establish a prioritised programme for asset renewal to ensure effectiveness and efficiency of supply

Customer services: receive, prioritise and respond to customer complaints and requests for services.

How are renewal works identified and prioritised?

Detailed methodologies are available in the Draft Lifecycle Management Manual with results in the 2018 Water Supply Asset Management Plan.

At a high level:

- Long term (years 4-30) budget planning is based on installation year and theoretical useful life where the theoretical useful life takes into account material, manufacturer, manufacturing standard, high level criticality condition assessment results and expert judgement from literature.
- Short term (years 1-3) budgets and programs identify and prioritise specific renewals projects based on condition assessment results, performance assessment results, breakage rates, operating costs, criticality, obsolescence, risk and alignment with transport (road) renewal works.

6. What financial resources are needed?

Refer to the **Activities and Services** section in the most recently adopted [Long Term Plan / Annual Plan](#).

7. How much capital expenditure will be spent, on what category of asset, and what are the key capital projects for this activity?

Refer to the **Capital Programme** section in the most recently adopted [Long Term Plan / Annual Plan](#).

8. Are there any significant negative effects that this activity will create?

Negative Effect	Mitigation
Cost of operating a compliant potable water supply	<p>Documented processes and maintenance systems control costs.</p> <p>Improve network efficiency through asset renewal.</p> <p>Water supply rezoning and pressure management to reduce operating and maintenance costs.</p> <p>Reduce demand through water conservation measures.</p> <p>Assess and report cost efficiency and affordability.</p>
Chemical addition may be required (chlorination or fluoridation) as dictated by legislation and/or water quality	<p>React to Central Government legislation as required.</p> <p>Chlorination of urban water supplies not currently required.</p> <p>Fluoridate water if required by the Canterbury District Health Board.</p>
Salt-water intrusion in coastal regions compromises water quality	<p>Monitor well takes in coastal areas for salinity (conductivity) and investigate any changes.</p> <p>Long term strategy to move wells away from coast where salt-water intrusion may impact on quality.</p>
Over extraction limits water available for growth of the city.	<p>Maintain network in good condition to reduce leaks.</p> <p>Operate within water take consents.</p> <p>Reduce water demand through water conservation measures.</p>
Effects of water abstraction on the environment	<p>Network maintenance and water conservation measures to minimise wastage.</p> <p>Annual leak detection programme to monitor and reduce water loss.</p> <p>Maintain resource consent compliance and avoid over-abstraction.</p> <p>Establish infrastructure (e.g. suction tanks) to improve management of groundwater abstraction.</p>
Natural disasters cause widespread damage to the water supply network	<p>Earthquake design guidelines incorporated in Council's Infrastructure Design Standard and Construction Standard Specifications.</p>

Negative Effect	Mitigation
	<p>Well, pump station, reservoir and pipeline design more resilient infrastructure than previously.</p> <p>Uphold standards and specifications through the resource and building consent processes.</p> <p>Continue to invest in renewal programmes to remove weaker assets from network (e.g. AC pipes).</p> <p>Water supply rezoning to improve resilience and response to natural disasters.</p>
Earthquake legacy of reduced asset lives and red zone infrastructure	Provide for and manage deferred replacement of assets (not addressed by SCIRT).

9. Does this Service Plan need to change as a result of a service delivery review?

A Service Delivery Review report (Section 17A) for this activity has been carried out. Based on the outcome of this report no changes to the service plan or delivery model are required.