Long Term Plan 2018-28
Service Plan for Wastewater Collection, Treatment and Disposal

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

Christchurch City Council

Approvals		
Role	**Name**	**Signature and date of sign-off**
Finance Manager	Peter Langbein	Approved February 2018
Head of Three Waters and Waste	John Mackie	Approved 2 March 2018 
General Manager(s)	David Adamson	

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

Christchurch City Council builds, owns, operates and maintains wastewater networks and wastewater treatment plants to protect public health and the environment. The service is focussed on providing a reliable, safe and resilient system for conveying wastewater away from properties for treatment and disposal.

Wastewater, also known as sewage, refers to the used water collected in internal drains from homes and businesses, and includes trade waste from industrial and commercial operations. Wastewater does not include stormwater drainage, which is collected, treated and re-introduced into the environment via a separate system.

Providing a wastewater collection, treatment and disposal service 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 in a number of ways, this includes planning, day to day operations, planned and reactive maintenance, repair or renewal of damaged infrastructure, building new infrastructure and implementing improvements to the system.

1. What does this activity deliver?

The objective of this activity is to provide wastewater collection, treatment and disposal in a way that protects the public and the environment. As a Council we:

- Collect, convey and treat wastewater in a safe, efficient and reliable manner
- Discharge treated wastewater to the environment in compliance with resource consents
- Reuse and/or dispose wastewater treatment by-products, including biogas and biosolids
- Provide laboratory services to monitor treatment processes and treated wastewater quality
- Plan, regulate, build, maintain, manage and renew wastewater systems.

The Council collects wastewater from approximately 160,000 customers in Christchurch, Lyttelton, Diamond Harbour, Governors Bay, Akaroa, Duvauchelle, Tikao Bay and Wainui, through 945 km of laterals 1,826 km of wastewater mains, 149 pump stations, 84 lift stations, and 34 odour control sites. It provides treatment at eight wastewater treatment plants and disposal via one outfall pump station, six ocean/harbour

outfalls and two land irrigation schemes. The wastewater reticulation and treatment infrastructure is monitored and controlled by an extensive communications system.

2. Why do we deliver this activity?

Providing good-quality wastewater 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 wastewater system that protects public health and the environment is a fundamental requirement for safe and healthy urban communities. The community expects the Council to provide good quality, reliable wastewater services in a cost-effective, equitable and sustainable manner.

This activity is also undertaken in accordance with:

- Health Act 1956
- Resource Management Act 1991
- Health and Safety at Work Act 2015
- Hazardous Substances and New Organisms Act 1996
- National Policy Statement on Urban Development Capacity 2016
- Water Supply, Wastewater and Stormwater Bylaw 2014
- Trade Waste Bylaw 2015.

The Council must deliver the wastewater collection, treatment and disposal service to comply with:

Resource consents: Resource consents set limits the volume and quality of treated wastewater that can be discharged to the environment. Council must ensure that treatment processes are able to comply with the consent conditions and must do regular sampling and testing to monitor compliance. Resource consents require the Council to control air discharges generated from its wastewater treatment processes. To comply with consent conditions adequate and reliable treatment processes must be maintained. The wet weather overflow resource consent sets limits on the location and frequency of wet weather overflows, and requires Council to monitor and report on any overflows.

Biosolids disposal: The Council manages the quality of biosolids to allow for its reuse or disposal. This means that Council must control the release of trade waste to avoid chemical contamination and must ensure that adequate treatment processes are maintained to disinfect sludge.

Air quality: The Council manages its wastewater network to avoid objectionable or offensive odours causing nuisance to nearby residents and businesses.

Avoid nuisance: In terms of the Health Act 1956 the Council must ensure that its wastewater collection, treatment and disposal service is delivered in a manner which is not offensive nor likely to be injurious to health. The Council has developed a bylaw to prevent or abate nuisances arising from its wastewater collection, treatment and disposal service.

Water services assessments: The Local Government Act 2002 requires a territorial authority to assess, from a public health perspective, the adequacy of its wastewater services in light of health risks, quality of service, current and future demand and the consequence of discharge to the environment.

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 Wastewater Strategy 2013 provides the strategic framework for the wastewater collection, treatment and disposal service.

The wastewater collection, treatment and disposal service is critical for achieving and supporting Council's Strategic Directions, including:

- Safe and sustainable supply water supply and improved waterways including:
    - Water quality in our waterways and wetlands is improved over time

- 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 wastewater service:

- Safe and healthy communities
- Healthy waterways
- 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 Wastewater Collection, Treatment and Disposal 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	
Collecting wastewater from properties within the reticulated area and conveying the wastewater to treatment plants									
11.0.1			**11.0.1**			**11.0.1.16**	**11.0.1.16**	**11.0.1.16**	**11.0.1.16**
11.1.1	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network	Resident satisfaction surveys	New level of service – no current performance		Target 1 Proportion of residents satisfied with the reliability and responsiveness provided by Council wastewater services: ≥ 79%	Target 1 Proportion of residents satisfied with the reliability and responsiveness provided by Council wastewater services: ≥ 79%	Target 1 Proportion of residents satisfied with the reliability and responsiveness provided by Council wastewater services: ≥ 80%	Target 1 Proportion of residents satisfied with the reliability and responsiveness provided by Council wastewater services: ≥ 85%
11.0.1			**11.0.1**			**11.0.1.5**	**11.0.1.5**	**11.0.1.5**	**11.0.1.5**
11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-	The median response time measured from the time that the Council receives notification of the overflow to the time that service	29 minutes in 2015/16	Average of 55 minutes for in Water NZ National Performance Review 2015/16	Target 2 Median time from notification to attendance of overflows resulting from network faults: ≤ 1 hour	Target 2 Median time from notification to attendance of overflows resulting from network faults: ≤ 1 hour	Target 2 Median time from notification to attendance of overflows resulting from network faults: ≤ 1 hour	Target 2 Median time from notification to attendance of overflows resulting from network faults: ≤ 1 hour

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 3a	personnel reach the site. Reported in monthly contract reports from the Contractor.						
11.0.1 11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 3b	**11.0.1** The median resolution time measured from the time that the Council receives notification of the overflow to the time that service personnel confirm resolution of the overflow. Reported in monthly contract reports from the Contractor.	1 hour 50 minutes in 2015/16	Average of 3 hours in Water NZ National Performance Review 2015/16	**11.0.1.6** Target 3 Median time from notification to resolution of overflows resulting from network faults: ≤ 24 hours	**11.0.1.6** Target 3 Median time from notification to resolution of overflows resulting from network faults: ≤ 24 hours	**11.0.1.6** Target 3 Median time from notification to resolution of overflows resulting from network faults: ≤ 24 hours	**11.0.1.6** Target 3 Median time from notification to resolution of overflows resulting from network faults: ≤ 24 hours
11.0.1 11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network	**11.0.1** Count of total number of blowbacks o maintenance work carried out by the Council or its	23 in 2015/16		**11.0.1.15** Target 4 Annual number of properties affected by wastewater blowbacks due to maintenance work	**11.0.1.15** Target 4 Annual number of properties affected by wastewater blowbacks due to maintenance work	**11.0.1.15** Target 4 Annual number of properties affected by wastewater blowbacks due to maintenance work	**11.0.1.15** Target 4 Annual number of properties affected by wastewater blowbacks due to maintenance work

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	
			contractors reported to the Council call centre in a financial year. Reported in monthly contract reports from the Contractor.			carried out by the Council or its contractors: ≤ 35	carried out by the Council or its contractors: ≤ 35	carried out by the Council or its contractors: ≤ 35	carried out by the Council or its contractors: ≤ 35
11.0.1 11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 4a	**11.0.1** The number of complaints confirmed to be about wastewater odour received through the call centre, expressed per 1,000 properties connected to the Council's wastewater system	0.52 in 2015/16	Average of 9.53 for all wastewater complaint types in Water NZ National Performance Review 2015/16	**11.0.1.8** Target 5 Number of wastewater odour complaints per 1,000 properties connected to the wastewater network per year: ≤ 0.6	**11.0.1.8** Target 5 Number of wastewater odour complaints per 1,000 properties connected to the wastewater network per year: ≤ 0.6	**11.0.1.8** Target 5 Number of wastewater odour complaints per 1,000 properties connected to the wastewater network per year: ≤ 0.6	**11.0.1.8** Target 5 Number of wastewater odour complaints per 1,000 properties connected to the wastewater network per year: ≤ 0.6
11.0.1 11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs,	**11.0.1** The number of complaints about Council's wastewater network received through the call centre, expressed per	0.53 in 2015/16	Average of 9.53 for all wastewater complaint types in Water NZ National Performance Review 2015/16	**11.0.1.9** Target 6 Number of wastewater system fault complaints per 1,000 properties connected to the	**11.0.1.9** Target 6 Number of wastewater system fault complaints per 1,000 properties connected to the	**11.0.1.9** Target 6 Number of wastewater system fault complaints per 1,000 properties connected to the	**11.0.1.9** Target 6 Number of wastewater system fault complaints per 1,000 properties connected to 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	
		wastewater non-financial performance measure 4b	1,000 properties connected to the Council's wastewater system			wastewater network per year: ≤ 0.6	wastewater network per year: ≤ 0.7	wastewater network per year: ≤ 0.8	wastewater network per year: ≤ 1.5
11.0.1 11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 4c	**11.0.1** The number of complaints about Council's wastewater system blockages received through the call centre, expressed per 1,000 properties connected to the Council's wastewater system	6.19 in 2015/16	Average of 9.53 for all wastewater complaint types in Water NZ National Performance Review 2015/16	**11.0.1.7** Target 7 Number of wastewater system blockage complaints per 1,000 properties connected to the wastewater network per year: ≤ 10	**11.0.1.7** Target 7 Number of wastewater system blockage complaints per 1,000 properties connected to the wastewater network per year: ≤ 12	**11.0.1.7** Target 7 Number of wastewater system blockage complaints per 1,000 properties connected to the wastewater network per year: ≤ 14	**11.0.1.7** Target 7 Number of wastewater system blockage complaints per 1,000 properties connected to the wastewater network per year: ≤ 20
11.0.1 11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network	**11.0.1** Lengths of pipe at condition 5 divided by total wastewater pipe length expressed as a percentage. Reported from Council asset management systems.	New level of service – no past performance	Average of 7% in Water NZ National Performance Review 2015/16	**11.0.1.18** Target 8 Percentage of total wastewater gravity network pipework length at condition grade 5: ≤ 13%	**11.0.1.18** Target 8 Percentage of total wastewater gravity network pipework length at condition grade 5: ≤ 13%	**11.0.1.18** Target 8 Percentage of total wastewater gravity network pipework length at condition grade 5: ≤ 13%	**11.0.1.18** Target 8 Percentage of total wastewater gravity network pipework length at condition grade 5: ≤ 13%

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	
11.0.1			**11.0.1**			**11.0.1.19**	**11.0.1.19**	**11.0.1.19**	**11.0.1.19**
11.1.1 cont'd	Council wastewater services are reliable	Community outcome: Modern and robust city infrastructure and facilities network	Lengths of pipe at condition 5 based on inspection divided by total condition 5 pipe length expressed as a percentage. Reported from Council asset management systems.	New level of service – no past performance		Target 9 Percentage of wastewater gravity network pipework identified as condition grade 5 through physical inspection rather than theoretical modelling: ≥ 95%	Target 9 Percentage of wastewater gravity network pipework identified as condition grade 5 through physical inspection rather than theoretical modelling: ≥ 95%	Target 9 Percentage of wastewater gravity network pipework identified as condition grade 5 through physical inspection rather than theoretical modelling: ≥ 95%	Target 9 Percentage of wastewater gravity network pipework identified as condition grade 5 through physical inspection rather than theoretical modelling: ≥ 95%
11.0.1			**11.0.1**			**11.0.1.2**	**11.0.1.2**	**11.0.1.2**	**11.0.1.2**
11.1.2	Council wastewater services are responsive	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 3a	The median attendance time measured from the time that the Council receives notification of the fault to the time that service personnel confirm resolution of the fault. Reported in monthly contract reports from the Contractor.	27 minutes in 2015/16	Average of 55 minutes for all types of wastewater networks in Water NZ National Performance Review 2015/16	Target 1 Median time from notification to arrival on-site for urgent faults on urban wastewater networks: ≤ 1 hour	Target 1 Median time from notification to arrival on-site for urgent faults on urban wastewater networks: ≤ 1 hour	Target 1 Median time from notification to arrival on-site for urgent faults on urban wastewater networks: ≤ 1 hour	Target 1 Median time from notification to arrival on-site for urgent faults on urban wastewater networks: ≤ 1 hour

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	
11.0.1 11.1.2 cont'd	Council wastewater services are responsive	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 3a	**11.0.1** The median attendance time measured from the time that the Council receives notification of the fault to the time that service personnel confirm resolution of the fault. Reported in monthly contract reports from the Contractor.	61 minutes in 2015/16	Average of 55 minutes for all types of wastewater networks in Water NZ National Performance Review 2015/16	**11.0.1.1** Target 2 Median time from notification to arrival on-site for urgent faults on rural wastewater networks: ≤ 2 hours	**11.0.1.1** Target 2 Median time from notification to arrival on-site for urgent faults on rural wastewater networks: ≤ 2 hours	**11.0.1.1** Target 2 Median time from notification to arrival on-site for urgent faults on rural wastewater networks: ≤ 2 hours	**11.0.1.1** Target 2 Median time from notification to arrival on-site for urgent faults on rural wastewater networks: ≤ 2 hours
11.0.6 11.1.2 cont'd	Council wastewater services are responsive	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 3a	**11.0.6** The median attendance time measured from the time that the Council receives notification of the fault to the time that service personnel confirm resolution of the fault. Reported in monthly contract reports from the Contractor.	2.6 hours in 2015/16	Average of 55 minutes for all types of wastewater networks in Water NZ National Performance Review 2015/16	**11.0.6.2** Target 3 Median time from notification to arrival on-site for non-urgent faults on urban wastewater networks: ≤ 5 days	**11.0.6.2** Target 3 Median time from notification to arrival on-site for non-urgent faults on urban wastewater networks: ≤ 5 days	**11.0.6.2** Target 3 Median time from notification to arrival on-site for non-urgent faults on urban wastewater networks: ≤ 5 days	**11.0.6.2** Target 3 Median time from notification to arrival on-site for non-urgent faults on urban wastewater networks: ≤ 5 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	
11.0.6			**11.0.6**			**11.0.6.3**	**11.0.6.3**	**11.0.6.3**	**11.0.6.3**
11.1.2 cont'd	Council wastewater services are responsive	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 3a	The median attendance time measured from the time that the Council receives notification of the fault to the time that service personnel confirm resolution of the fault. Reported in monthly contract reports from the Contractor.	2.0 hours in 2015/16	Average of 55 minutes for all types of wastewater networks in Water NZ National Performance Review 2015/16	Target 4 Median time from notification to arrival on-site for non-urgent faults on rural wastewater networks: ≤ 5 days	Target 4 Median time from notification to arrival on-site for non-urgent faults on rural wastewater networks: ≤ 5 days	Target 4 Median time from notification to arrival on-site for non-urgent faults on rural wastewater networks: ≤ 5 days	Target 4 Median time from notification to arrival on-site for non-urgent faults on rural wastewater networks: ≤ 5 days
11.0.6			**11.0.6**			**11.0.6.4**	**11.0.6.4**	**11.0.6.4**	**11.0.6.4**
11.1.2 cont'd	Council wastewater services are responsive	Community outcome: Modern and robust city infrastructure and facilities network Department of Internal Affairs, wastewater non-financial performance measure 4d	The proportion of residents that complain about their service request received through the call centre, expressed per 1,000 properties connected to the Council's waste water system	New level of service – no current performance		Target 5 Number of complaints regarding Council's response to issues with the Council wastewater system per 1,000 properties connected to the wastewater network per year: ≤ 0.1	Target 5 Number of complaints regarding Council's response to issues with the Council wastewater system per 1,000 properties connected to the wastewater network per year: ≤ 0.1	Target 5 Number of complaints regarding Council's response to issues with the Council wastewater system per 1,000 properties connected to the wastewater network per year: ≤ 0.1	Target 5 Number of complaints regarding Council's response to issues with the Council wastewater system per 1,000 properties connected to the wastewater network per year: ≤ 0.1

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	
11.0.5			**11.0.5**			**11.0.5.2**	**11.0.5.2**	**11.0.5.2**	**11.0.5.2**
11.2.1	Council maximises public health through wastewater services	Community outcome: Safe and healthy communities Department of Internal Affairs, wastewater non-financial performance measure 1	Number of dry weather overflows per 1,000 properties connected to the wastewater network. Reported in resource consent compliance reports to ECan.	0.67 in 2015/16	Average of 1.56 in Water NZ National Performance Review 2015/16	Target 1 Number of dry weather overflows from wastewater systems per 1,000 connected properties per year: ≤ 0.7	Target 1 Number of dry weather overflows from wastewater systems per 1,000 connected properties per year: ≤ 0.7	Target 1 Number of dry weather overflows from wastewater systems per 1,000 connected properties per year: ≤ 0.7	Target 1 Number of dry weather overflows from wastewater systems per 1,000 connected properties per year: ≤ 1.4
Operate and maintain treatment plants, discharge structures/outfalls and biosolids reuse/disposal									
11.1.2			**11.1.2**			**11.1.2.1**	**11.1.2.1**	**11.1.2.1**	**11.1.2.1**
11.3.1	Council disposes of wastewater in a responsible manner	Community outcome: Healthy waterways Department of Internal Affairs, wastewater non-financial performance measure 2a	Resource consent compliance reports to ECan.	0 in 2015/16	Average of 0.15 in Water NZ National Performance Review 2015/16	Target 1 Number of abatement notices regarding Council resource consents related to discharges from wastewater systems per year: 0	Target 1 Number of abatement notices regarding Council resource consents related to discharges from wastewater systems per year: 0	Target 1 Number of abatement notices regarding Council resource consents related to discharges from wastewater systems per year: 0	Target 1 Number of abatement notices regarding Council resource consents related to discharges from wastewater systems per year: 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	
11.1.2 11.3.1 cont'd	Council disposes of wastewater in a responsible manner	Community outcome: Healthy waterways Department of Internal Affairs, wastewater non-financial performance measure 2b	**11.1.2** Resource consent compliance reports to ECan.	0 in 2015/16	Average of 0.04 in Water NZ National Performance Review 2015/16	**11.1.2.4** Target 2 Number of infringement notices regarding Council resource consents related to discharges from wastewater systems per year: 0	**11.1.2.4** Target 2 Number of infringement notices regarding Council resource consents related to discharges from wastewater systems per year: 0	**11.1.2.4** Target 2 Number of infringement notices regarding Council resource consents related to discharges from wastewater systems per year: 0	**11.1.2.4** Target 2 Number of infringement notices regarding Council resource consents related to discharges from wastewater systems per year: 0
11.1.2 11.3.1 cont'd	Council disposes of wastewater in a responsible manner	Community outcome: Healthy waterways Department of Internal Affairs, wastewater non-financial performance measure 2c	**11.1.2** Resource consent compliance reports to ECan.	0 in 2015/16	Average of 0 in Water NZ National Performance Review 2015/16	**11.1.2.3** Target 3 Number of enforcement orders regarding Council resource consents related to discharges from wastewater systems per year: 0	**11.1.2.3** Target 3 Number of enforcement orders regarding Council resource consents related to discharges from wastewater systems per year: 0	**11.1.2.3** Target 3 Number of enforcement orders regarding Council resource consents related to discharges from wastewater systems per year: 0	**11.1.2.3** Target 3 Number of enforcement orders regarding Council resource consents related to discharges from wastewater systems per year: 0
11.1.2 11.3.1 cont'd	Council disposes of wastewater in	Community outcome: Healthy waterways	**11.1.2** Resource consent compliance reports to ECan.	0 in 2015/16	Average of 0 in Water NZ National	**11.1.2.2** Target 4 Number of convictions	**11.1.2.2** Target 4 Number of convictions	**11.1.2.2** Target 4 Number of convictions	**11.1.2.2** Target 4 Number of convictions

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	
	a responsible manner	Department of Internal Affairs, wastewater non-financial performance measure 2d			Performance Review 2015/16	regarding Council resource consents related to discharges from the wastewater systems per year: 0	regarding Council resource consents related to discharges from the wastewater systems per year: 0	regarding Council resource consents related to discharges from the wastewater systems per year: 0	regarding Council resource consents related to discharges from the wastewater systems per year: 0
11.1.3 11.4.1	Council wastewater networks and operations demonstrate environmental stewardship	Community outcome: Sustainable use of resources	**11.1.3** Mass of biosolids sent for beneficial reuse divided by total mass of biosolids produced expressed as a percentage.	95.7% in 2015/16	Average of 3.3% in Water NZ National Performance Review 2015/16	**11.1.3.1** Target 1 Proportion of biosolids diverted from landfill (beneficially reused): ≥ 95%	**11.1.3.1** Target 1 Proportion of biosolids diverted from landfill (beneficially reused): ≥ 95%	**11.1.3.1** Target 1 Proportion of biosolids diverted from landfill (beneficially reused): ≥ 95%	**11.1.3.1** Target 1 Proportion of biosolids diverted from landfill (beneficially reused): ≥ 95%
11.1.5 11.4.1 cont'd	Council wastewater networks and operations demonstrate environmental stewardship	Community outcome: Sustainable use of resources	**11.1.5** Total power consumption for the year to date divided by the volume of wastewater treated for the year to date.	0.20 in 2015/16	Average of 1.08 for combined wastewater conveyance and treatment in Water NZ National Performance Review 2015/16	**11.1.5.1** Target 2 Power consumption – kWh of electricity per cubic metre wastewater treated at the Christchurch WWTP: ≤ 0.20	**11.1.5.1** Target 2 Power consumption – kWh of electricity per cubic metre wastewater treated at the Christchurch WWTP: ≤ 0.20	**11.1.5.1** Target 2 Power consumption – kWh of electricity per cubic metre wastewater treated at the Christchurch WWTP: ≤ 0.20	**11.1.5.1** Target 2 Power consumption – kWh of electricity per cubic metre wastewater treated at the Christchurch WWTP: ≤ 0.20

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	
11.1.5 11.4.1 cont'd	Council wastewater networks and operations demonstrate environmental stewardship	Community outcome: Sustainable use of resources	**11.1.5** Total power consumption for the year to date divided by the mass of chemical oxygen demand removed in the year to date.	0.31 in 2015/16		**11.1.5.2** Target 3 Power consumption – kWh of electricity per kilogram of chemical oxygen demand (COD) removed at the Christchurch WWTP: ≤ 0.33	**11.1.5.2** Target 3 Power consumption – kWh of electricity per kilogram of chemical oxygen demand (COD) removed at the Christchurch WWTP: ≤ 0.33	**11.1.5.2** Target 3 Power consumption – kWh of electricity per kilogram of chemical oxygen demand (COD) removed at the Christchurch WWTP: ≤ 0.33	**11.1.5.2** Target 3 Power consumption – kWh of electricity per kilogram of chemical oxygen demand (COD) removed at the Christchurch WWTP: ≤ 0.33
11.1.6 11.4.1 cont'd	Council wastewater networks and operations demonstrate environmental stewardship	Community outcome: Sustainable use of resources	**11.1.6** kWh of electricity used that is self-generated divided by the total power use in kWh expressed as a percentage.	88.9% in 2015/16		**11.1.6** Target 4 Proportion of electricity used at the Christchurch WWTP that is self-generated from treatment by-products: ≥ 75%	**11.1.6** Target 4 Proportion of electricity used at the Christchurch WWTP that is self-generated from treatment by-products: ≥ 75%	**11.1.6** Target 4 Proportion of electricity used at the Christchurch WWTP that is self-generated from treatment by-products: ≥ 75%	**11.1.6** Target 4 Proportion of electricity used at the Christchurch WWTP that is self-generated from treatment by-products: ≥ 75%

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	
Provide laboratory services as an integral part of monitoring and controlling treatment processes									
11.1.4 11.3.1 Non-LTP	Council disposes of wastewater in a responsible manner	Community outcome: Healthy waterways	**11.1.4** Number of samples tested by an IANZ accredited lab divided by total number of samples tested expressed as a percentage.	100% in 2015/16		**11.1.4** Target 5 Proportion of externally reported sampling and testing completed by an IANZ accredited laboratory: 100%	**11.1.4** Target 5 Proportion of externally reported sampling and testing completed by an IANZ accredited laboratory: 100%	**11.1.4** Target 5 Proportion of externally reported sampling and testing completed by an IANZ accredited laboratory: 100%	**11.1.4** Target 5 Proportion of externally reported sampling and testing completed by an IANZ accredited laboratory: 100%

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
12.0.2.6	MoH risk grading of the urban water supplies (excluding NW zone): Ba	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
12.0.2.5	MoH risk grading of the NW water supply zone: Da	

12.0.2.18	MoH risk grading for Lyttelton Harbour: Bb	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 : ≥ 79%).
12.0.2.4	MoH risk grading of rural water supplies: Uu	

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

The wastewater collection, treatment and disposal service is managed according to best practice which aligns with the International Infrastructure Management Manual (IIMM) to ensure that Council complies with its statutory requirements and achieves the levels of service expected by the community. Council staff and its operations and maintenance contractors manage the wastewater collection, treatment and disposal service in the following way:

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

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

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

Operate: ensure that wastewater networks and treatment facilities are 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 data, 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 Wastewater 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, condition assessment results, expert judgement from literature and studies into earthquake related life reduction completed by SCIRT and high level criticality.
- Short term (years 1-3) budgets and programs identify and prioritise specific renewals projects based on condition assessment results, performance assessment results, blockage rates, operating cost, defect types, defect numbers, criticality, obsolescence, risk and alignment with transport (road) and storm water 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?

Effect	Mitigation
Cost of operating wastewater collection, treatment and disposal systems	Follow documented procedures and industry best practice for cost minimisation. Follow technological developments and implement cost saving initiatives on a continuous improvement basis. Focus process key performance indicators on cost efficiency.

Effect	Mitigation
	Ensure staff are kept updated with technological and operational best practice through attendance at conferences and participation in specialist industry working groups.
Social, cultural and environmental effects of wastewater overflows	Maintain resource consent compliance. Reduce overflows through projects identified in the city-wide wastewater optimisation project. Fully calibrate wastewater network models through using recent flow monitoring data. Increase flow monitoring on wastewater pump stations and trunk sewers. Continue to implement processes for erecting signage and public notification where overflows could result in health risks. Provide on-site attenuation where required in capacity constraint areas. Clean and maintain siphons and wastewater mains in accordance with maintenance plan. Use flood modelling scenarios to identify areas at risk of inundation and undertake projects to reduce risk of flood water getting into the wastewater network.
Odour from wastewater networks and wastewater treatment plants	Odour control systems installed in problem areas. Operate odour control systems in accordance with procedures including regular maintenance to remove build-ups of odour causing compounds. Robust work planning at wastewater treatment plants to avoid odour events. Good design of wastewater networks to prevent creation of anaerobic conditions / adequate ventilation. Enforce trade waste bylaws. Monitor and control illegal discharge of chemicals and toxins to the wastewater system.
Potential for negative environmental effect of treated wastewater discharges	Maintain resource consent compliance. Operate and maintain treatment plant and disposal services according to best practice. Monitor trade waste discharges to ensure unacceptable pollutants are not released to the WWTP. Monitor and control illegal discharge of chemicals and toxins to the wastewater system to avoid process failure.

Effect	Mitigation
Cultural impact of effluent discharge to water bodies	Work collaboratively with Ngāi Tahu and local rūnanga to find cost effective solutions that address cultural concerns. Consider options to discharge treated wastewater from Akaroa and Duvauchelle to land instead of Akaroa Harbour. Implement the project to divert wastewater from Lyttelton, Governors Bay and Diamond Harbour to the Christchurch Wastewater Treatment Plant, instead of Lyttelton Harbour.
Biosolids disposal to the environment	Continue to dry biosolids to reduce volume, kill pathogens and enable reuse. Monitor trade waste discharges to ensure potential pollutants are not released to the wastewater treatment plants and carried over into the biosolids, maintaining quality of biosolids. Continue with beneficial reuse of biosolids.

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

A Service Delivery Review or Exemption 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.